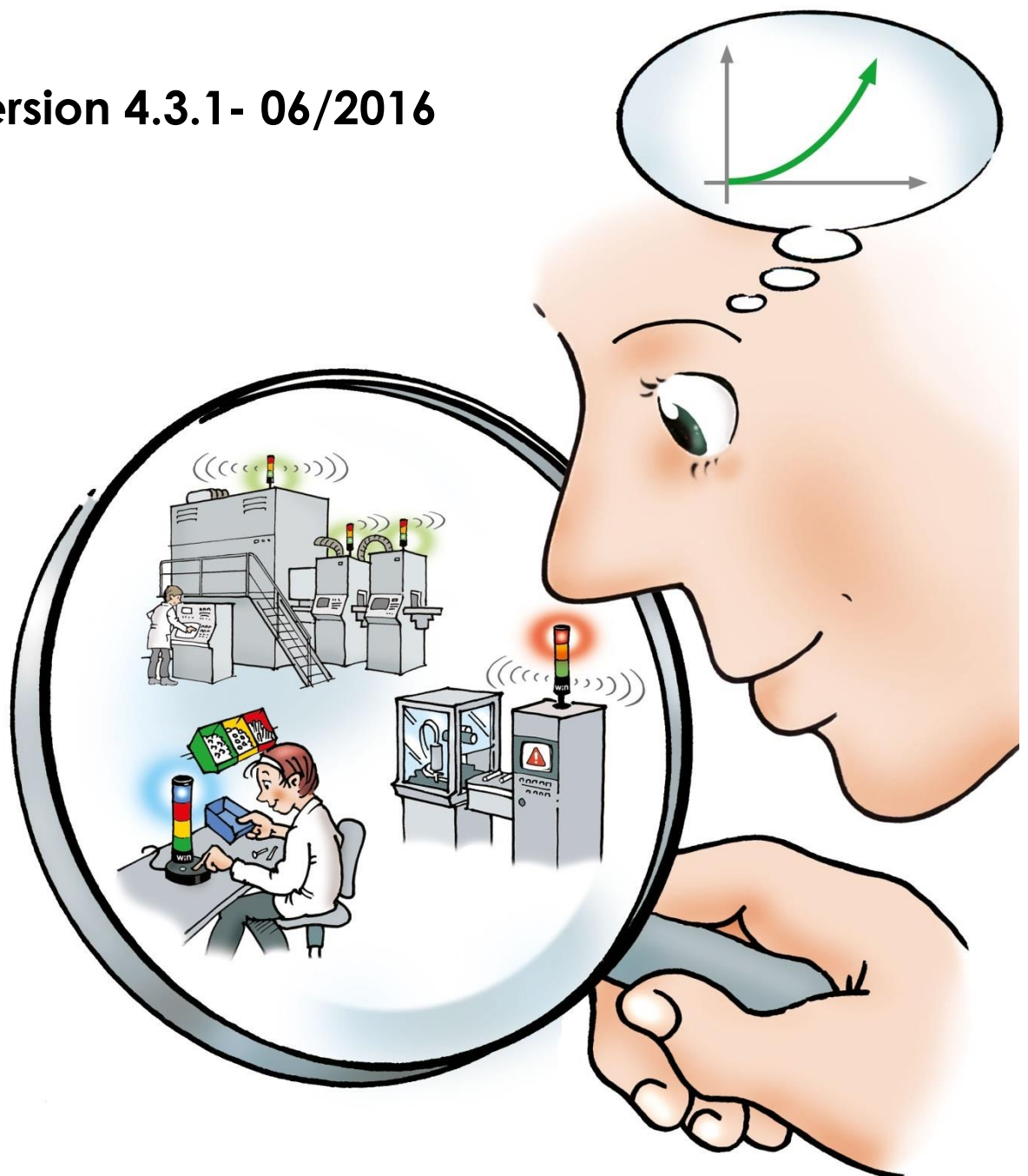


Manual for the MDC, Call for Action and Control System

Version 4.3.1- 06/2016



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Introduction

WERMA offers an easy to install simple low cost wireless monitoring system called WIN (Wireless Information Network) which can be fitted to virtually any piece of equipment or machinery, irrespective of age and specification. WIN combines signal tower technology with wireless technology and an ingenious software package. The common interface point on machines is a WERMA signal tower to which the WIN (MDC – machine data collection) system can be easily fitted and commissioned.

The software supplied with the system is licence-free and easy to install. There is no restriction on the number of users who may wish to install and run the program. The software displays the status condition of signal lights installed in the system and the user can select from three languages, German, English or French. The software enables the user to analyse runtimes, identify causes of disruption in operations and therefore improve efficiency.

This manual is valid for the following products:

- 860.000.00
- 860.000.06
- 860.640.01
- 860.640.02
- 860.640.03
- 860.640.11
- 860.640.12
- 860.640.13
- 860.640.22
- 860.840.01
- 860.840.02
- 860.840.11
- 860.840.12
- 860.840.22
- 656.000.01
- 656.000.02

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As of:

Version 4.3.1- 06/2016

310.860.001

WERMA reserves the right to make technical improvements to the product and accepts no responsibility for mistakes or printing errors which may be contained in this documentation.

1. Technical information

1.1 Assembly

1.1.1 WIN master (860.000.00)

Description	Order number	Quantity
WIN master with antenna, rubber feet and wall mounting accessories	860.000.00	1
USB cable 3m (A/Mini-B-USB)		1
WIN leaflet instruction		1

1.1.2 WIN ethernet master (860.000.06)

Description	Order number	Quantity
WIN master with antenna, rubber feet and wall mounting accessories	860.000.06	1
USB cable 3m (A/Mini-B-USB)		1
Ethernet cable 3m RJ45		1
WIN leaflet instruction		1

1.1.3 WIN system KombiSIGN 71 (860.640.01)

Description	Order number	Quantity
WIN master with antenna, rubber feet and wall mounting accessories	860.000.00	1
WIN slave KombiSIGN 71	860.640.02	3
USB cable 3m (A/Mini-B-USB)		1
WIN leaflet instruction		1

1.1.4 WIN slave KombiSIGN 71 (860.640.02)

Description	Order number	Quantity
WIN slave KombiSIGN 71	860.640.02	1
WIN leaflet instruction		1

1.1.5 WIN complete KombiSIGN 71 (860.640.03)

Description	Order number	Quantity
WIN master with antenna, rubber feet and wall mounting accessories	860.000.00	1
WIN slave KombiSIGN 71	860.640.02	3
LED permanent light element green 24V AC/DC	644.200.75	3
LED permanent light element yellow 24V AC/DC	644.300.75	3
LED permanent light element red 24V AC/DC	644.100.75	3
Base with integrated tube	975.840.10	3
Terminal element Cage Clamp for tube mounting	640.810.00	3
USB cable 3m (A/Mini-B-USB)		1
WIN leaflet instruction		1
KombiSIGN 71 leaflet instruction		1

1.1.6 WIN system with WIN slave performance KombiSIGN 71 (860.640.11)

Description	Order number	Quantity
WIN master with antenna, rubber feet and wall-mounting accessories	860.000.00	1
WIN slave performance KombiSIGN 71	860.640.12	3
USB cable 3m (A/Mini-B-USB)		1
WIN leaflet instruction		1

1.1.7 WIN slave performance KombiSIGN 71 (860.640.12)

Description	Order number	Quantity
WIN slave performance KombiSIGN 70	860.840.12	1
WIN leaflet instruction		1

1.1.8 WIN complete with WIN slave performance KombiSIGN 71 (860.640.13)

Description	Order number	Quantity
WIN master with antenna, rubber feet and wall mounting accessories	860.000.00	1
WIN slave performance KombiSIGN 71	860.640.12	3
LED permanent light element green 24V AC/DC	644.200.75	3
LED permanent light element yellow 24V AC/DC	644.300.75	3
LED permanent light element red 24V AC/DC	644.100.75	3
Base with integrated tube	975.840.10	3
Terminal element Cage Clamp for tube mounting	640.810.00	3
USB cable 3m (A/Mini-B-USB)		1
WIN leaflet instruction		1
KombiSIGN 71 leaflet instruction		1

1.1.9 WIN slave control KombiSIGN 71 (860.640.22)

Description	Order number	Quantity
WIN slave performance KombiSIGN 71	860.640.22	1
WIN leaflet instruction		1

1.1.10 WIN system KombiSIGN 70 (860.840.01)

Description	Order number	Quantity
WIN master with antenna, rubber feet and wall-mounting accessories	860.000.00	1
WIN slave KombiSIGN 70	860.840.02	3
USB cable 3m (A/Mini-B-USB)		1
WIN leaflet instruction		1

1.1.11 WIN slave KombiSIGN 70 (860.840.02)

Description	Order number	Quantity
WIN slave KombiSIGN 70	860.840.02	1
WIN leaflet instruction		1

1.1.12 WIN system with WIN slave performance KombiSIGN 70 (860.840.11)

Description	Order number	Quantity
WIN master with antenna, rubber feet and wall mounting accessories	860.000.00	1
WIN slave performance KombiSIGN 70	860.840.12	3
USB cable 3m (A/Mini-B-USB)		1
WIN leaflet instruction		1

1.1.13 WIN slave performance KombiSIGN 70 (860.840.12)

Description	Order number	Quantity
WIN slave performance KombiSIGN 71	860.640.12	1
WIN leaflet instruction		1

1.1.14 WIN slave control KombiSIGN 70 (860.840.22)

Description	Order number	Quantity
WIN slave control KombiSIGN 71	860.640.22	1
WIN leaflet instruction		1

1.1.15 ClearSIGN compact with WIN (656.000.01)

Description	Order number	Quantity
ClearSIGN compact with WIN; 4 tier; red/yellow/green/blue; WIN slave	656.000.01	1
WIN leaflet instruction		1

1.1.16 ClearSIGN compact with WIN (656.000.02)

Description	Order number	Quantity
ClearSIGN compact with WIN; 4 tier; red/yellow/green/blue; WIN slave performance	656.000.02	1
WIN leaflet instruction		1

1.2 System requirements

The system requirements are different depending on the type of PC.

On the "Server PC" Microsoft SQL Server 2008 R2 and the WERMA WIN software are installed. The WERMA WERMA WIN database runs on the "Server PC".

On the "Client PC" only the WERMA WIN software is installed. The SQL Server database with the WERMA WIN database will be connected over a network.

Description	Server PC	Client PC
Processor	Pentium III compatible processor or higher Dual Core - processor is recommended	
Minimum RAM	2 GB	1 GB
Free hard disk space	3,6 GB	1,5 GB
CD/DVD Drive	✓	
USB port	✓	
Windows Installer 4.5	✓	
Microsoft .NET Framework 4.0	✓	
	<i>Will be installed together with the WERMA WIN software if not available on your PC.</i>	
Supported Operating Systems	Windows Vista SP2	Windows Vista SP2
	Windows 7 SP1	Windows 7 SP1
	Windows 8	Windows 8
	Windows 8.1	Windows 8.1
	Windows Server 2008 SP2	Windows Server 2008 SP2
	Windows Server 2008 R2 SP1	Windows Server 2008 R2 SP1
	Windows Server 2012	Windows Server 2012
	Windows Server 2012 R2	Windows Server 2012 R2
Supported SQL Server	Compatible with: Microsoft SQL Server 2008 SP4**	

*Notice the further information into the Chapter 2.5 (www.werma.com/win)

** The use of Microsoft SQL 2008 R2 is recommended

Note: Unless otherwise specified the 32 Bit (x86) and 64 Bit (x64) are supported. The automatic installation of the database onto a domain controller is not supported. Manual installation is possible. The server core roll is not supported.

1.3 Safety instructions

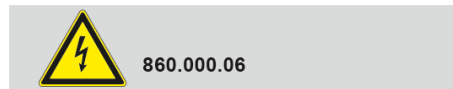
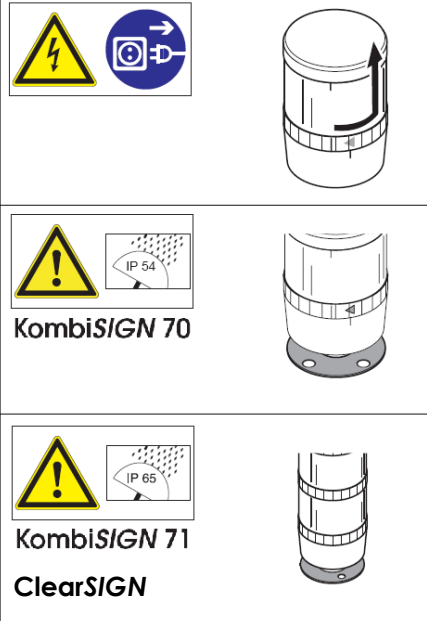



Caution!

- The WIN device must not be used in connection with devices that may directly or indirectly serve health- or life-saving purposes or cause hazards by operation to human beings, animals or asset values.
- The described products have been developed in order to assume safety functions as part of an entire plant or machine. The responsibility taken by the manufacturer of a plant or machine implies a safeguarding of correct general function. Moreover WERMA does not assume any liability for recommendations made or implied by this description. From this description new claims for guarantee, warranty or liability cannot be derived beyond the general terms and conditions of delivery.
- This device does not replace personal protective equipment (e.g. safety glasses, feet protection, etc.).
- This system does not take the place or replace any machine guards, machine safety guards, safety devices, safety procedures, or supervision.
- Always test this device, as well as all machine guards and safeguards, to ensure they are functional at start-up of each shift.
- Always take machine out of service until worn out parts are replaced.
- Whenever removing guards always enforce OSHA lock-out / tag-out regulations.
- Please also refer to the instruction leaflet for your WERMA signal tower
- The WIN system is not suitable for safety relevant applications.
- For use with 24 V signal towers only.
- Use only with a class 2 power supply (Protective Extra Low Voltage).



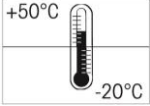
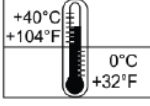
- Ⓓ Anschluss **ausschließlich** durch ausgebildete Elektro-Fachkräfte.
- ⒼⒸ Electrical connection is to be made by trained electrical specialists **only**.
- Ⓕ Le branchement doit **uniquement** être effectué par des professionnels.
- Ⓘ Il collegamento deve essere eseguito **solo** da elettricisti specializzati.
- Ⓔ La conexión **sólo** debe ser realizada por electricistas debidamente formados.
- ⒽⒶ A ligação deve ser feita **exclusivamente** por profissional eléctrico especializado.
- ⒸⒶ Připojení smí **provádět** pouze kvalifikovaný personál.
- ⒽⒶ Podłączenie **wyłącznie** przez specjalistów-elektryków.
- Ⓕ Liittäminen kuuluu **ainoastaan** koulutettujen sähköalan ammattilaisten tehtäviin.
- ⒽⒶ Подключение проводится только специалистом-электриком.
- ⒽⒶ Bağlantı **sadece** eğitimli elektrik teknisyenleri tarafından yapılmalıdır.
- ⒸⒶ 布线需由专业电工执行




- Ⓓ Betrieb **ausschließlich** mit dem im Lieferumfang enthaltenen Netzteil zulässig.
 - ⒼⒸ Operation **only** with power adapter included in assembly.
 - Ⓕ Opération **seulement** permise avec le bloc d'alimentation compris dans la livraison.
- Input: 100-240 V~, 50-60 Hz
Output: 5 V=, I_{max} 2,1 A
- 

1.4 Technical data

1.4.1 General


Description	Value
ISM frequency	868,0 ... 868,6 MHz
Transmitter power	10dBm with 50 Ohm
Transmission range	Max. 300m (unobstructed line of sight) With Repeater function max. 900m (unobstructed line of sight)
Temperature	 860.000.06: 
Standards	This product complies with the ETSI EN 300220, EN 301489, EN 62479 and EN 60950 standards. Receiver category according to EN 300220: category 3. This product fulfils the requirements of the norm 1999/5/EG. The Declaration of Conformity is available on request.
Network size	Max. 50 WIN slaves and max. 4 WIN masters, which are writing to one database. Larger networks upon request.

1.4.2 WIN master

Description	Value
Dimension	80 mm x 76 mm x 31 mm
Interface	USB
Operating voltage	5V DC (USB)
Current consumption	Max. 100 mA
Material	ABS, black + transparent ring
Protection rating	

Note: The maximum length of the USB cable used with the master is 3 m. The WIN master does not need a separate power supply.



1.4.3 WIN ethernet master

Description	Value
Dimension	80 mm x 76 mm x 31 mm
Interface	USB
Operating voltage	5V DC (USB)
Current consumption	160 mA (max. 800 mA)
Material	ABS, black + transparent ring
Protection rating	
Fixing	RJ45 (10Base-T/100Base-TX)



Note: The maximum length of the USB cable used with the master is 3 m and the Ethernet cable shall not be longer than 100m.

Note: Please note that the WIN ethernet master is not designed for external installation

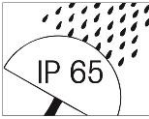

1.4.4 WIN slave

Description	Value
Dimension	Ø 70 mm x 65 mm
Current consumption	40 mA (max. 430 mA)
Operating voltage	24 V AC/DC
Material	PC, black
Seal	Pre-assembled with each element
Protection rating	KombiSIGN 71:  KombiSIGN 70: 
Installation position	Lowest element of your signal tower
Number of signal elements	5, incl. WIN slave element

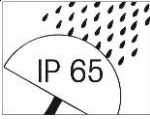
1.4.5 WIN slave performance

Description	Value
Dimension	Ø 70 mm x 65 mm
Current consumption	40 mA (max. 430 mA)
Operating voltage	24 V AC/DC
Material	PC, black
Seal	Pre-assembled with each element
Protection rating	KombiSIGN 71:  KombiSIGN 70: 
Installation position	lowest element of your signal tower
Number of signal elements	Max. 4 (max. 3 tiers for status monitoring and max. 1 tier with counter input)
Counter impulse	Max. 10Hz under the following conditions: <ul style="list-style-type: none"> • WIN software is running and the database is connected • WIN slave performance has a permanent power supply • Wireless connection between the units
Counter input	Tier 4 (pre-assigned), can be changed in WIN software

1.4.6 WIN slave control



Description	Value
Dimension	Ø 70 mm x 65 mm
Current consumption	70 mA (max. 2 A)
Current per output	Continuous: 750 mA Peak (10 ms): 3,6 A Min.: 0,1 mA
Operating voltage	24 V AC/DC
Material	PC, black
Seal	Pre-assembled with each element
Protection rating	KombiSIGN 71:  KombiSIGN 70: 
Installation position	lowest element of your signal tower
Number of signal elements	5, incl. WIN slave element

1.4.7 ClearSIGN compact with WIN

Description	Value
Dimension	Ø 40 mm x 320 mm
Current consumption	530 mA
Operating voltage	24 V DC
Protection rating	

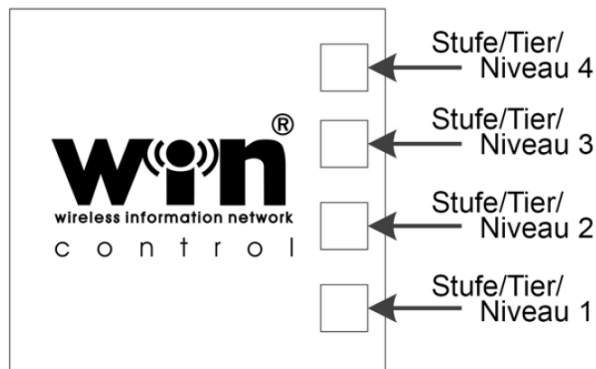
1.5 Troubleshooting

1.5.1 WIN slave / WIN slave performance / WIN slave control



Meaning	LED red	LED green
		
No connection with WIN master	X	
Connection with WIN master		X

1.5.2 WIN slave control

The blue status LEDs represents the current state of the individual output. These are only active if the external switch is activated.



1.5.3 WIN master / WIN ethernet master

Meaning	LED red	LED green
		
No connection with WIN slave	X	
Connection with WIN slave		X

1.5.4 WIN ethernet master

	Green LED Ethernet Port		
Meaning	OFF	On	Blinking
No connection to the network	X		
Connection to the network		X	
Network activity			X

	Yellow LED Ethernet Port	
Meaning	OFF	On
No connection to WERMA WIN	X	
Connection to WERMA WIN		X

1.6 Power supply

1.6.1 WIN slave

Note: The WIN slave uses the electrical connections of the signal tower.

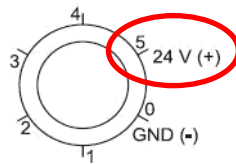
There are 2 options:

1. Passive power supply:

If at least one element of the signal tower is always active, the WIN slave does not need an additional power supply.

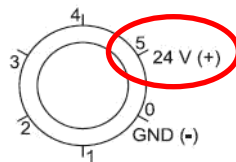
2. Active power supply (recommended):

If there is no passive power supply, the WIN slave needs a permanent operating voltage, which should be connected to pin 5, as shown in the diagram below (24V AC/DC).



1.6.2 WIN slave performance

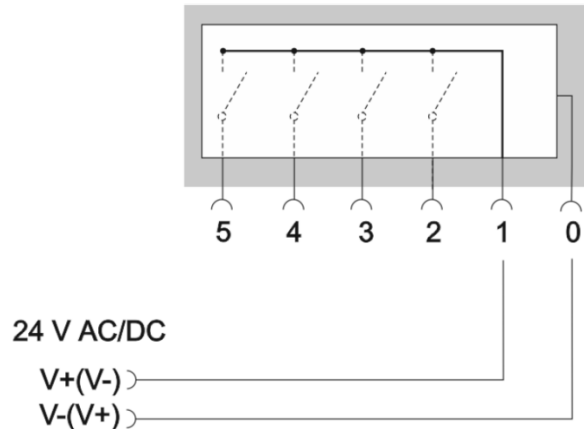
The WIN slave performance needs a **permanent operating voltage**, which should be connected to pin 5, as shown in the diagram below (24V AC/DC).



1.6.3 WIN slave control

The WIN slave control needs a **permanent operating voltage**, which should be connected to Pin 1, as shown in the diagram below (24 V AC/DC).

Pin 1 can be switched through to the terminals 2, 3, 4 and 5. Depending on the pin assignment of terminals 0 and 1 it is possible to switch to 24V or 0V (see drawing).



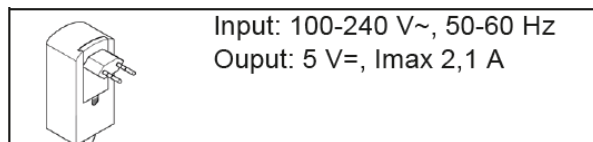
1.6.4 WIN master

The WIN master is powered through the USB port (5V DC) of your PC.



1.6.5 WIN ethernet master

The WIN ethernet master obtains its power through the power supply supplied.



2. Installation of WIN Software

Note: You must have administrator rights to install the WIN software.

Note: Please note the System Requirements when installing the software, see chapter 1.2

During the installation you can select between "Install local database", "Connect with existing database" or "Expert Installation."

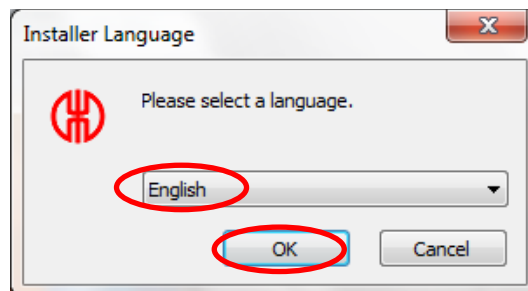
2.1 Install local database

Note: For this type of installation WERMA WIN creates a User and an associated password for the WIN database access. These are:

User: wermawin

Password: Tyz19\$lx50WsR3Ed7m

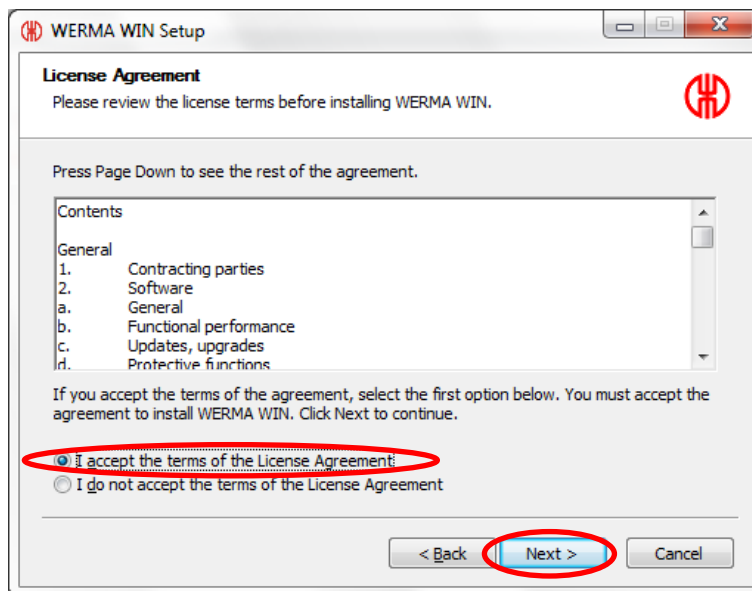
1. Download the current software: www.werma.com/win. Extract the download and double-click on the extracted file. The installation process will start automatically.
2. Follow the instructions until the installation has been completed.
3. Select your desired language and click "OK".



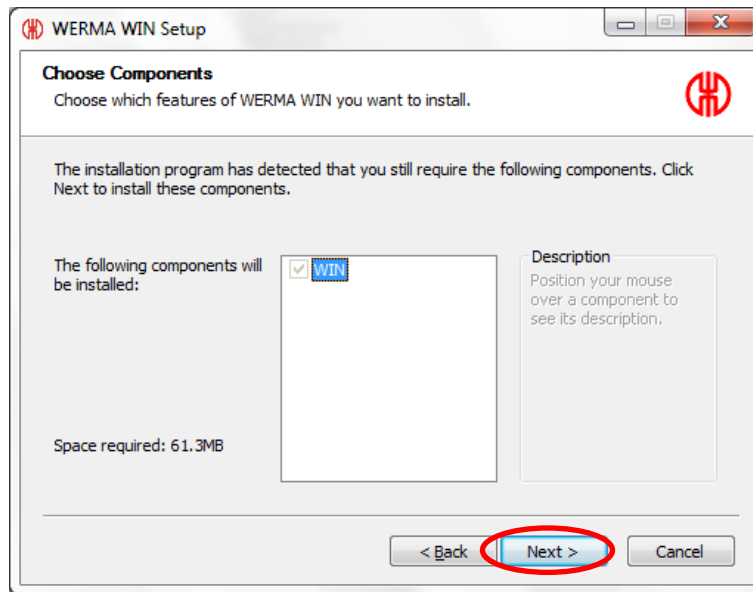
4. Click "Next".



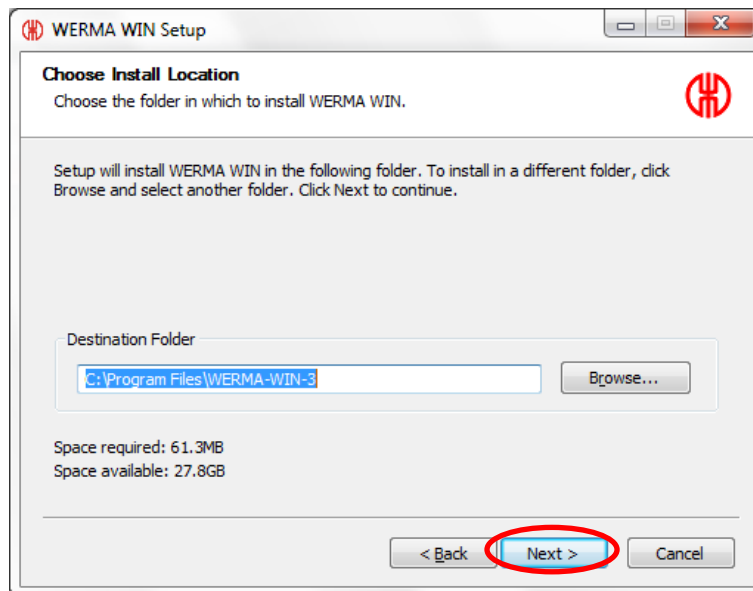
5. You have to accept the licence agreement before starting the installation. Click "Next".



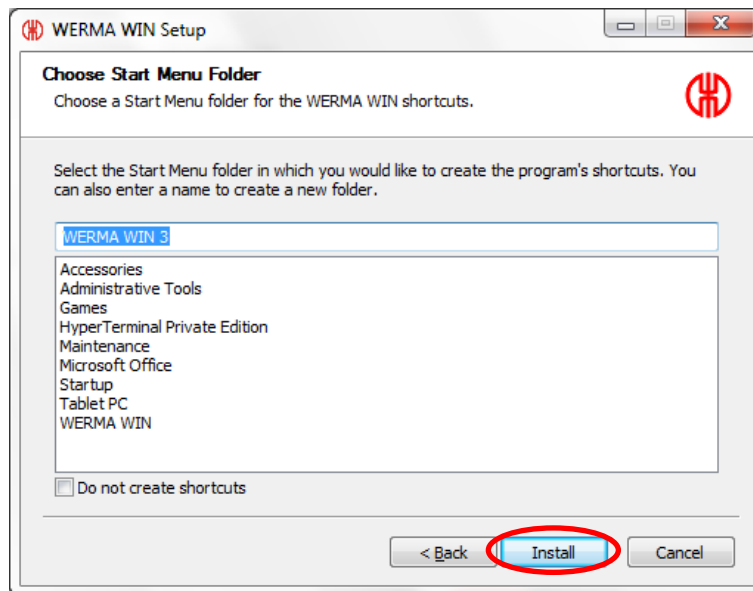
6. This window lists the components to be installed. If Microsoft .NET Framework or Windows Installer is not available on your PC, these programs will also be included in the list. Click "Next".



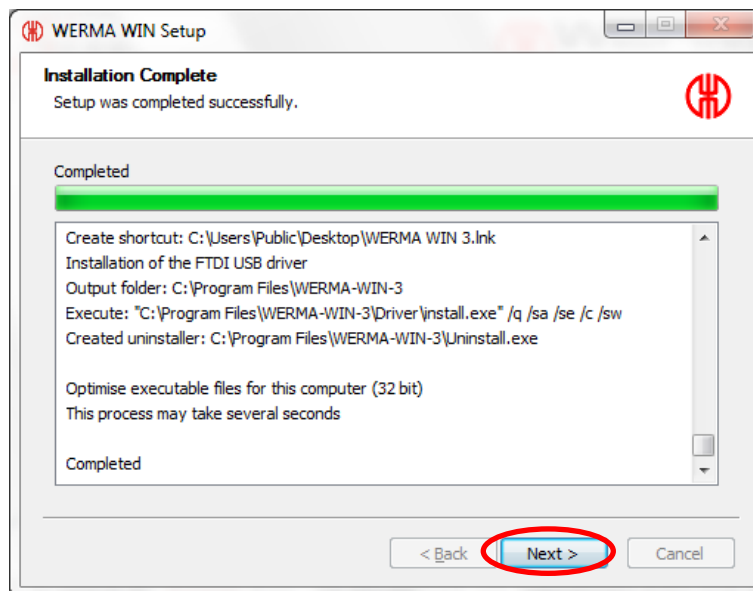
7. Specify the location where you wish to install the WIN software and click "Next".



8. Click "Install" to start the installation.

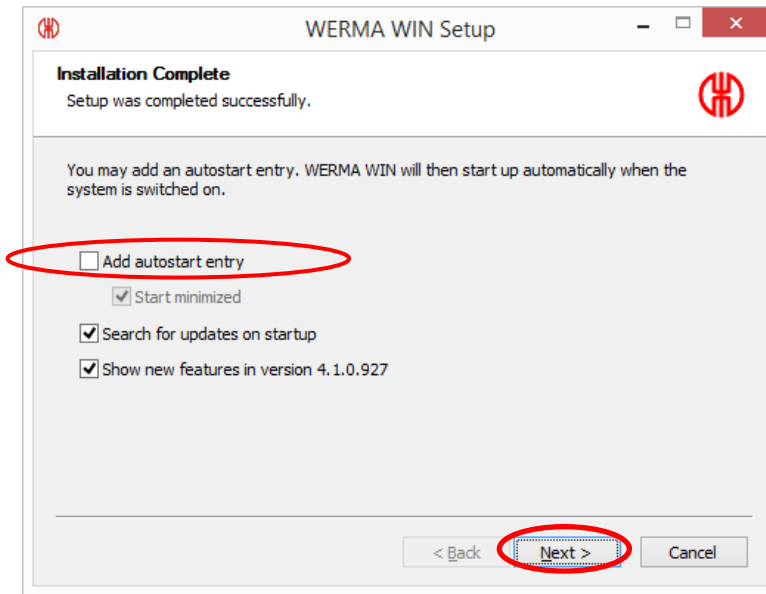


9. Software installation has been completed. Click "Next".

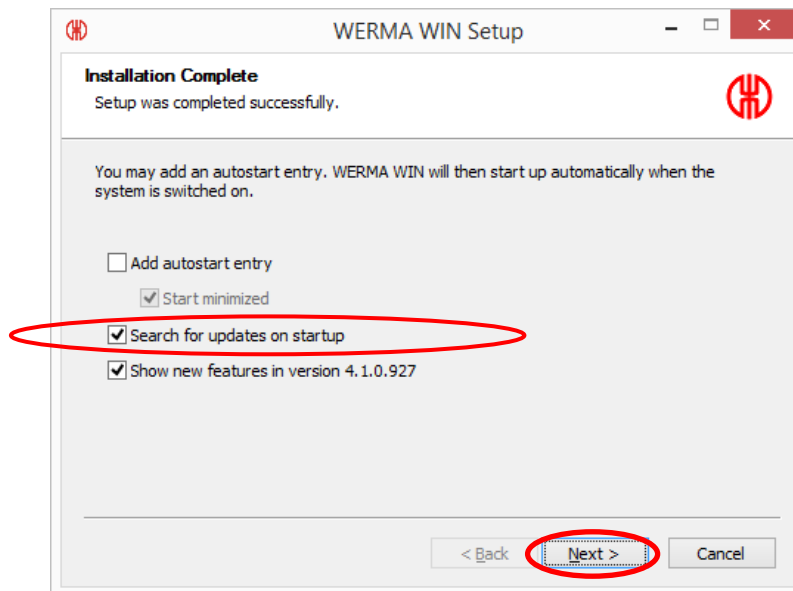


Note: If Microsoft .NET Framework has to be installed, the installation process may take several minutes and a restart is necessary.

-
10. By adding an "Add autostart entry", the WIN software runs automatically every time your PC starts up and a user is logged in.

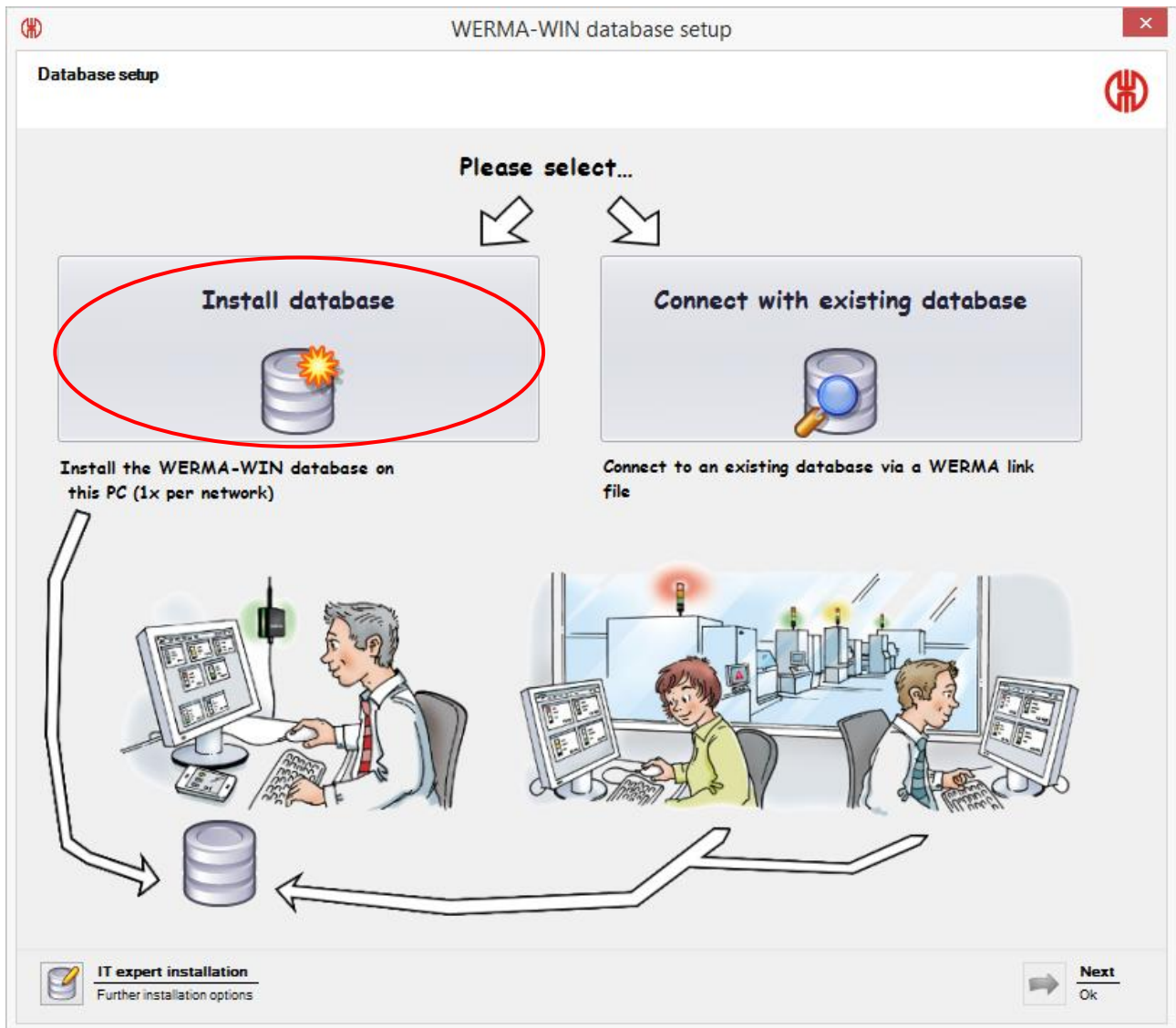


11. If you have selected the "search for updates on start-up" box, WERMA WIN will search for and inform you of any updates every time it starts up.

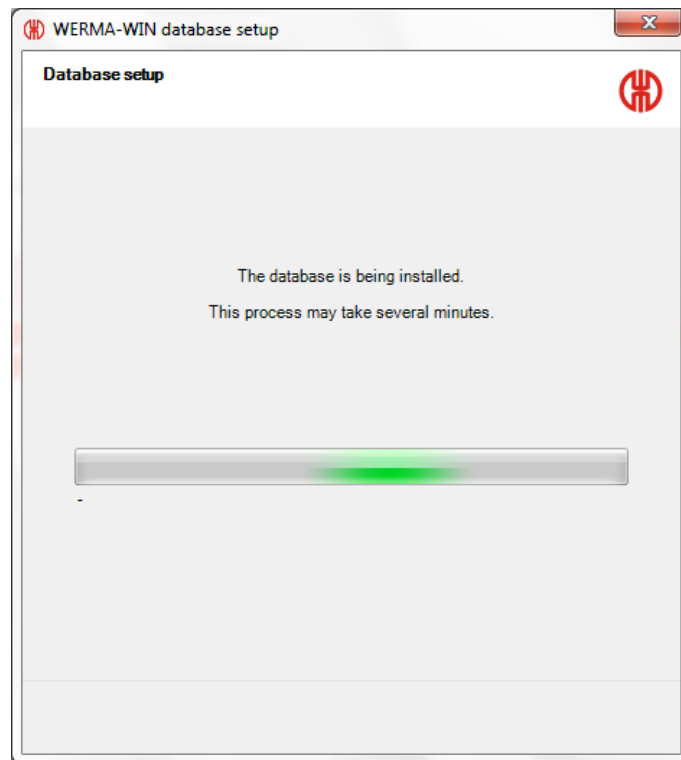


12. Click "Next".

13. The following window opens. Please select "Install database". The database set up installs Microsoft SQL Server 2008 R2 locally with a WIN database.

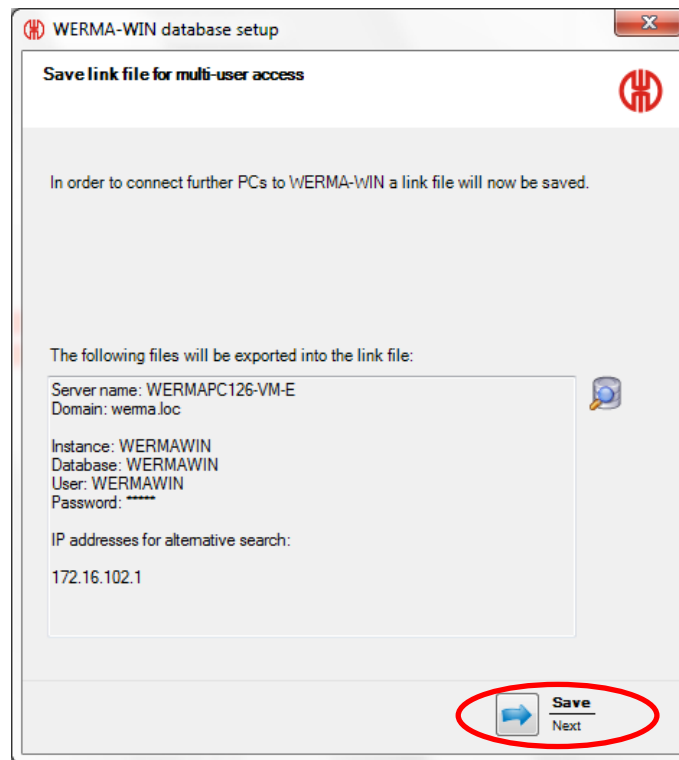


14. The following window opens. Please wait until the database set up is complete.



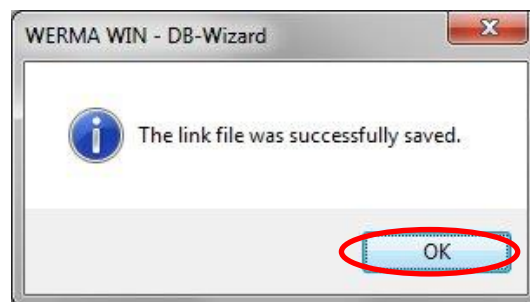
Note: During installation of the database a "WERMA WIN 4 Server service" and a "WERMA WIN 4 Connector service" is installed. The services run in the background as long as the PC is on. All collected WIN data is written to the WIN database without the WIN software running and a user logged on.

15. Save the link file, this is necessary for multiple accesses.

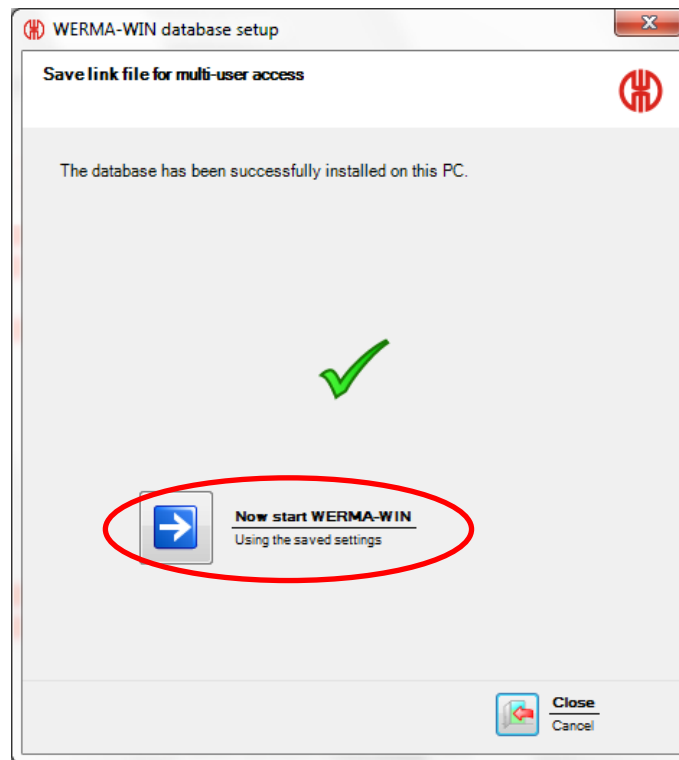


Note: Save the link file to a network location to which other users have accesses.

16. The following window appears when the link file is saved successfully.



17. The database has been successfully installed. You can now start WIN; the database set up will close automatically.

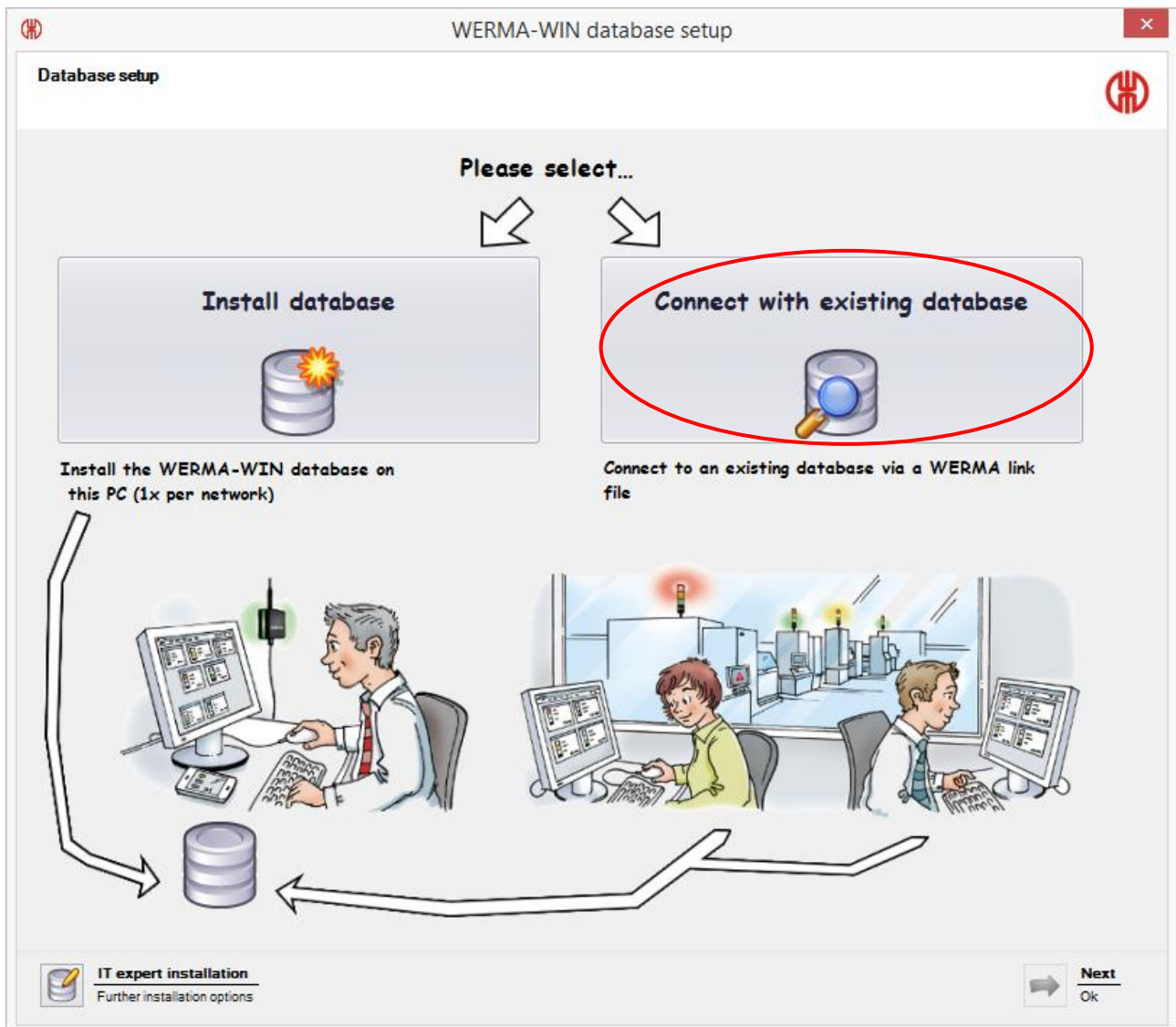


2.2 Connection to existing database

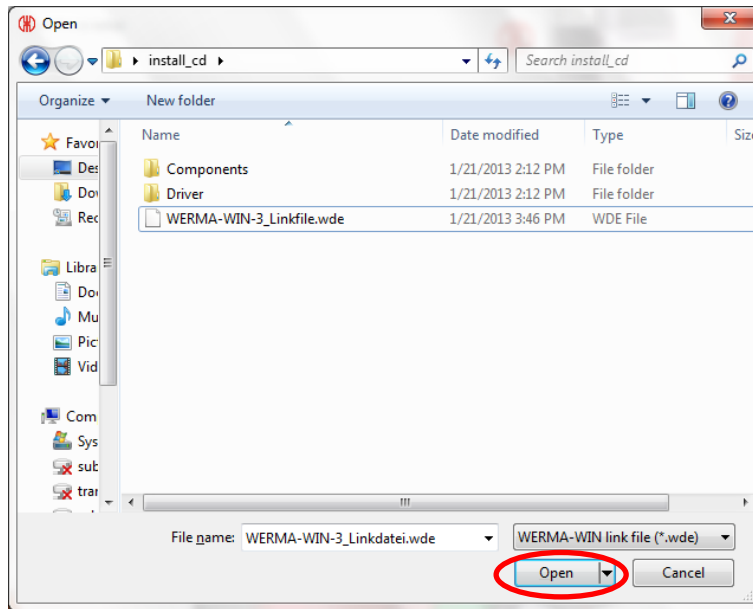
To connect to an existing database, proceed as described in chapter 2.1 up to and including point 12.

Proceed as follows:

1. The following window opens. Please select "Connect to existing database".

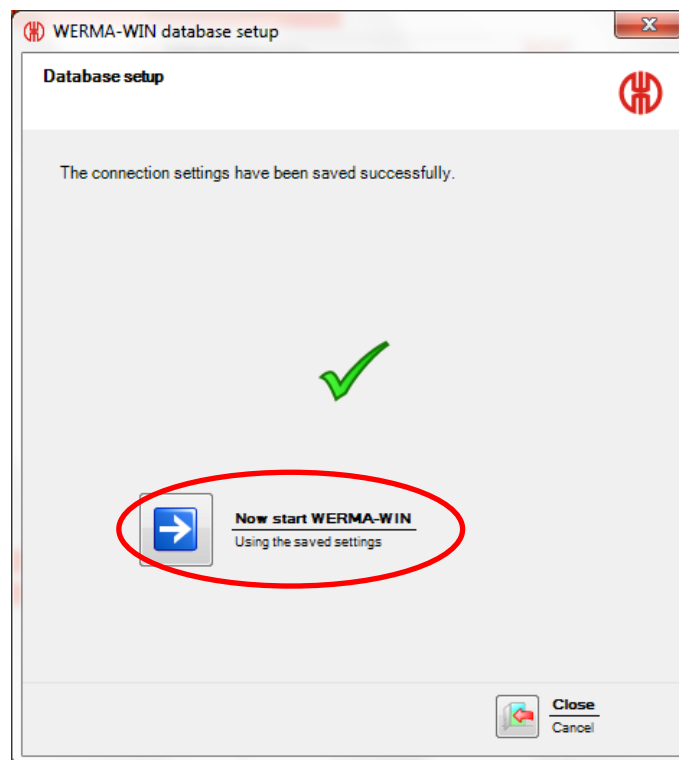


2. Select the location of the link file (network) and click "Open".



Note: A "WERMA WIN 4 Connector service" is installed when connected to the existing database. The service will run in the background as long as the PC is on. All collected WIN data is written to the WIN database without the WIN software running and a user logged on.

3. The connection to the database was successful. You can now start WIN the database set up will close automatically.



2.3 IT Expert Installation

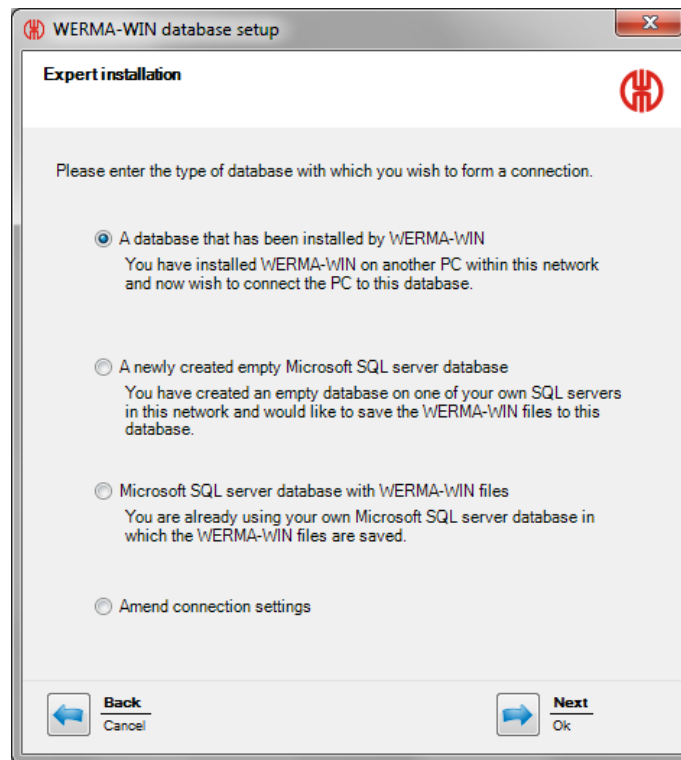
For Expert installation (further installation options), proceed as described in chapter 2.1 up to and including point 12.

Proceed as follows:

1. The following window opens. Please select "IT expert installation".



-
2. The following window opens, you have several choices to connect to a database, see chapter 2.3.1 to 2.3.3.

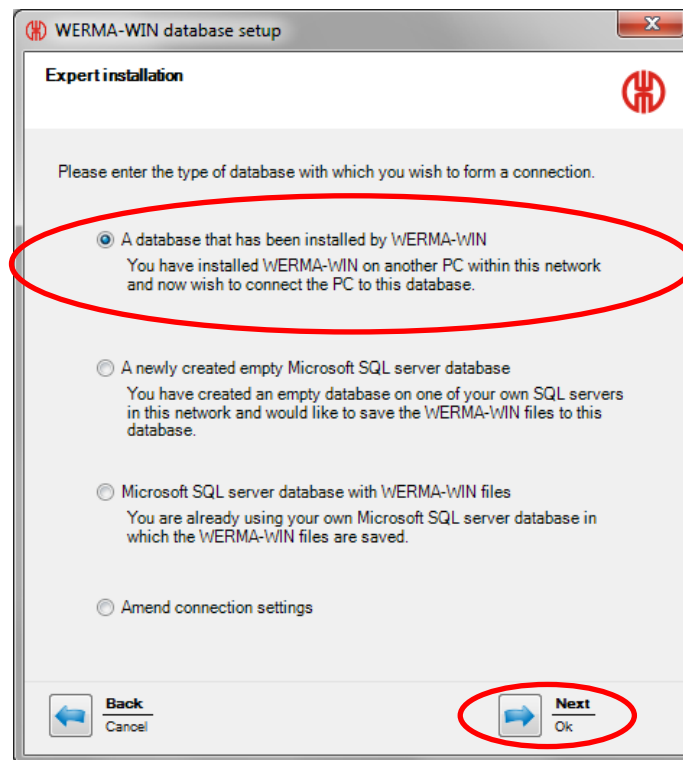


2.3.1 A database that has been installed by WERMA-WIN

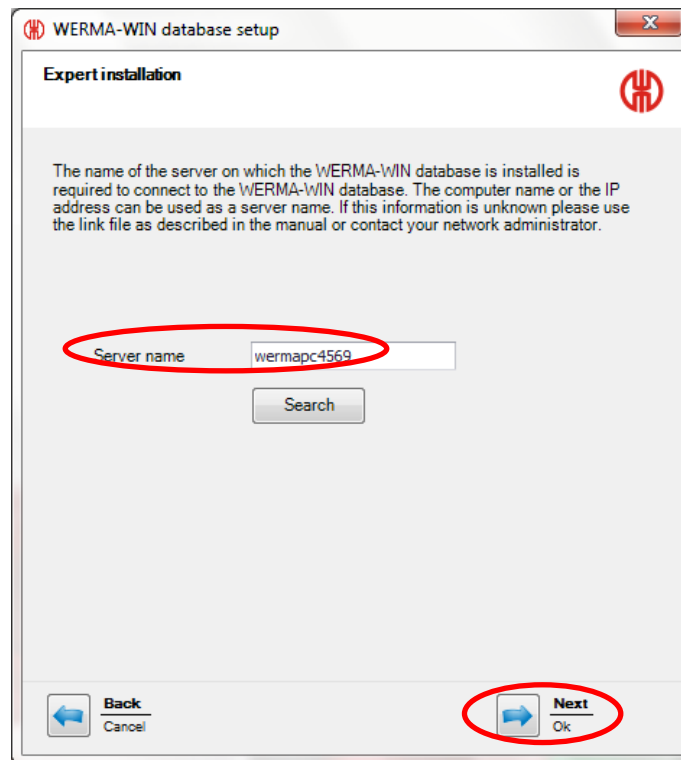
By selecting this option, you can connect to an existing WIN database (see also chapter 2.2).

To connect to an existing database, proceed as follows:

1. Select "A database that has been installed by WERMA-WIN" and click "Next."

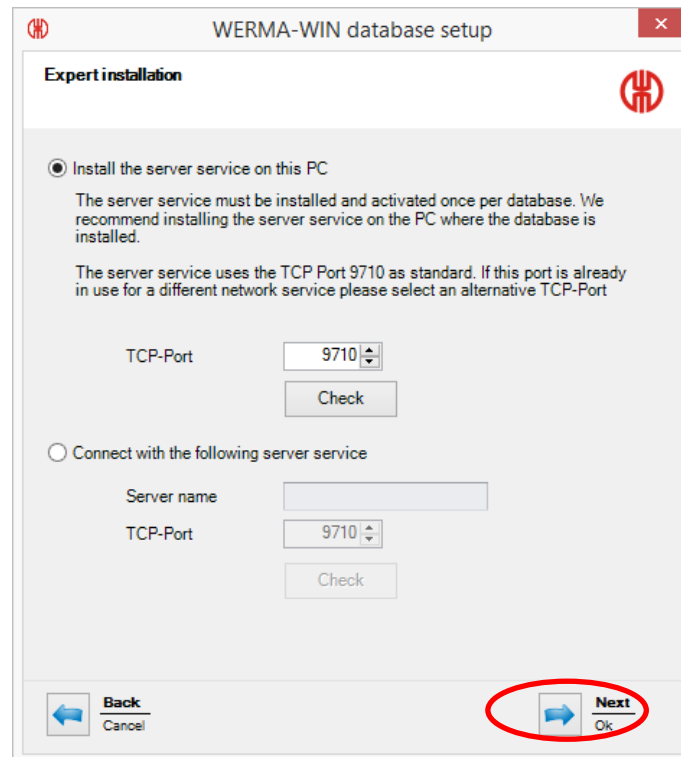


-
- Specify the server name on which the database is installed.



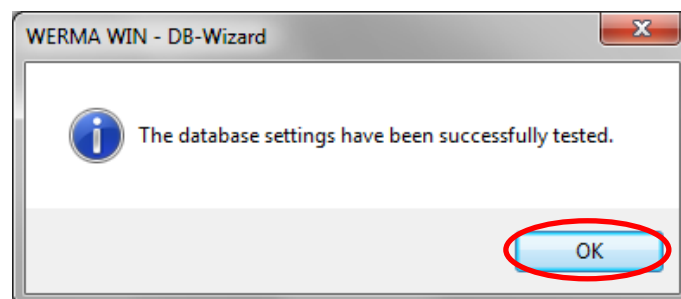
Note: The server name can be found in the WERMA-WIN link file (.wde) that you saved in the first installation.

3. Please select if you wish to have the "WERMA WIN 4 server service" installed on your desktop. Alternatively you can connect to an existing server service, giving the server name and TCP port. Confirm your selection with "Next".



Note: A "WERMA WIN 4 Connector service" will also be installed. The service will run in the background as long as the PC is on. All collected WIN data is written to the WIN database without the WIN software running and a user logged on.

4. If the connection to the database is successful, the following window appears. Click "OK".



2.3.2 A newly created empty Microsoft SQL server database

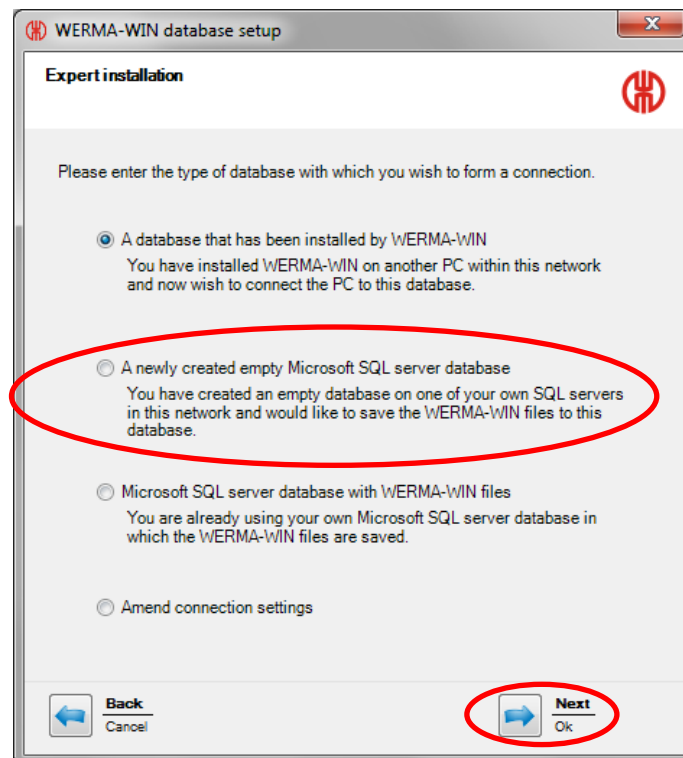
By selecting this option, you can connect to a new and empty database. The installation program will then create all necessary tables in the database.

Note: You have to create the empty database on the Microsoft SQL Server and link the corresponding database user with the database login. Please note:

Compatible from:	Microsoft SQL Server 2005 SP4
Recommendation:	Microsoft SQL Server 2008 R2
Collation:	Latin1_General_CI_AS
Role membership:	db_datareader, db_datawriter and db_ddladmin or db_owner

To connect to an empty database, proceed as follows:

1. Select "A newly created empty Microsoft SQL server database" and click "Next."



2. Specify the access data for this new database.

WERMA-WIN database setup

Expert installation

Please enter the connection settings for the database server. Contact your network administrator if these settings are unknown.

Server name: wermawin

Instance name: wermawin

Database: wermawin

User name: wermawin

Password:

Search

Back Cancel Next Ok

3. Please select if you wish to have the "WERMA WIN 4 server service" installed on your desktop. Alternatively you can connect to an existing server service, giving the server name and TCP port. Confirm your selection with "Next".

WERMA-WIN database setup

Expert installation

Install the server service on this PC

The server service must be installed and activated once per database. We recommend installing the server service on the PC where the database is installed.

The server service uses the TCP Port 9710 as standard. If this port is already in use for a different network service please select an alternative TCP-Port

TCP-Port: 9710

Check

Connect with the following server service

Server name: []

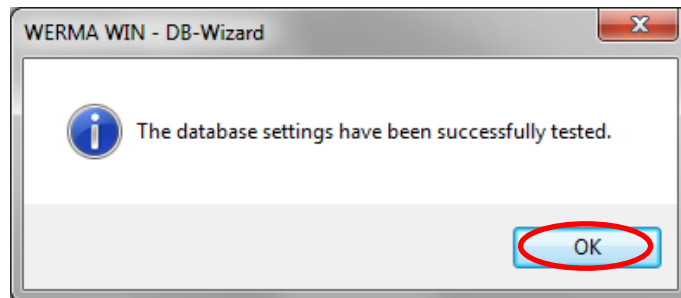
TCP-Port: 9710

Check

Back Cancel Next Ok

Note: A "WERMA WIN 4 Connector service" will also be installed. The service will run in the background as long as the PC is on. All collected WIN data is written to the WIN database without the WIN software running and a user logged on.

4. If the connection to the database is successful, the following window appears. Click "OK".

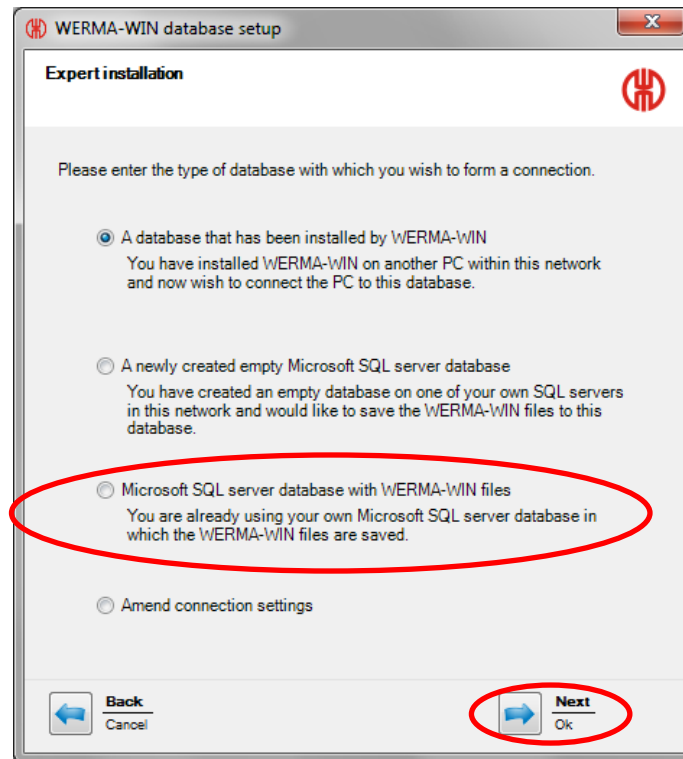


2.3.3 Microsoft SQL server database with WERMA-WIN files

By selecting this option, you can connect to an existing WIN database, which is stored on an SQL server.

To connect to a WIN database, proceed as follows:

1. Select "Microsoft SQL server database with WERMA-WIN files" and click "Next."



- Specify the access data for this database.

WERMA-WIN database setup

Expert installation

Please enter the connection settings for the database server. Contact your network administrator if these settings are unknown.

Server name: wermawin

Instance name: wermawin

Database: wermawin

User name: wermawin

Password: ●●●●●●

Search

Back Cancel Next Ok

- Please select if you wish to have the "WERMA WIN 4 server service" installed on your desktop. Alternatively you can connect to an existing server service, giving the server name and TCP port. Confirm your selection with "Next".

WERMA-WIN database setup

Expert installation

Install the server service on this PC

The server service must be installed and activated once per database. We recommend installing the server service on the PC where the database is installed.

The server service uses the TCP Port 9710 as standard. If this port is already in use for a different network service please select an alternative TCP-Port

TCP-Port: 9710

Check

Connect with the following server service

Server name: []

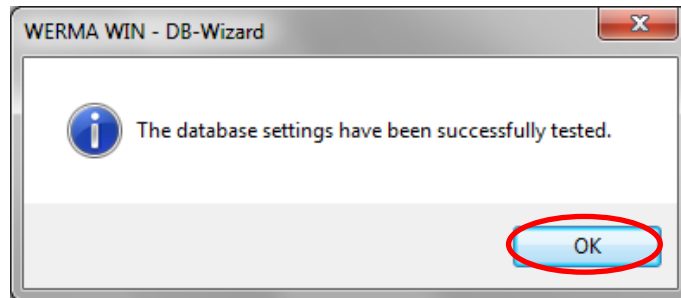
TCP-Port: 9710

Check

Back Cancel Next Ok

Note: A "WERMA WIN 4 Connector service" will also be installed. The service will run in the background as long as the PC is on. All collected WIN data is written to the WIN database without the WIN software running and a user logged on.

4. If the connection to the database is successful, the following window appears. Click "OK".



2.4 Firewall Configuration

When installing WERMA WIN all necessary ports are configured by default in the Windows Firewall. If you are using a different or additional firewall or network products, manual adjustment may be necessary. Please ensure the following network connections are not blocked:

Source(s)	Aim (s)	Type	Port	Note
Server Client	MS SQL Server	UDP/TCP	-	We recommend allowing all network connections for sqlservr.exe and sqlbrowser.exe in the MS SQL Server installation. For a different configuration, follow the Administration Manual of the MS SQL Server.
Server Client	Server	TCP	9710*	Data connection to the WERMA WIN Server service
Server	Ethernet Master	TCP	80*	http-data connection
Server	Ethernet Master	UDP- Broad- cast	5000	Acquire Device Information
Server	<external Mail server>	TCP	25*	Mail using SMTP to the configured server
Server	www.werma-win.com **	TCP	443	Mail to the integrated email function. Configuration of Web proxy is possible.
Server Client	www.werma.com ** www.werma-win.com **	TCP	80	Update check, Retrieving the Online Manual and contact site

* Can be configured differently in the software.

** We recommend not blocking the access to other domains for future updates of WERMA WIN.

2.5 WERMA-WIN installation under Windows 10

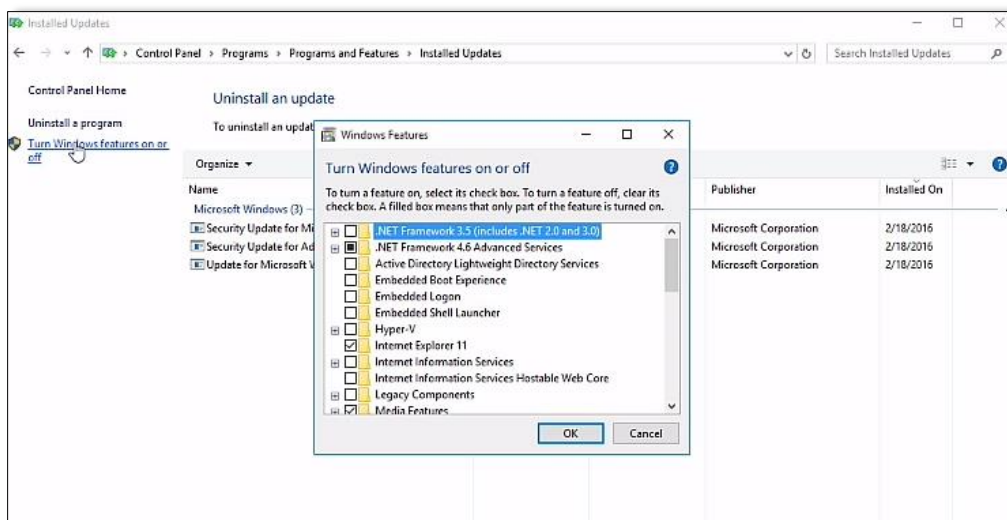
The automatic installation of the database components through WERMA-WIN is not possible for Windows 10 because Windows 10 does not support the Microsoft SQL Server 2008 R2.

This manual describes the manual installation of „Microsoft SQL Server 2014 Express“ and all required components.

2.5.1 Activation of Microsoft .NET Frameworks 3.5

Open „Programs and features“ and check whether the function „Microsoft .NET Frameworks 3.5“ is activated. If this is not the case please proceed as follows:

1. Open the tab „Turn windows features on or off“.
2. Activate “Microsoft NET.Frameworks 3.5“. Confirm your input with „OK“ and close the dialogue window.



Note: You need an internet connection to perform this installation.

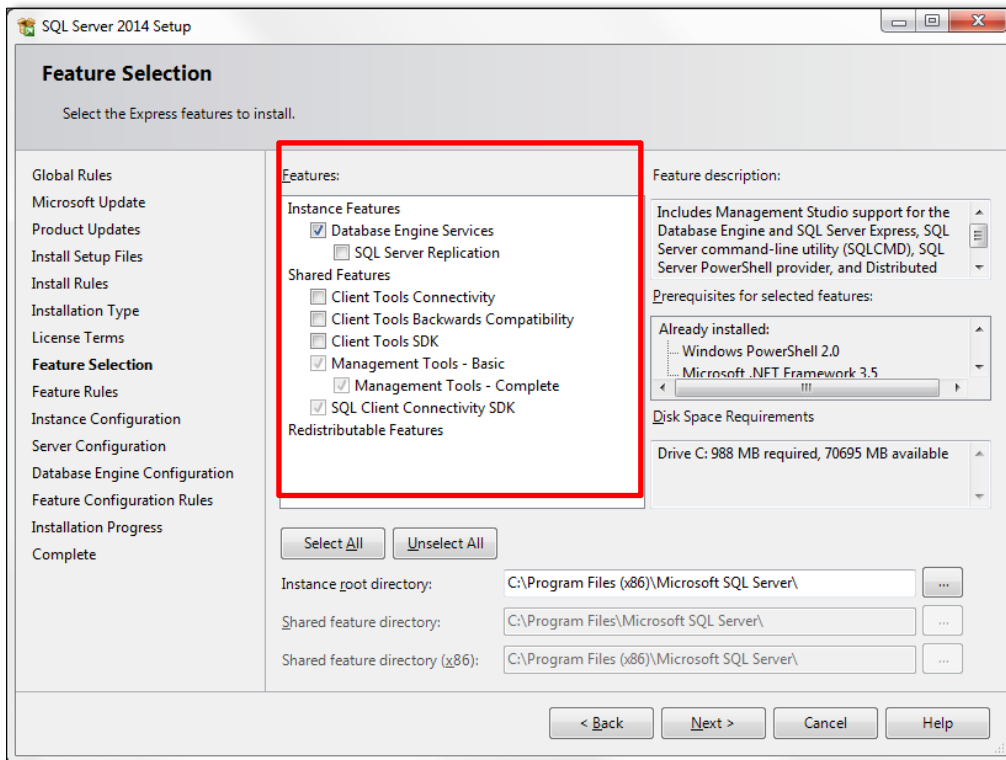
2.5.1 Installation SQL Server 2014 Express

The Installation of the SQL Server- 2014 Express has to be done manually:

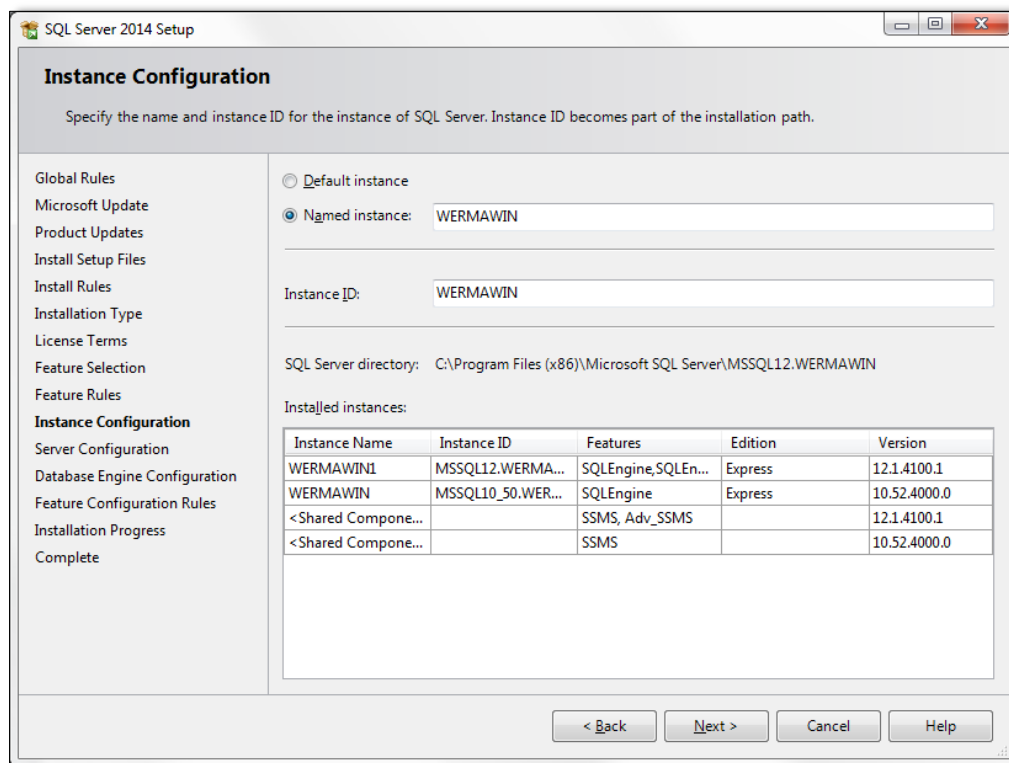
1. Download the SQL Server 2014 Express directly from Microsoft:
<https://www.microsoft.com/en-us/download/details.aspx?id=46697>
2. Select that installation file which is compatible for your operating system and execute the download.



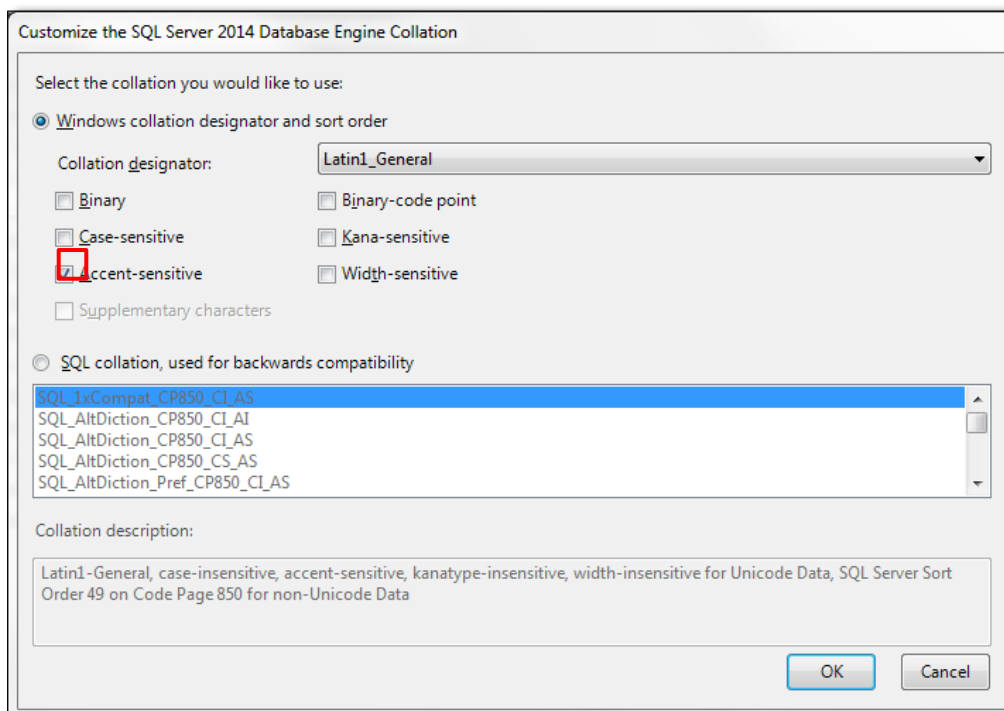
3. Open the installation file and confirm with „OK“.
4. Open „New SQL server stand-alone installation (...)“.
5. Accept the license terms and confirm with „next“.
6. Confirm the window „Microsoft Update“ with „next“.
7. Activate the following features and confirm with „next“.



- Enter „WERMAWIN“ in the field “named instance”, confirm with „next“.

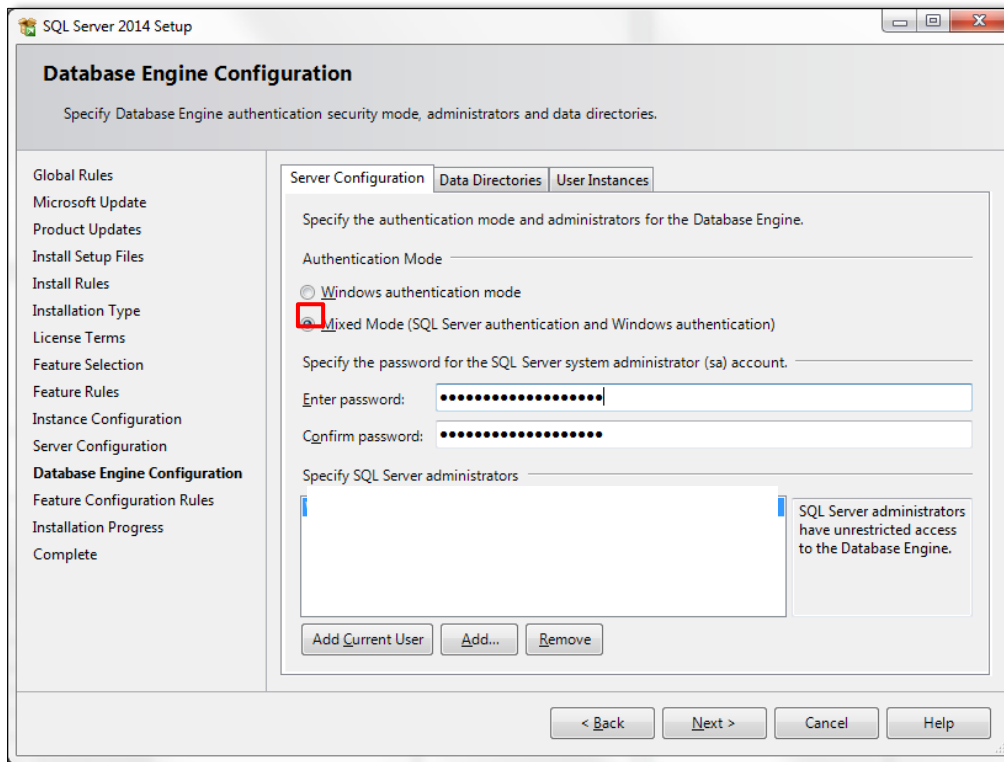


- Move from the tab „Service accounts“ to “Collation“ and select the Collation designator: Latin1_General, confirm with „OK“.



10. Activate the „mixed mode“ and enter the following password:

Password: Tyz19\$lx50WsR3Ed7m



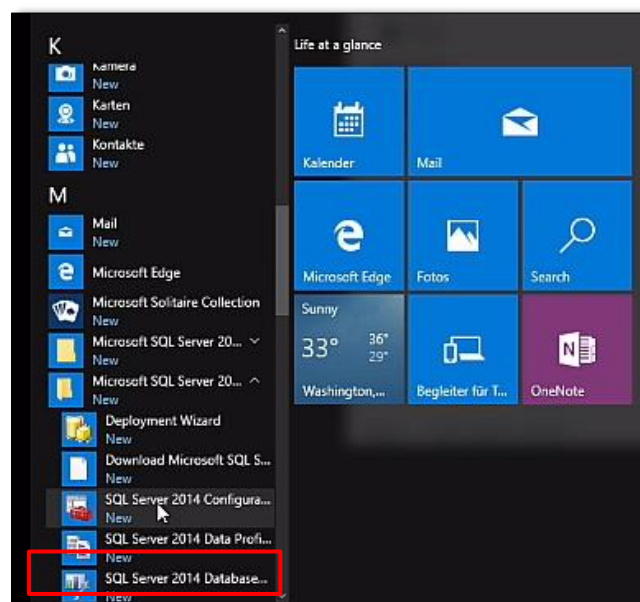
11. Confirm with „next“.

12. Close the dialogue window after the successful installation of the SQL Servers 2014.

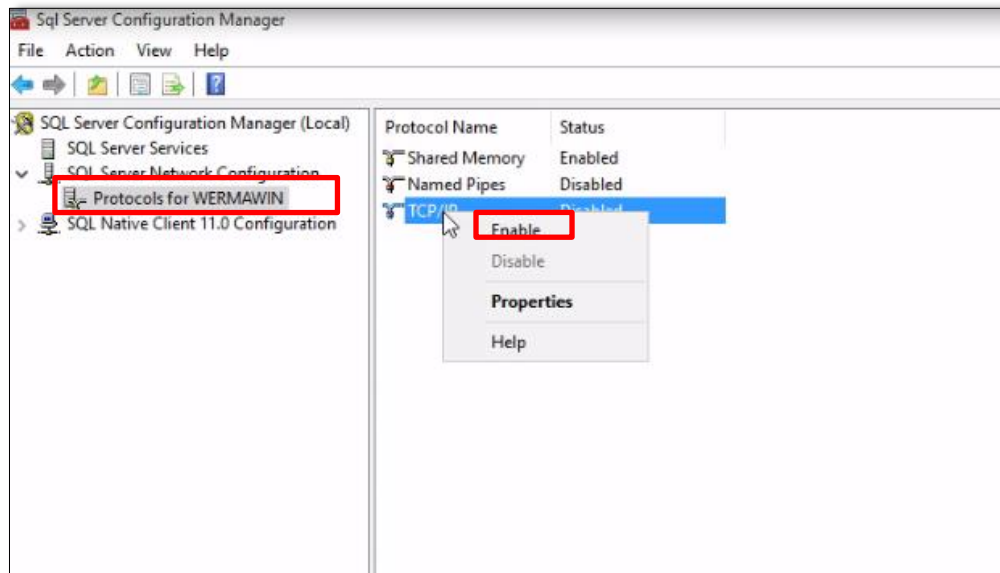
2.5.2 Activation of the TCP-protocol

Activate the TCP-record to enable a data exchange.

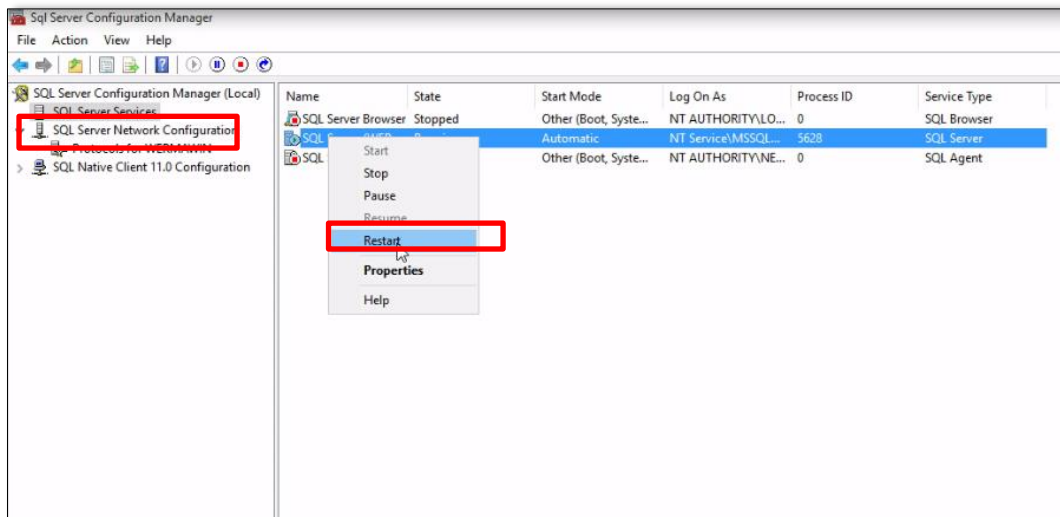
1. Open the „SQL Server 2014 Configuration manager“.



2. Activate the TCP-record by selecting „Protocols for WERMAWIN“ .



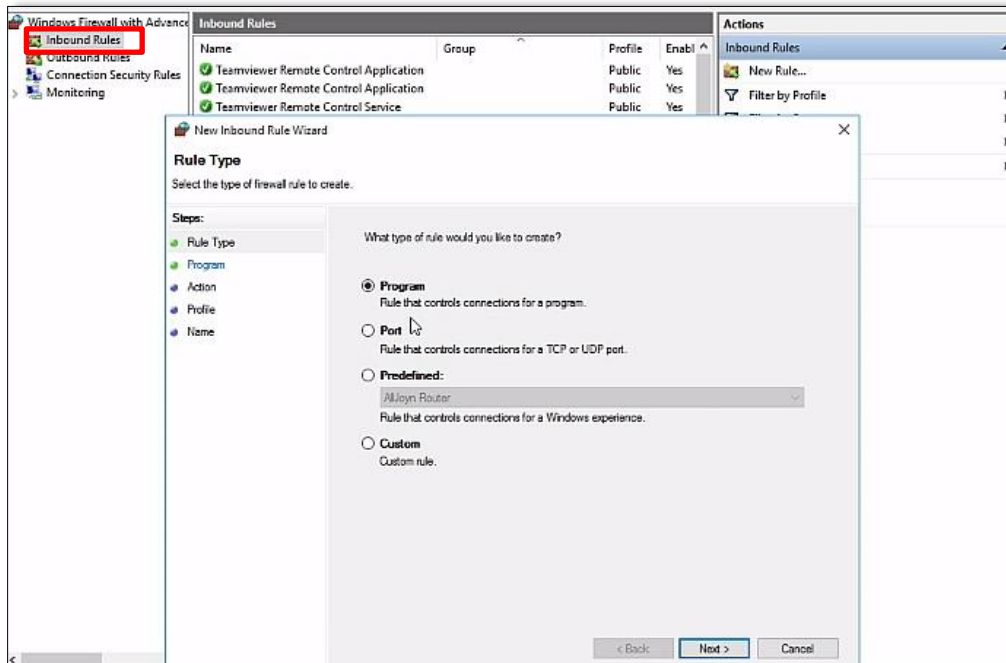
3. Restart the service **SQL Server (WERMAWIN)**.



2.5.3 Firewall „New rule“

For proper functioning of „WERMA-WIN“, you have to define a new incoming firewall rule.

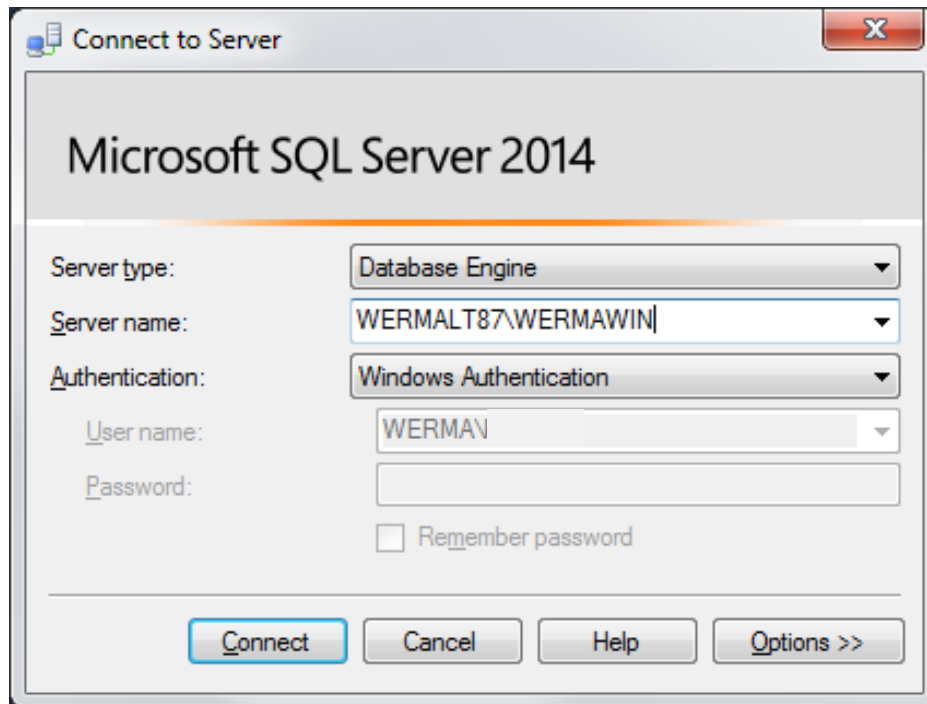
1. Open “Windows firewall with advanced security”.
2. Define a „new rule“ using „Inbound Rules“ and select the rule type “Program”.
Click “next”.



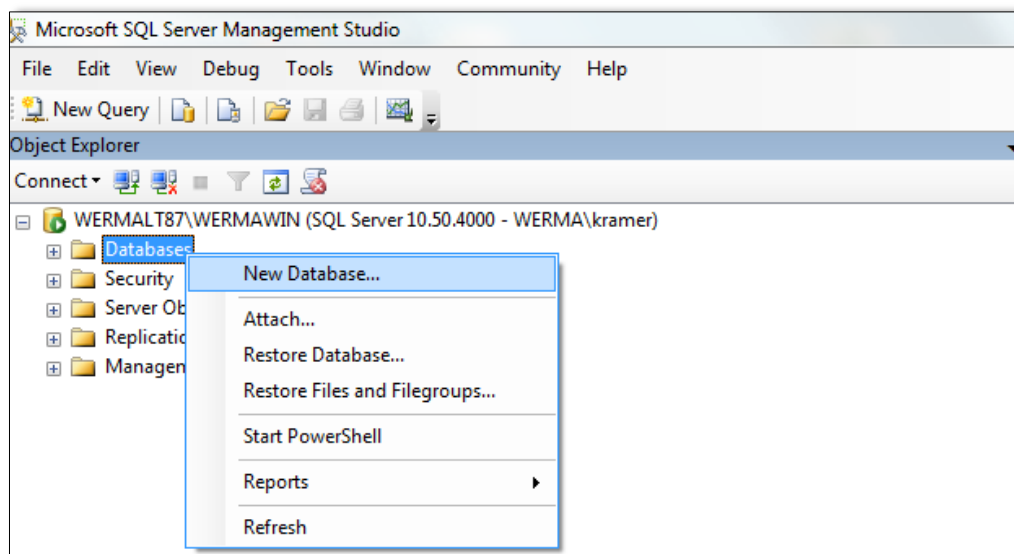
3. Select **%ProgramFiles%\Microsoft SQL Server\90\Shared\sqlbrowser.exe**
Confirm with „next“.
4. Select „allow the connection“ and confirm with „next“.
5. Choose „WERMAWIN“ (sqlbrowser.exe) as name and confirm your input with „next“.
6. Repeat step 1 to 5 with:
%ProgramFiles%\Microsoft SQL Server\MSSQL12.WERMAWIN\MSSQL\Binn\sqlservr.exe
7. Select the name „WERMAWIN (sqlsrvr.exe)“.

2.5.4 Database configuration

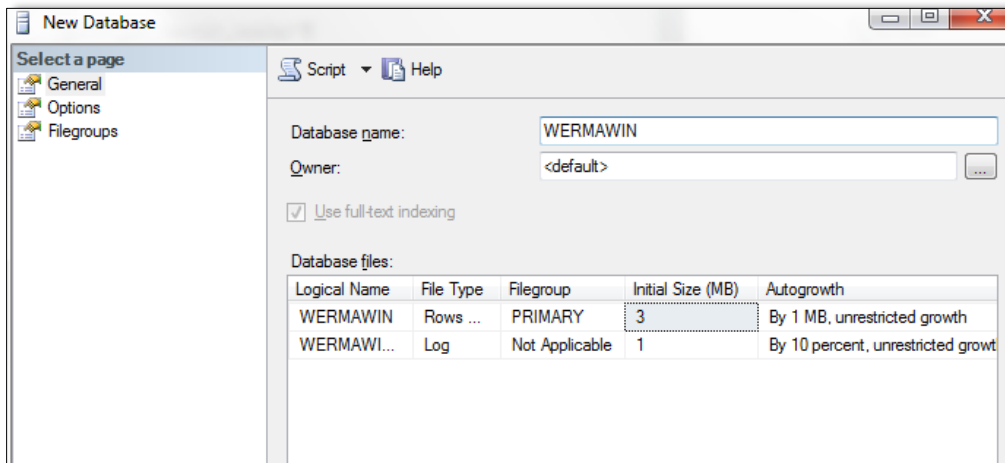
1. Open the „Microsoft SQL Management Studio“. Enter your server name if you use a server. Then click „Connect“.



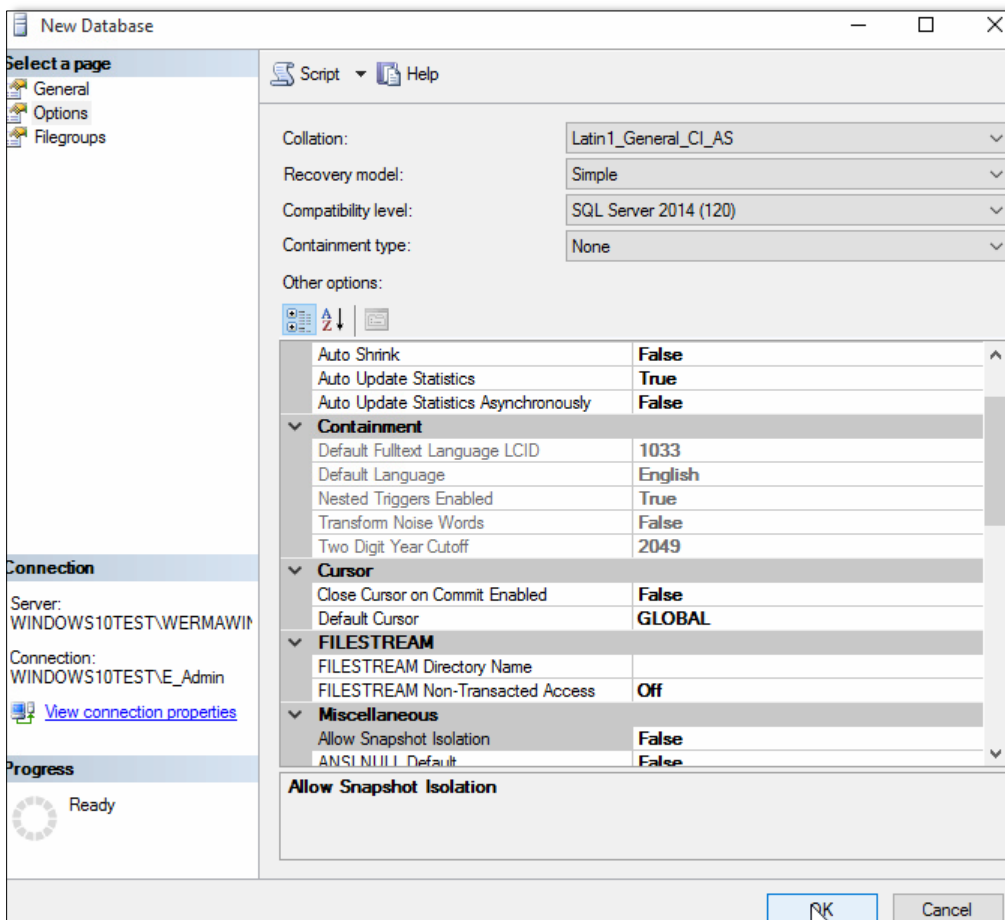
2. Create a new database.



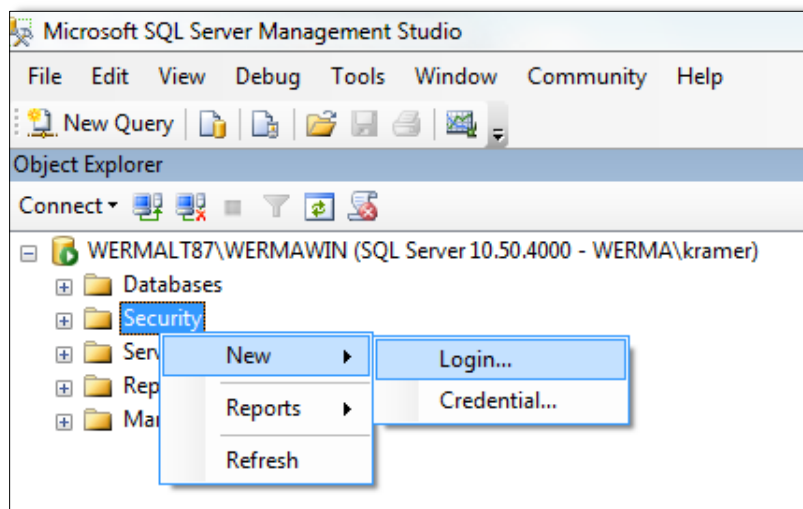
- Enter in the database field the name „WERMAWIN“ and confirm your entry with „OK“.



- Click "Options" at the left tab page and select the following settings at the tab „Collation“:
Latin1_General_CI_AS



5. Create a new login using the tab „security“.



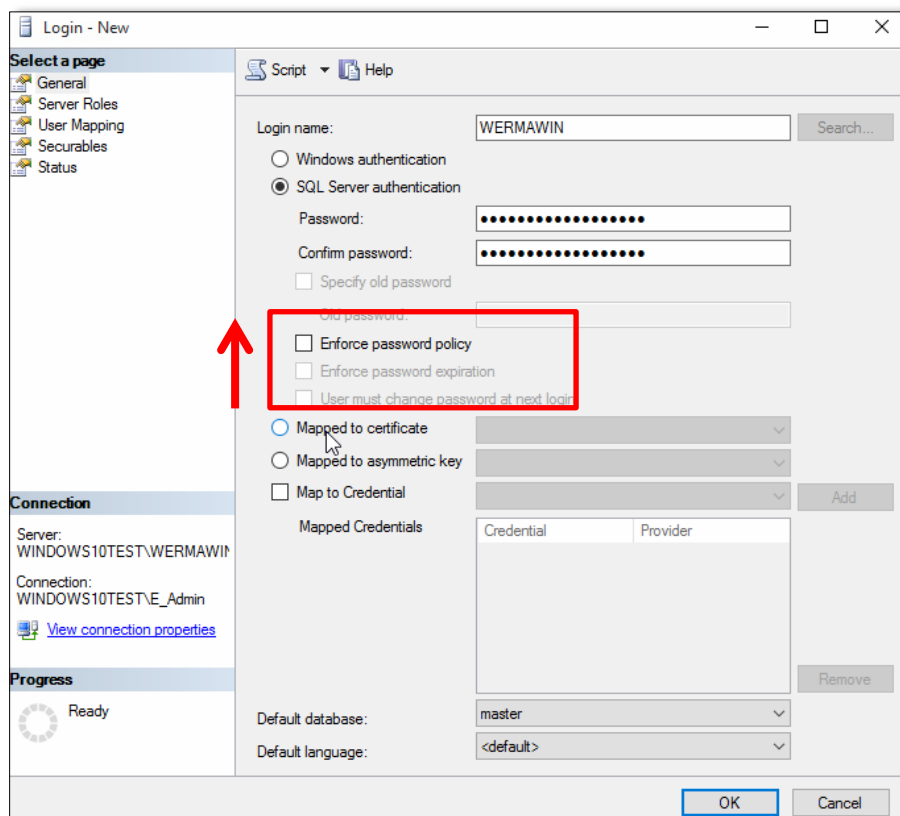
6. Please select:

Login name: **WERMAWIN**

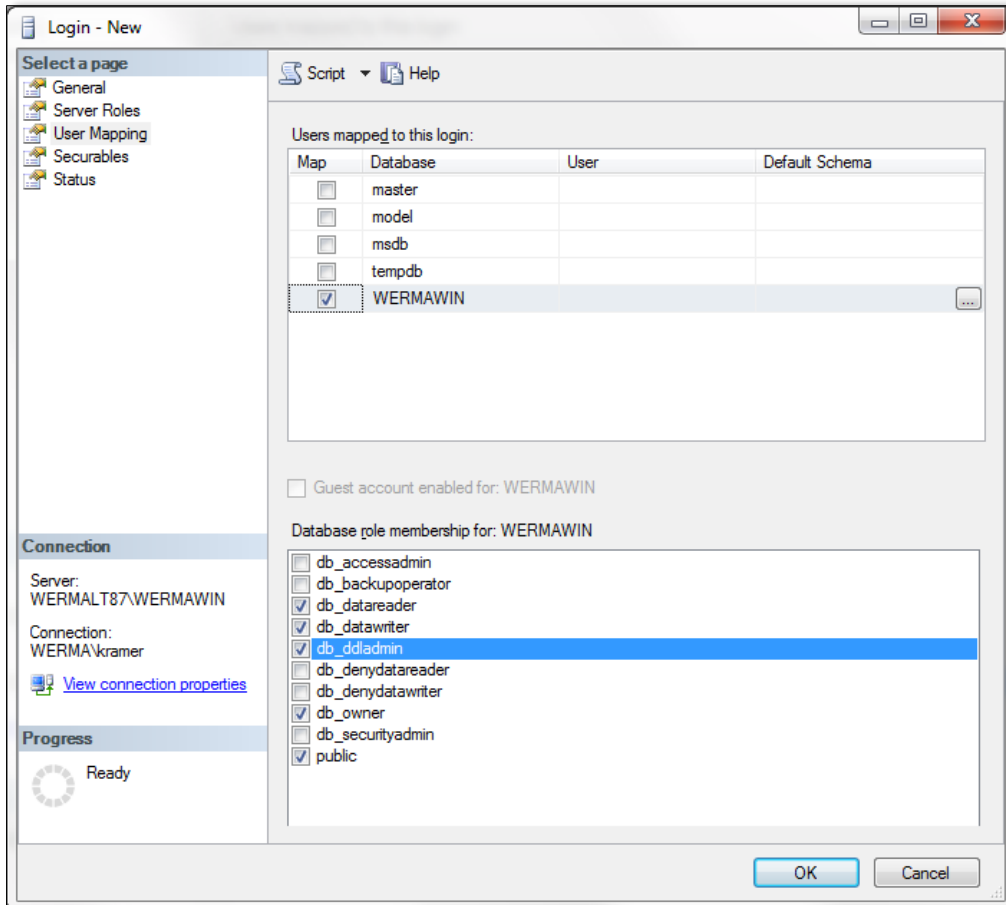
password: **Tyz19\$!x50WsR3Ed7mz**

7. Disable from bottom to the top the boxes

- Enforce password policy
- Enforce password expiration
- User must change password at next login

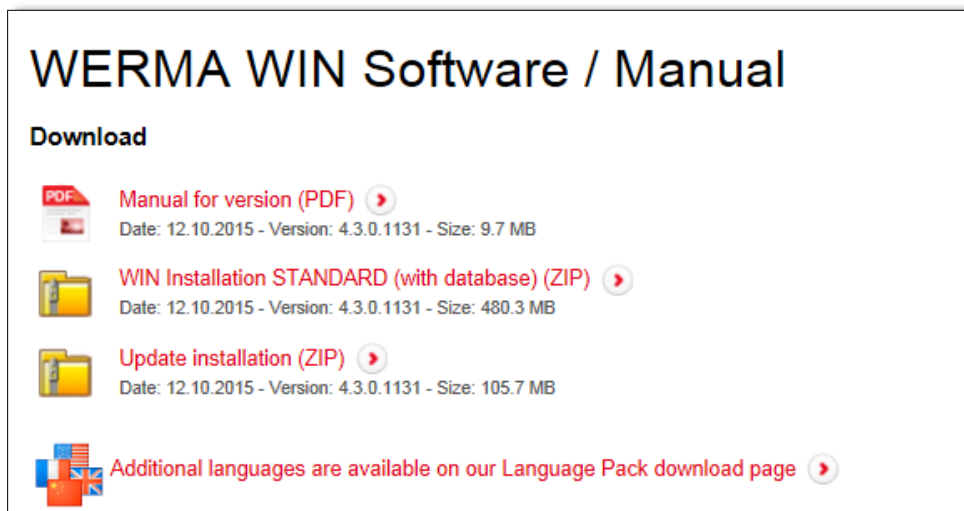


8. Select „User Mapping“ from the left tab page. Chose “WERMAWIN” from the list of available databases. Give the user following rights:
 - db_owner
 - db_datareader
 - db_datawriter
 - db_ddl_admin
 - public
9. Save with “OK”.



2.5.5 "WERMA-WIN" download

1. Open the Website www.werma.com/win and start the download „WIN Installation STANDARD (with database)(ZIP)“



Note: You must have administrator rights to install the WIN software.

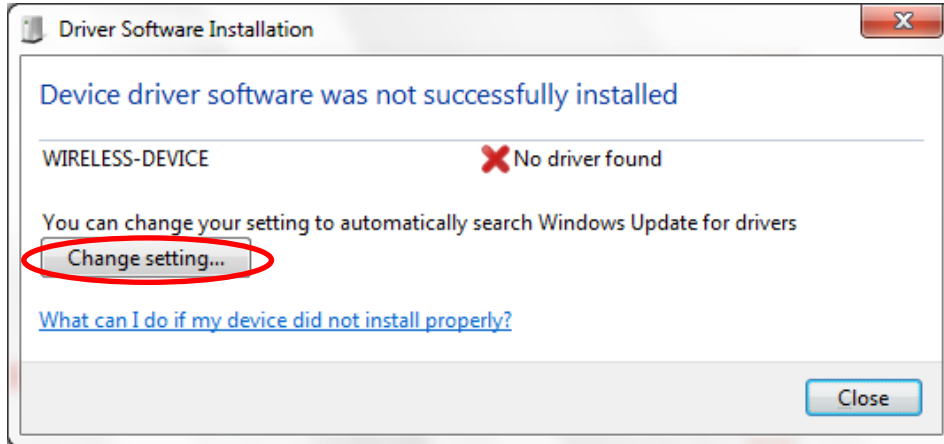
2. Unpack the install file and restart the setup.
3. Execute the „**IT expert installation**“. For more information, see chapter 2.3 of the manual for version, at www.werma.com/win.



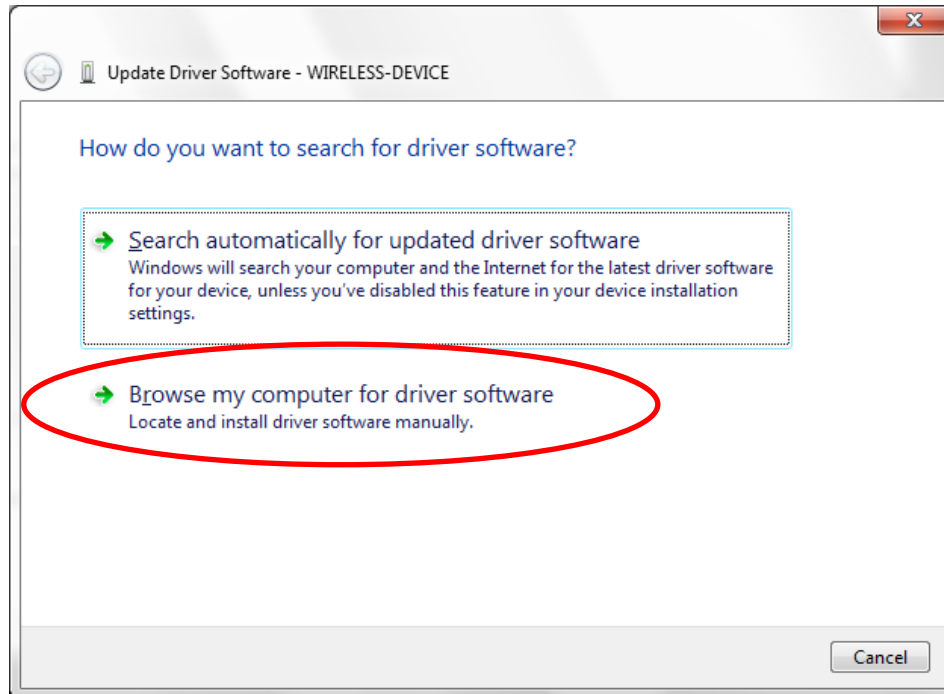
3. Manual driver installation

Note: Manual driver installation is only required if the WIN master is not recognised after installation of the WIN software. In this case, Windows will start the hardware wizard.

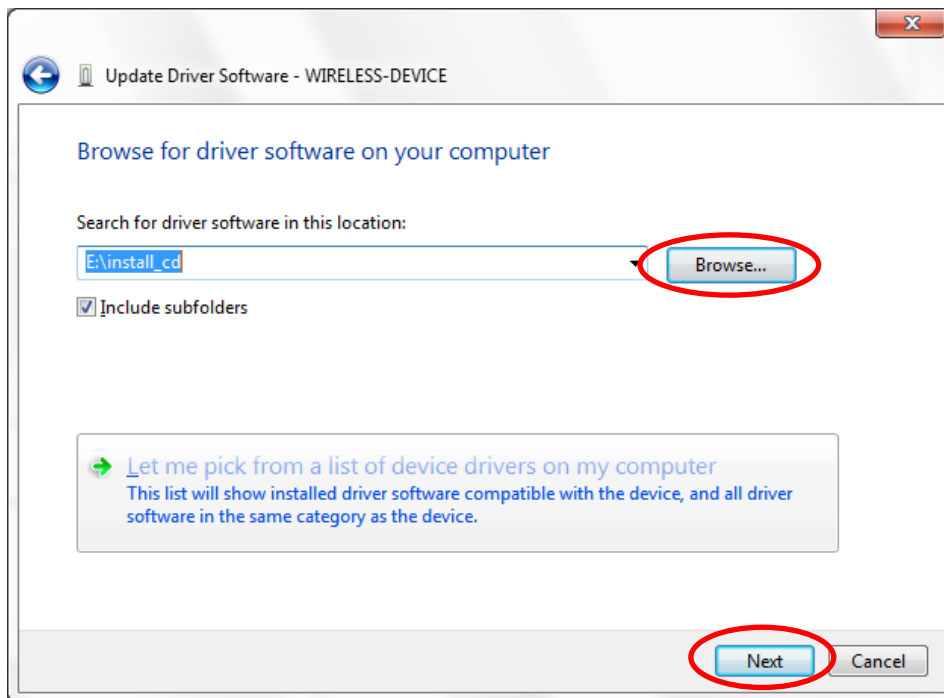
1. Click on "Change setting...".



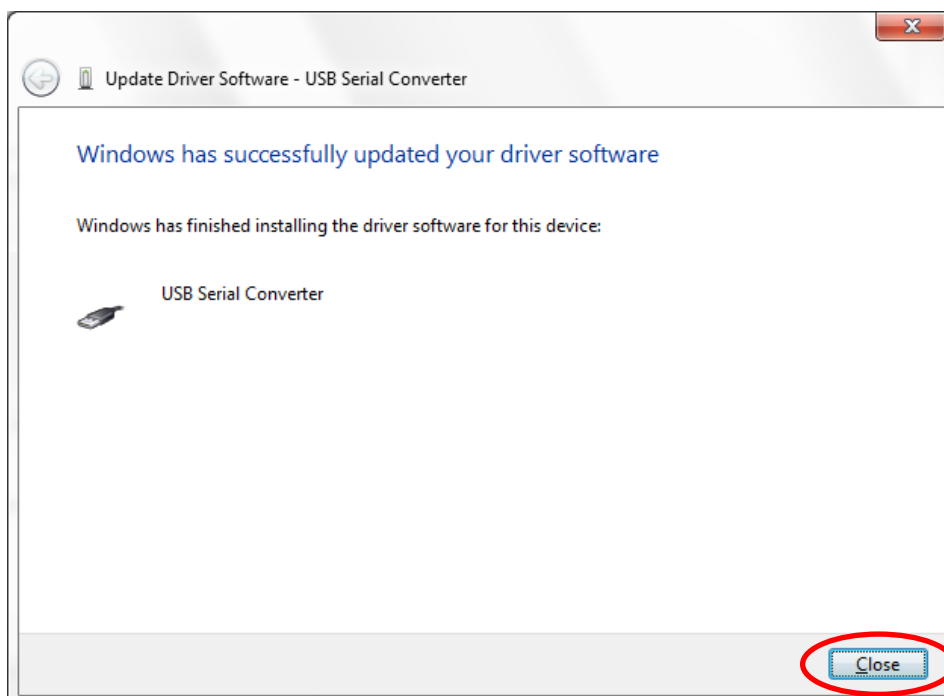
2. Please choose "Browse my computer for driver software".



3. Specify the location of the WIN driver by clicking "Browse ..." Select the "Driver" folder and confirm by clicking "OK". Click "Next" again.



4. The driver for the WIN master has been successfully installed. Click "Finish" to close the hardware wizard.

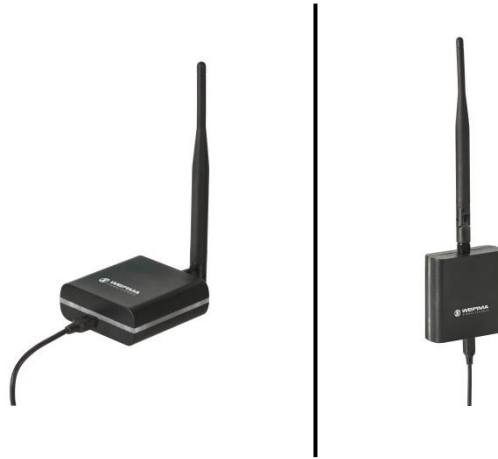


Note: The WIN master is now ready for operation.

4. Mounting – WIN master / WIN ethernet master

Note: The ideal wireless connection is achieved, if as few objects as possible are in between the WIN master and the WIN slave.

1. Fix the rubber feet or the wall bracket to the housing.
2. Screw the antenna on to your WIN master.



Note: For information on power supply, see chapter 1.6.4 and 1.6.5.

5. Activation

5.1 Activation of the WIN starter packages

WIN starter packages are:

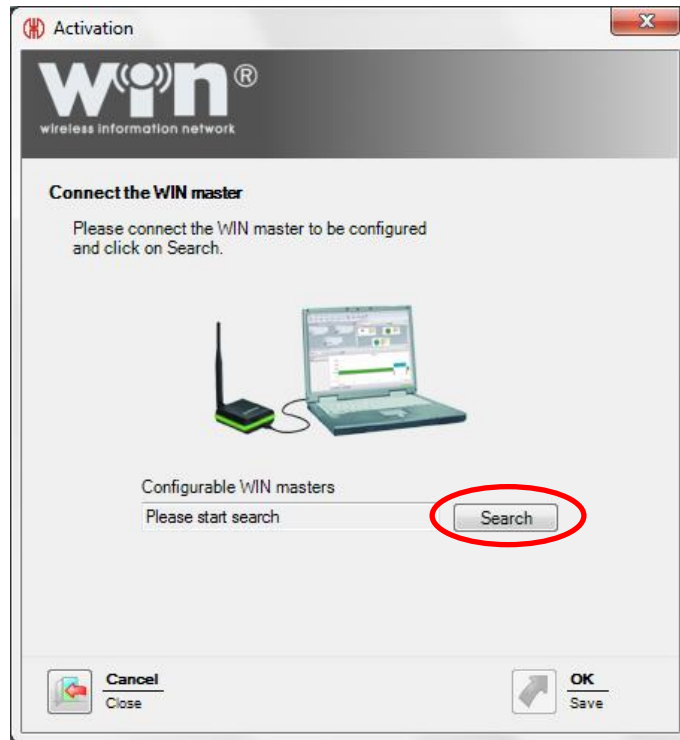
- WIN complete KombiSIGN 71 860.640.03
- WIN system KombiSIGN 70 860.840.01
- WIN system KombiSIGN 71 860.640.01
- WIN complete with WIN slave performance KombiSIGN 71 860.640.13
- WIN system with WIN slave performance KombiSIGN 70 860.840.11
- WIN system with WIN slave performance KombiSIGN 71 860.640.11

To activate the WIN starter packages proceed as follows:

1. Start up your PC and start the WIN software.
2. The following window appears. Confirm by clicking "Next".



3. Connect the WIN master to your PC using the USB cable provided. Click "Search" to search for the connected WIN master.



Note: If the WIN master is not recognised as hardware, please install the driver manually. Manual driver installation is described in chapter 2.4.

4. The WIN master has been detected. Click "OK" to proceed with the configuration.



5. You can now mount the three WIN slaves, which are included with the WIN system or WIN complete kits on your signal towers. These three WIN slaves are pre-configured, i.e. connection to the WIN master has already been established.



If you want to add further WIN slaves, you can do this after activation of the WIN system/complete.

Note: Activation of additional, WIN slaves, which are not pre-configured and additional WIN master, is described in chapter 5.2

5.2 Activation of the additional WIN components

Additional WIN components are:

WIN master:

- WIN master 860.000.00

WIN ethernet master:

- WIN ethernet master 860.000.06

WIN slaves:

- WIN slave KombiSIGN 71 860.640.02
- WIN slave KombiSIGN 70 860.840.02
- ClearSIGN compact mit WIN slave 656.000.01

WIN slaves performance:

- WIN slave performance KombiSIGN 71 860.640.12
- WIN slave performance KombiSIGN 70 860.840.12
- ClearSIGN compact mit WIN slave performance 656.000.02

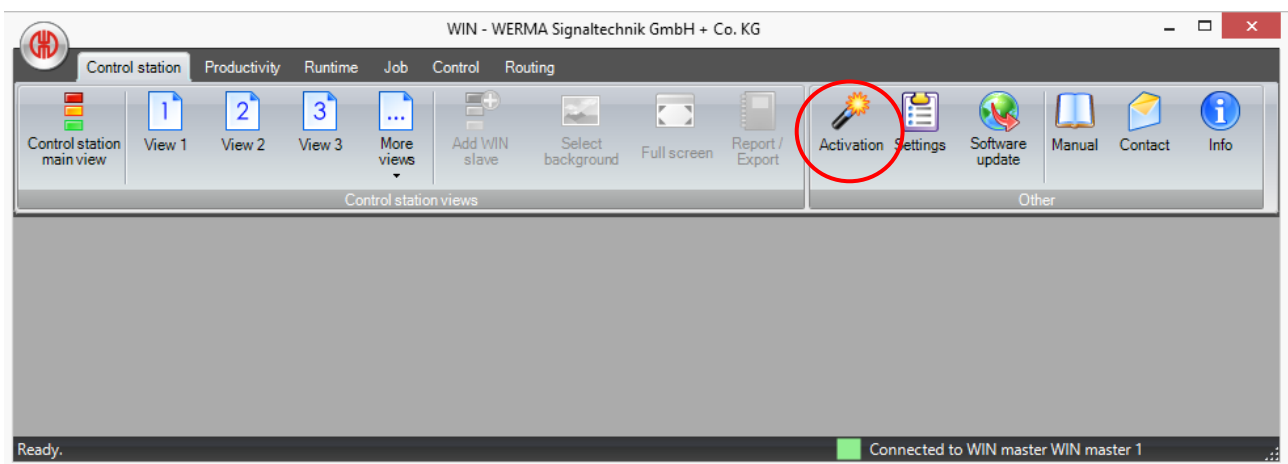
WIN slaves control:

- WIN slave control KombiSIGN 71 860.640.22
- WIN slave control KombiSIGN 70 860.840.22

5.2.1 WIN master

Configure a WIN master as follows:

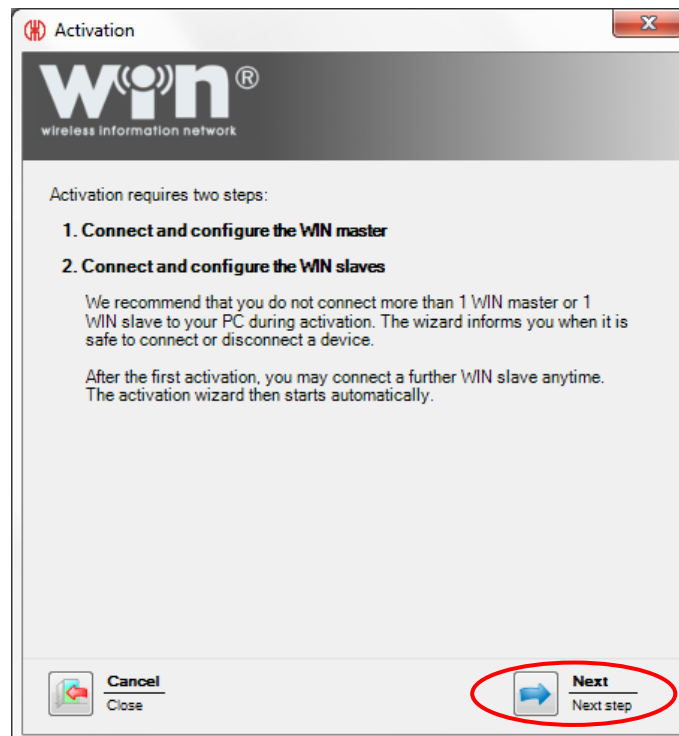
1. Click "Activation".



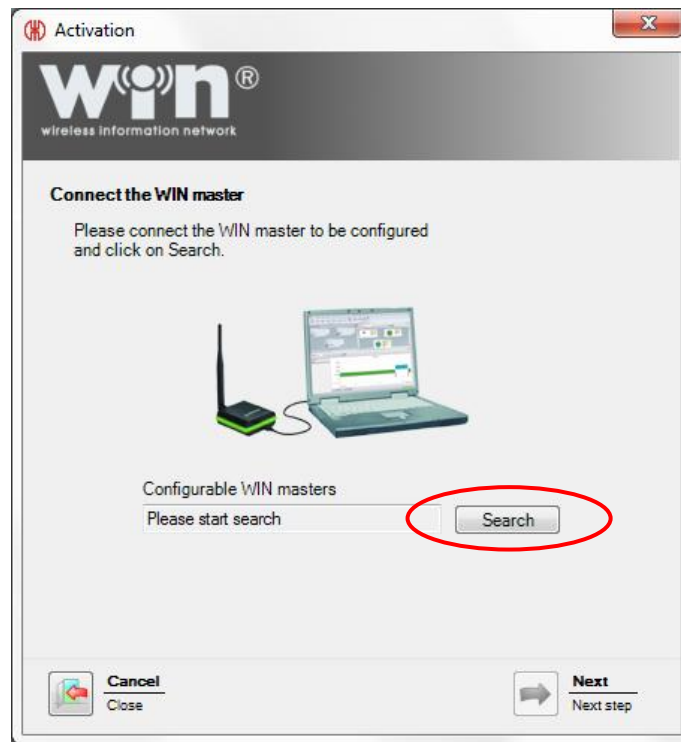
2. Select "Activate WIN device".



3. Read the information and click "Next".



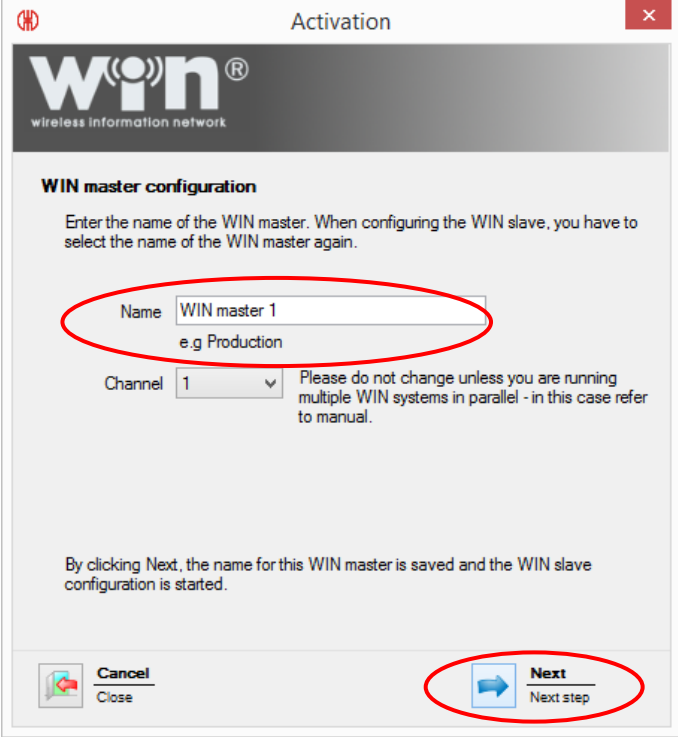
4. Connect the WIN master to the PC and click "Search".



5. After the WIN master has been recognised, click "Next".



6. If a new firmware version is available, a message appears. If you want to install the new firmware, confirm with "Yes".
7. In the following window, enter the description and click "Next".



Activation

win
wireless information network

WIN master configuration

Enter the name of the WIN master. When configuring the WIN slave, you have to select the name of the WIN master again.

Name
e.g Production

Channel Please do not change unless you are running multiple WIN systems in parallel - in this case refer to manual.

By clicking Next, the name for this WIN master is saved and the WIN slave configuration is started.

Close Next step

5.2.2 WIN ethernet master

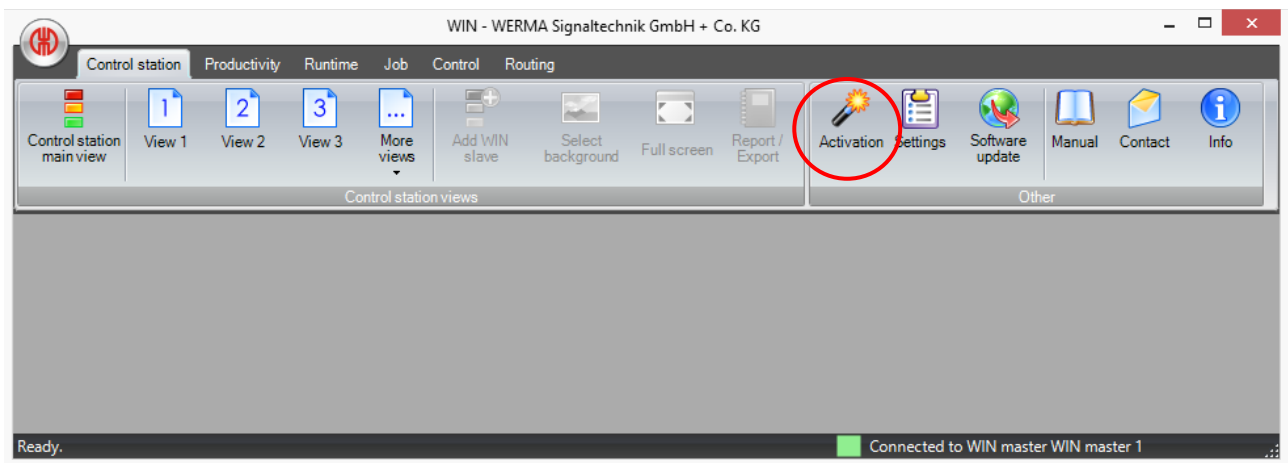
For the activation of a WIN ethernet masters, you have three options. These are:

- Automatically obtain an IP address via DHCP
- Static IP address
- Advanced network configuration

5.2.2.1 Automatically obtain an IP address via DHCP

Configure a WIN ethernet master with IP address via DHCP as follows:

1. Click "Activation".



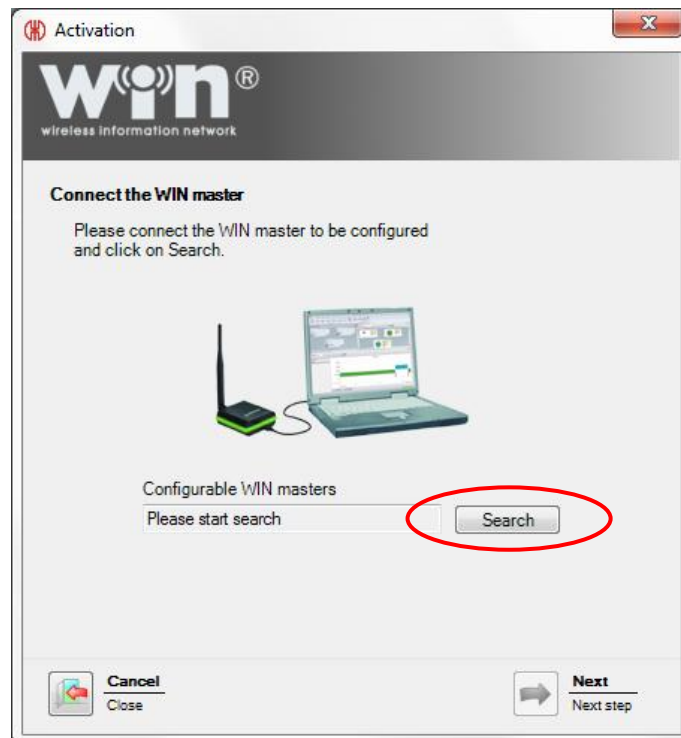
2. Select "Activate WIN device".



3. Read the information and click "Next".



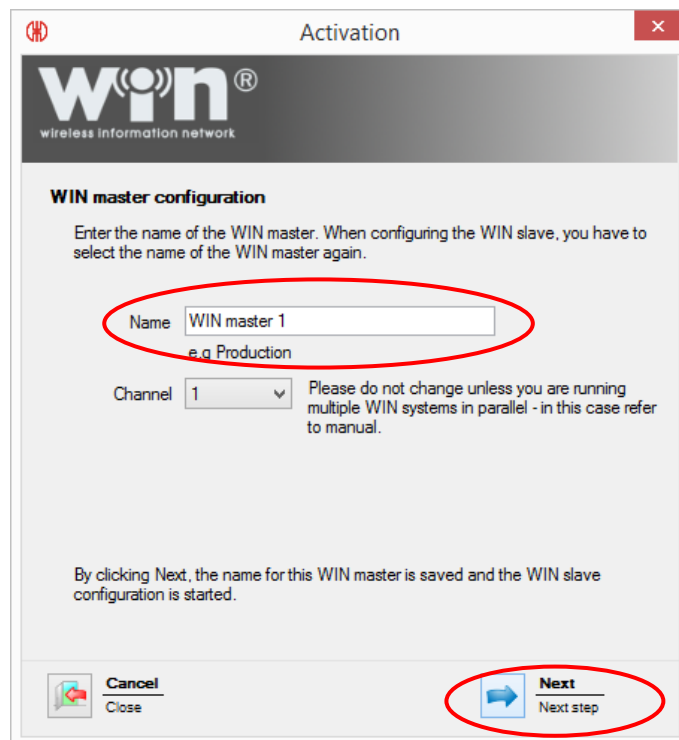
4. Connect the WIN ethernet master to the PC and click "Search".



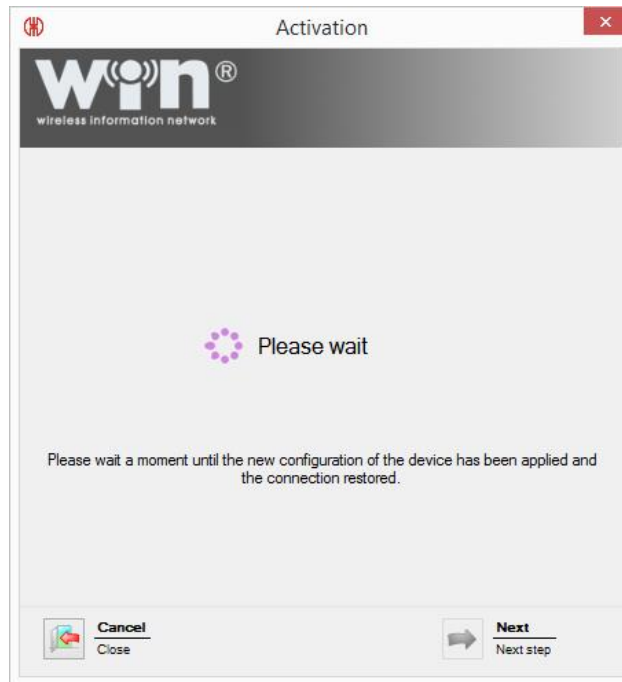
5. After the WIN master has been recognised, click "Next".



6. If a new firmware version is available, a message appears. If you want to install the new firmware, confirm with "Yes".
7. In the following window, enter the description and click "Next".



8. Please wait a moment until the configuration of the device has been applied and the connection restored.



9. Please wait a moment until the configuration of the device has been applied and the connection restored.

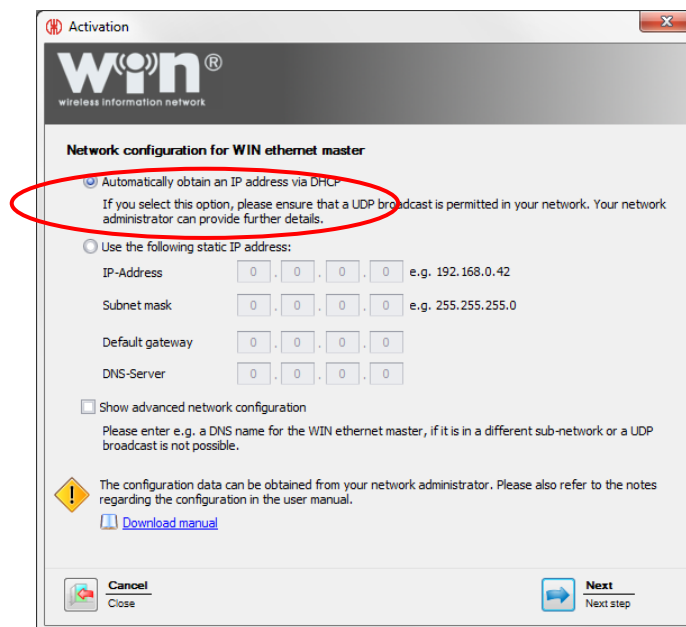
5.2.2.2 Use a dynamic IP-address

If the IP-address for WIN ethernet master is to be allocated by a DHCP-Server, this must be obtained by UDP-Broadcast.

Note: The WIN ethernet master and the SQL database must be in the same subnet and the UDP Broadcast must be activated. If this is not possible select the advanced network configuration see chapter (5.2.2.4).

To use a dynamic IP-address, proceed as follows:

1. Select „Automatically obtain an IP address via DHCP” and confirm with „Next“.



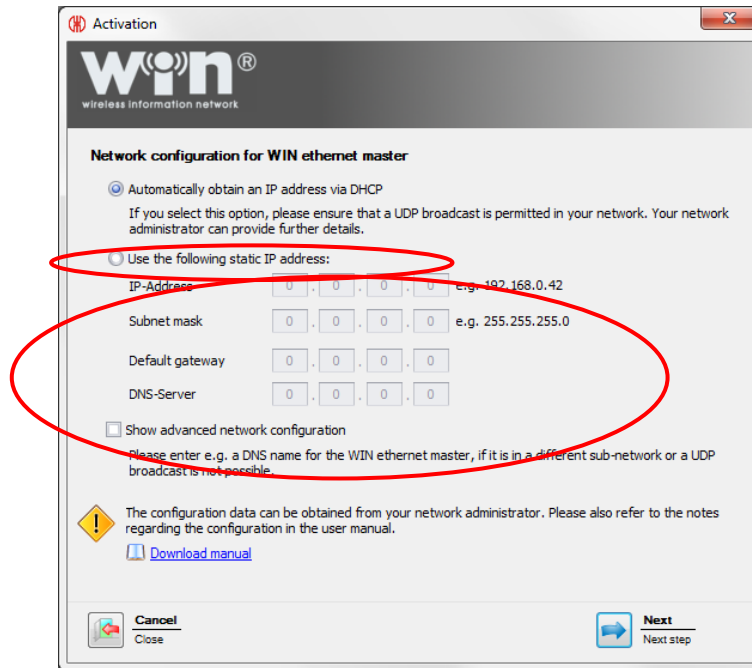
2. The configuration has been successfully completed. Now choose whether you want to make a further configuration or quit this configuration.



5.2.2.3 Use a static IP-address

If a static IP-address is allocated, configure the WIN ethernet master as follows:

1. Select "Use the following static IP-address".
2. Enter the configuration data into the fields and confirm your selection by clicking "Next".



Note: The configuration data can be obtained from you network administrator.

3. The configuration has been successfully completed. Now choose whether you want to make a further configuration or quit this configuration.



5.2.2.4 Advanced network configuration

The advanced network configuration must be used if:

- The WIN ethernet master and the WERMA WIN Server are in different subnets
- The UDP scan is not allowed
- It is not possible to select a static IP-address.

1. Select "Show advanced network configuration" and click "Next".

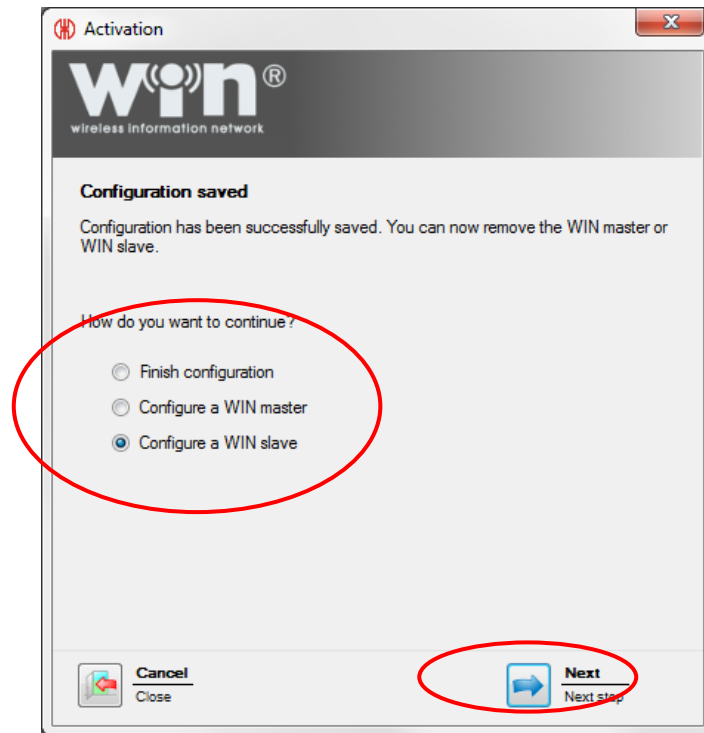
The screenshot shows the 'Activation' dialog box for WIN ethernet master. The title bar reads 'Activation'. The main content area is titled 'Network configuration for WIN ethernet master'. It features two radio button options: 'Automatically obtain an IP address via DHCP' (selected) and 'Use the following static IP address:'. Below the static IP option, there are four input fields for 'IP-Address', 'Subnet mask', 'Default gateway', and 'DNS-Server', each with a '0' in the first box and an example value to the right. A red oval highlights these four input fields. Below the fields is a checkbox labeled 'Show advanced network configuration' which is currently unchecked. At the bottom right, a 'Next' button with a blue arrow icon is circled in red. A 'Cancel' button is also visible at the bottom left.

2. Enter the configuration data into the fields.

The screenshot shows the 'Activation' dialog box for advanced network configuration. The title bar reads 'Activation'. The main content area is titled 'Advanced network configuration for WIN ethernet master'. It contains a paragraph of text explaining the default TCP/IP connection. Below the text are two input fields: 'IP / DNS name' and 'TCP-Port'. The 'TCP-Port' field has the value '80' and '(Default value: 80)' next to it. A red oval highlights the 'IP / DNS name' input field. At the bottom right, a 'Next' button with a blue arrow icon is circled in red. A 'Cancel' button is also visible at the bottom left.

Note: The configuration data for the "advanced network configuration" can be obtained from you network administrator.

3. The configuration has been successfully completed. Now choose whether you want to make further configuration or quit this configuration.

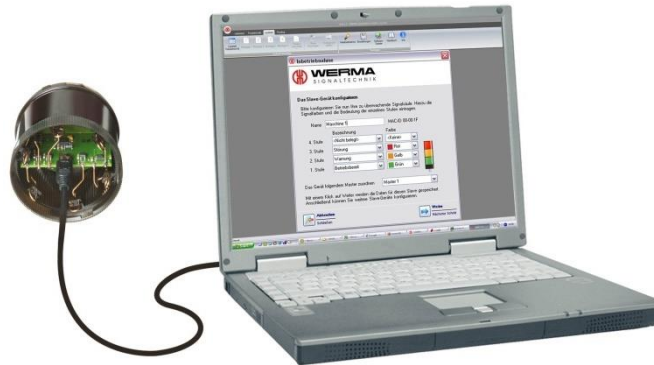


5.2.3 WIN slave

Note: The three WIN slaves included in the WIN system or WIN complete kits are pre-configured.

If you want to use more than three WIN slaves, configuration is carried out as follows:

1. Start the WIN software.
2. Connect the WIN slave to your PC using the USB cable.

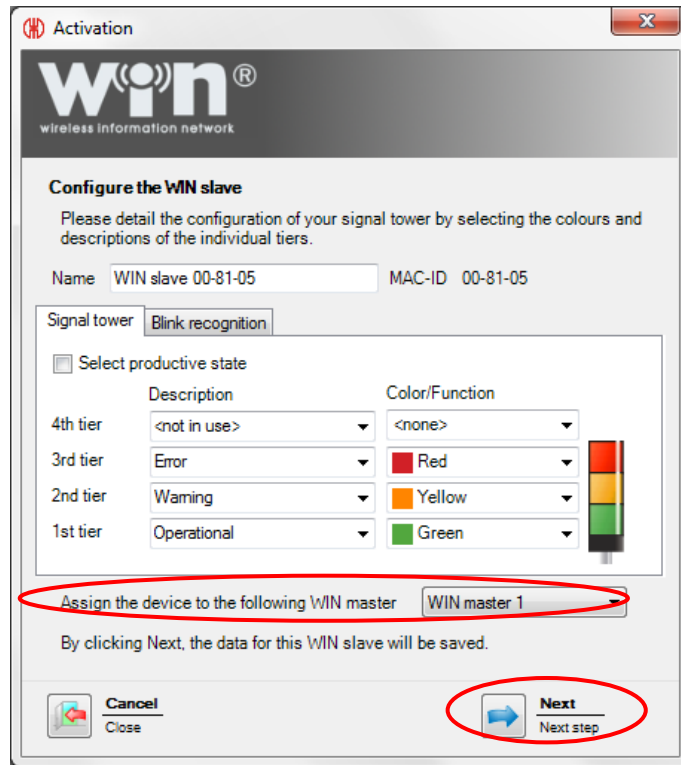


3. The following box appears on the screen:

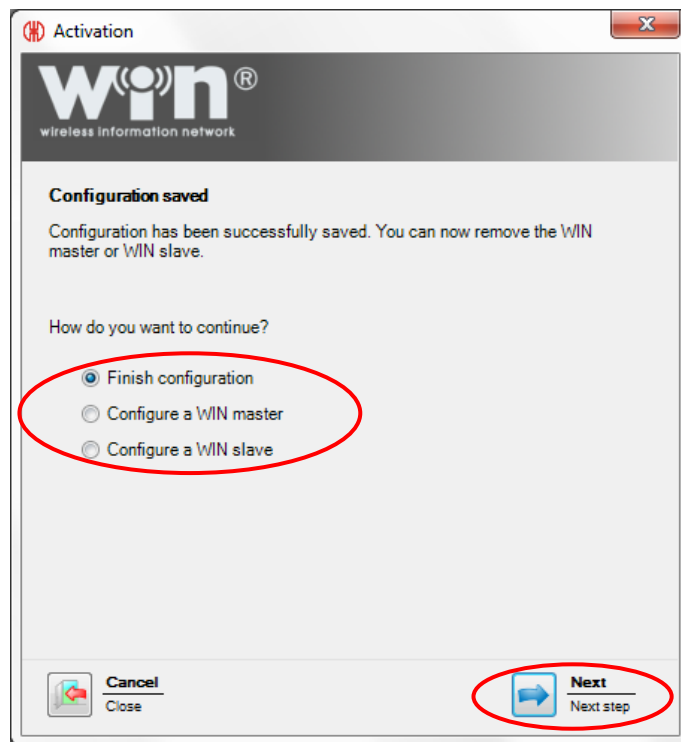
Click "Search" to search for the connected WIN slave. Once it has been found, click "Next".



4. Configure your WIN slave and assign it to a WIN master.



5. If several WIN slaves need to be configured, select "Configure a WIN slave" and click "Next". Repeat the process from step 3 onwards.



If you want to configure a master, select "Configure a master", see chapter 5.2.1.

If you want to finish a configuration, select "Finish configuration".

To confirm your selection click "Next".

6. Disconnect the USB connection to the WIN slave.



7. The WIN slaves can now be integrated into the signal towers. (Refer to chapter 6)

5.2.4 WIN slave performance

Note: The three WIN slaves performance included in the WIN system performance or WIN complete performance kits are pre-configured.

If you want to use more than three WIN slaves performance, configuration is carried out as follows:

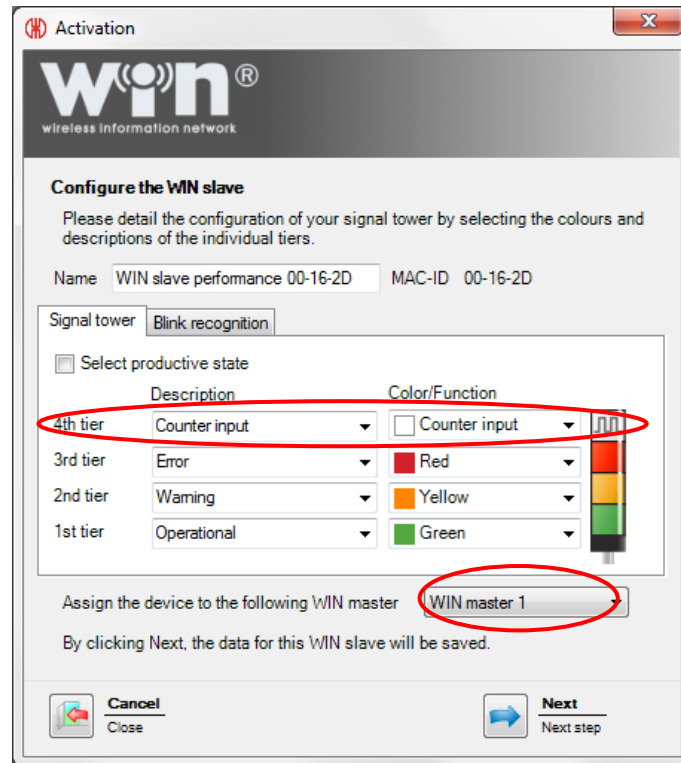
1. Start the WIN software.
2. Connect the WIN slave performance to your PC using the USB cable.



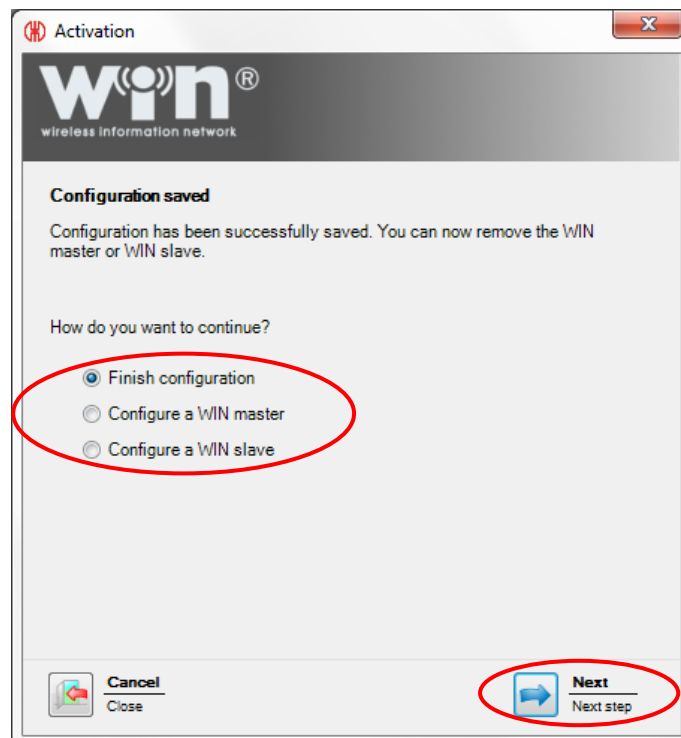
3. The following box appears on the screen:
Click "Search" to search for the connected WIN slave performance. Once it has been found, click "Next".



- Configure your WIN slave performance and assign it to a WIN master.
In addition, configure the counter input to the tier on which the count impulse is applied.



- If several WIN slaves performance needs to be configured, select "Configure a WIN slave" and click "Next". Repeat the process from step 3 onwards.



If you want to configure a master, select "Configure a master", see Chapter 5.2.1.

If you want to finish a configuration, select "Finish configuration".

To confirm your selection click "Next".

6. Disconnect the USB connection to the WIN slave performance.



7. The WIN slave performance can now be fitted into the signal towers. (Refer to chapter 6)

5.2.5 WIN slave control

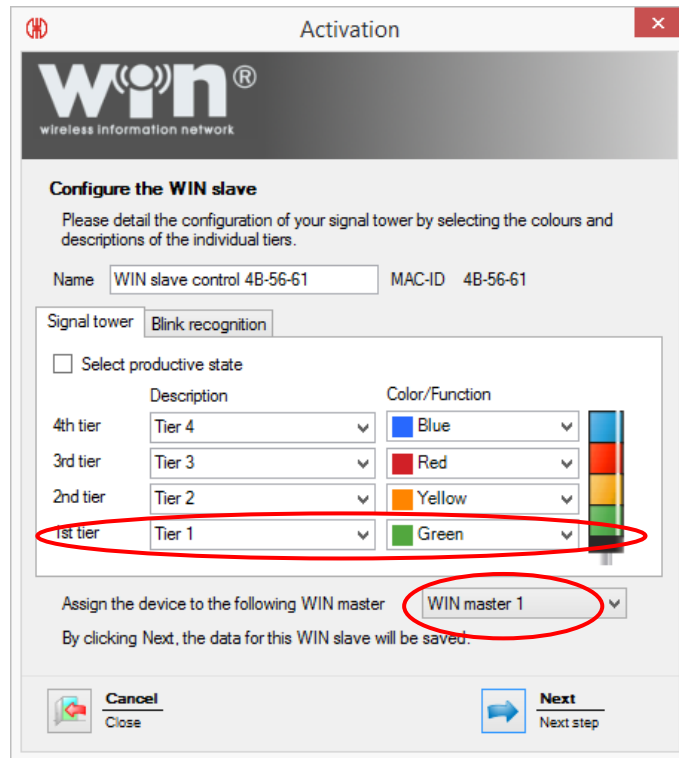
1. Start the WIN software.
2. Connect the WIN slave to your PC using the USB cable.



3. The following box appears on the screen:
Click "Search" to search for the connected WIN slave control. Once it has been found, click "Next".



4. Configure your WIN slave control and assign it to a WIN master.

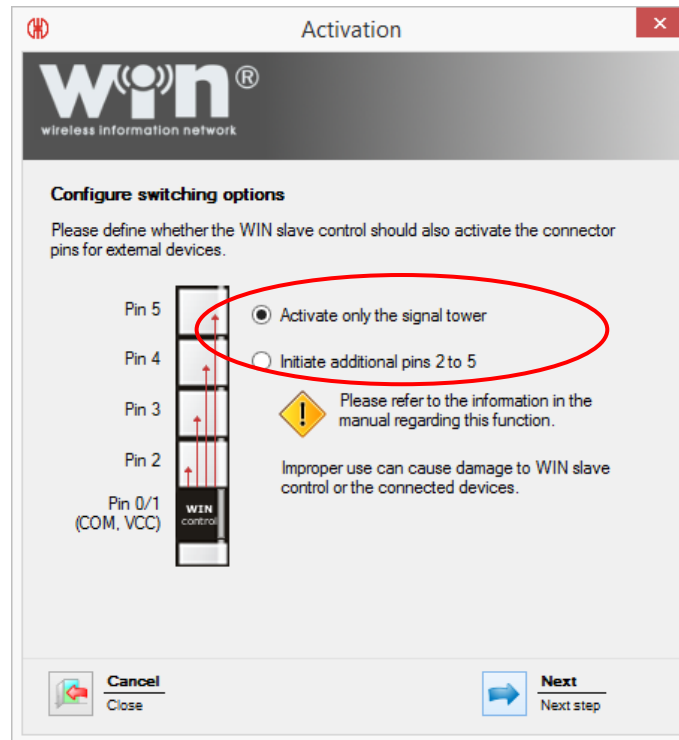


5. Configure the switch status of WIN slave control by defining the individual tiers. You can choose between “Off”, “On” or “Blinking”.



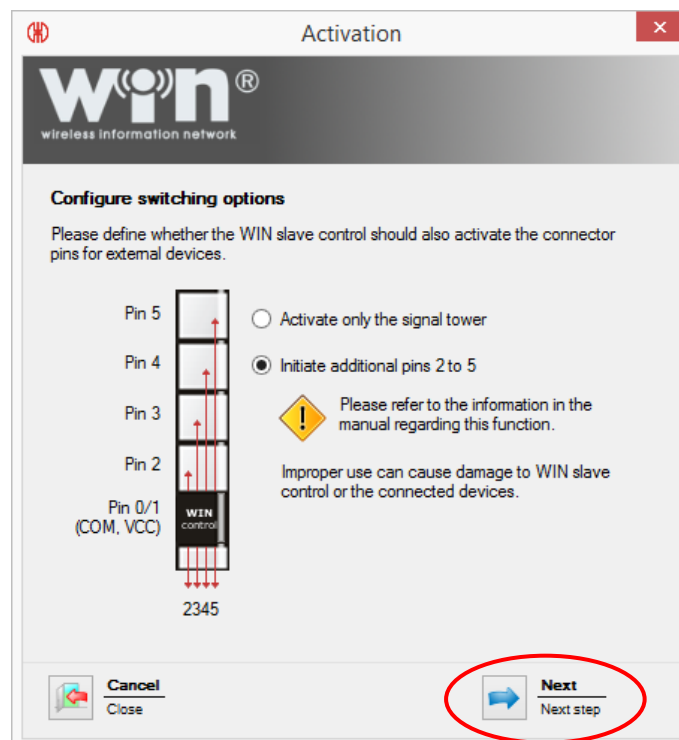
Note: The switched condition is activated as seen as the WIN slave control is energised.

6. Configure the switch conditions of the WIN slave control. You can choose between the standard (default) "Activate only the signal tower" and "Initiate additional pins 2 to 5".

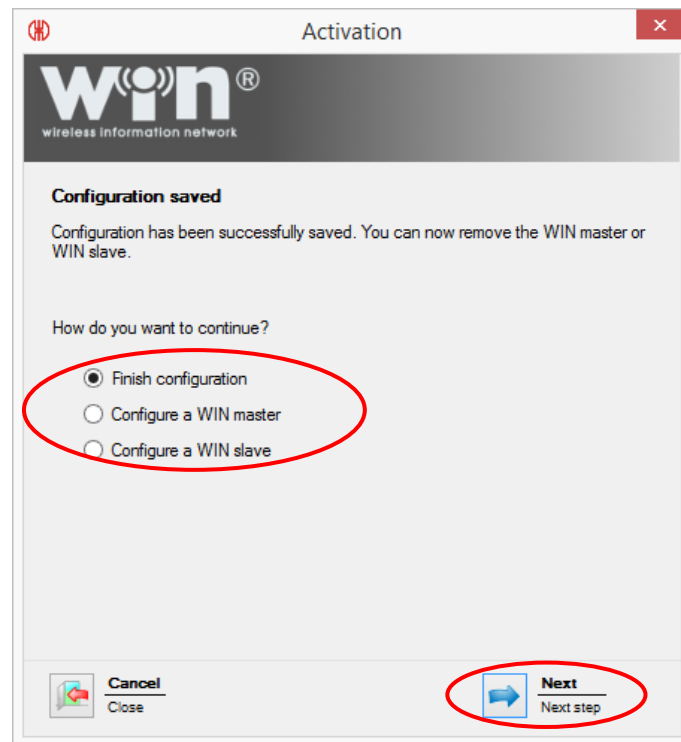


Note: See safety instructions in chapter 1.3.

7. Confirm your selection with "Next".



8. If several WIN slaves need to be configured, select "Configure a WIN slave" and click "Next". Repeat the process from step 3 onwards.



If you want to configure a master, select "Configure a master", see chapter 5.2.1.

If you want to finish a configuration, select "Finish configuration".

To confirm your selection click "Next".

9. Disconnect the USB connection to the WIN slave control.

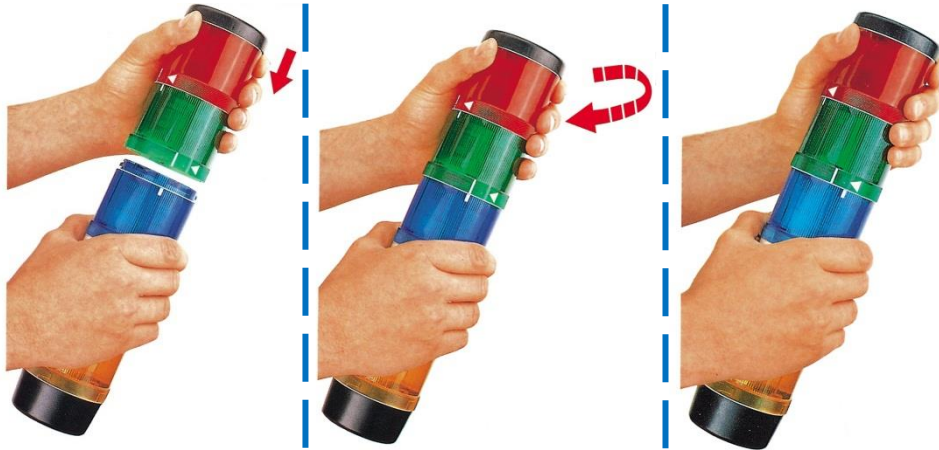


10. The WIN slaves can now be integrated into the signal towers. (Refer to chapter 6)

6. Fitting

6.1 WIN slave / WIN slave performance / WIN slave control

By means of the bayonet system, the WIN slave can be fitted as the **lowest element** of the WERMA KombiSIGN 70 or KombiSIGN 71 signal tower. Ensure that the white markings of the individual elements are aligned on top of each other. Turn the WIN slave slightly until it clicks on the terminal element (see following picture).



6.2 ClearSIGN compact with WIN

Please observe the assembly instructions for ClearSIGN compact shown in the installation leaflet. The WIN slave / WIN slave performance is a standard integral fit to the product.

7. Programme functions

The WIN menu offers six different main modules:

- Control Station Module
- Productivity Module
- Runtime Module
- Job Module
- Control Module
- Routing Module

Additionally, Reporting and Data Export functions are available in the following modules:

- Control Station Module
- Productivity Module
- Runtime Module
- Job Module

For a detailed description of the functions, refer to the relevant Module chapter (7.1 to 7.4 as well as 7.7)

7.1 Control Station Module

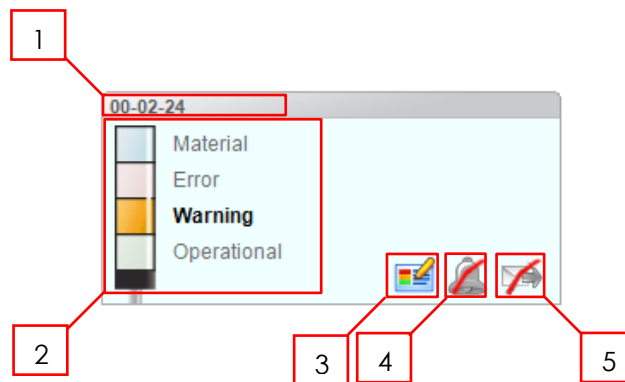
The Control Station view shows the status of up to 50 machines and the jobs being worked on. You can quickly see if a machine is in an error condition or running normally. This module helps you to quickly take action to reduce downtime. You can see the performance progress of jobs on each machine immediately. You can install a layout of your workshop in the control station view.

7.1.1 Control station depiction

7.1.1.1 WIN slave

The control station depiction of a WIN slave includes following information:

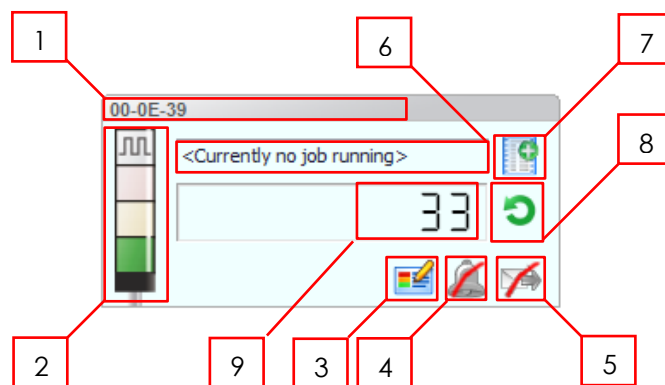
1. WIN slave name
2. Status depiction
3. Edit WIN slave configuration
4. Set up the status change message
5. Set up the status transmission



7.1.1.2 WIN slave performance without running job

The control station depiction of a WIN slave performance **without** running Job includes following information:

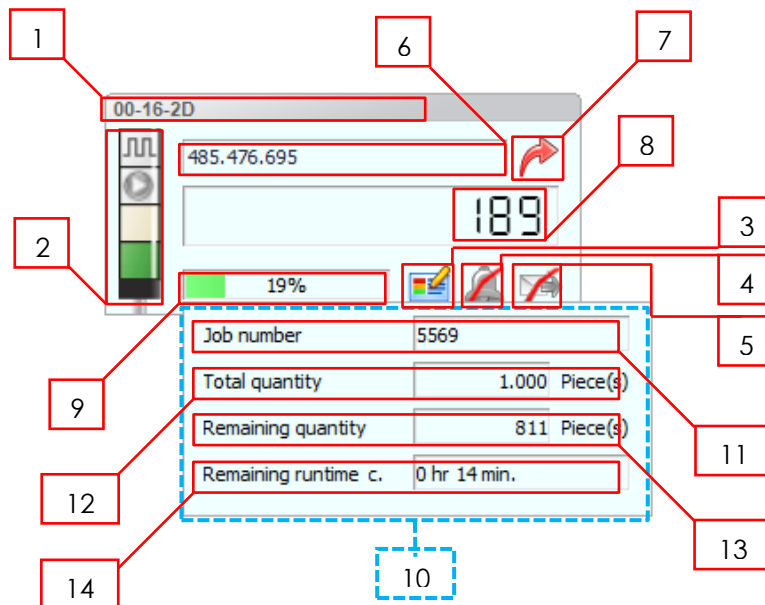
1. WIN slave performance name
2. Status depiction
3. Edit WIN slave performance configuration
4. Set up the status change message
5. Set up the status transmission by E-mail
6. Depiction "No running Job"
7. Edit new Job
8. Reset counter value
9. Current quantity without target value



7.1.1.3 WIN slave performance with running job

The control station depiction of a WIN slave performance **with** running Job includes following information:

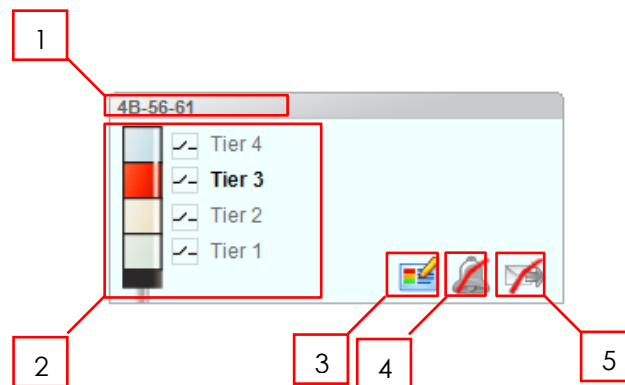
1. WIN slave performance name
2. Status depiction
3. Edit WIN slave performance configuration
4. Set up the status change message
5. Set up the status transmission by E-mail
6. Displays the running job
7. Jump to Job Module
8. Current quantity
9. Fulfilment level of the job
10. Mouse over function for job details
11. Job number
12. Total quantity of the job
13. Remaining quantity of the job
14. Remaining runtime of the job



7.1.1.4 WIN slave control – manual control mode

The Control Station view of WIN slave control **in manual control mode** displays the following information:

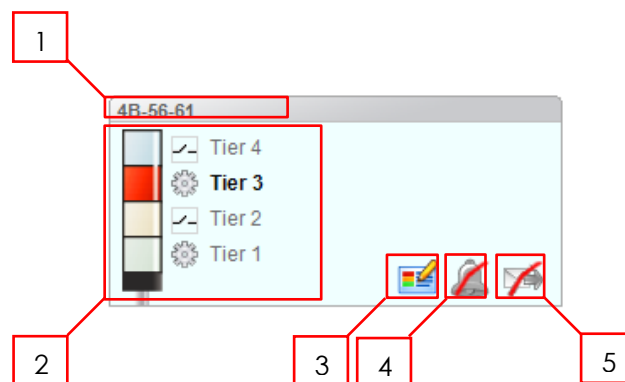
1. WIN slave control name
2. Display of the status within manual control mode. A description of the functions can be found in chapter 7.1.4.
3. Edit WIN slave control configuration
4. Set up the status change message
5. Set up the status transmission by E-mail



7.1.1.5 WIN slave control with defined switching rule

The Control Station view of WIN slave control **in defined switching rule mode** displays the following information:

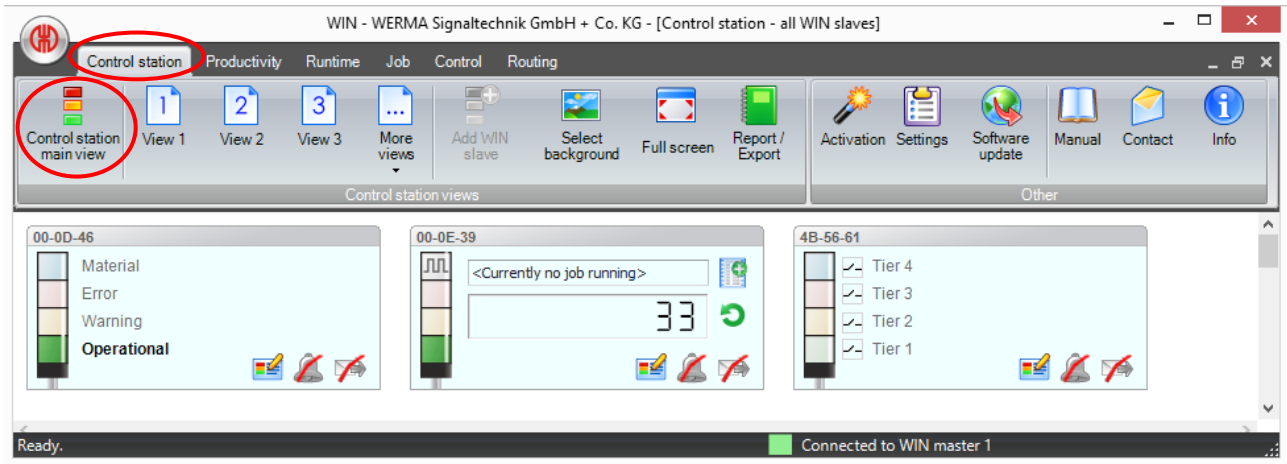
1. WIN slave control name
2. Display of the status within defined switching rule mode. A description of the functions can be found in chapter 7.5.2.
3. Edit WIN slave control configuration
4. Set up the status change message
5. Set up the status transmission by E-mail



7.1.2 Views into the control station

7.1.2.1 Control station main view

The Control Station main view gives an overview of **all WIN slaves** which have been configured.

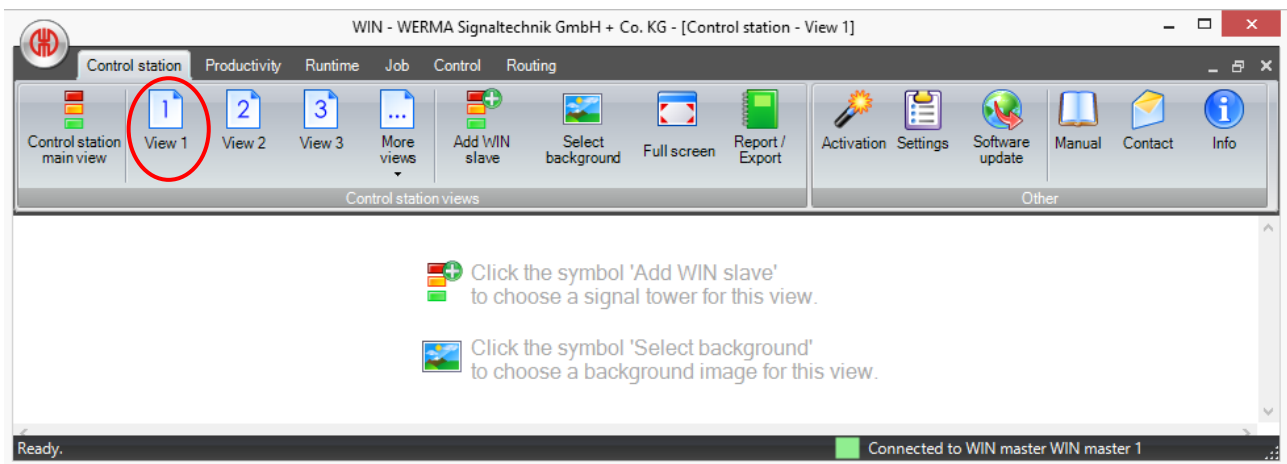


7.1.2.2 Further views

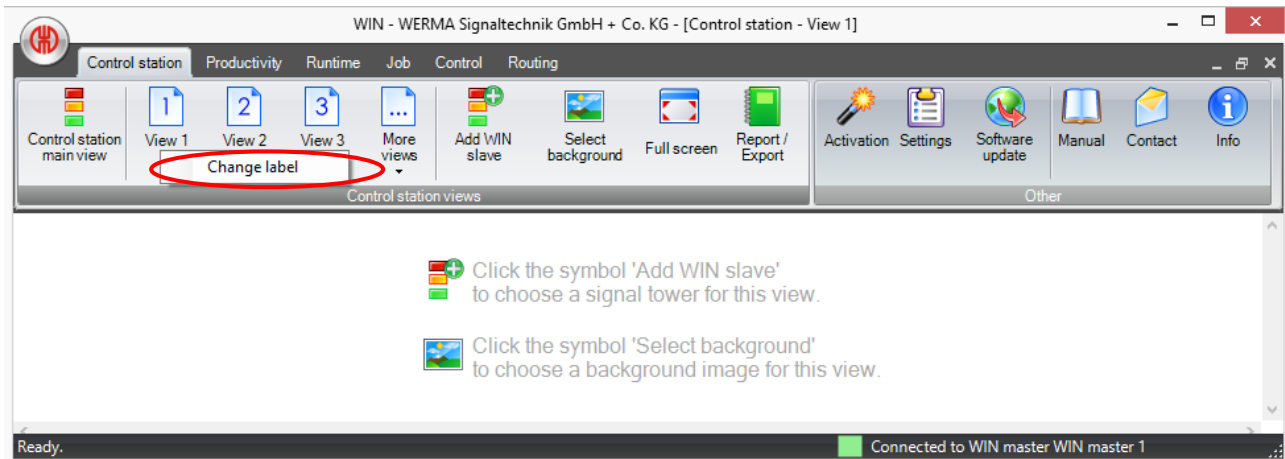
By opening up further views, specific groups of WIN slaves can be selected and displayed.

To configure another view, proceed as follows:

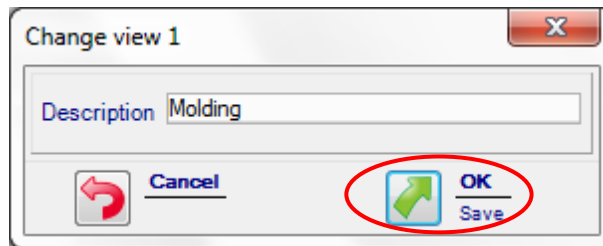
1. Views can be opened by clicking the mouse on the relevant view number.



2. The names of the individual views can be edited by right-clicking on the view icon.

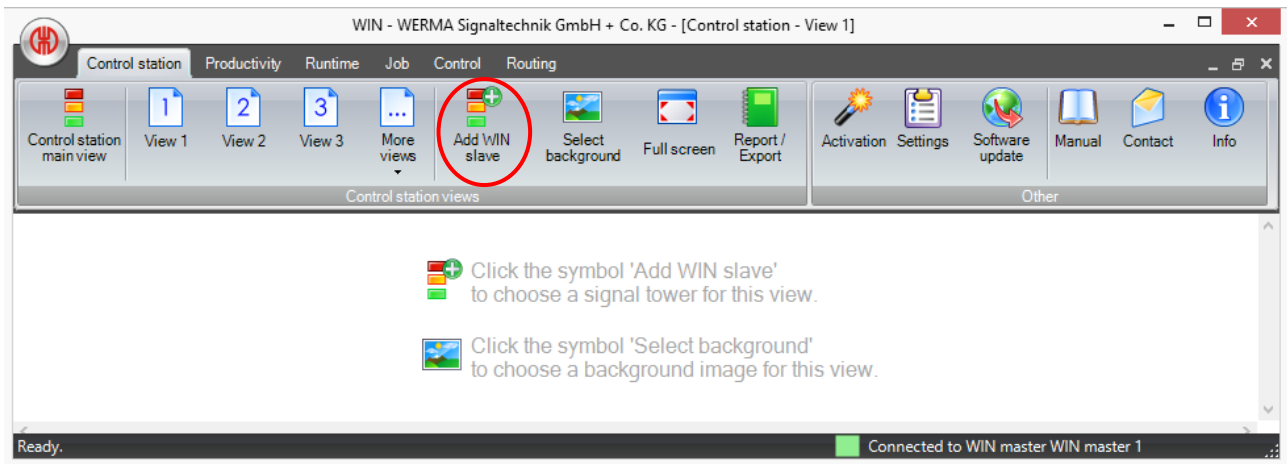


3. Confirm your entry with "OK".

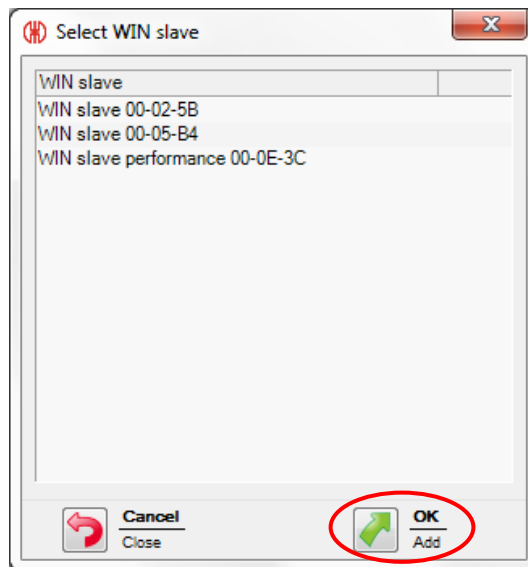


7.1.2.3 Adding a WIN slave to a View

1. By clicking "Add WIN slave", any number of WIN slaves can be added to the selected view.

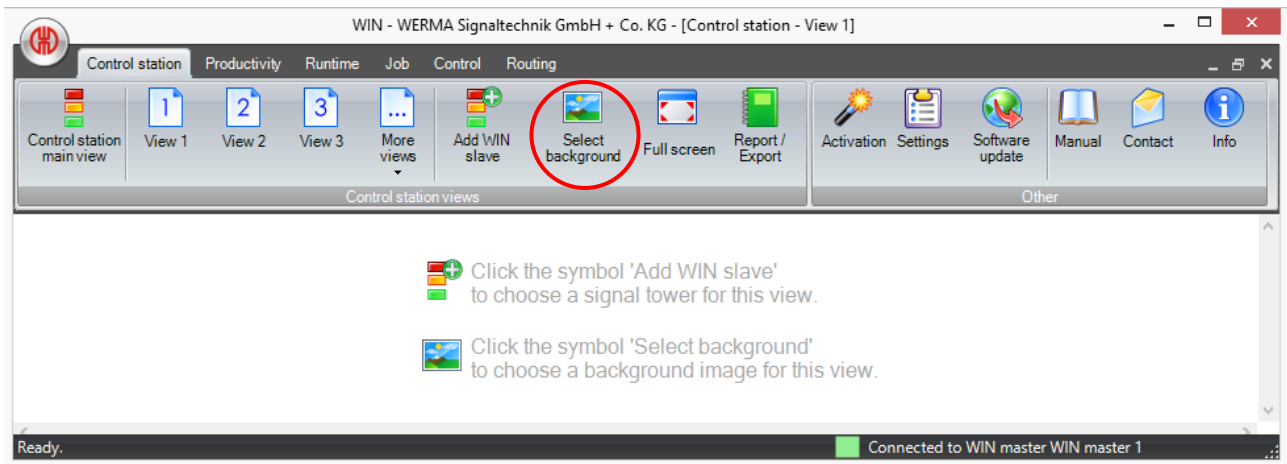


2. Confirm your choice with "OK".

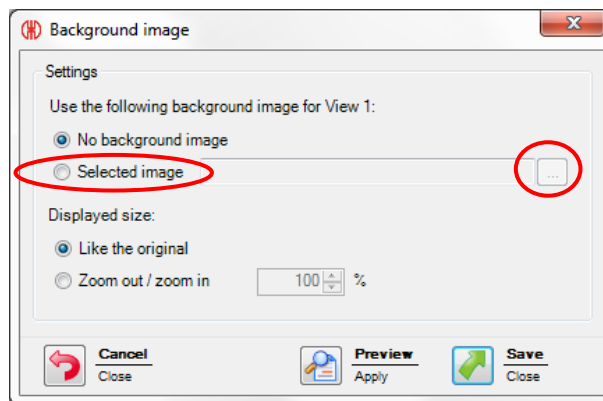


7.1.2.4 Selecting a background for a View

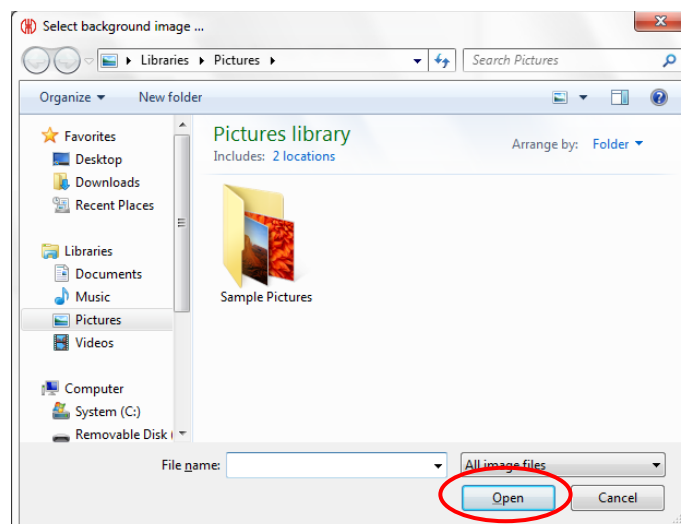
1. To add or edit a background, click the "Select background" button on the menu bar. You can define images in all popular image formats (jpg, bmp, tiff,) as a background for this view.



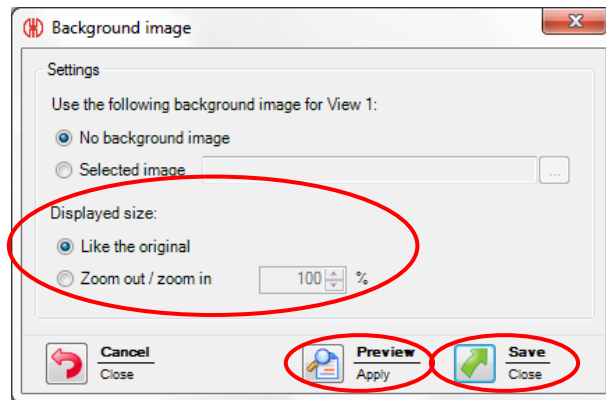
2. A window opens where you choose "Selected image" and click on "..." to select the background image.



3. In the following window, you may select your background.



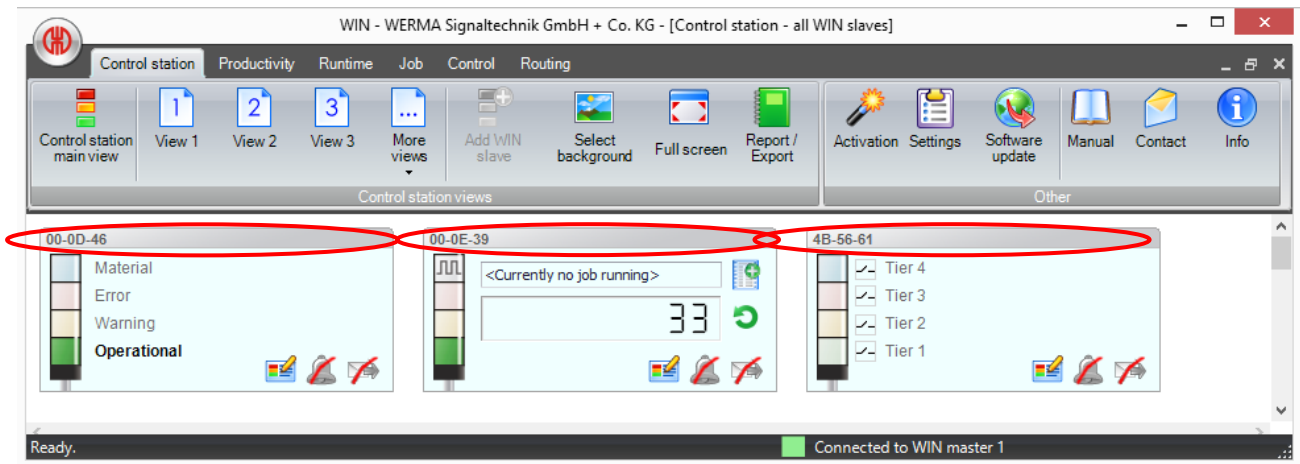
-
4. You can also choose if you want to zoom in or out of the image or insert it in its original size. To select the desired image and add it as a background, click "Open". Click "Save" to add the background image to the view. A preview is displayed via the "Preview" button.



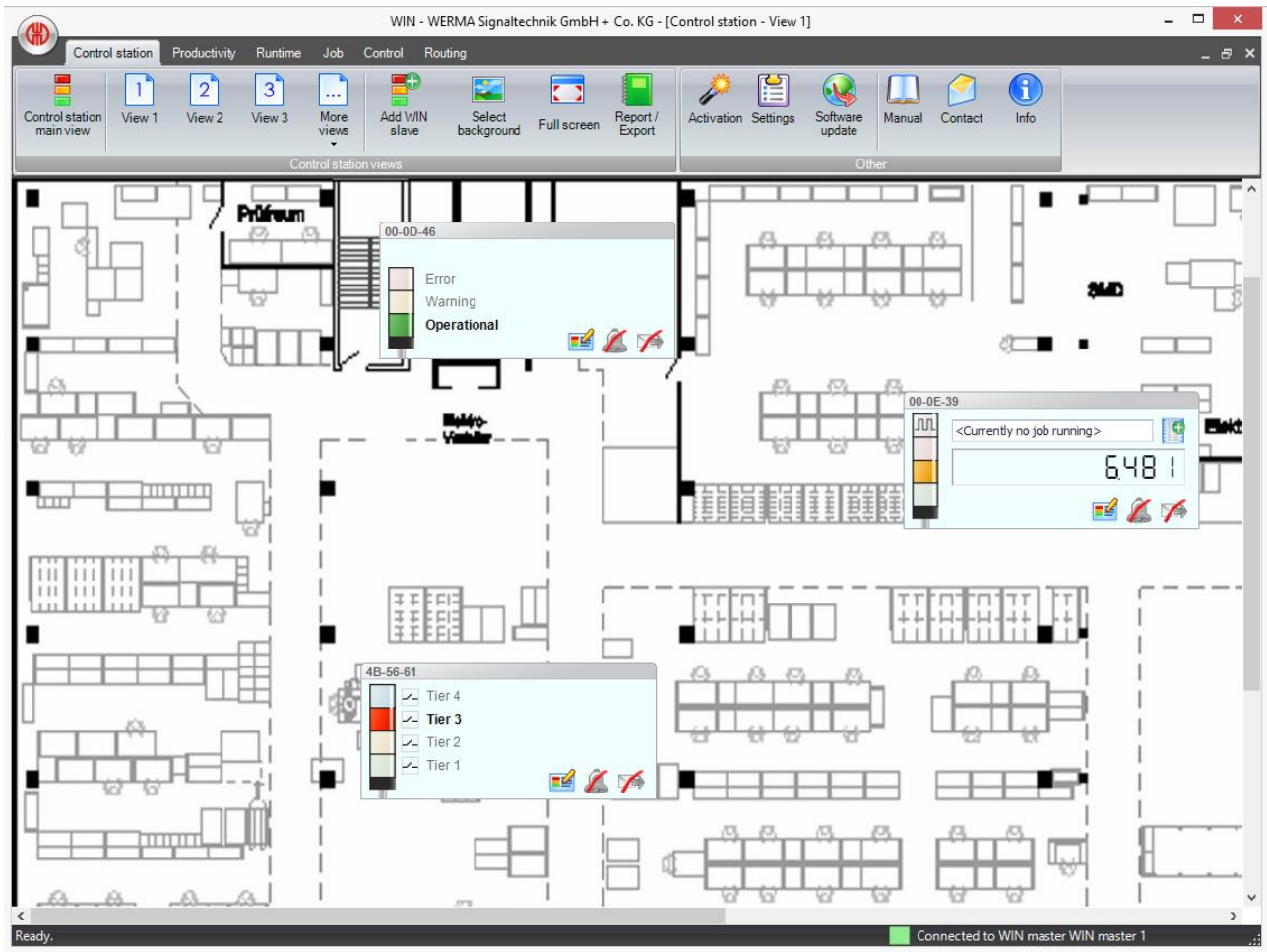
Note: The desired image must be stored on your PC or a data drive connected to your PC. If you want to use the multiple access function, the background image must be saved on a network drive.

7.1.2.5 Re-positioning a WIN slave icon

Every WIN slave can be re-positioned. Simply select the desired WIN slave on the menu bar by left clicking and dragging to the desired position.

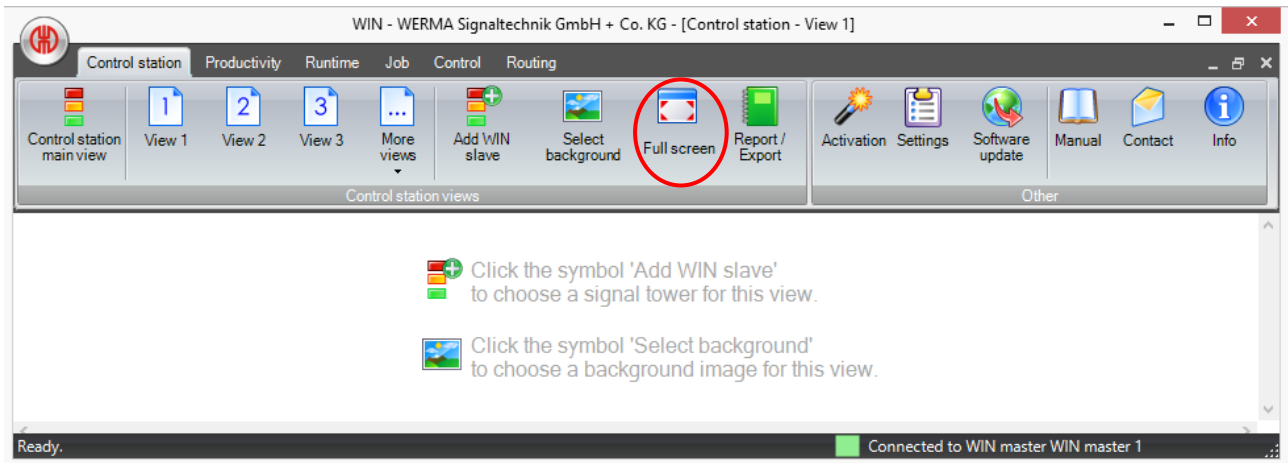


Example: A floor-plan of the production area has been used as a background. The WIN slaves have been placed at the positions of their corresponding machines.



7.1.2.6 Full Screen Mode

You can use the Full screen mode for all views in the Control Station and Productivity Module. To edit the Full screen mode, click the "Full screen" button on the menu bar. To close the Full screen mode press the "esc" button.



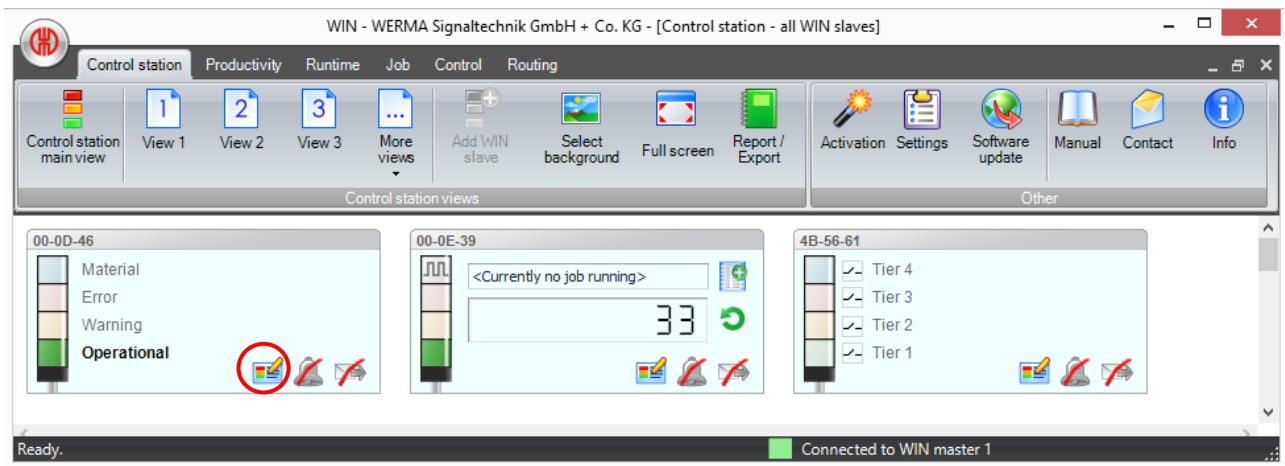
7.1.3 Configuration WIN slave

7.1.3.1 Editing WIN slave

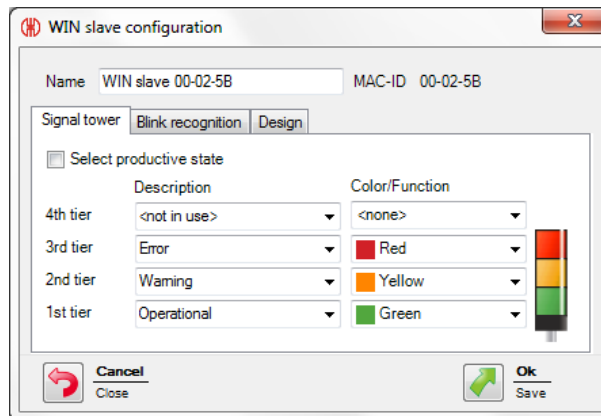
Every WIN slave can be individually named and configured.

To configure a WIN slave, proceed as follows:

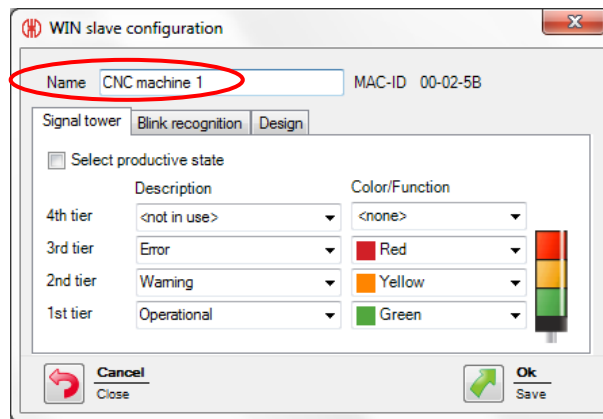
1. Select the WIN slave to be configured in one of your views.
2. Click the "Edit WIN slave" button.



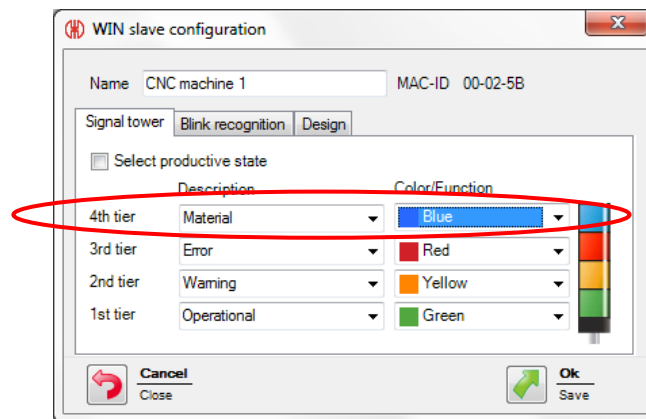
3. The WIN slave configuration menu will pop up.



4. The name of the WIN slave can be matched to its intended use (e.g. CNC machine)

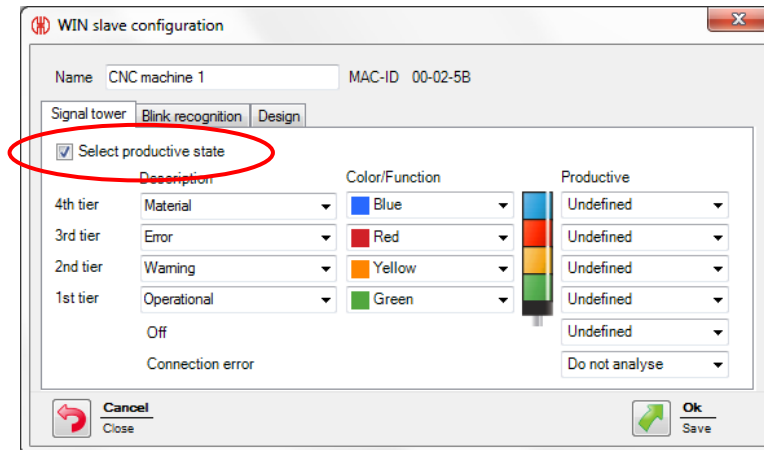


5. By changing the description of the individual tiers, the WIN slave configuration can be matched to its specific signal tower. Just enter the desired meaning in the "Description" box.

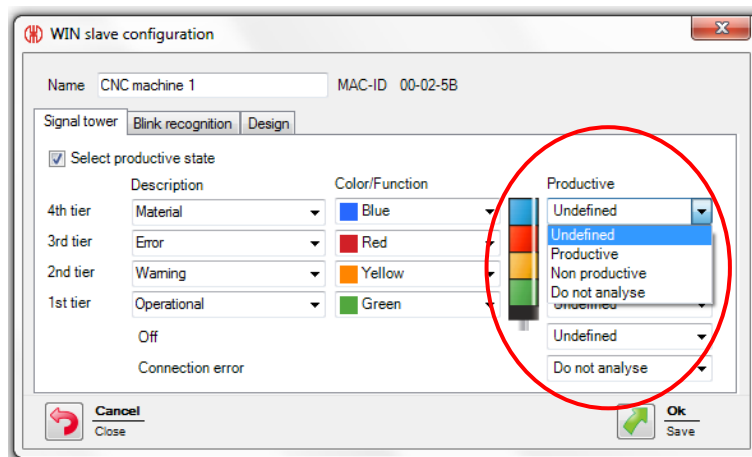


Note: The "Description" box can be edited according to individual requirements. The individual "Descriptions" can also be chosen from the drop-down list.

6. Define the productive states to analyse these in the productivity module, see chapter 7.2.2.6. Please click on the check box.



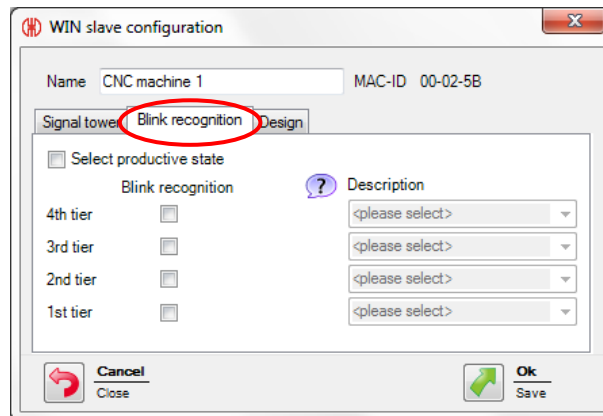
7. For each state, you can choose between "Productive", "Non productive", "Undefined" or "do not analyse". The definition can also be made for the states "Off" and "Connection error".



Note: Productive states are evaluated according to the following priority:

- (1) Non productive
- (2) Productive
- (3) Do not analyse
- (4) Undefined

8. If your signal tower has an additional blinking function, you can activate this on the Blink recognition tab. You can then activate the blink recognition for each tier of your signal tower and add a description.

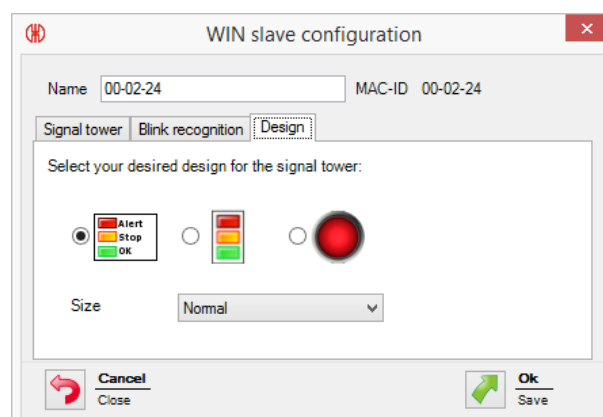


Note: Blink recognition detects blinking signals between 0.8 Hz and 15 Hz generated by a machine or control unit (e.g. via the PLC).

Note: For each state of the blink recognition, you can choose between “Productive”, “Non productive”, “Undefined” or “Do not analyse”.

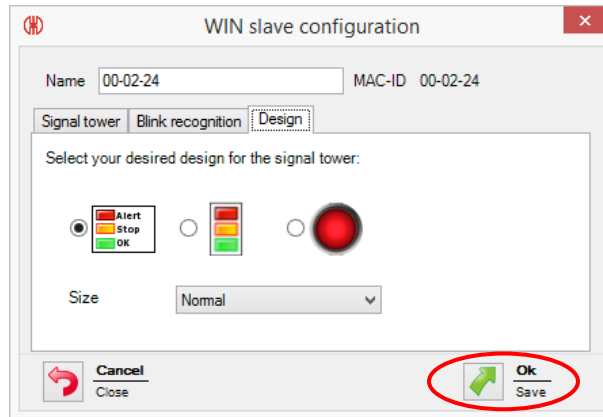
9. You can select a design variant for your signal tower in the Design tab. You can choose between:

- signal tower with text
 - Normal size (100%)
 - Large size (200%)
- signal tower without text
 - Normal size (100%)
 - Large size (200%)
- individual light
 - Small size (25%)
 - Normal size (100%)
 - Large size (200%)



Note: If you have selected a design variant with individual light and your signal tower displays two active statuses, the WIN software automatically switches to the signal tower without the text display variant.

10. By clicking "OK", your changes are saved and the WIN slave configuration window is closed.

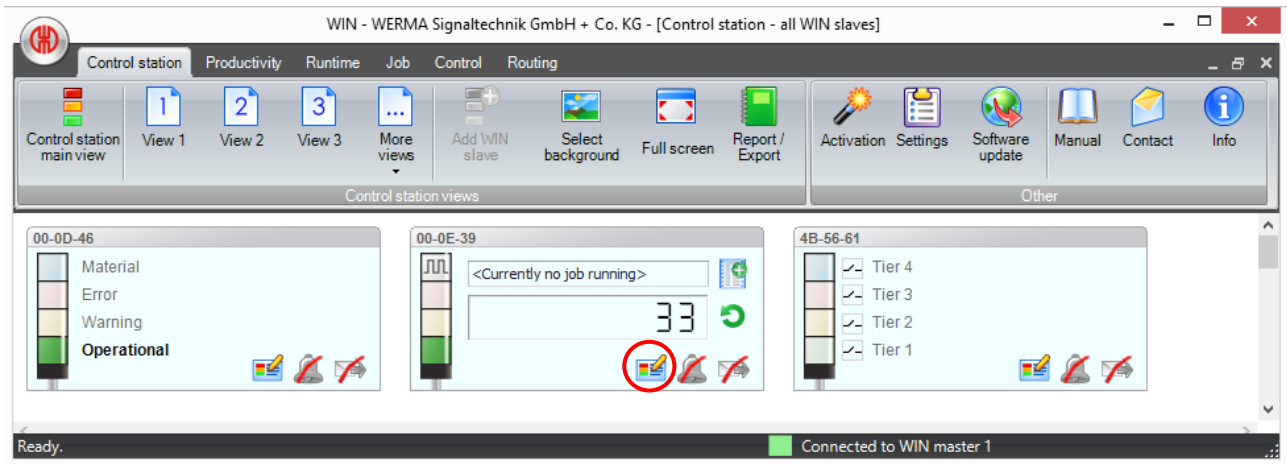


7.1.3.2 Editing WIN slave performance

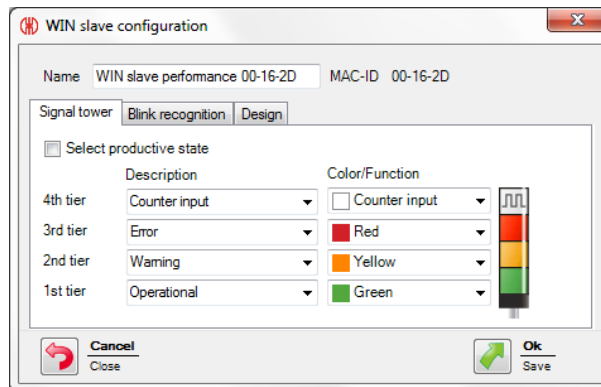
Every WIN slave performance can be individually named and configured.

To configure a WIN slave performance, please proceed as follows:

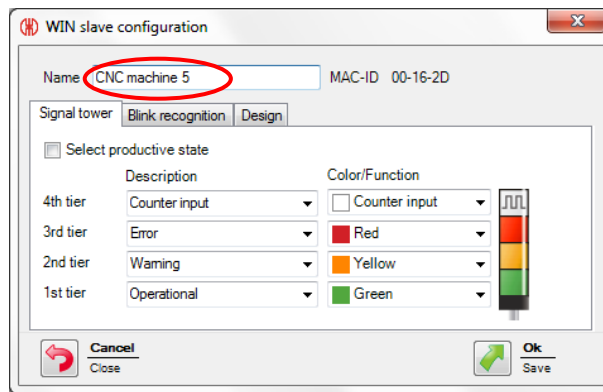
1. Select the WIN slave performance to be configured in one of your views.
2. Click the "Edit WIN slave" button.



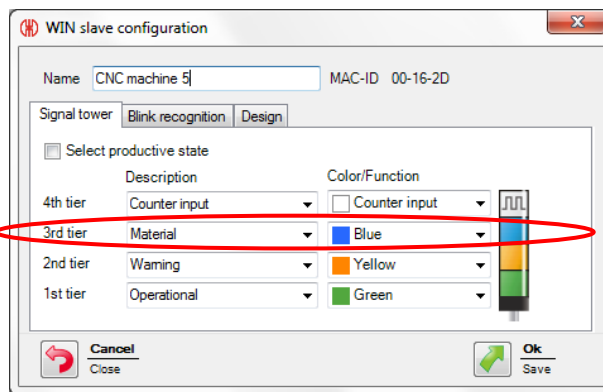
3. The WIN slave configuration menu will pop up.



- The name of the WIN slave performance can be matched to its intended use (e.g. CNC machine)

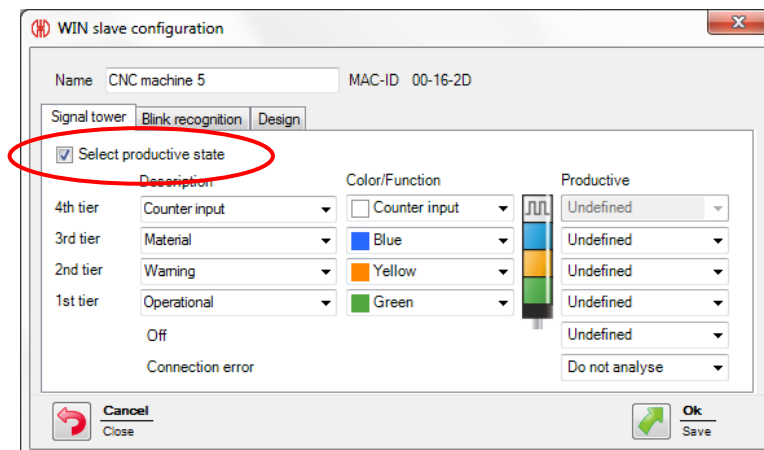


- By changing the description of the individual tiers, the WIN slave configuration can be matched to its specific signal tower. Enter the desired meaning in the "Description" box.

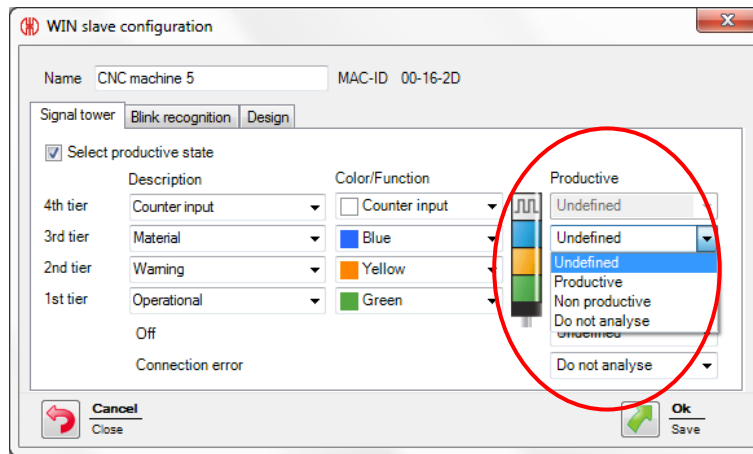


Note: The "Description" box can be edited according to individual requirements. The individual "Descriptions" can also be chosen from the drop-down list.

- Define the productive states to analyse these in the productivity module, see chapter 7.2.2.6. Please click on the check box.



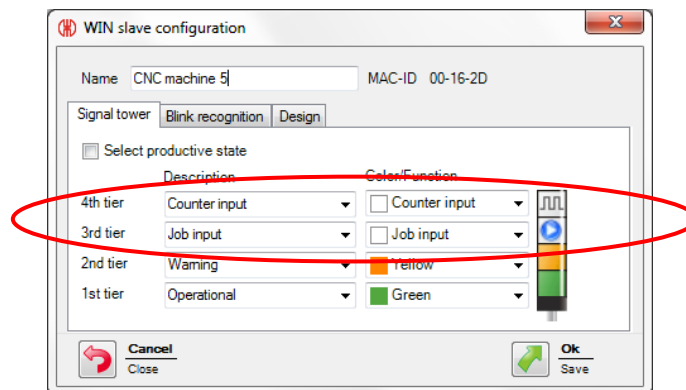
7. For each state, you can choose between "Productive", "Non-productive", "Undefined" or "Do not analyse". The definition can also be done for the states "Off" and "Connection error".



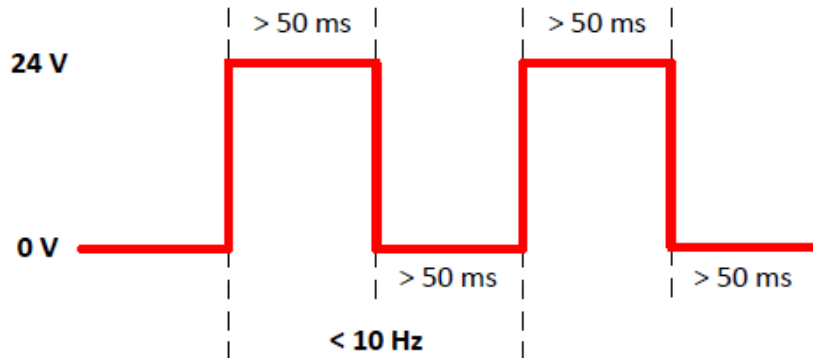
Note: Productive states are evaluated according to the following priority:

- (1) Non productive
- (2) Productive
- (3) Do not analyse
- (4) Undefined

8. In addition, in the tab "Signal tower" you can select the function "counter input" and / or "job input".



Note: The counter input and the job input must be defined for **one tier** on WIN slave performance. The maximum counting frequency is 10 Hz with minimum "on" and "off" times of 50ms.

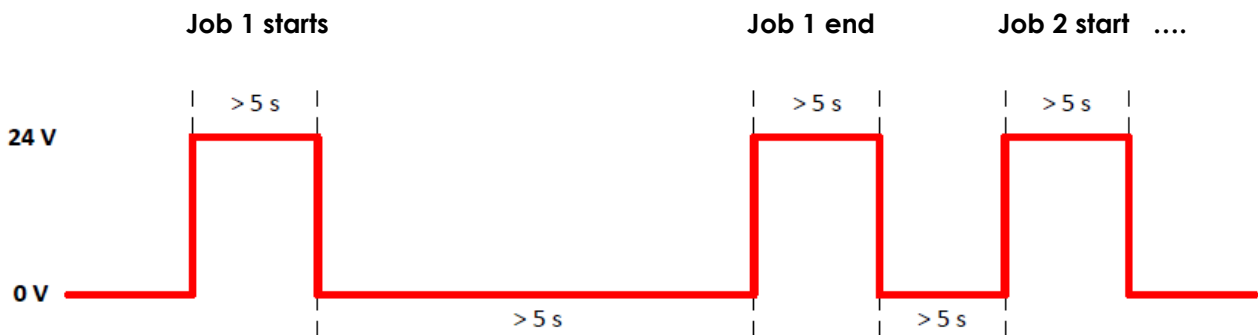


Caution:

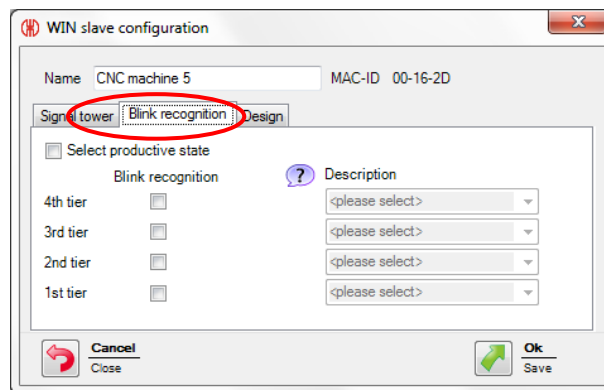
The default setting for the counter input is tier 4. This can be changed to another tier but the WIN slave performance must be connected to the PC via the USB port. This new configuration is transmitted to the WIN slave performance. Only after this step is the counter input of WIN slave performance configured for the new tier.



Note: The impulse on the tier configured for the job input must be applied for **at least five seconds**. The first impulse starts the job, and the second impulse ends the job. If you have already created another job with "active waiting", it can be started with a further impulse. The impulse can be present for the whole duration of the job, then it must be inactive for at least five seconds, so that a further impulse ends the job (see the figure below). To label a job with "active waiting" label, follow the steps in Chapter 7.4.3.4.



9. If your signal tower has an additional blinking function, you can activate this on the blink recognition tab. You can then activate the blink recognition for each tier of your signal tower and add a description.



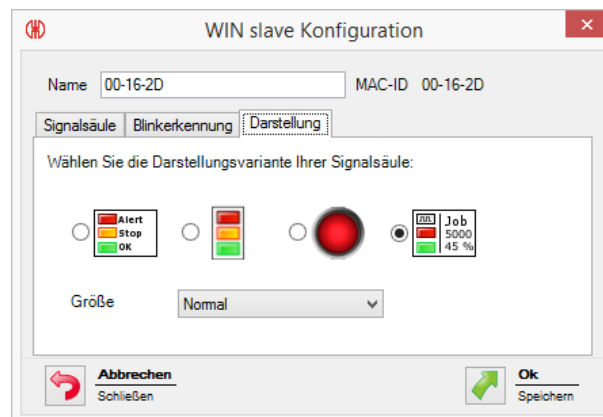
Note: Blink recognition detects blinking signals between 0.8 Hz and 15 Hz generated by a machine or control unit (e.g. via the PLC).

Note: The blink recognition cannot be set for the tier with a counter input and for the tier with a job input.

Note: For each states of the blink recognition, you can choose between "Productive", "Non-productive", "Undefined" or "Do not analyse".

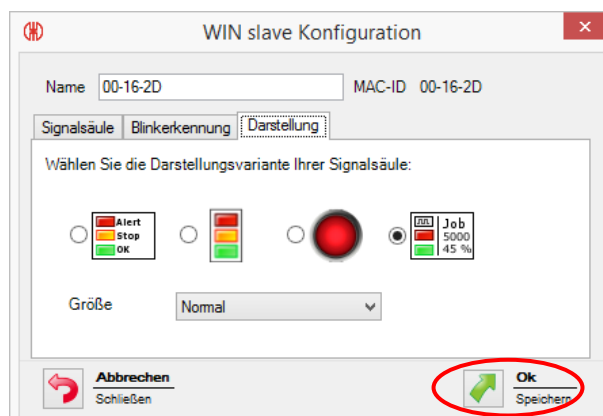
10. You can select a design variant for your signal tower in the "Design" tab. You can choose between:

- signal tower with text
 - Normal size (100%)
 - Large size (200%)
- signal tower without text
 - Normal size (100%)
 - Large size (200%)
- individual light
 - Small size (25%)
 - Normal size (100%)
 - Large size (200%)
- signal tower with job details
 - Normal size (100%)



Note: If you have selected a design variant with individual light and your signal tower displays two active statuses, the WIN software automatically switches to the signal tower without the text display variant.

11. By clicking "OK", your changes are saved and the WIN slave configuration window is closed.

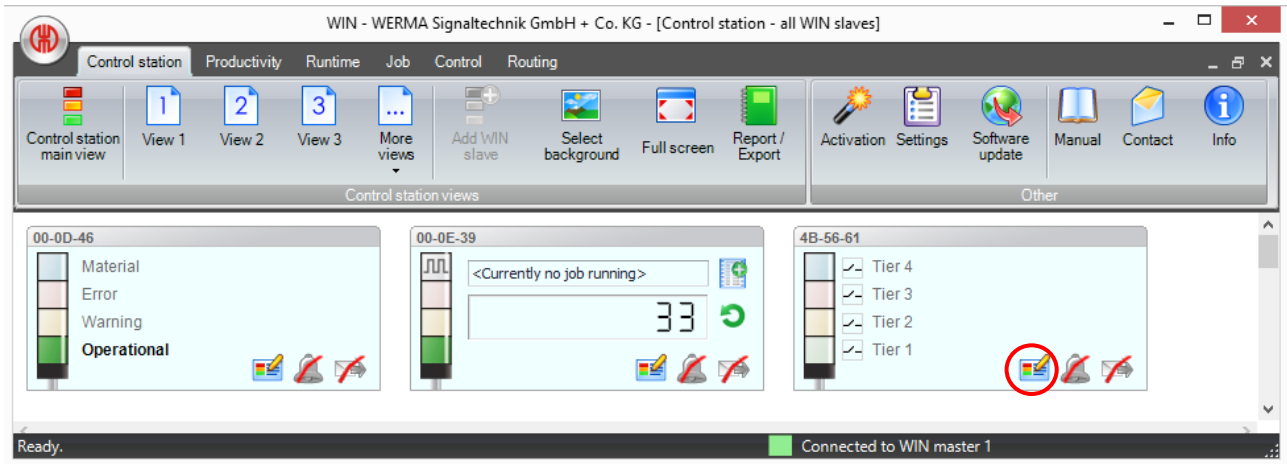


7.1.3.3 Editing WIN slave control

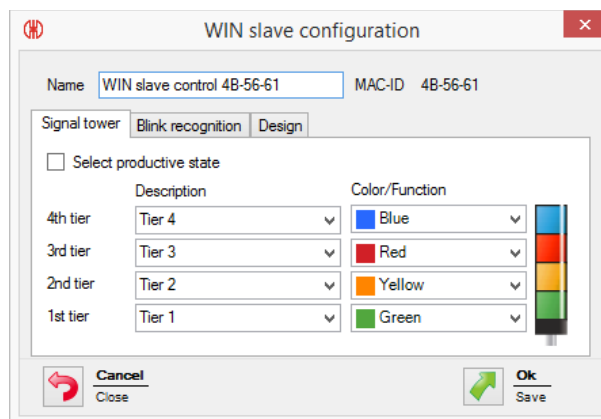
Each WIN slave control can be individually named and configured.

To configure a WIN slave control, proceed as follows:

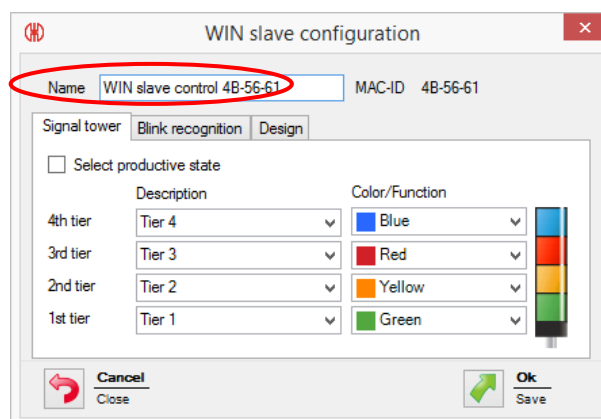
1. Select the WIN slave control to be configured in one of your views.
2. Click the "Edit WIN slave" button.



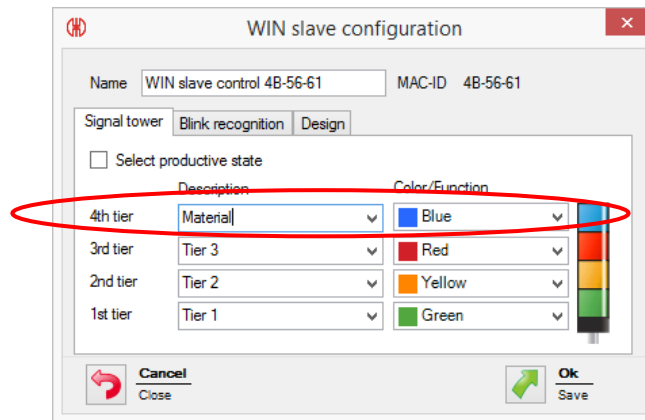
3. The WIN slave configuration menu will pop up.



4. The name of the WIN slave can be matched to its intended use (e.g. CNC machine)

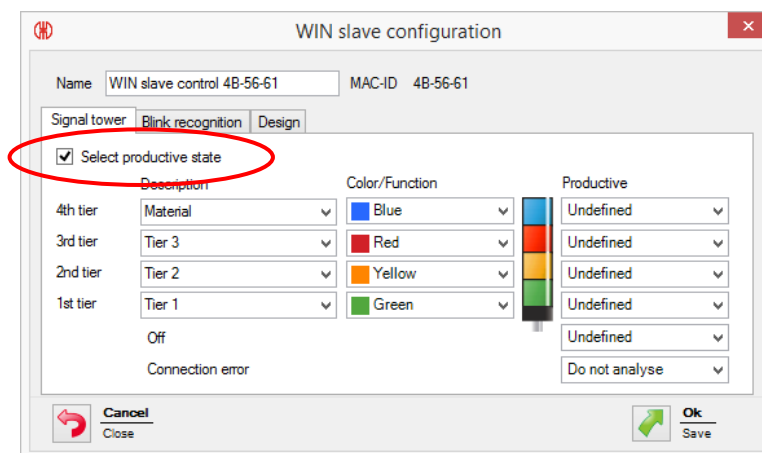


5. By changing the description of the individual tiers, the WIN slave configuration can be matched to its specific signal tower. Just enter the desired meaning in the "Description" box.

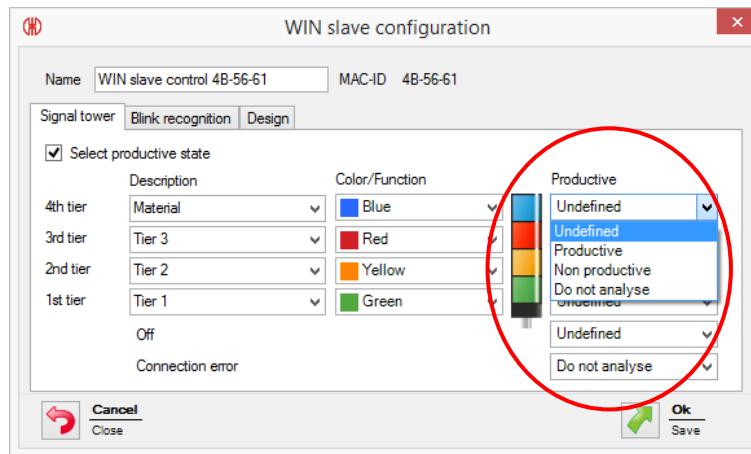


Note: The "Description" box can be edited according to individual requirements. The individual "Descriptions" can also be chosen from the drop-down list.

6. Define the productive states to analyse these in the productivity module, see chapter 7.2.2.6. Please click on the check box.



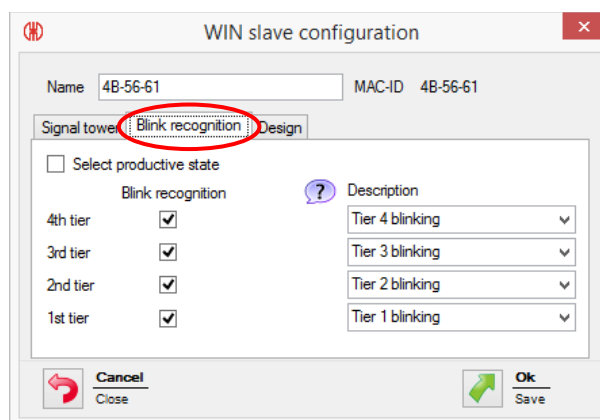
7. For each state, you can choose between "Productive", "Non-productive", "Undefined" or "do not analyse". The definition can also be made for the states "Off" and "Connection error".



Note: Productive states are evaluated according to the following priority:

- (1) Non productive
- (2) Productive
- (3) Do not analyse
- (4) Undefined

8. With WIN slave control the blink recognition mode is active for all tiers. An individual tier can be activated in either manual control or switching rule mode the blink recognition can be deactivated through the tick box.

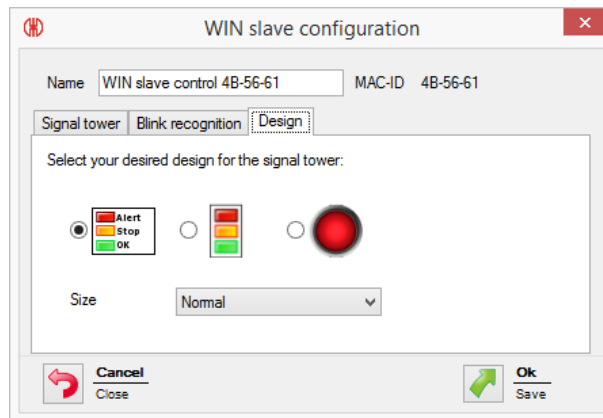


Note: The blink recognition instruction is transmitted to the signal tower terminal element connections at 1 Hz.

Note: For each state of the blink recognition, you can choose between "Productive", "Non-productive", "Undefined" or "Do not analyse".

9. You can select a design variant for your signal tower in the Design tab. You can choose between:

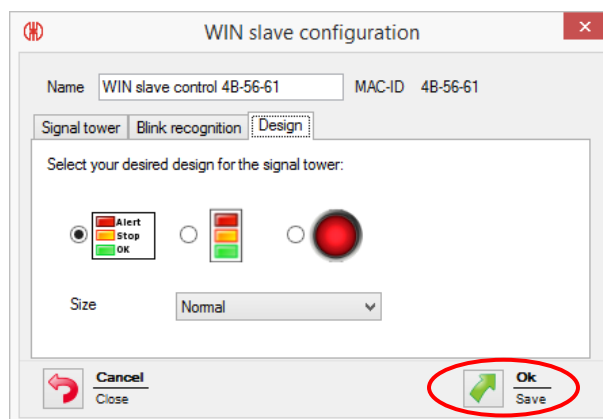
- signal tower with text
 - Normal size (100%)
 - Large size (200%)
- signal tower without text
 - Normal size (100%)
 - Large size (200%)
- individual light
 - Small size (25%)
 - Normal size (100%)
 - Large size (200%)



Note: Manual control of the signal tower tier is only possible in the design version with text (both sizes).

Note: If you have selected a design variant with individual light and your signal tower displays two active statuses, the WIN software automatically switches to the signal tower without the text display variant.

10. By clicking "OK", your changes are saved and the WIN slave configuration window is closed.



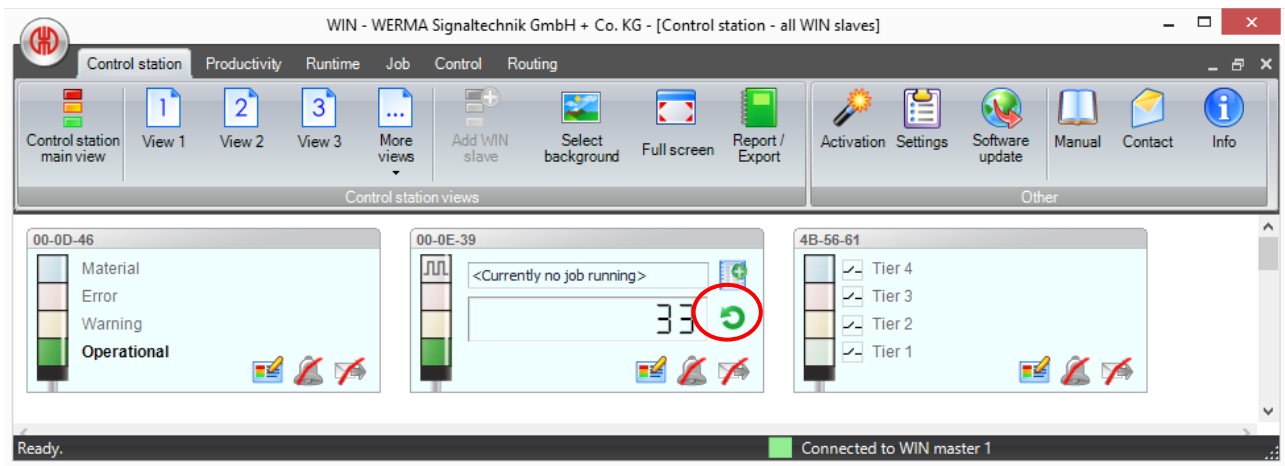
7.1.4 Reset counter value

With each WIN slave performance, quantities can be counted with or without job. To count quantities with job proceed as described in chapter 7.4.

Note: Resetting a counter value is only possible when counting without a job.

To reset the counter value with of a WIN slave performance, proceed as follows:

1. Select the WIN slave performance to be configured in one of your views.
2. Click on "reset" next to the current quantity.



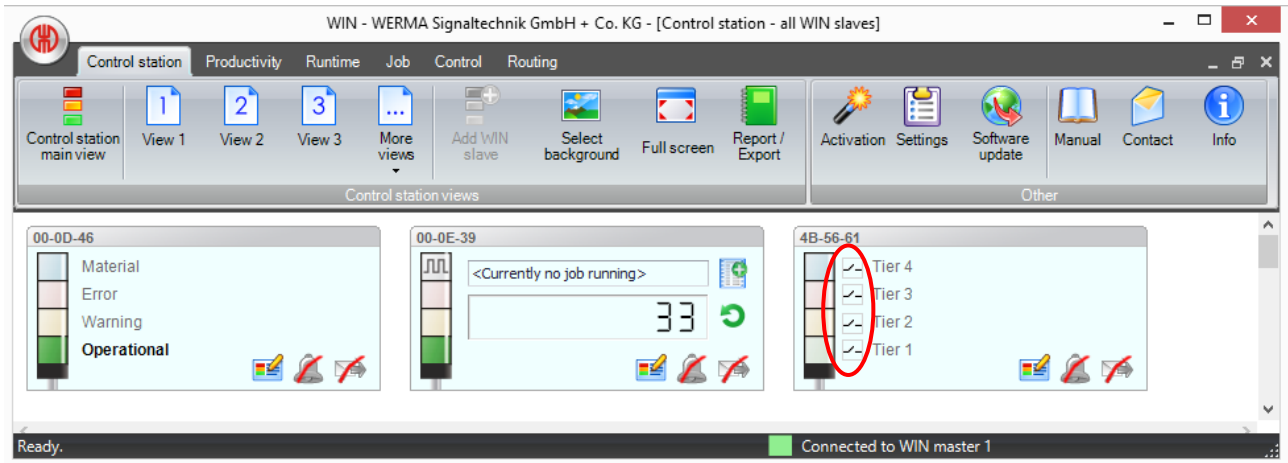
3. Confirm the message with "Yes" to reset the counter value.

7.1.5 Manual control with WIN slave control

Each WIN slave control can be switched or controlled – see chapter 7.5.

To control a WIN slave control manually follow these steps:

4. Select the WIN slave control to be controlled in one of the views.
5. Click on the symbol “switch” next to the appropriate tier.



6. The following menu will appear and you can choose between “Off“, “On” or “Blinking“.

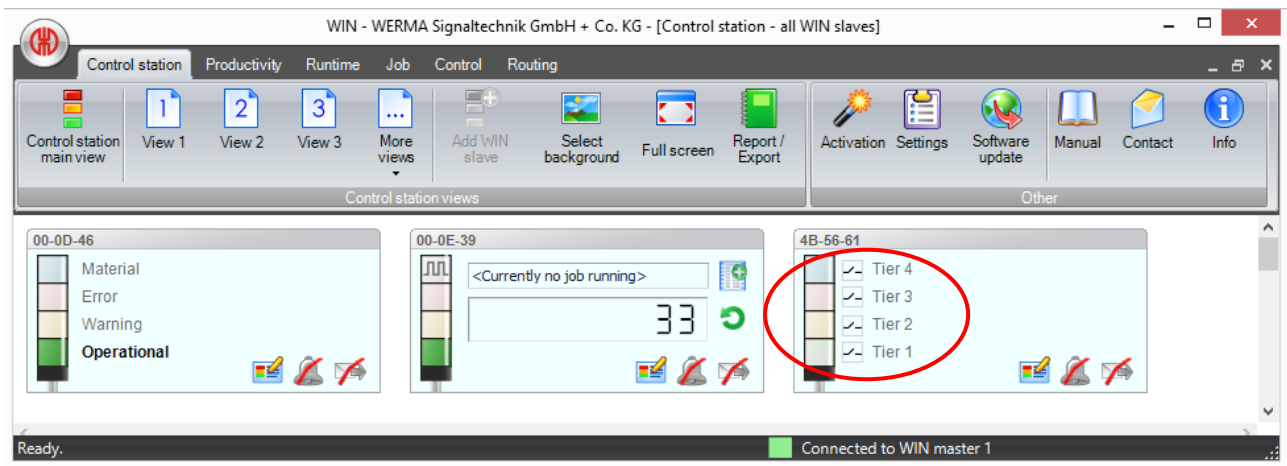


Note: Please note that the switch symbol will flicker during activation of this mode. As soon as activation has been completed the symbol will return to a permanent state.

Note: Please note that you can only activate a blinking mode if blink recognition function for that tier has been activated.

Note: See safety instructions in chapter 1.3.

7. The signal tower then displays the function selected for each tier.

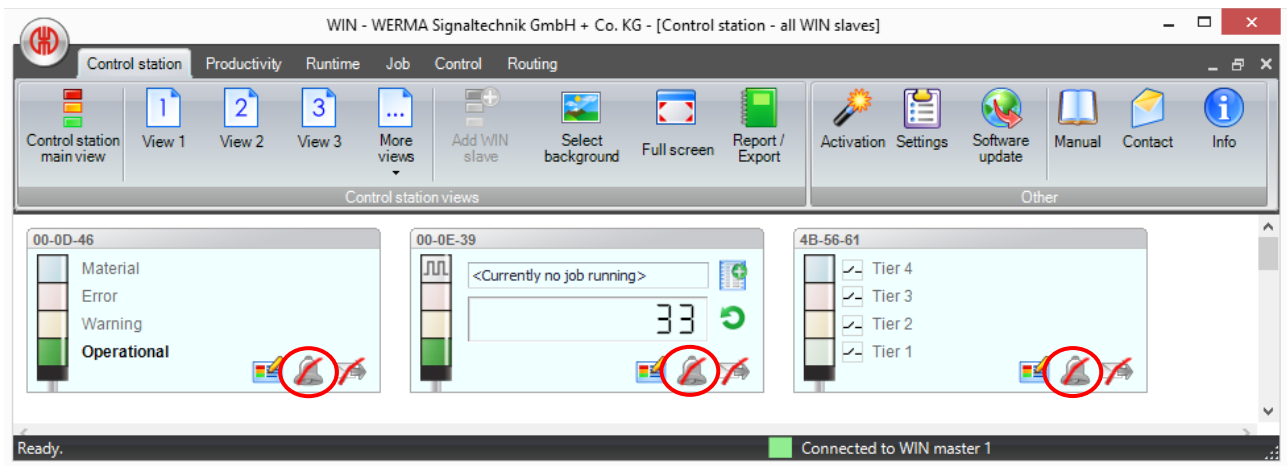


7.1.6 Status Change Message

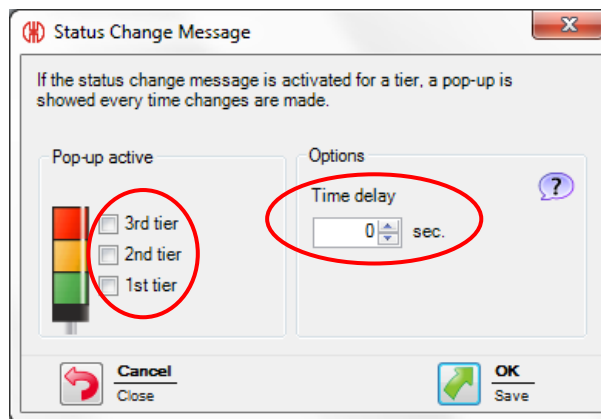
If the Status Change Message option is active for a WIN slave, a pop-up window appears when the signal tower changes state. This function allows you to minimise the WIN software and work with other programs without impairing the monitoring of your machines. A pop-up window will always inform you of any changes in machine status. You can store an individual sound for the status change message in the settings, see chapter 9.3.

To set up the status change message, proceed as follows:

1. The Status Change Message can be activated by clicking the "bell" symbol.



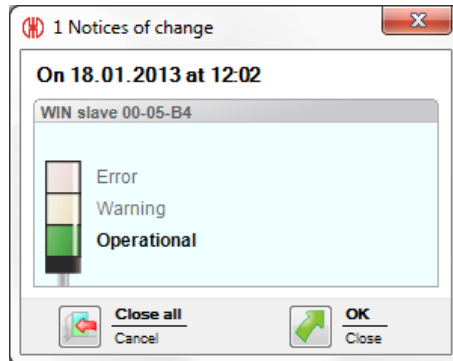
2. The following window opens and you can choose which tier and the time after which a popup window will be created. Your settings are saved by clicking on "OK".



Note: When the WIN software is closed the user-specific settings will be saved.

Note: For the tier with counter input to the WIN slave performance, the status change message cannot be generated.

3. Once a status change message has been activated for a WIN slave, a pop-up window appears whenever there is a change. To close these messages, click "OK". If there are several messages, you can click "Close all" to close all the messages.



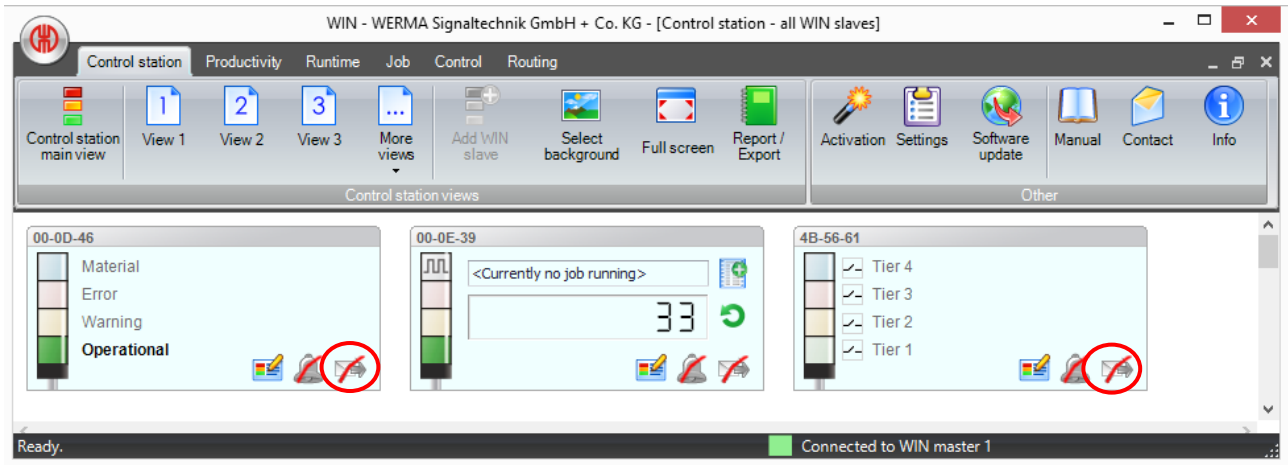
7.1.7 Status transmission

7.1.7.1 WIN slave / WIN slave control

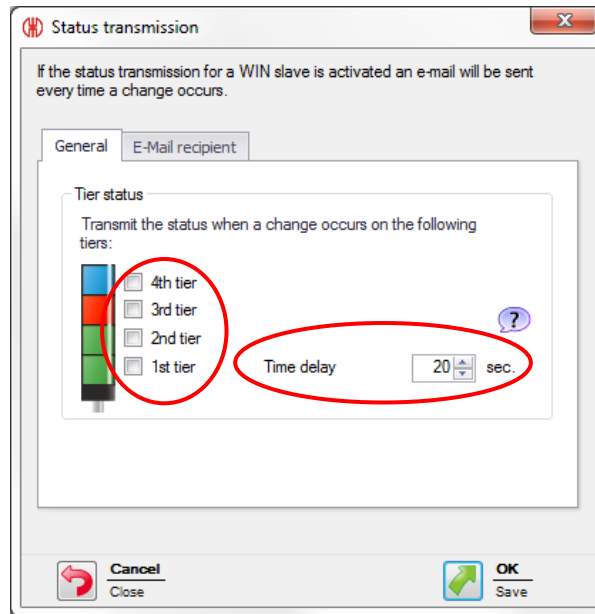
Note: If the status transmission for a WIN slave / WIN slave control is active, you are informed by e-mail of a status change of your signal tower, see chapter 9.2.1 under Settings.

To set up the status transmission, proceed as follows:

1. Click on the "envelope symbol".

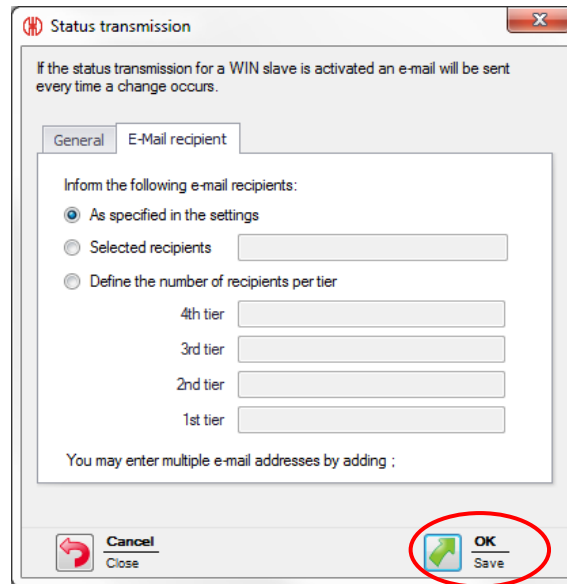


2. In the Status Transmission window, "General" tab, you can activate the status transmission for individual tiers. You can also use the time delay option to specify when you wish to be informed, i.e. the minimum time that the signal status must exist, before an E-mail will be sent. If the signal status is cleared before the end of the time delay, no status transmission will be sent.



3. In the "E-mail recipient" tab you can select who should receive the email. You can either send the e-mail to:

- The default recipient specified in Settings (see chapter 9.2.1)
- Specified recipient: Choose "Selected recipients" and enter the relevant e-mail address. For multiple addresses, enter a semicolon between each address.
- Specified recipient, dependent on the activated tier. Select Define recipients per tier and enter the email address as required. For multiple addresses, enter a semicolon between each address.



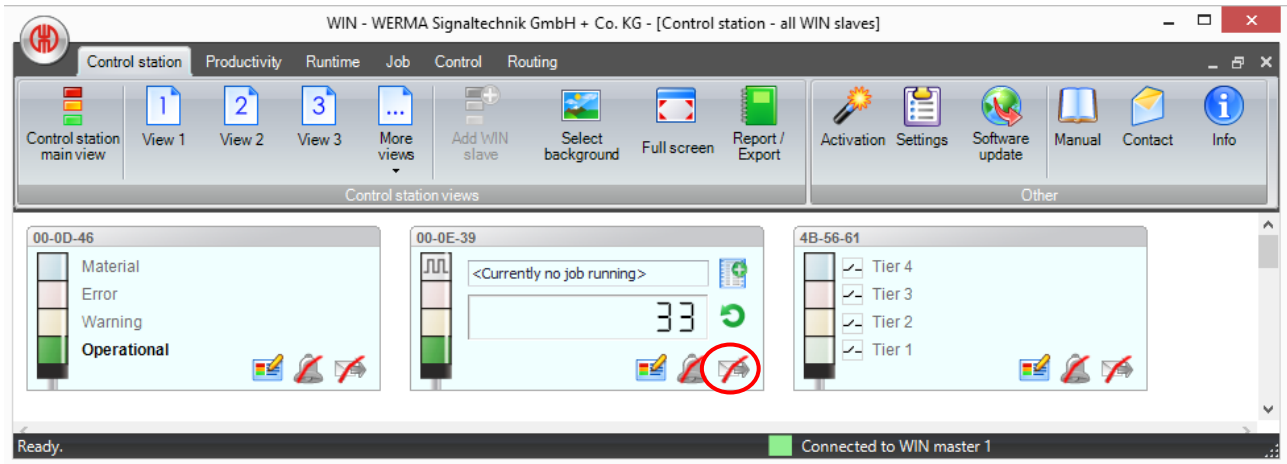
4. To save the setting click "OK".

7.1.7.2 WIN slave performance

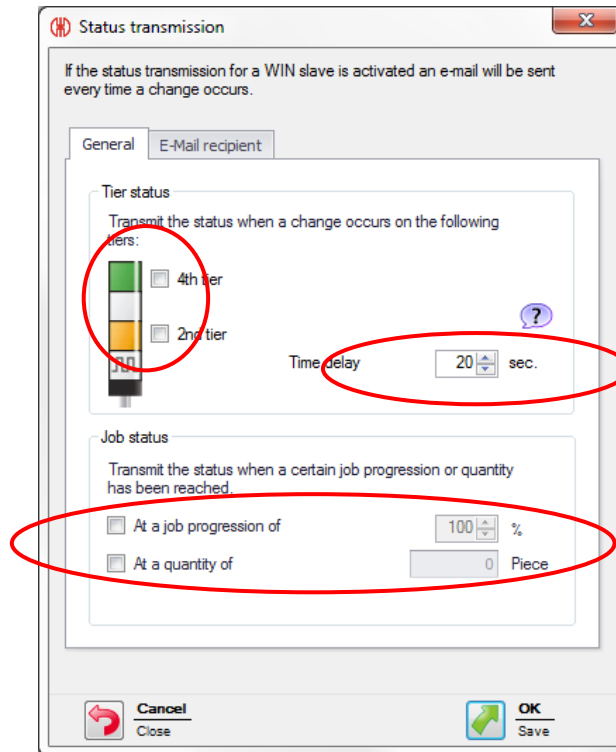
Note: If the status transmission for a WIN slave is active, you are informed by e-mail of a status change of your signal tower, see chapter 9.2.1 under Settings.

To set up the status transmission, proceed as follows:

1. Click on the "envelope symbol".



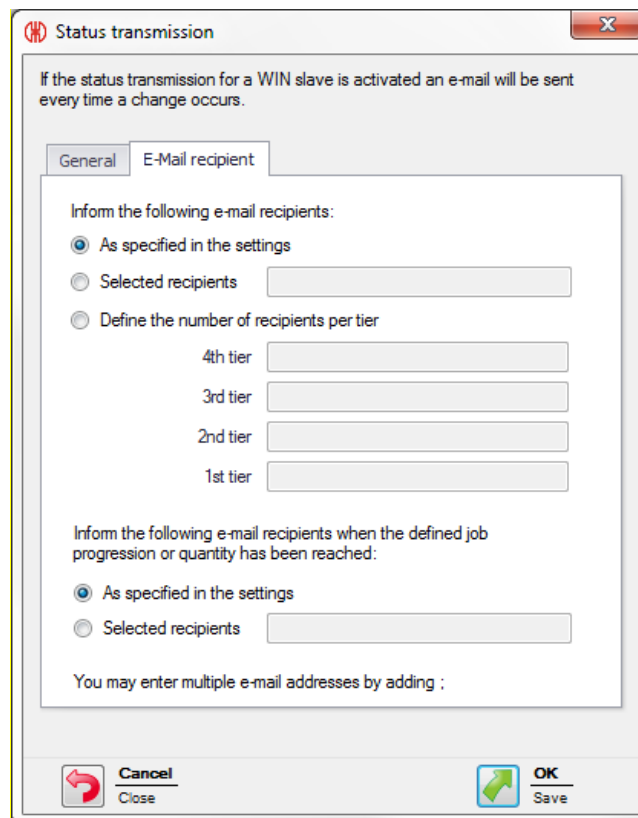
2. In the Status Transmission window, "General" tab, you can activate the status transmission for each individual tier. You can also use the time delay option to specify when you wish to be informed, i.e. the minimum time that the signal status must exist before an E-mail will be sent. If the signal status is cleared before the end of the time delay, no status transmission is sent. With WIN slave performance you can configure status notification to be triggered when a running job reaches a defined percentage of job progression or a certain quantity produced.



3. In the E-mail recipient tab you can select who should receive the email. You can either send the e-mail to:
 - The default recipient specified in Settings (see chapter 9.2.1)
 - Specified recipient: Choose "Selected recipients" and enter the relevant e-mail address. To separate multiple addresses, enter a semicolon after each address.
 - Specified recipient, dependent on the activated tier. Select Define recipients per tier and enter the email address as required. For multiple addresses, enter a semicolon between each address

For WIN slave performance, you can also configure email recipients for job progression and/or quantity produced. Select:

- "As specified in the settings" to use the default recipient (see chapter 9.2.1)
- "Selected recipients" to notify others. For multiple addresses, enter a semicolon between each address.



The screenshot shows a dialog box titled "Status transmission" with a close button (X) in the top right corner. Below the title bar, there is a text box stating: "If the status transmission for a WIN slave is activated an e-mail will be sent every time a change occurs." Below this, there are two tabs: "General" and "E-Mail recipient", with "E-Mail recipient" being the active tab. The main content area is divided into two sections. The first section is titled "Inform the following e-mail recipients:" and contains three radio button options: "As specified in the settings" (which is selected), "Selected recipients" (with an empty text input field), and "Define the number of recipients per tier". Under the "Define the number of recipients per tier" option, there are four text input fields labeled "4th tier", "3rd tier", "2nd tier", and "1st tier". The second section is titled "Inform the following e-mail recipients when the defined job progression or quantity has been reached:" and contains two radio button options: "As specified in the settings" (which is selected) and "Selected recipients" (with an empty text input field). At the bottom of the main content area, there is a text label: "You may enter multiple e-mail addresses by adding ;". At the bottom of the dialog box, there are two buttons: "Cancel" (with a red arrow icon) and "OK" (with a green arrow icon). Below "Cancel" is the text "Close" and below "OK" is the text "Save".

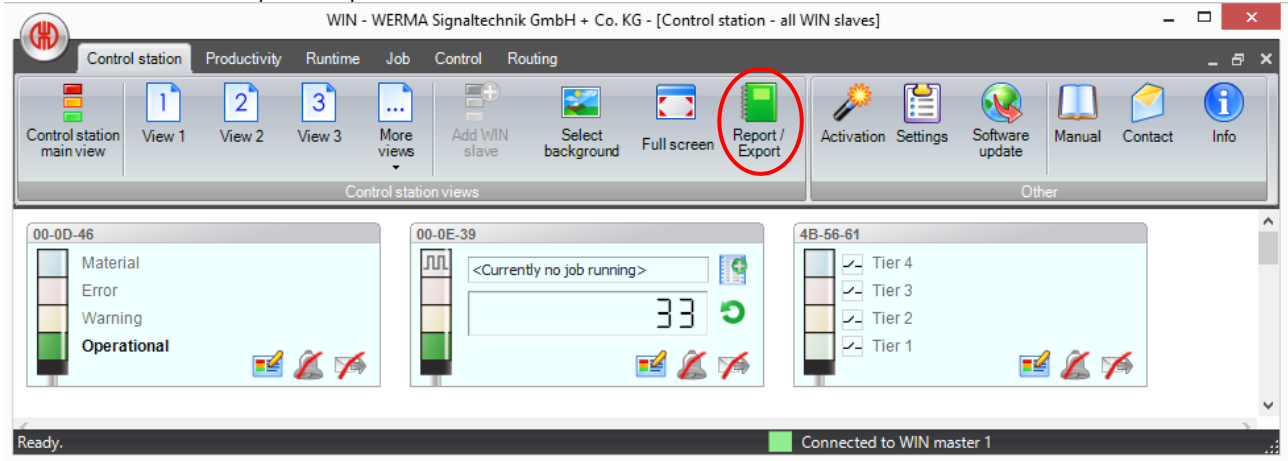
3. To save the setting click "OK".

7.1.8 Report

Note: A report can only be generated from the currently selected view. By selecting the Main View, all WIN slaves can be included. Select or create a different view to select particular WIN slaves.

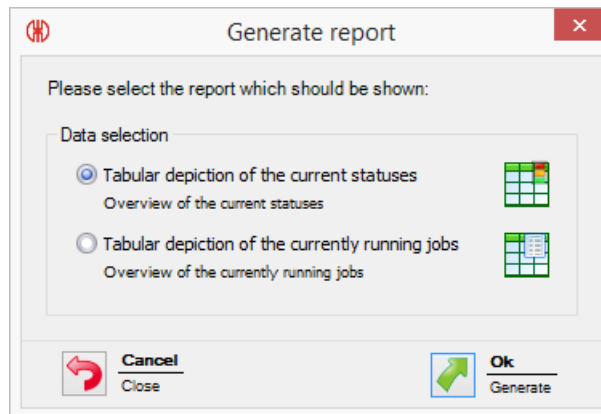
To generate a report, proceed as follows:

1. Click on "Report/Export".

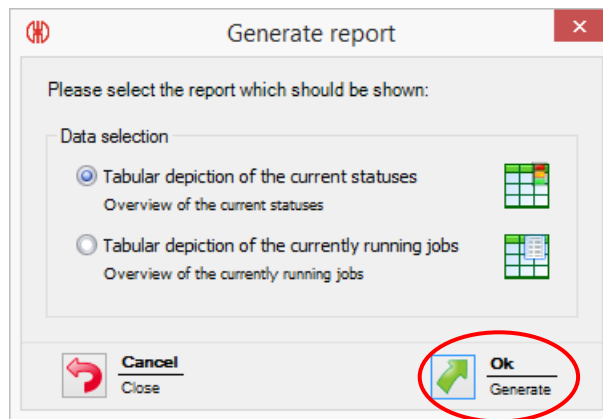


2. Now select which report you want to generate. Choose between:

- Tabular depiction of the current statuses
- Tabular depiction of the currently running jobs



3. Confirm your selection with "OK".



4. You can now see a preview of your selected report. Additional functions are described in section 7.7, Report and Export Functions.

7.2 Productivity Module

Using the Productivity Module you can check the productivity of your machines over any time period. You can look for example at the last working day, or define specific time periods such as shift patterns. Using this module it is possible to retrospectively analyse downtime and fault conditions and thus help improve efficiency in the future.

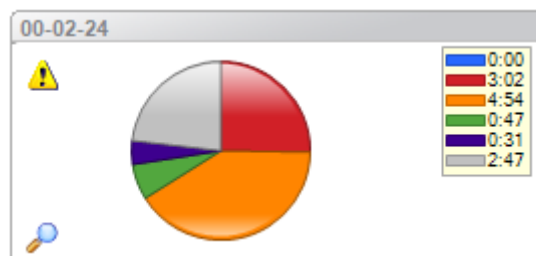
7.2.1 Productivity display

The productivity views adopt the settings of the WIN slave configuration and of the Control Station Module:

- WIN slave Name
- WIN slave colour and function
- WIN slave signal description
- WIN slave positions
- Name of view
- Background

7.2.1.1 WIN slave / WIN slave control

The pie charts display the individual states of the WIN slaves / WIN slaves control.



The states of the WIN slaves / WIN slaves control correspond to those of the Control Station Module plus the two states “Off” (purple) and “Connection Error” (grey).

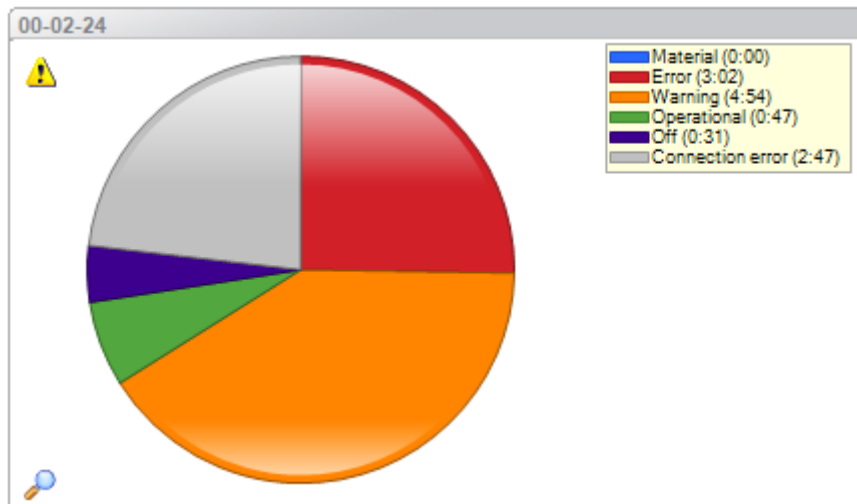
The “OFF” state applies if no signal tower element is active but there is still power to the signal tower.

The “Connection Error” applies when:

- wireless communication cannot be established between the WIN slave and the WIN master,
- the WIN software is not operational,
- the PC is in the Off state,
- the Microsoft SQL Server cannot be reached and therefore no database connection can be established
- the WIN slave is not connected to the power supply or
- the WIN master is not connected to the PC.

Note: The shaded areas within the pie chart represent the blink recognition for the respective tier.

Clicking on the “magnifying glass” enlarges the pie chart and displays the status descriptions.

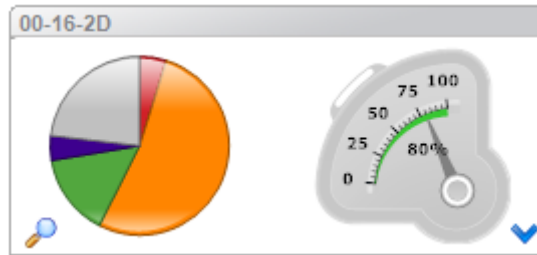


Click on the “magnifying glass” again to zoom out.

Note: If more than one tier has been simultaneously active, a yellow triangle will appear.

7.2.1.2 WIN slave performance

In the pie charts the individual states of the WIN slaves performance and productivity in a speedometer chart appears.



The states of the WIN slave performance correspond to those of the Control Station Module plus the two states “Off” (purple) and “Connection Error” (grey).

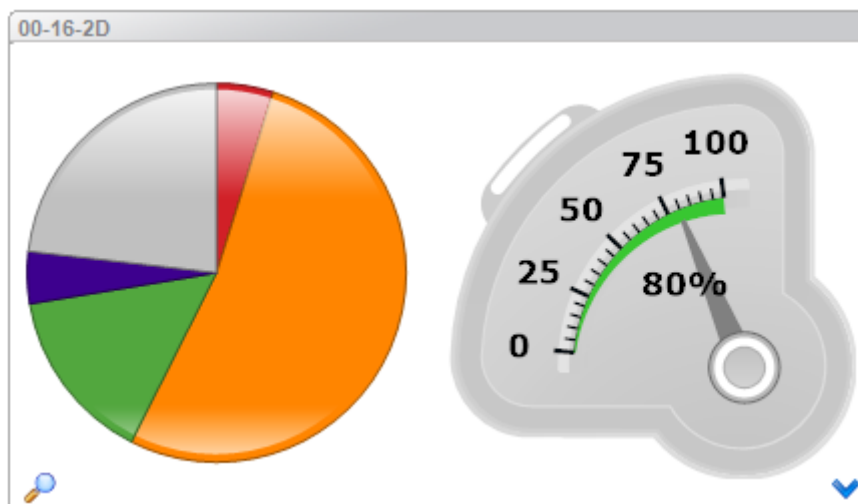
The “OFF” state applies if no signal tower element is active but there is still power to the signal tower.

The “Connection Error” applies when:

- wireless communication cannot be established between the WIN slave and the WIN master,
- the WIN software is not operational,
- the PC is in the Off state,
- the Microsoft SQL Server cannot be reached and therefore no database connection can be established
- the WIN slave is not connected to the power supply or
- the WIN master is not connected to the PC.

Note: The shaded areas within the pie chart illustrate the blink recognition for the respective tier.

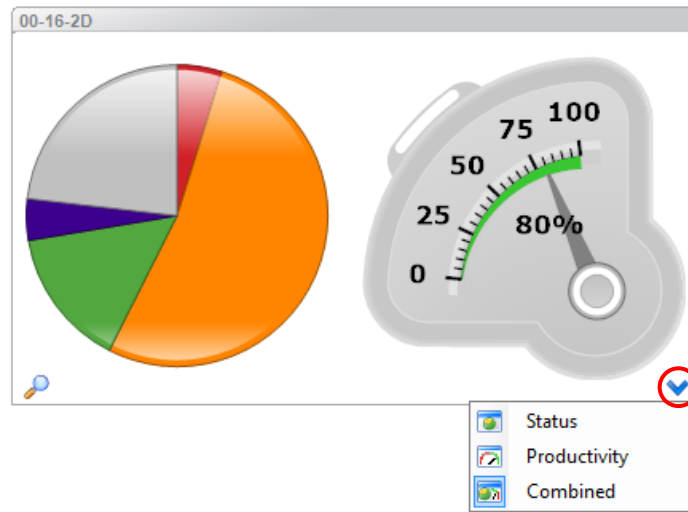
Clicking on the “magnifying glass” enlarges the pie chart.



Click on the “magnifying glass” again to zoom out.

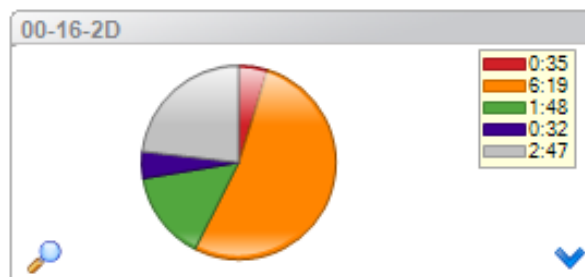
Note: If more than one tier has been simultaneously active, a yellow triangle will appear.

Click on the "blue arrow" to select your preferred display option.

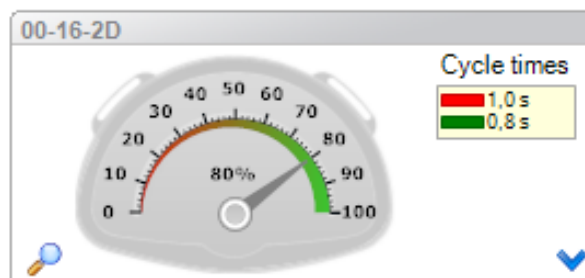


The options are as follows:

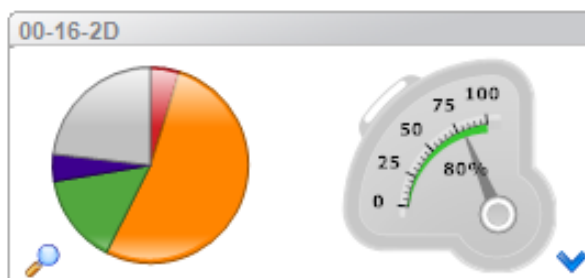
- Status



- Productivity



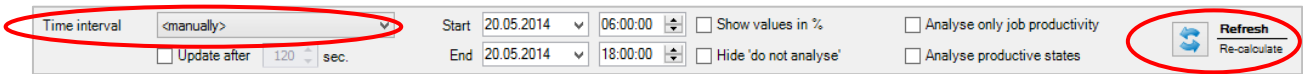
- Combined



7.2.2 Productivity options

7.2.2.1 Setting time interval

The time interval for the displayed values can be individually adjusted. You may select one of the pre-set time intervals or define a different interval using the "Start" and "End" boxes.

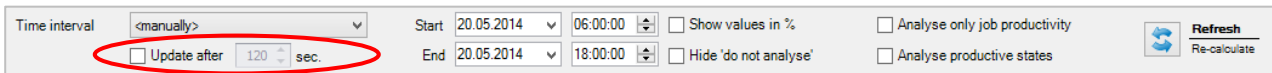


After changing the time intervals, the view must be updated by clicking "Refresh".

Note: If you have defined specific time periods within Settings, you can select them from the drop down menu. See chapter 9.7. If, for example, you want to look at the early shift for last week select first of all "last week" and then the defined shift.

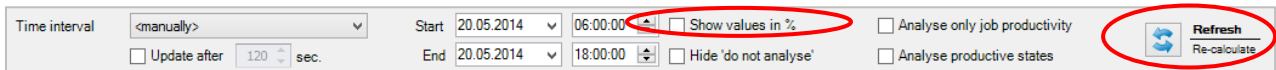
7.2.2.2 Setting the automatic update

By selecting the "Update after ..." box, the pie charts are automatically updated after the selected time.



7.2.2.3 Display in hours or per cent

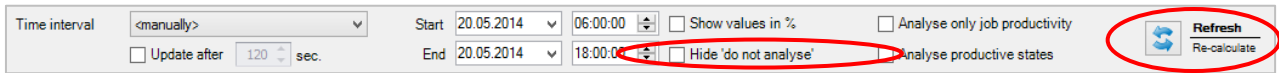
By selecting the "Show runtime in %" box, the runtime display is changed from hours to percentage.



When this box is selected, the view must be updated by clicking "Refresh".

7.2.2.4 Hide; do not analyse

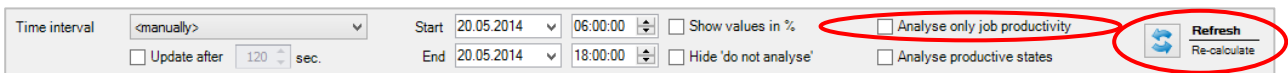
By selecting the "Hide; do not analyse" box, all states which are defined as "do not analyse" will be ignored and the pie chart displays all other states.



When this box is selected, the view must be updated by clicking "Refresh".

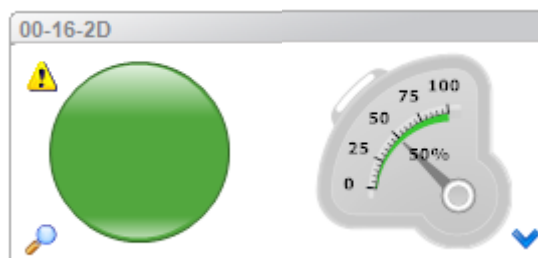
7.2.2.5 Analyse only job productivity

By selecting "Analyse only job productivity" box, the productivity and the time with no running job is ignored. Accordingly, the speedometer chart is adapted.

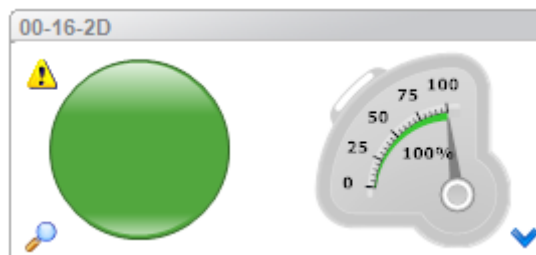


Example: In the cases below, the calculated productivity is based on one hour during which a job has run for 30 minutes with a job productivity of 100%:

- Productivity:
The overall productivity is **50%**, because the rest of the time is evaluated (without job) with a productivity of 0%.



- Only job productivity:
The job productivity is **100%**, because the rest of the time (without job) is ignored.



7.2.2.6 Analyse productive states

By selecting the "Analyse productive states" box, all states which are defined as "Productive" or "Non-productive" will be shown in the pie chart display.

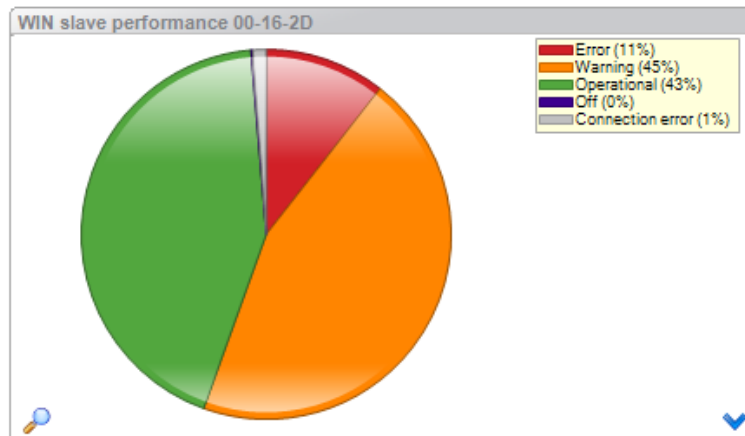
The screenshot shows a control panel with the following elements: 'Time interval' set to '<manually>', 'Start' and 'End' dates set to '20.05.2014' with times '06:00:00' and '18:00:00' respectively, 'Update after' set to '120 sec.', 'Show values in %' checkbox, 'Analyse only job productivity' checkbox, 'Hide 'do not analyse'' checkbox, 'Analyse productive states' checkbox (which is checked and circled in red), and a 'Refresh Re-calculate' button (also circled in red).

When this box is selected, the view must be updated by clicking "Refresh".

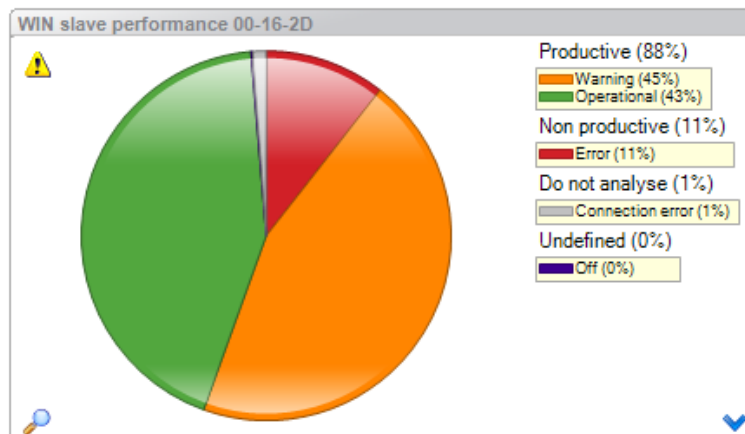
Example:

The calculated productivity is based on one hour:

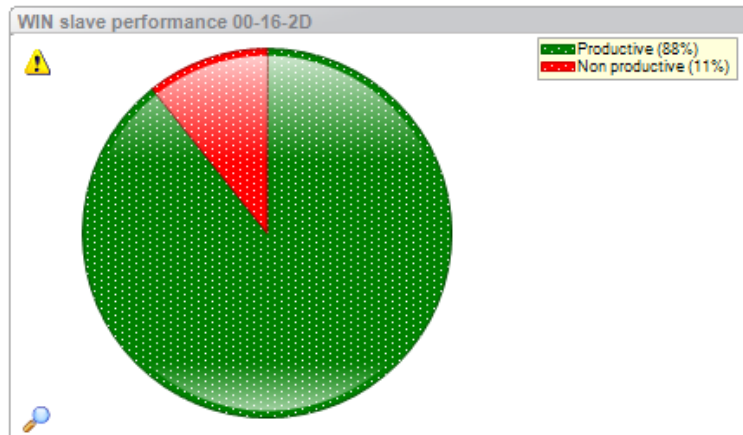
- Analysis of productivity without defined productive states. Each state is listed and shown separately in the pie chart.



- Analysis of productivity with defined productive states and without selecting the "Analyse productive states" box. The states are sorted according to the categories of "Productive", "Non-productive" and "Do not analyse". The pie chart shows each state separately.



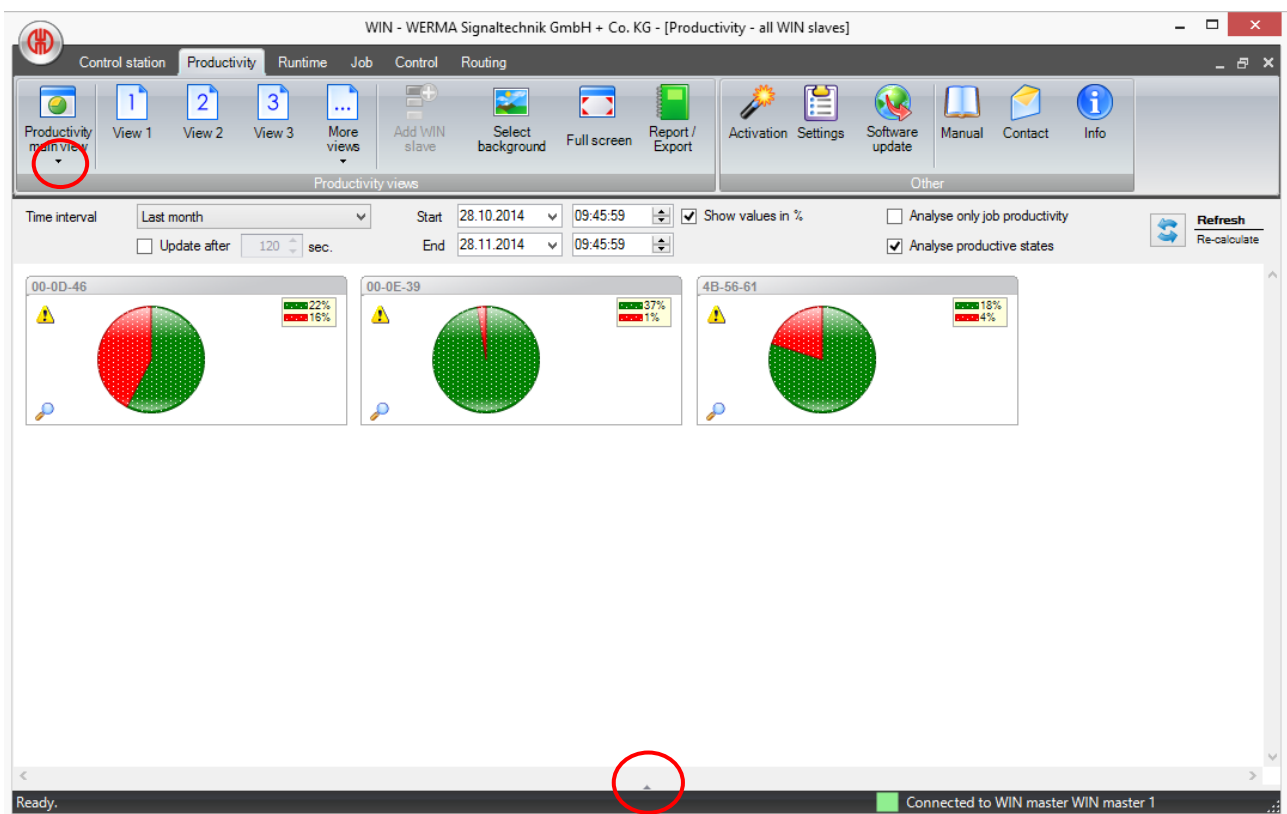
- Analysis of productivity with defined productive states and with selecting the "Analyse productive states" box. The states are assigned to the categories of "Productive" and "Non-productive". These categories are displayed in the pie chart.



7.2.3 Total productivity per view

In each view, you can see total productivity for that view, either for all defined states or for a combination of productive / non productive states.

Click on the small arrow at the bottom-centre or click on the arrow under "Productivity main view".

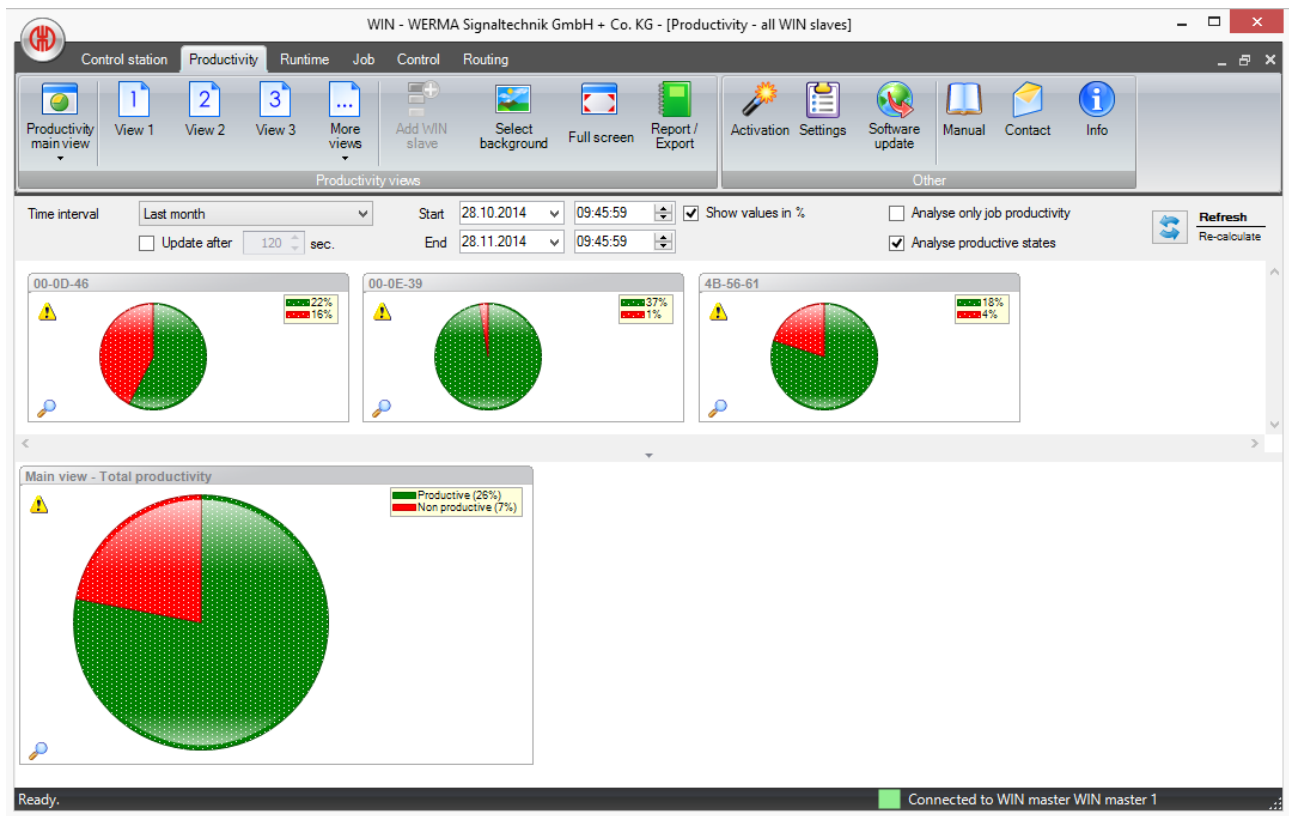


The screenshot shows the WERMA software interface with the following details:

- Window Title:** WIN - WERMA Signaltechnik GmbH + Co. KG - [Productivity - all WIN slaves]
- Menu Bar:** Control station, Productivity, Runtime, Job, Control, Routing
- Productivity views:** View 1, View 2, View 3, More views
- Other:** Add WIN slave, Select background, Full screen, Report / Export, Activation, Settings, Software update, Manual, Contact, Info
- Time interval:** Last month
- Start:** 28.10.2014 09:45:59
- End:** 28.11.2014 09:45:59
- Options:** Show values in % (checked), Analyse only job productivity (unchecked), Analyse productive states (checked)
- Refresh:** Re-calculate
- Productivity Views Data:**

View ID	Productive (%)	Non-productive (%)
00-0D-46	22%	18%
00-0E-39	37%	1%
4B-56-61	18%	4%
- Status Bar:** Ready, Connected to WIN master WIN master 1

The total productivity per view is then displayed in an additional pie chart.



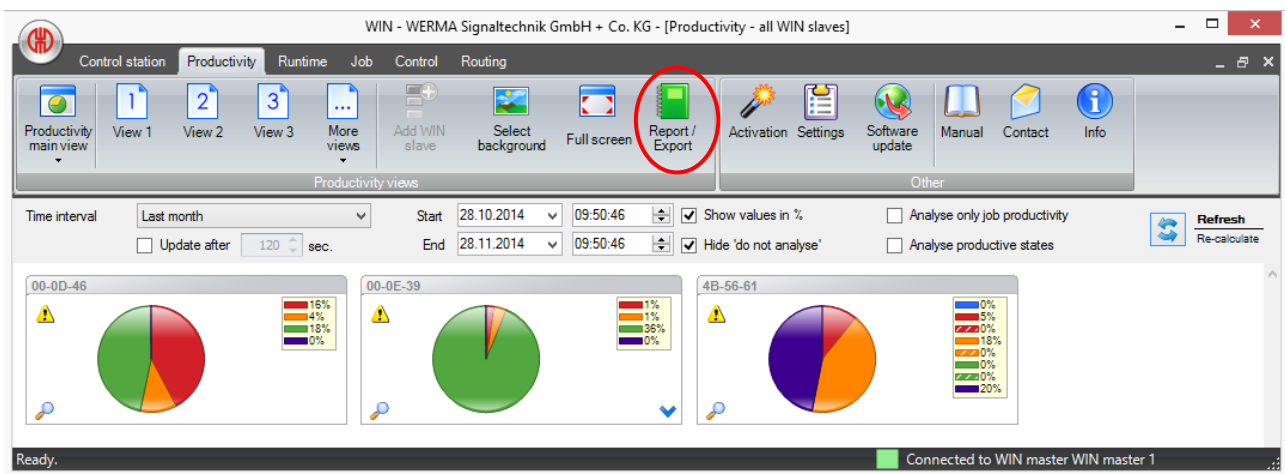
7.2.4 Report

Note: A report can only be generated from the currently selected view. By selecting the Main View, all WIN slaves can be included. Select or create a different view to select particular WIN slaves.

Note: A report can only be generated for the selected time period and the chosen analysis method (check box). Selecting “Analyse productive states” check box, will create a report based on that data.

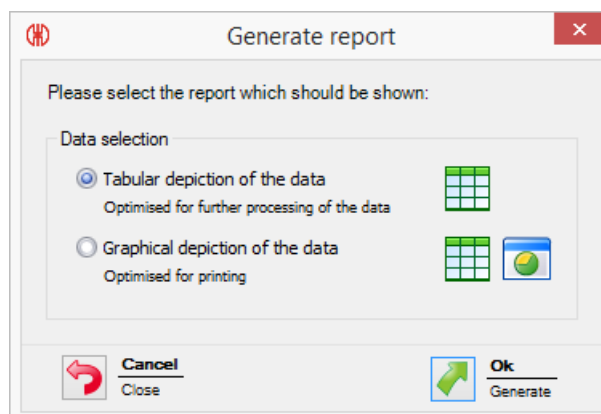
To generate a report, proceed as follows:

1. Click on “Report/Export”.

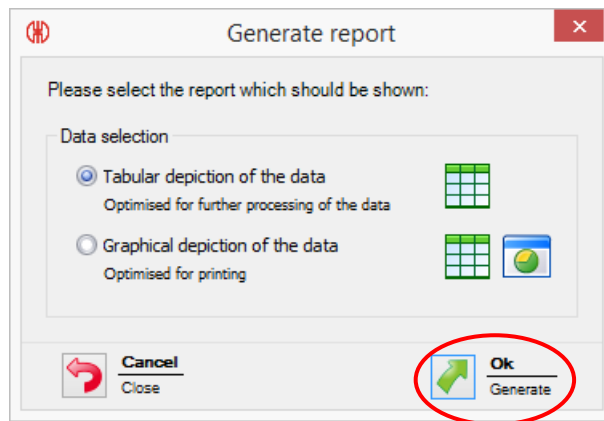


2. Now select which report you want to generate. Choose between:

- Tabular depiction of the data
- Graphical depiction of the data



-
3. Confirm your selection with "OK".



4. You can now see a preview of your selected report. Additional functions are described in section 7.7, "Report and Export Functions".

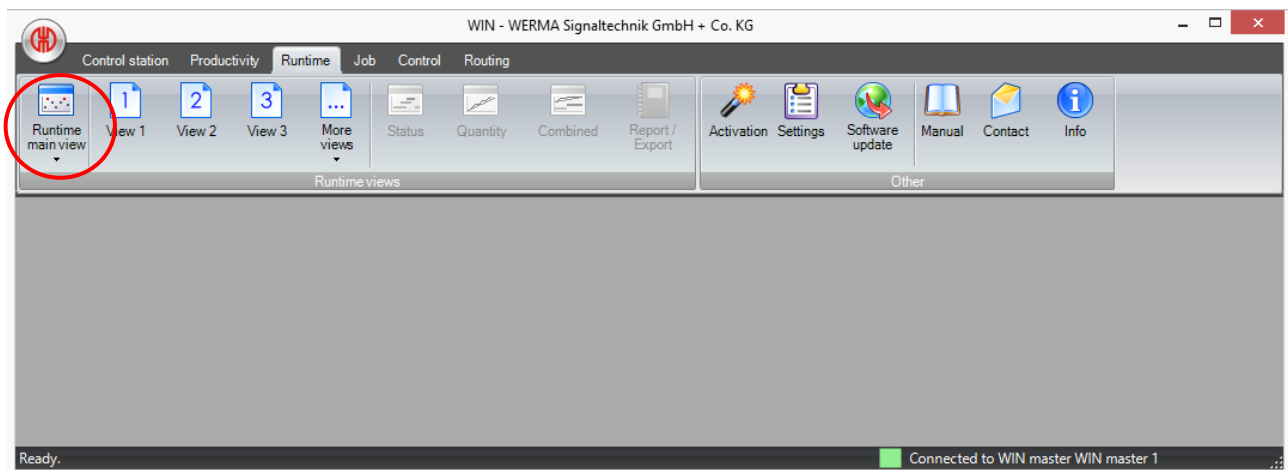
7.3 Runtime Module

The Runtime Module allows you to check the operation and downtimes of your machines. Using the module, you will quickly establish if there are patterns of downtime or fault conditions, giving you a better transparency of production. This forms the basis for improving the efficiency of your production processes.

7.3.1 Runtime Views

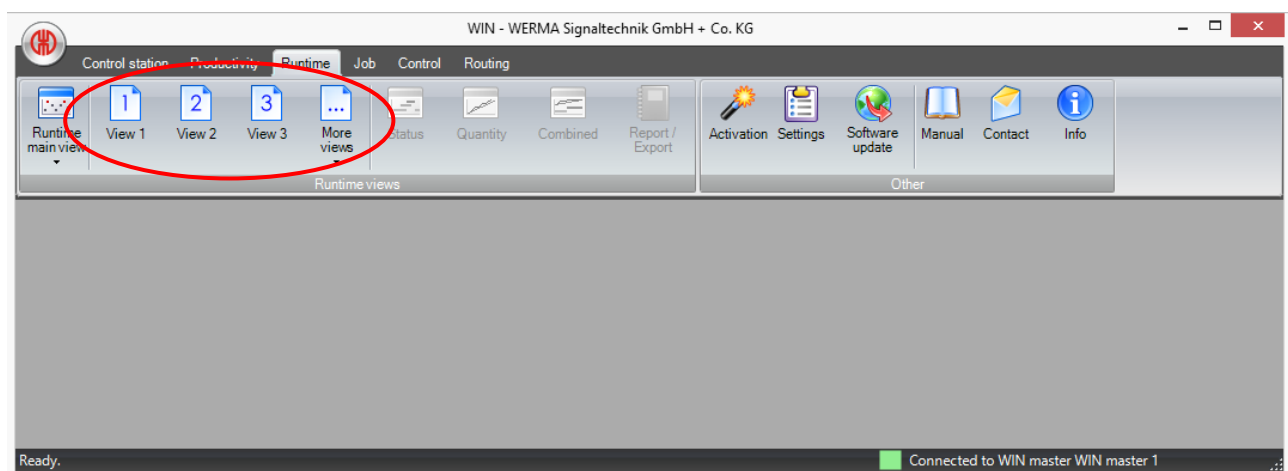
7.3.1.1 Main View

The Runtime main view gives you an overview of all the WIN slaves which are registered on your network. Clicking on a WIN slave will display the runtime history of that WIN slave. See chapter 7.3.3.



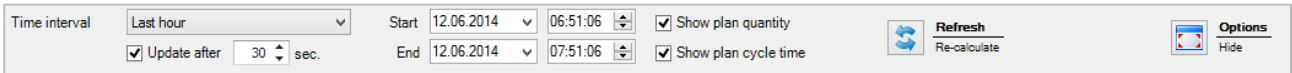
7.3.1.2 Additional Views

By selecting one of the additional views, the WIN slaves associated with that view are displayed (see chapter 7.1.2.3 for further details). The runtime depiction of several WIN slaves will then be used, see chapter 7.3.3.3.



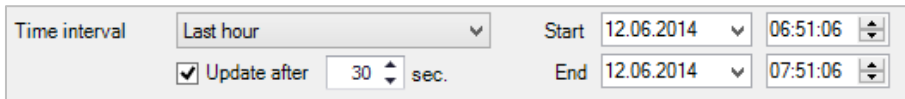
7.3.1.3 Runtime Module Options

In Options, you can select the time interval and the display selection criteria.

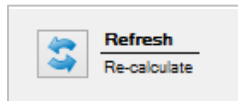


7.3.1.4 Setting time interval

The displayed time interval can be individually adjusted. You may select one of the pre-set time intervals or one of the finished customised time periods. Alternatively, choose a custom interval using the "Start" and "End" boxes.



To activate your selection, you must click "Refresh".



7.3.1.5 Navigation Buttons

Using the navigation buttons in the lower window section, you can change the time interval for the observation of the machine states.

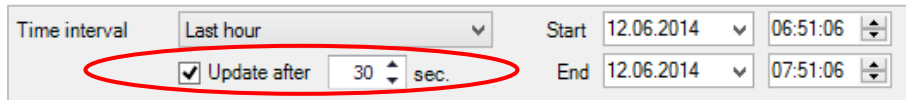


You can select an earlier or later time interval by using the "Next" or "Back" buttons.

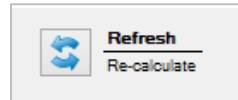
The "Zoom in" and "Zoom out" buttons can be used to display a smaller or larger time interval.

7.3.1.6 Automatic update option

By selecting the "Update after ..." box, the pie charts are automatically updated after the selected time.

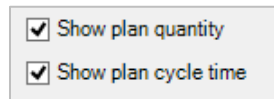


To activate you choice, you must click "Refresh".

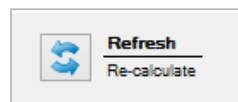


7.3.1.7 Target specification

For WIN slave performance, you can also display the job's target quantity and target cycle time. Activate this by ticking the corresponding check box.

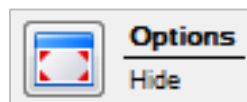


To activate you choice, you must click "Refresh".

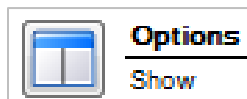


7.3.1.8 Show/Hide options

The button "Hide Options" can be used to hide the settings for the time interval and the column listing the WIN slaves. This increases the size of the diagrams.

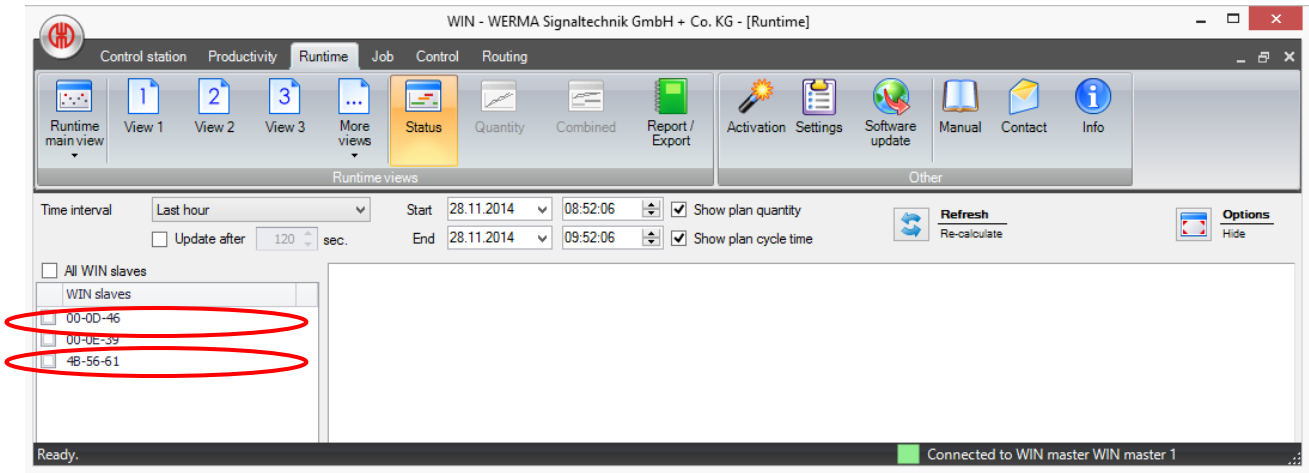


The button "Show Options" can be used to re-activate the standard view with all the options.



7.3.2 Runtime depiction

Any of the WIN slaves can be displayed in a separate chart by clicking on a WIN slave in the left-hand window section.



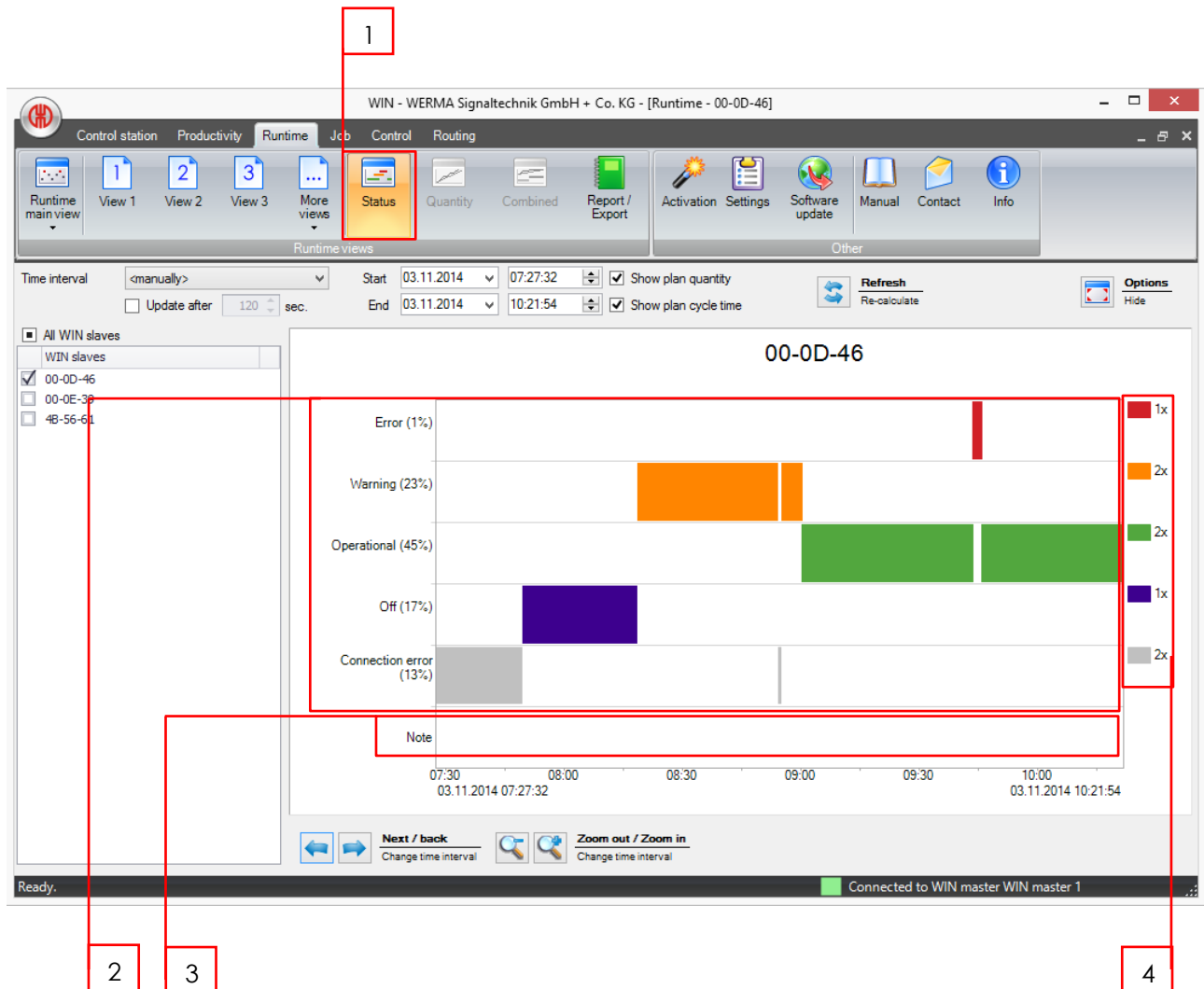
Pressing the "F11" key allows you to cycle through the Runtime view for each available slave. It will open the first machine in the list of WIN slaves with the time interval "last eight hours".

With a second press on "F11" the second machine with the time interval "last eight hours" will open and so on down the list.

7.3.2.1 WIN slave / WIN slave control

The runtime depiction of a WIN slave / WIN slaves control contains the following information and analysis:

1. Status display
2. Depiction of the statuses in the selected time interval
3. Note field
4. Number of occurrences in the selected time interval

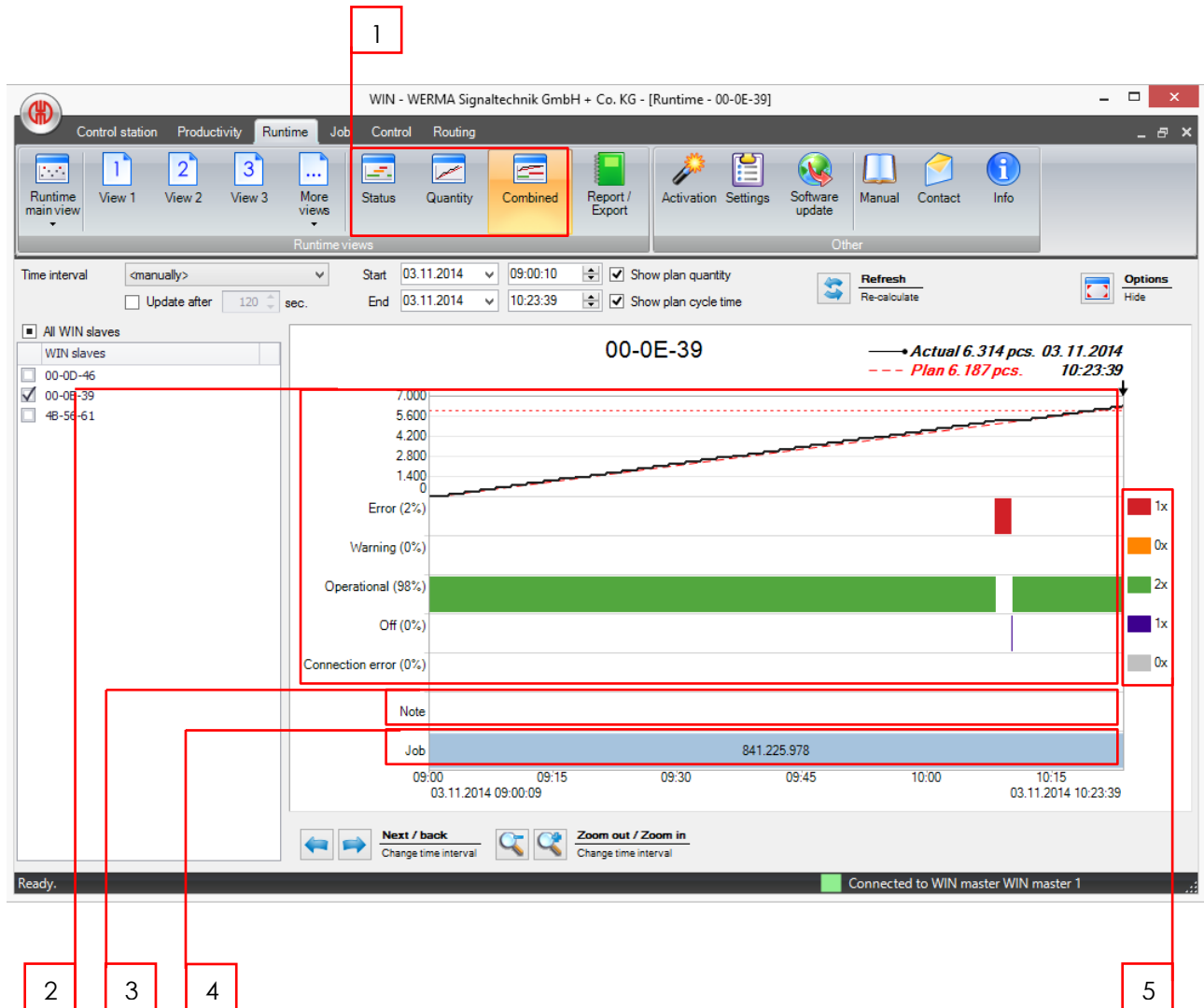


Note: The blink recognition signal is displayed as a shaded area in the colour of the respective tier.

7.3.2.2 WIN slave performance

The runtime depiction of a WIN slave performance contains the following information and analysis:

1. Status display / quantity display / combined display with status and quantity
2. Depiction of the statuses and quantity in the selected time interval
3. Note field
4. Job field
5. Number of occurrences in the selected time interval

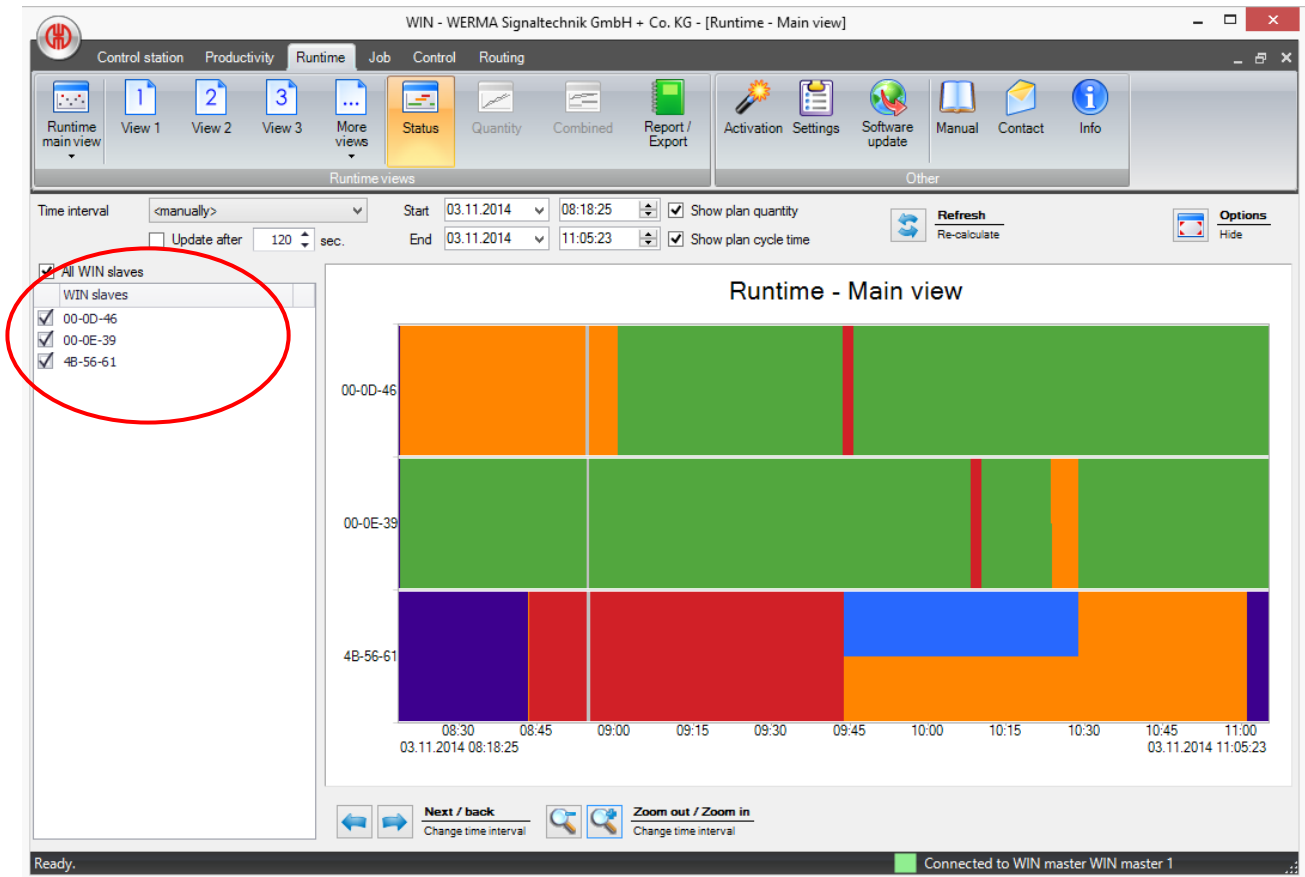


Note: Warning symbol "power loss" is displayed when the WIN slave performance is restored to power. Earlier data may be incorrect!

7.3.2.3 Runtime depiction of several WIN slaves

To compare the performance of a number of machines over a specific period, multiple runtimes of several WIN slaves can be opened in the Runtime module.

In the left hand window select one, several or all WIN slaves by clicking on them.



7.3.3 Note / Fault condition

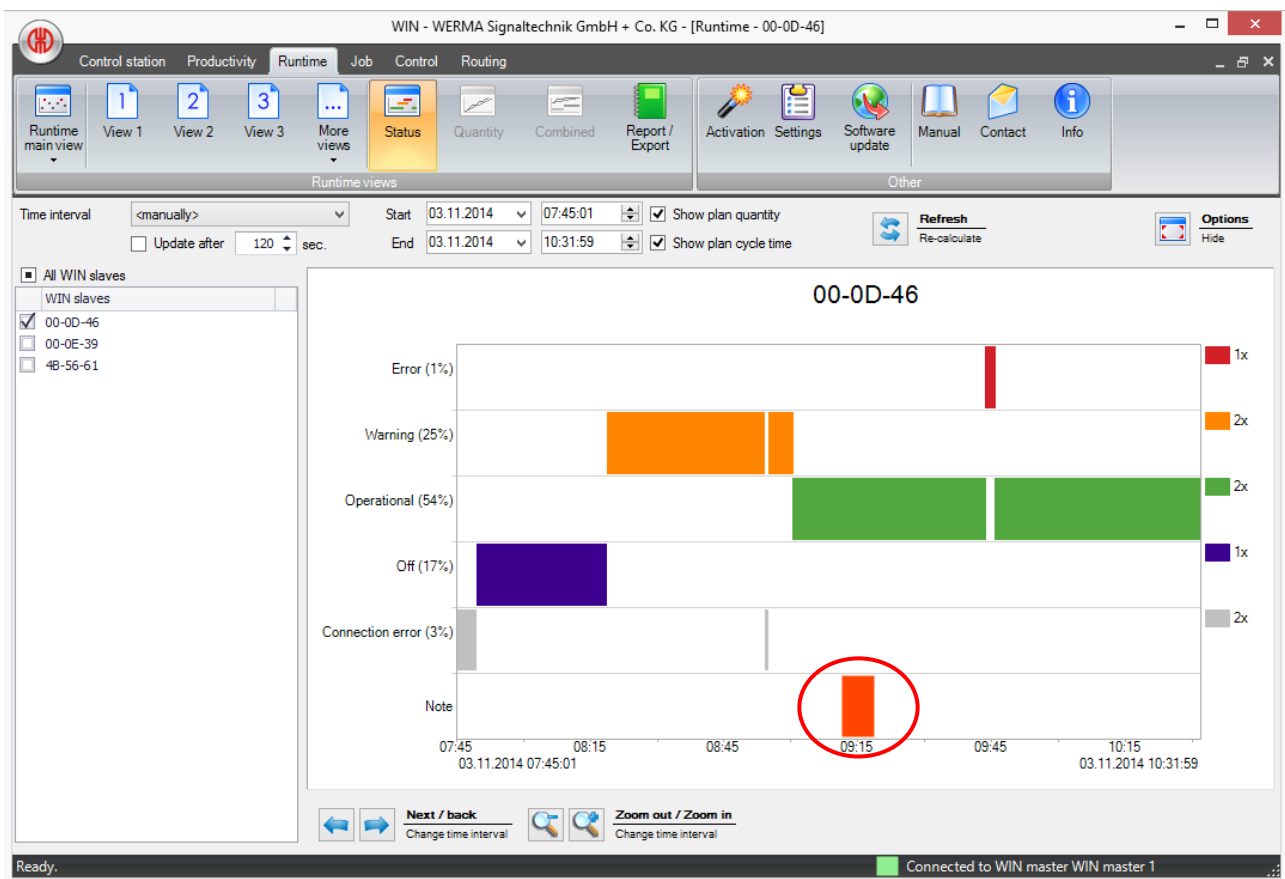
7.3.3.1 Inserting a note / fault condition

In the Runtime Module you can enter different coloured notes or fault conditions for each WIN slave.

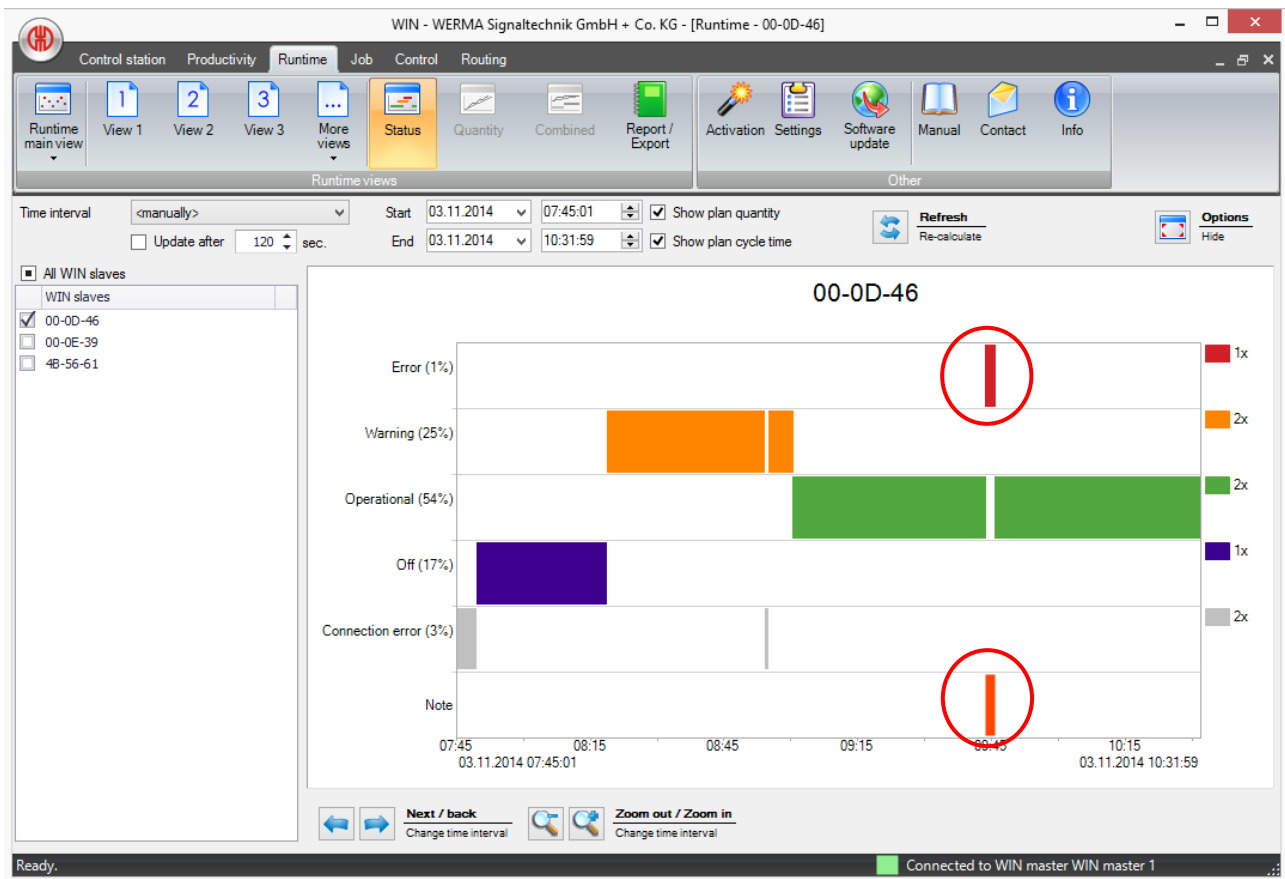
Note: A fault condition can be defined within Settings, see chapter 9.8. You can select these defined fault conditions in the runtime module when you create a note.

To create these, there are two options:

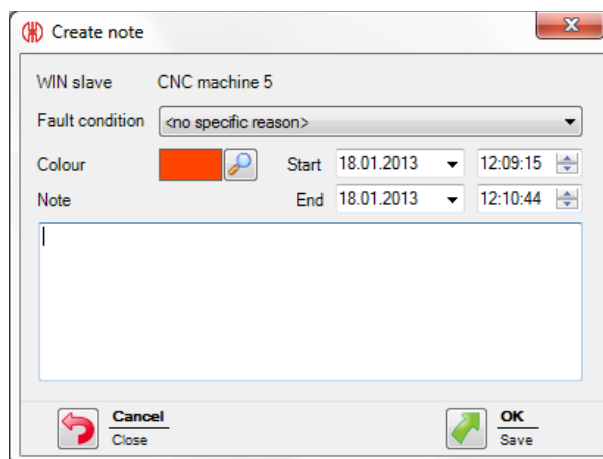
1. Use the cursor to draw a line in the note field. The length of the line corresponds to the duration of the note.



2. Double click on any status. The duration of the note corresponds to the duration of the selected status.



3. The following window appears.

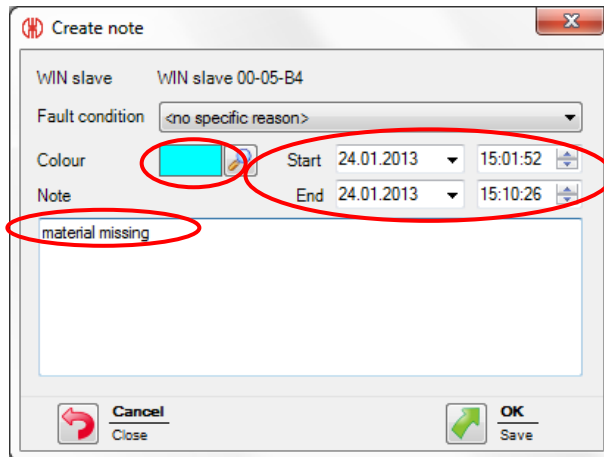


The screenshot shows the 'Create note' dialog box in the WERMA Signaltechnik software. The dialog box contains the following fields and controls:

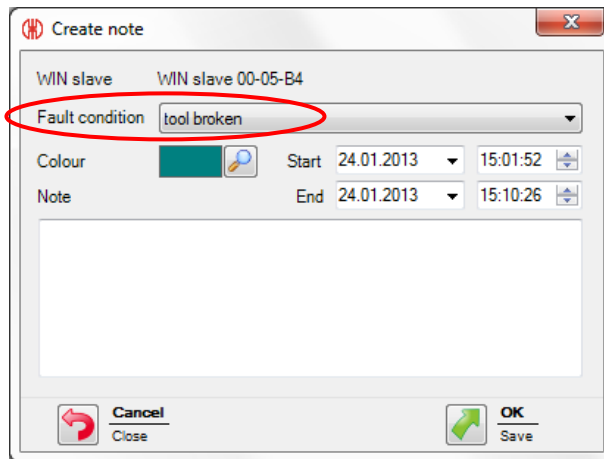
- WIN slave:** CNC machine 5
- Fault condition:** <no specific reason>
- Colour:** orange
- Start:** 18.01.2013 12:09:15
- End:** 18.01.2013 12:10:44
- Note:** A text area for entering the note content.
- Buttons:** Cancel (Close) and OK (Save).

Note: When "Use touch interface for the entry of the fault conditions" is activated within Settings/Fault Condition, the design option for touch screen appears. No separate note creation is possible, but you can choose the pre-defined reason for the fault by a click.

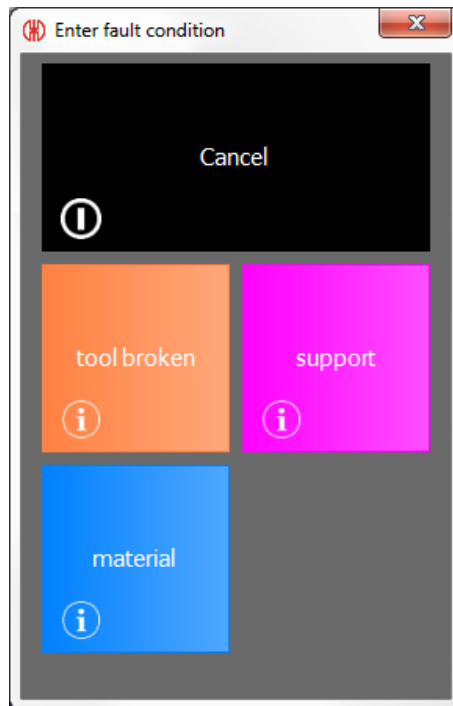
-
4. When creating a note you can select the note colour, enter the note text and edit the duration of the note.



5. When reporting a pre-defined fault condition you can select from the Fault condition pull-down. Fault conditions can be defined within Settings with the desired colour. See chapter 9.8.



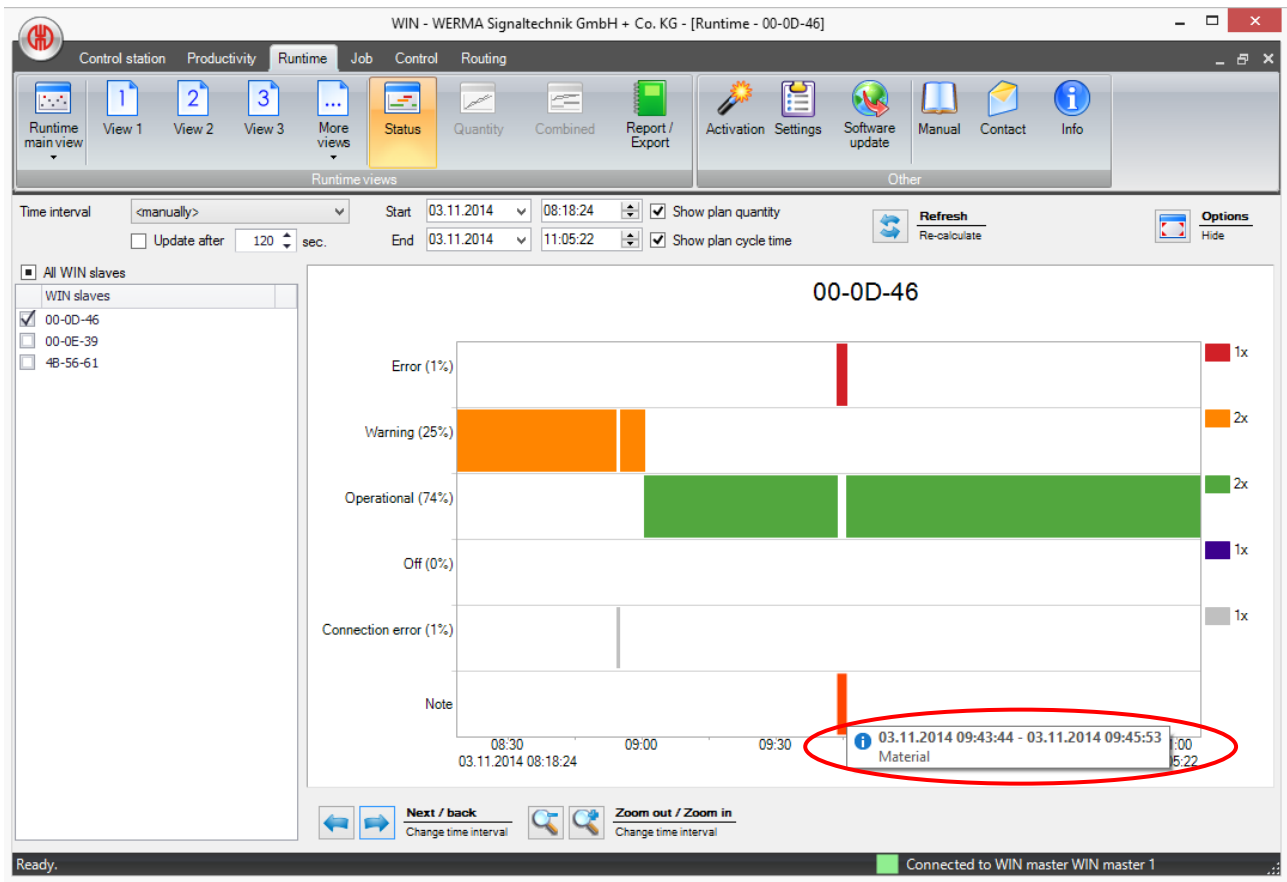
- When reporting a fault condition you can select a pre-defined fault condition via the touch interface. Fault conditions can be defined within Settings with the desired colour. See chapter 9.8. Ensure the box "Use touch interface for the entry of the fault conditions" is activated. The following window appears.



- To save the fault condition click on the desired fault condition.

7.3.3.2 Displaying the note / fault condition

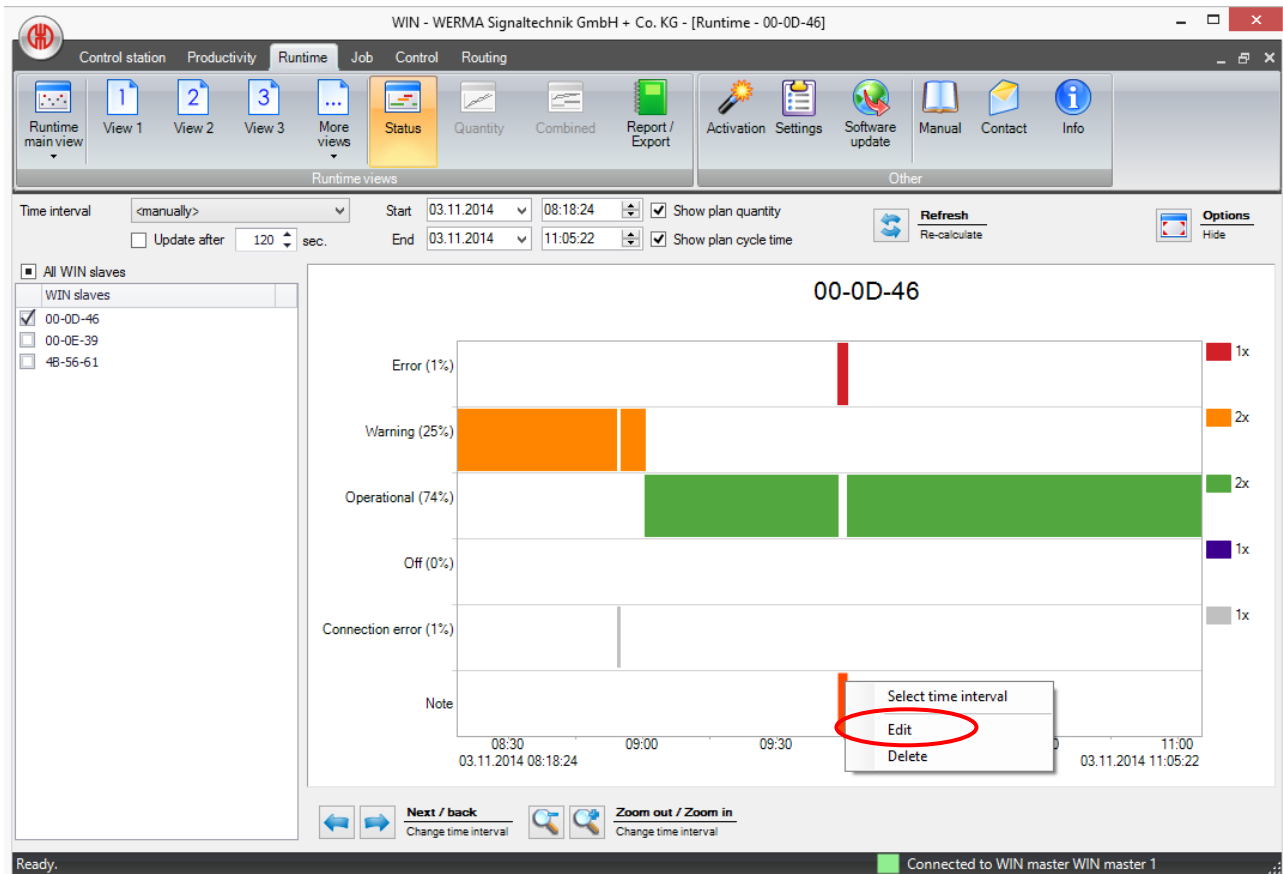
To display a note or fault condition, hover over the inserted note or the associated line. An information window opens on the screen, displaying the content of the note.



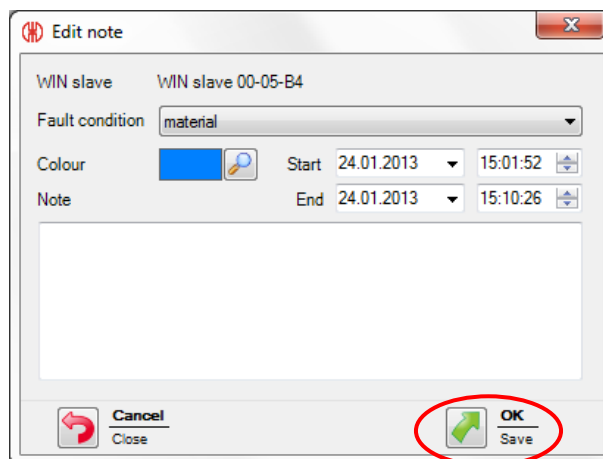
7.3.3.3 Editing a note / fault condition

There are two options to edit an existing note or fault condition.

Right-click on the note line and choose "Edit". Alternatively you can double click on the line to open the editing window.



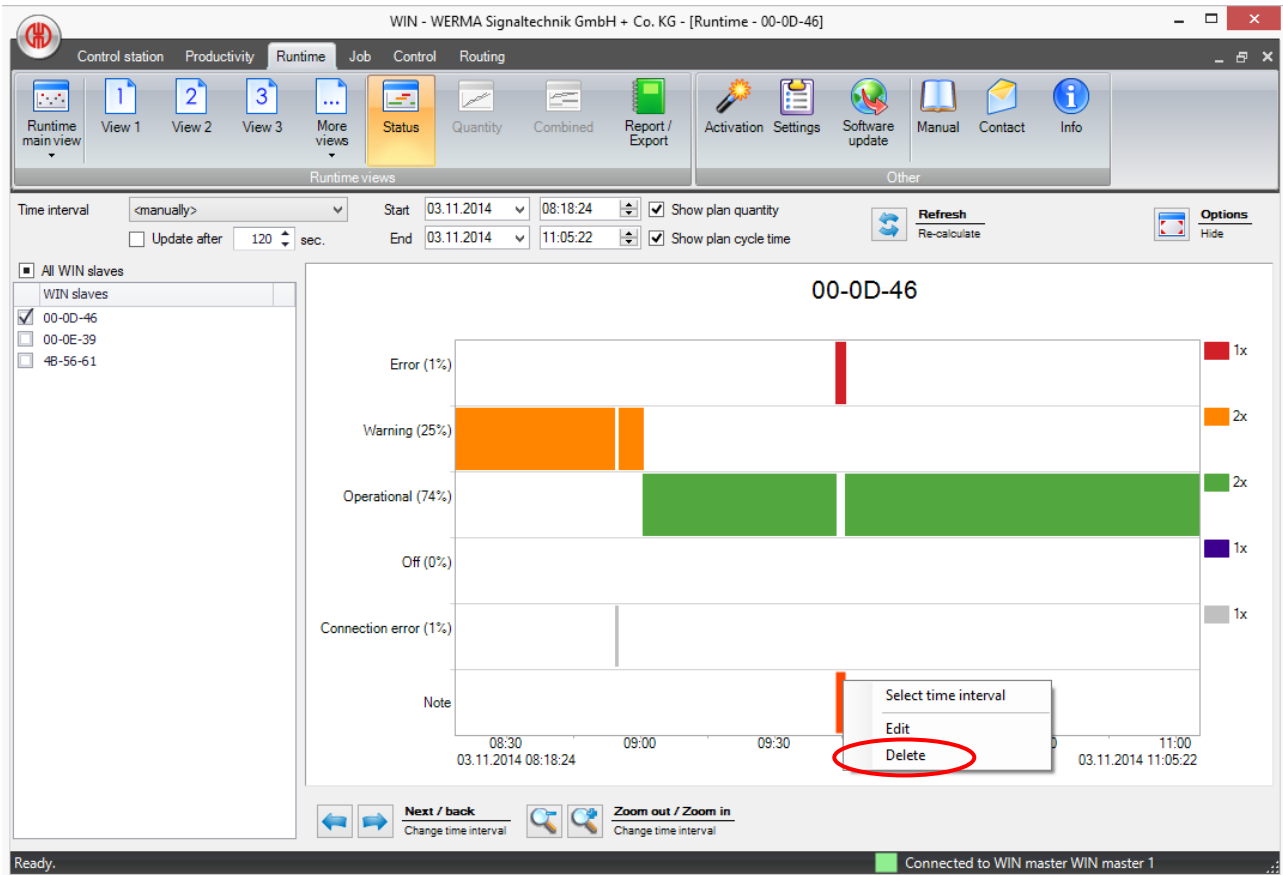
The "Edit note" window appears on the screen.



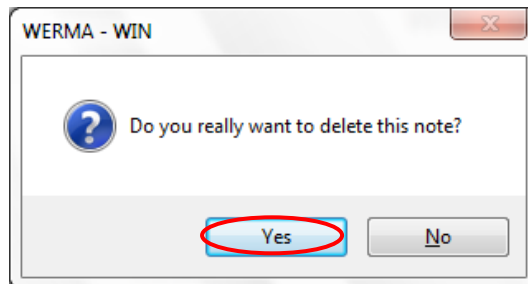
When you have finished editing, click "OK" to save your changes.

7.3.3.4 Deleting a note / fault condition

To delete a note or a fault condition, right-click on the note line and select "Delete".

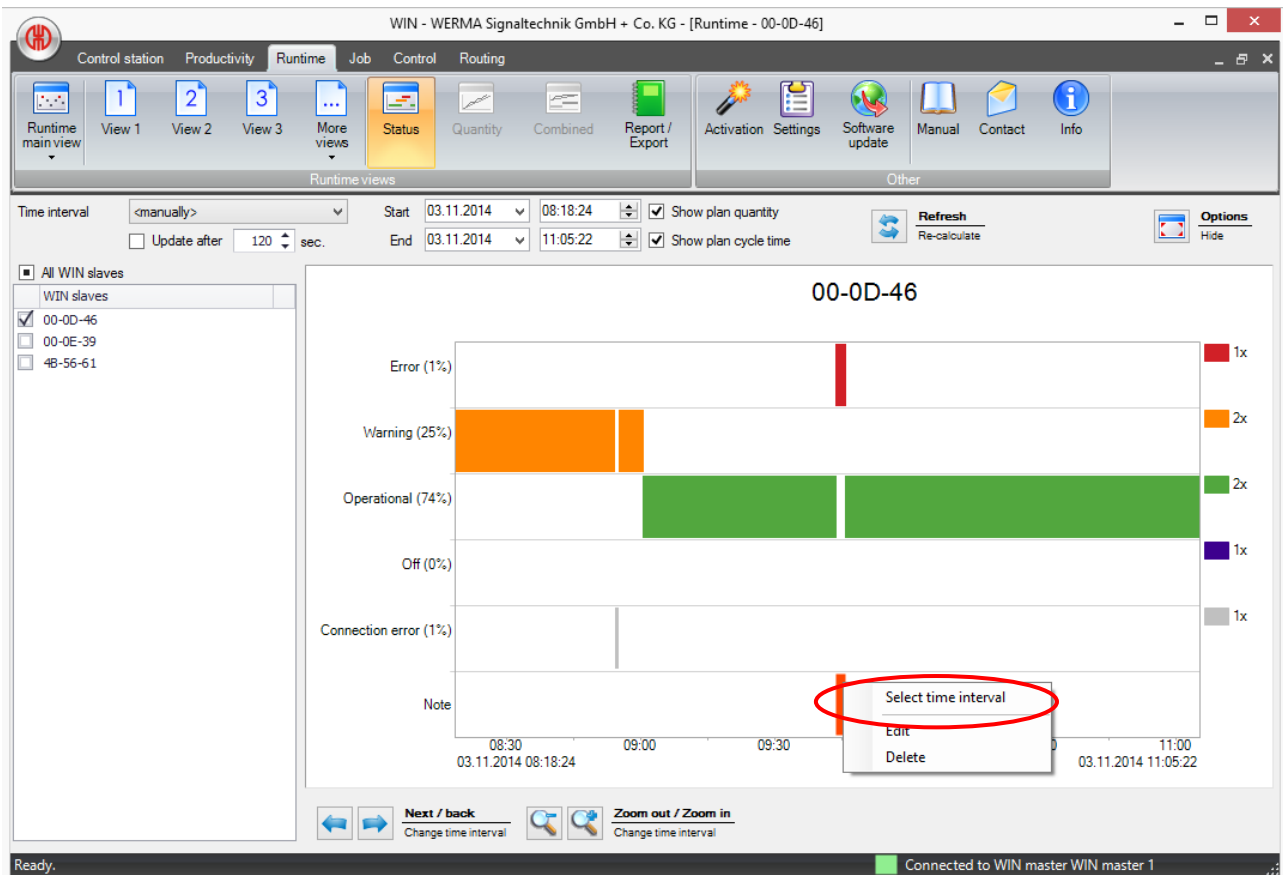


Click "Yes" to confirm.



7.3.3.5 Select time interval of the note / fault condition

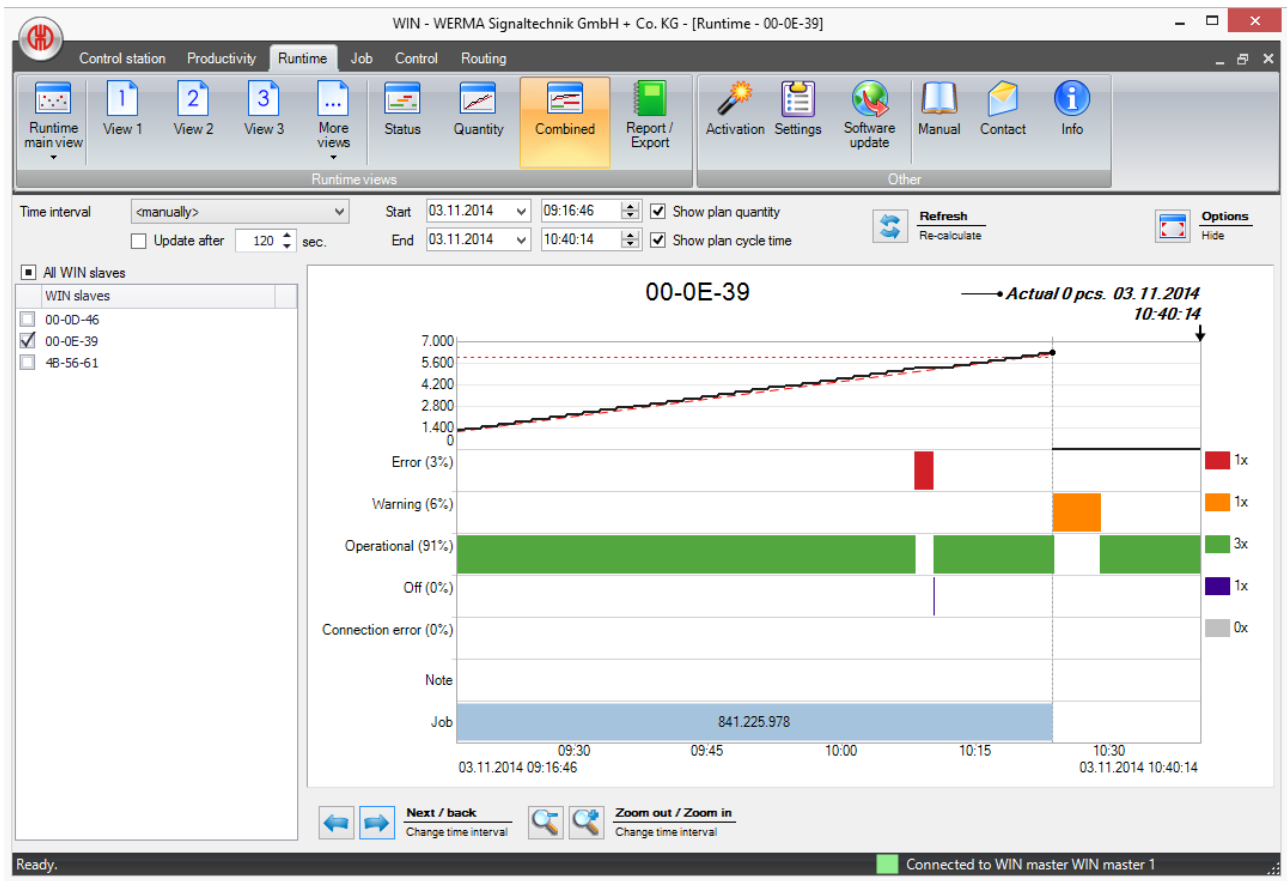
To select the time interval for the note or fault condition, right-click on the line for the note and select "Select time interval".



The Runtime module will automatically jump to this time interval and enlarges the view to fit the window.

7.3.4 Job

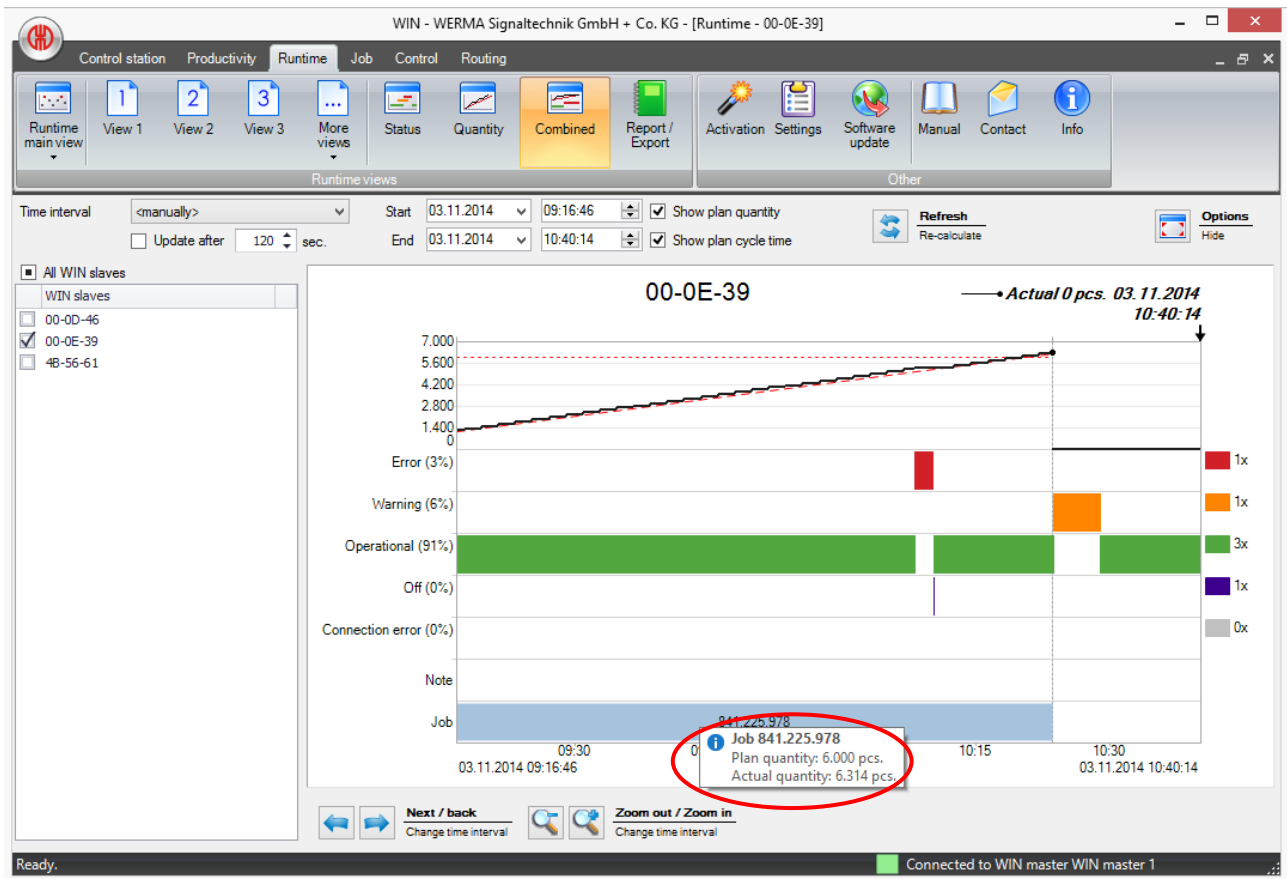
A job created in the Job Module is automatically displayed in the Job field of the Runtime Module. (See chapter 7.4.2).



Note: The job field is only active for the WIN slave performance.

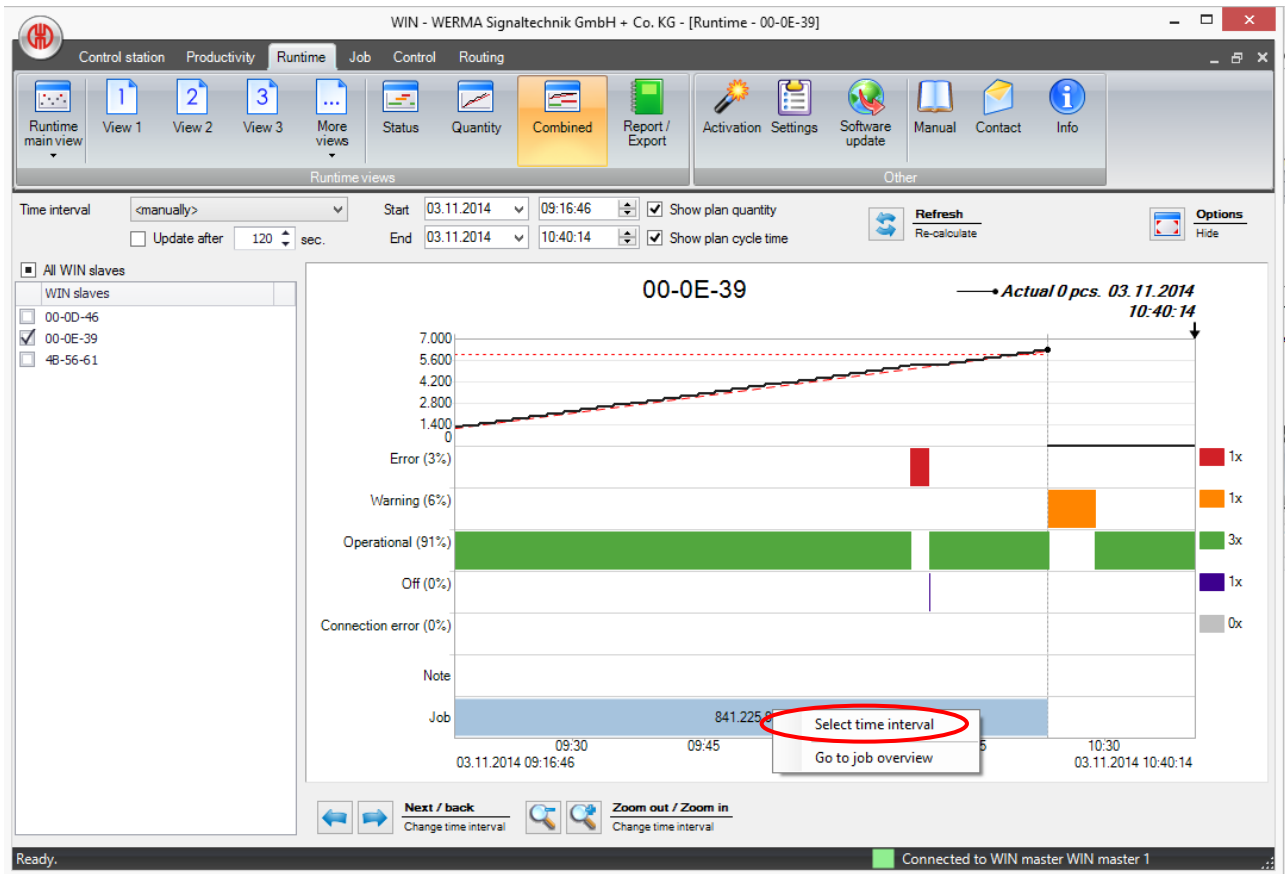
7.3.4.1 Displaying a job

To display a job, hover over the inserted job or the associated line. An information window opens on the screen, displaying the details of the job.



7.3.4.2 Select time interval of a job

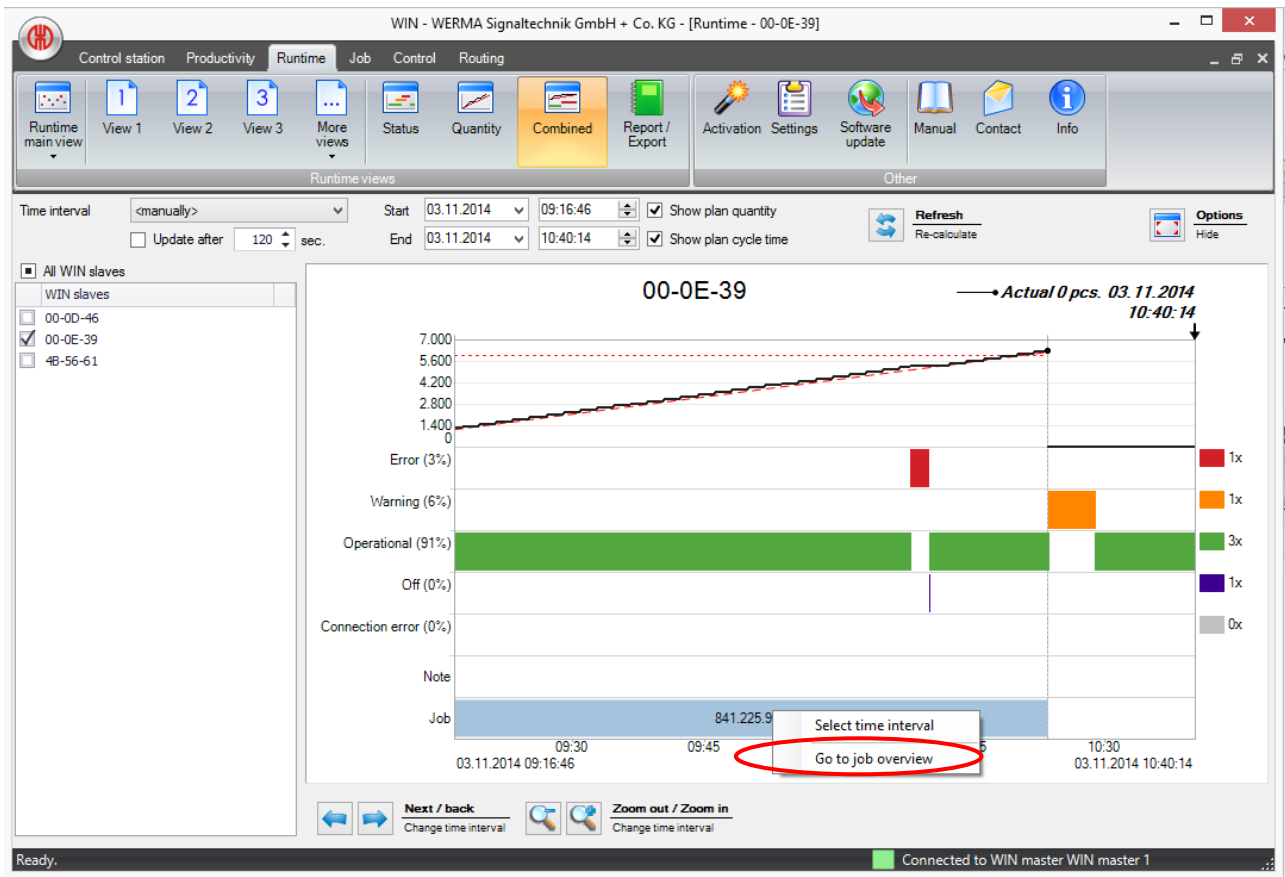
To select the time interval for a job please, right-click on the line for the job and select "Select time interval".



The Runtime module will automatically jump to this time interval and enlarge the view to fit the window.

7.3.4.3 Jump to the job module

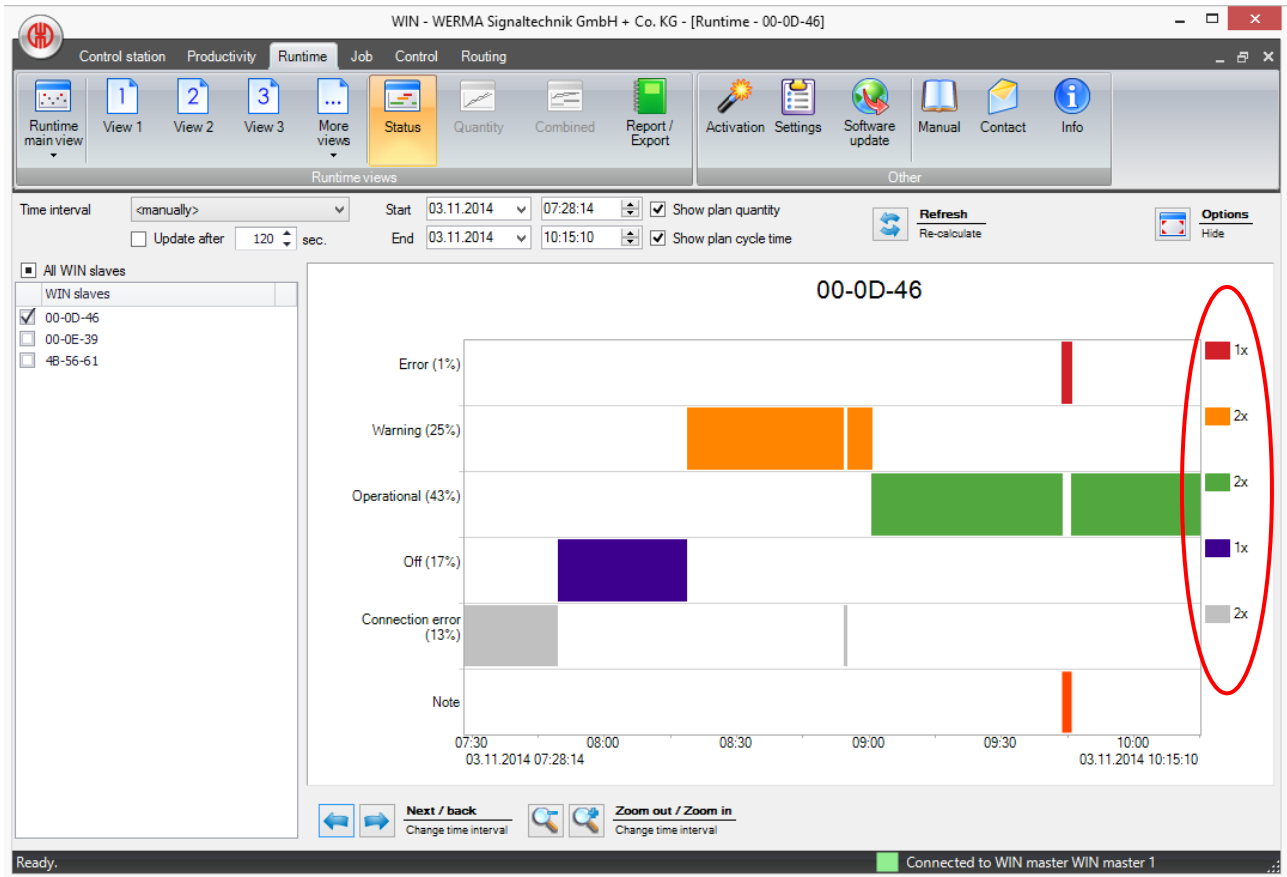
To jump to the job module, right-click on the line for the job and select "Go to job overview".



You will then be taken directly to the job module with the corresponding job selected.

7.3.5 Number of statuses

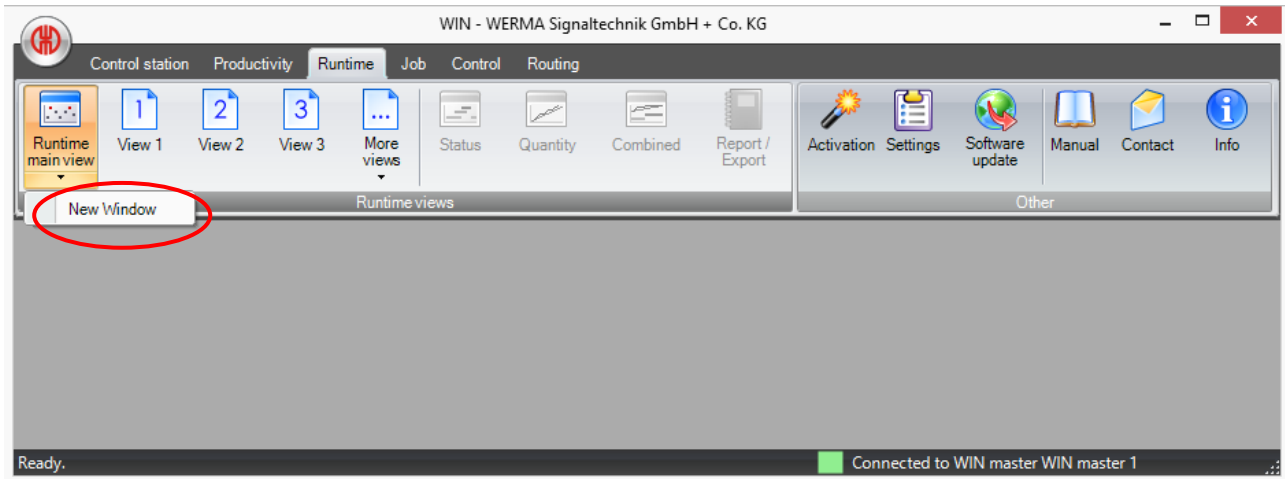
In the Runtime Module you can see how many times a status has occurred in the selected period. If you change the period, the number of occurrences of each status is automatically updated.



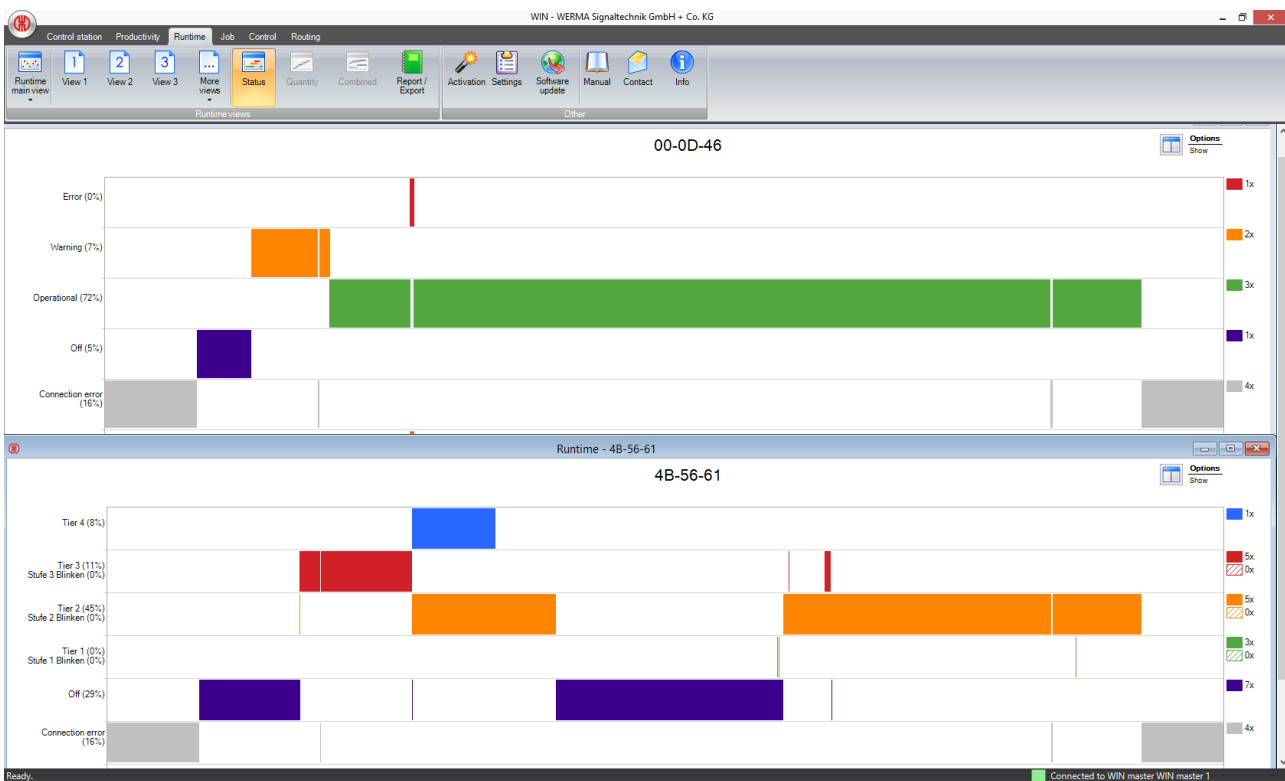
7.3.6 Open multiple windows

To compare the performance of a number of machines over a specific period multiple windows can be opened in the Runtime module.

1. Click on the arrow underneath the button "Runtime main view" and select the option "New Window".



2. An additional window will open which can be positioned as required.



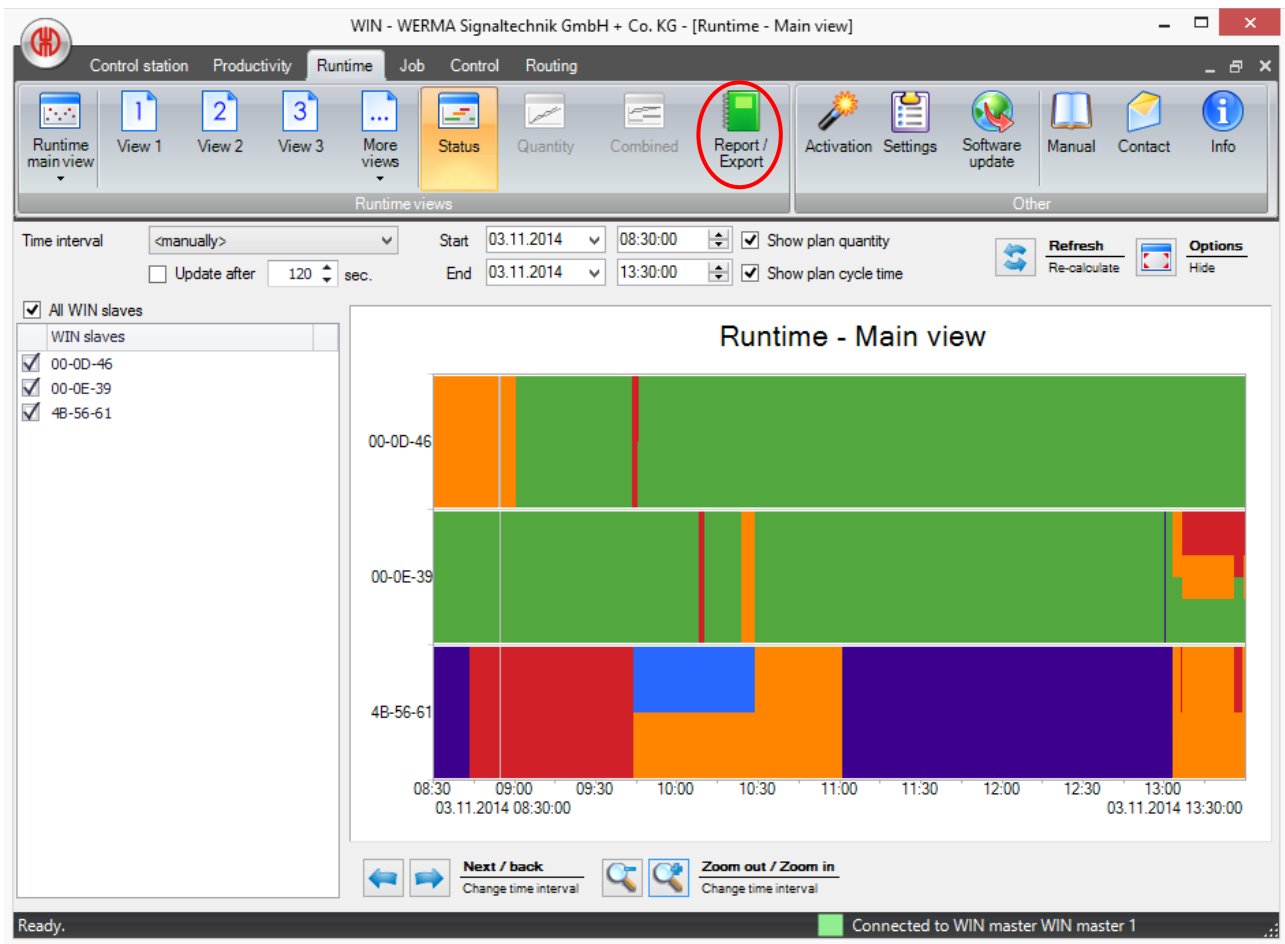
7.3.7 Report

Note: A report can only be generated from the currently selected view. By selecting the Main View, all WIN slaves can be included. Select or create a different view to select particular WIN slaves.

Note: A report can only be generated for the selected time period and the chosen analysis method.

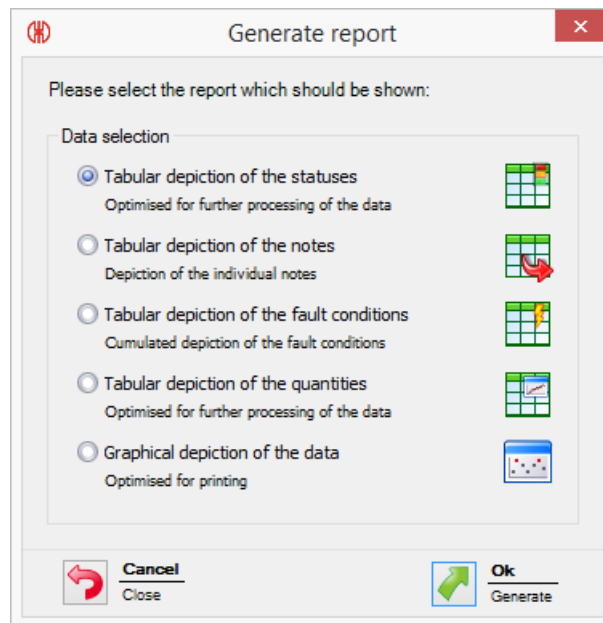
To generate a report, proceed as follows:

1. Click on "Report/Export".

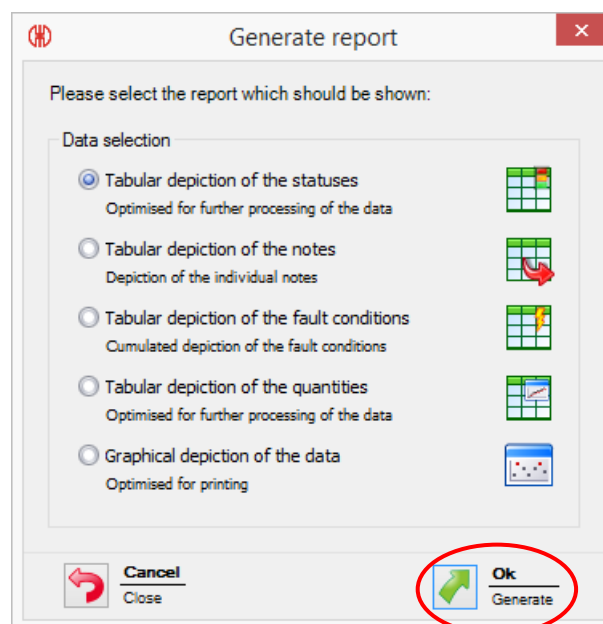


2. Now select which report you want to generate. Choose between:

- Tabular depiction of the statuses
- Tabular depiction of the notes
- Tabular depiction of the fault conditions (cumulated)
- Tabular depiction of the quantities
- Graphical depiction of the data



3. Confirm your selection with "OK".



4. You can now see a preview of your selected report. Additional functions are described in section 7.7, "Report and Export Functions".

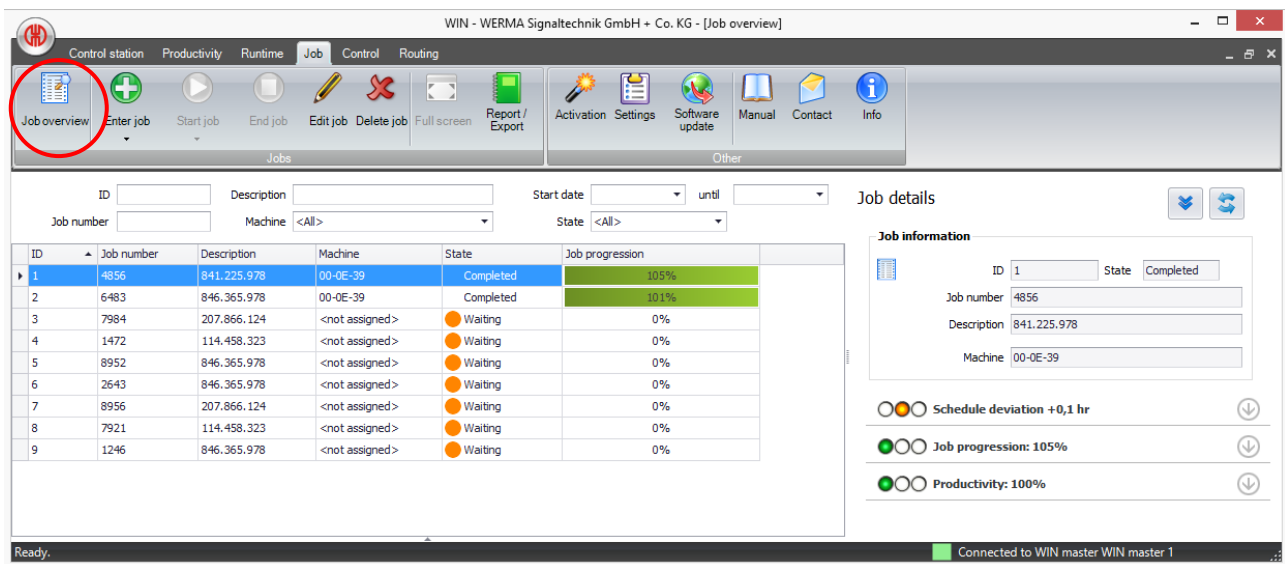
7.4 Job Module

The module gives you a comprehensive overview of which job is running on which machine and how the job is progressing. Future planned jobs are shown as “waiting” and can be initiated as soon as the machine required is available.

Note: This is applicable only to users with the hardware **WIN slave performance**.

7.4.1 Job overview

In the job overview, you see, at a glance, details of all created jobs.



WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]

Control station Productivity Runtime Job Control Routing

Jobs: Job overview, Enter job, Start job, End job, Edit job, Delete job, Full screen, Report / Export

Other: Activation, Settings, Software update, Manual, Contact, Info

ID: [] Description: [] Start date: [] until: []

Job number: [] Machine: <All>

ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	<not assigned>	Waiting	0%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Job details

Job information

ID: 1 State: Completed

Job number: 4856

Description: 841.225.978

Machine: 00-0E-39

Schedule deviation: +0,1 hr

Job progression: 105%

Productivity: 100%

Ready. Connected to WIN master WIN master 1

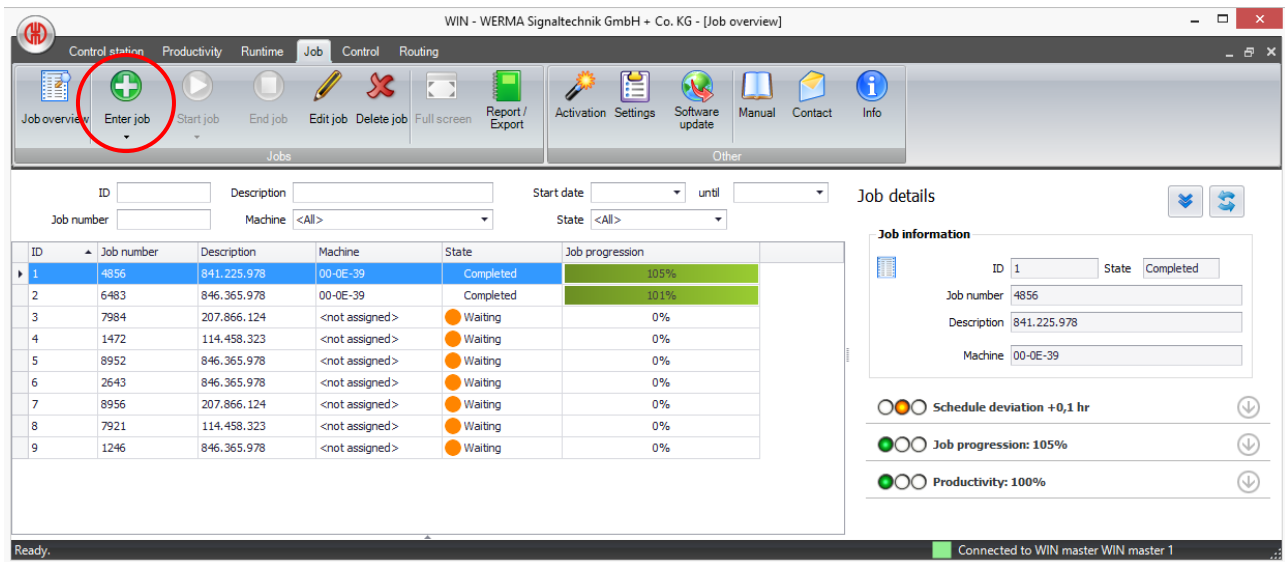
7.4.2 Enter a job

There are three different ways to enter a job which are described in this chapter.

7.4.2.1 Manual job entry

Proceed as follows:

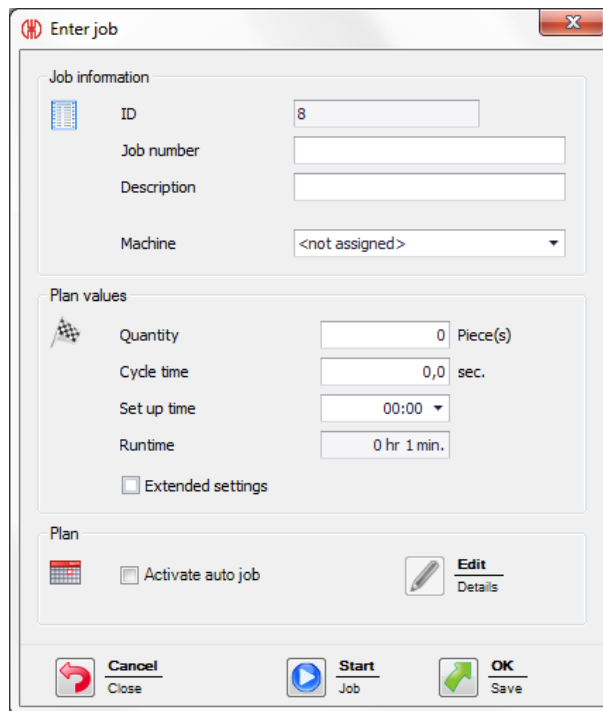
1. Click on "Enter job".



The screenshot shows the 'WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]' application window. The top toolbar contains several icons, with the 'Enter job' icon (a green plus sign) circled in red. Below the toolbar, there are input fields for 'ID', 'Description', 'Start date', 'Job number', and 'Machine'. A table lists jobs with columns for ID, Job number, Description, Machine, State, and Job progression. The 'Job details' panel on the right shows information for job ID 1, including Job number (4856), Description (841.225.978), and Machine (00-0E-39). It also displays status indicators for 'Schedule deviation +0,1 hr', 'Job progression: 105%', and 'Productivity: 100%'.

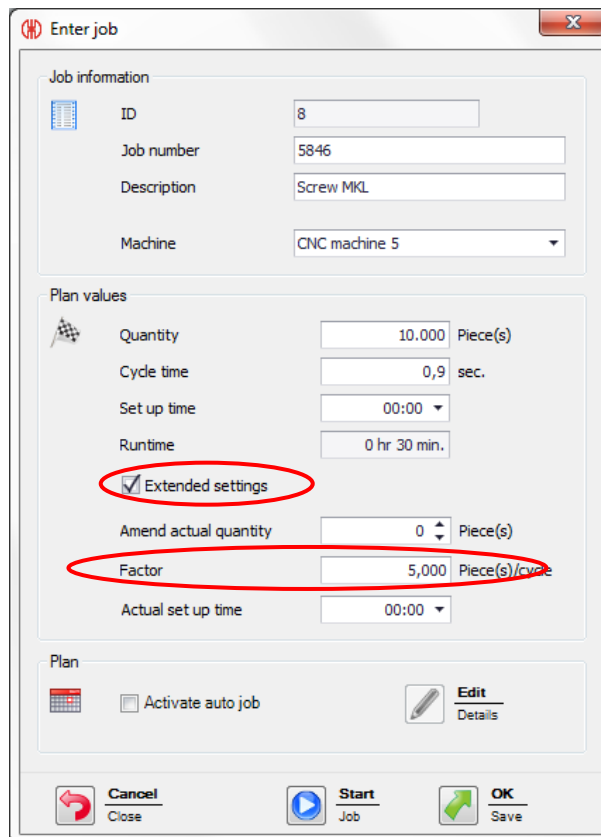
ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	<not assigned>	Waiting	0%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

2. Enter the job number and the job title in this window. The ID is a sequential number and is created automatically by the WIN system.



3. Select a WIN slave performance on which the job should run.
4. Please indicate the target specifications for the job.
 - Quantity: number of pieces to be produced
 - Cycle time: time required to produce one piece
 - Set up time: If a set up time is planned for this job, enter it here. If a part is produced before the end of the planned set up time, the actual set up time will be set to this time.
 - Runtime: the total time to produce the planned quantity for this job (including set up time)

5. Within "Extended settings", you can set a factor to define how many pieces per cycle are produced.
- Amend actual quantity: You can enter both positive and negative offset values, to compensate for reject parts.
 - Actual set up time: This time is automatically set by the WIN system and can be changed here. WIN calculates it as the time from the job start to the first piece being counted.



6. You can start the job immediately or store it as a waiting job to run later.

7.4.2.2 Import a job list

A job list can be imported in CSV format into WIN.

The CSV file must have the following format and rules:

Column label:

- JOBNUMBER
- DESCRIPTION
- MACHINE
- QUANTITY
- CYCLETIME
- SETUP TIME
- FACTOR

Format rules:

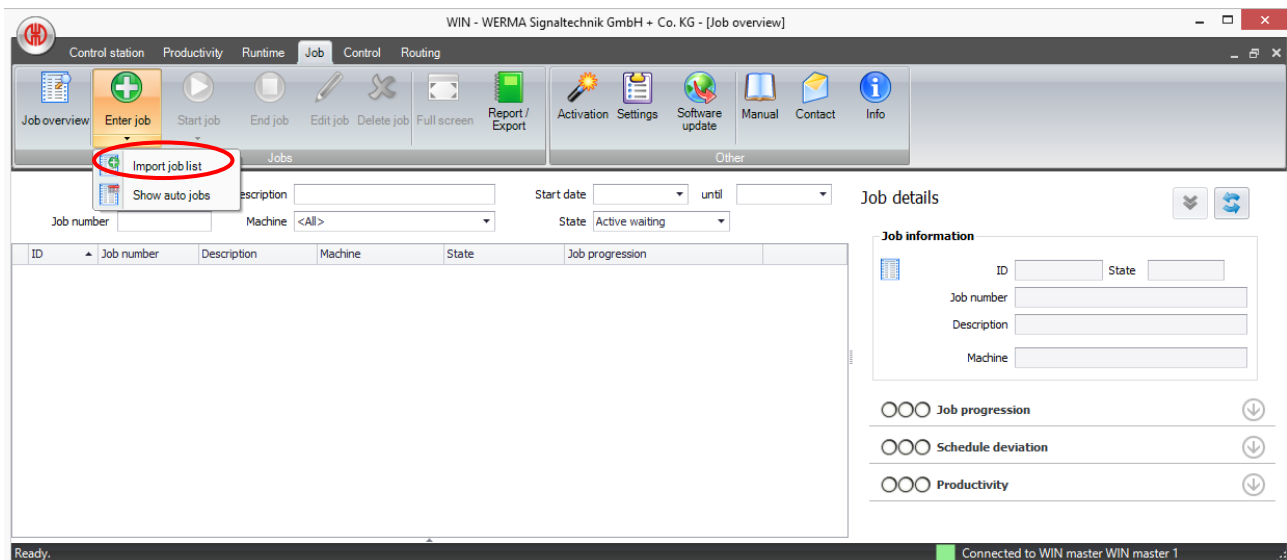
- The Windows standard character set can be used, for example, "Western European" or "Unicode (UTF-8)" can be used.
- Header / First row with column label must be specified.
- The delimiters are a semicolon (;), comma (,), tab (\t) or pipe (|). Only one delimiter is allowed per document.
- The column order is not relevant; they are identified by their headers (column labels).
- Column labels are not case dependent
- Not all of the columns (max. seven) need to be specified.
- Each data value (not the header) can be enclosed in double quotes (" "). Thus, the data value can also be text which can include a semicolon (;).
- Decimal numbers always use a point as decimal separator (no comma).
- The maximum number of decimal places after the decimal point will be checked (for the cycle time, one decimal place is allowed; for the factor, three decimal places are allowed)
- The maximum number of characters will be checked.
- The SETUP TIME is in the format [hh]h:mm, for example 0:00
- The CYCLE TIME is specified in seconds, for example 0.8

Example:

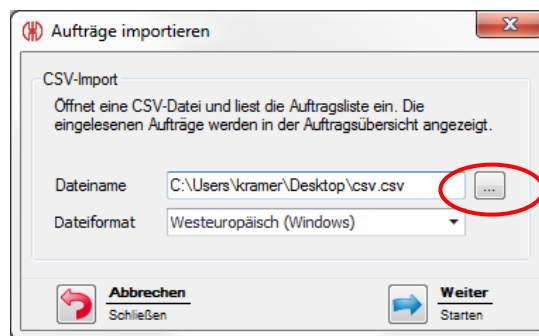
JOBNUMBER	DESCRIPTION	MACHINE	QUANTITY	CYCLETIME	SETUP TIME	FACTOR
4800	job "screw MKL;4711"	CNC machine 5	10000	0.8	01:00	2
4801	job "screw MXL;4201"	CNC machine 6	15000	1.0	05:00	1
4802	job "screw MMH;4722"	CNC machine 7	10000	0.7	01:00	2
4803	job "screw MKL;5671"	CNC machine 8	20000	0.8	10:00	5
4804	job "screw MCD;6681"	CNC machine 9	5000	1.0	01:50	1
4805	job "screw MXL;4221"	CNC machine 10	50000	1.0	03:00	1

To import a list of jobs in CSV format, proceed as follows.

1. Click on the pull-down below the button "Enter job" and select "Import job list".



2. The following window opens. To ensure the character set displays correctly, choose your file format. Click on "..." to browse for and open the desired CSV file. Confirm your selection by clicking "Next".



Note: Follow the format rules on the previous page.

3. The data in the CSV file will be imported and displayed in the job overview. Data which isn't in the correct format or otherwise fails validation will not be imported.

Example:

WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]

Control station Productivity Runtime Job Control Routing

Job overview Enter job Start job End job Edit job Delete job Full screen Report / Export Activation Settings Software update Manual Contact Info

Jobs Other

ID: Description: Start date: until:
Job number: Machine: State:

ID	Job number	Description	Machine	State	Job progression
3	7984	207.866.124	<not assigned>	Waiting	0%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Job details

Job information

ID: 3 State: Waiting
Job number: 7984
Description: 207.866.124
Machine: <not assigned>

○○○ Schedule deviation
○○○ Job progression
○○○ Productivity

Ready. Connected to WIN master WIN master 1

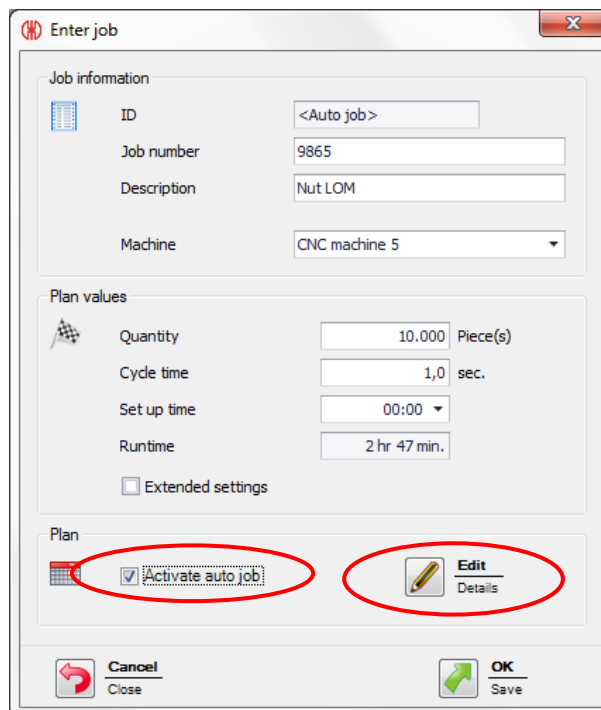
7.4.2.3 Enter Auto job

With the Auto job function, jobs will be started automatically at pre-defined times. It is necessary to define this unique or recurring start time.

Note: An Auto job can only be started if no other job is running on the selected machine.

To enter an Auto job, proceed as follows:

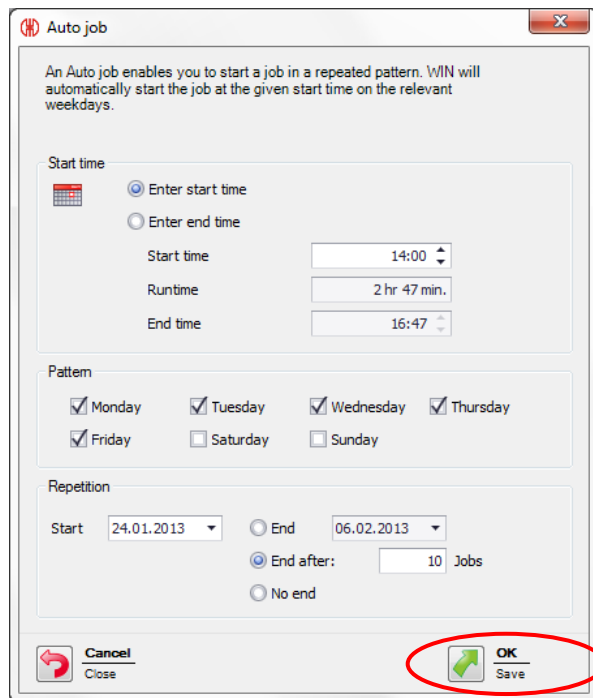
1. Proceed as described in chapter 7.4.2.1, "Manual job entry", up to and including point 5.
2. Activate the checkbox "Activate auto job" and then open the editor.



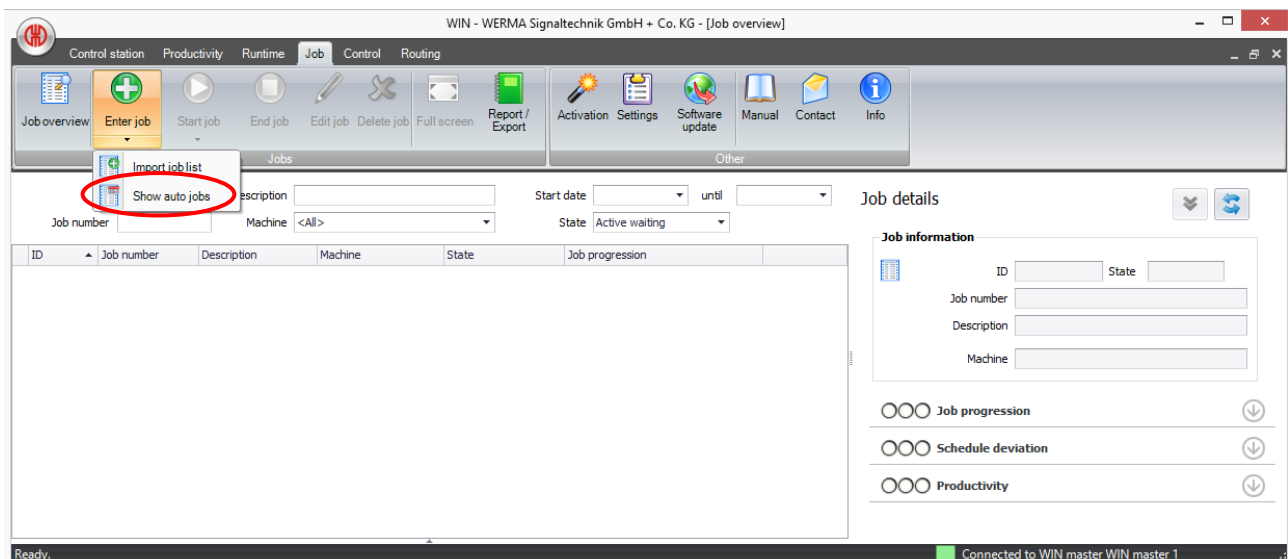
The screenshot shows the 'Enter job' dialog box with the following details:

- Job information:**
 - ID: <Auto job>
 - Job number: 9865
 - Description: Nut LOM
 - Machine: CNC machine 5
- Plan values:**
 - Quantity: 10.000 Piece(s)
 - Cycle time: 1,0 sec.
 - Set up time: 00:00
 - Runtime: 2 hr 47 min.
 - Extended settings:
- Plan:**
 - Activate auto job (circled in red)
 - Edit Details (button circled in red)
- Buttons:**
 - Cancel Close
 - OK Save

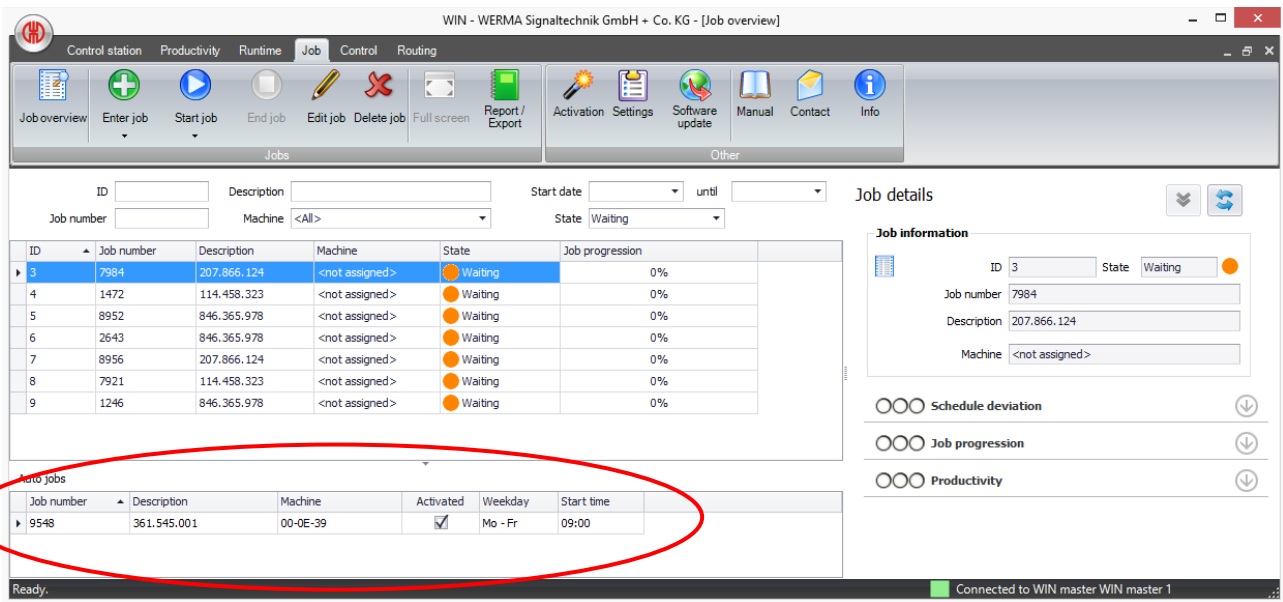
3. In the following window you can schedule the Auto job individually. Save your selection by clicking "OK."



4. To display the Auto jobs in the job overview, you can use the arrow key below the "Enter job" button.



5. The Auto jobs are displayed at the bottom of the job overview.



The screenshot shows the 'Job overview' window in the WERMA Signaltechnik software. The interface includes a menu bar with options like 'Control station', 'Productivity', 'Runtime', 'Job', 'Control', and 'Routing'. Below the menu is a toolbar with icons for 'Job overview', 'Enter job', 'Start job', 'End job', 'Edit job', 'Delete job', 'Full screen', 'Report / Export', 'Activation', 'Settings', 'Software update', 'Manual', 'Contact', and 'Info'. The main area contains a search and filter section with fields for ID, Description, Start date, Job number, Machine, and State. Below this is a table of jobs with columns for ID, Job number, Description, Machine, State, and Job progression. The 'Auto jobs' section at the bottom is circled in red and contains a table with columns for Job number, Description, Machine, Activated, Weekday, and Start time.

ID	Job number	Description	Machine	State	Job progression
3	7984	207.866.124	<not assigned>	Waiting	0%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Job number	Description	Machine	Activated	Weekday	Start time
9548	361.545.001	00-0E-39	<input checked="" type="checkbox"/>	Mo - Fr	09:00

7.4.3 Start job

7.4.3.1 Start job manually

To start a job, select a waiting job in the Job overview list and click the "Start job" button. Alternatively, you can right-click on the waiting job and select "Start Job".

The screenshot shows the 'WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]' application window. The top toolbar contains several buttons, with 'Start job' circled in red. Below the toolbar is a search and filter section with fields for ID, Description, Start date, Job number, Machine, and State. The main area displays a table of jobs:

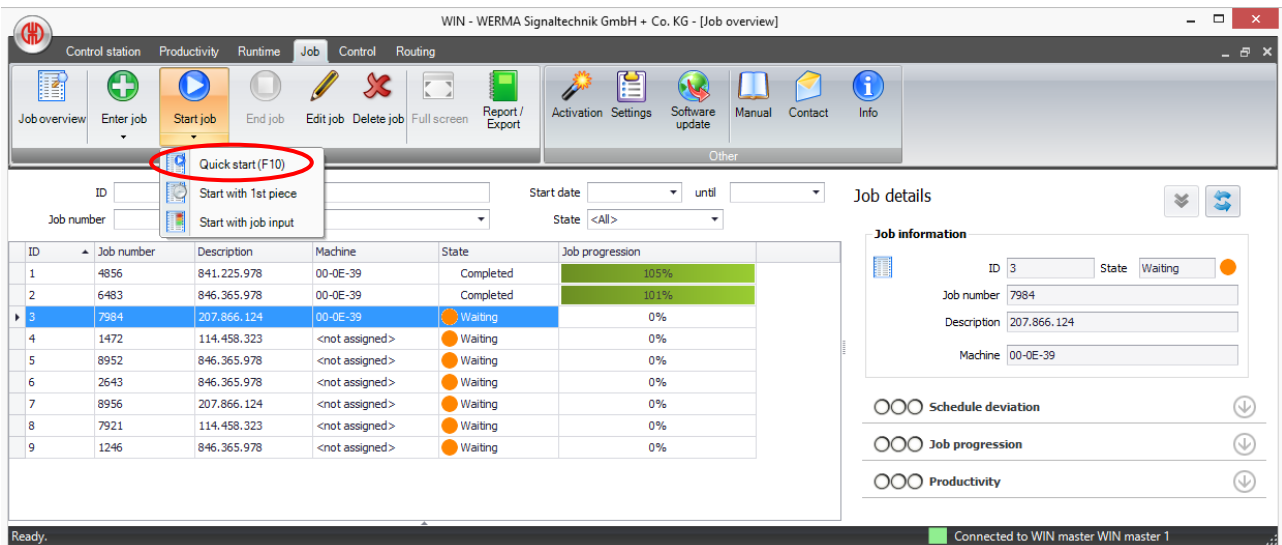
ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	7488	846.365.978	00-0E-39	Completed	119%
3	7984	207.866.124	<not assigned>	Waiting	0%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

The 'Job details' panel on the right shows the selected job (ID 3) with a state of 'Waiting' and a progress indicator. Below the job information are sections for 'Schedule deviation', 'Job progression', and 'Productivity', each with a progress indicator and a dropdown arrow.

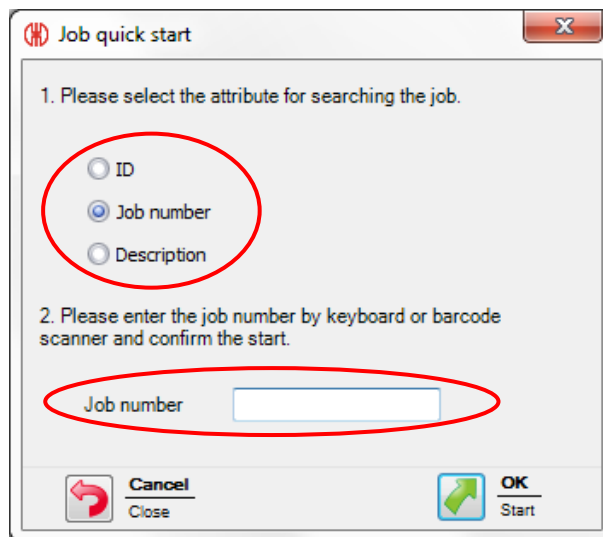
The job will be then started.

7.4.3.2 Job quick start

In all modules you can press the "F10" button to start a job. Alternatively, you can click on the arrow under "Start job" and select "Job quick start (F10)".



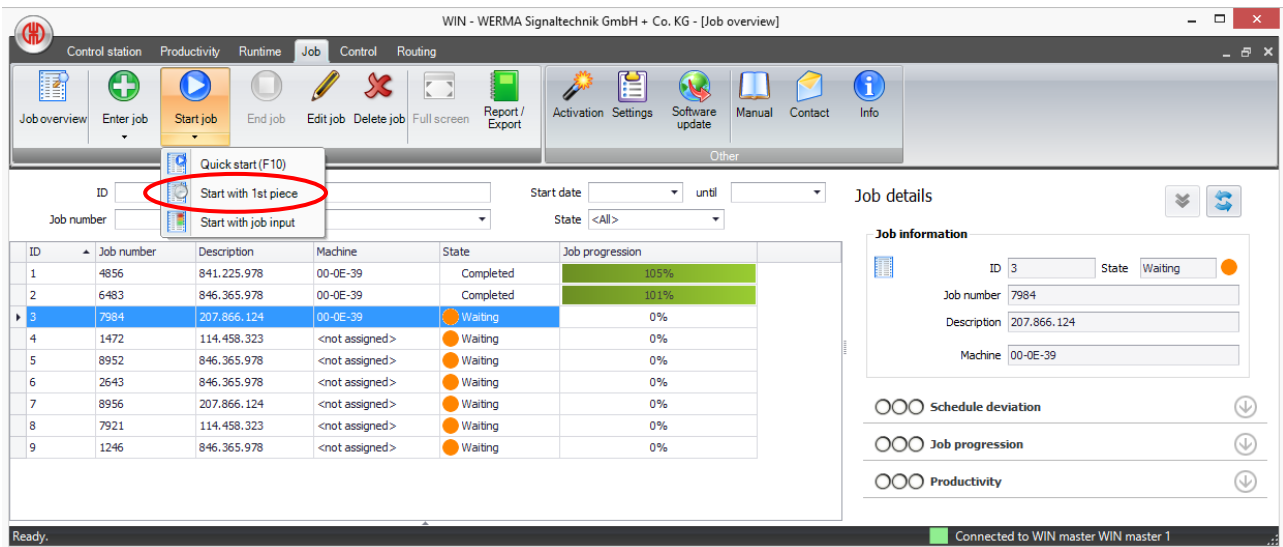
The following window opens:



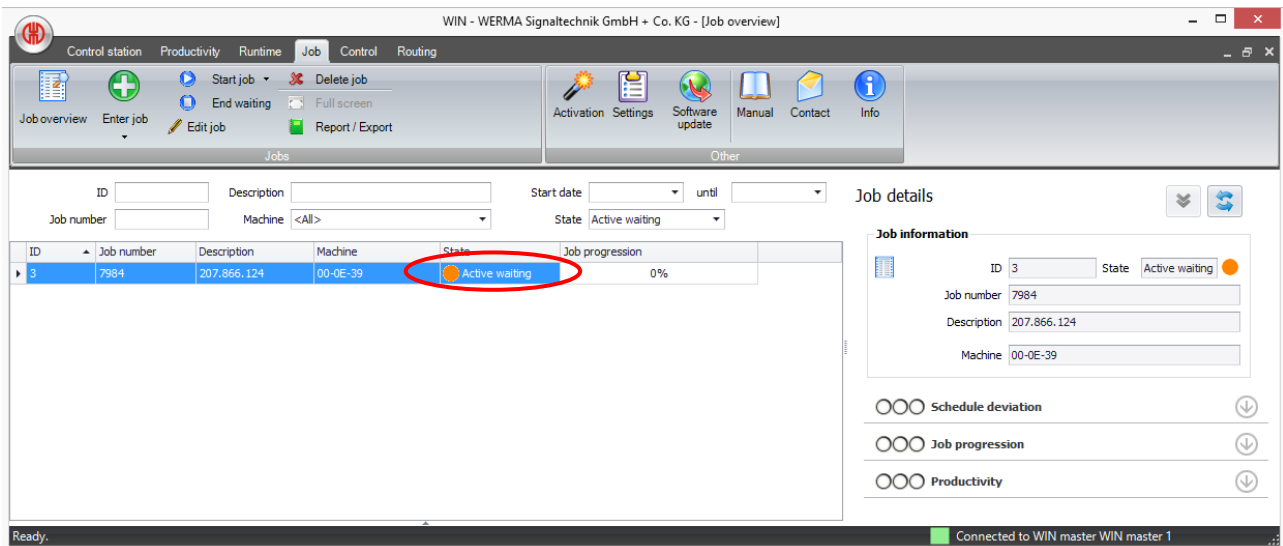
Choose one of the attributes and enter the associated value. The corresponding job is located and started.

7.4.3.3 Start with 1st piece

Select a "waiting job" from the Job overview list and click on the arrow under "Start job" and select "Start with 1st piece". Alternatively, right-click on the waiting job and select "Start with 1st piece".



Your job will be marked as "active waiting".

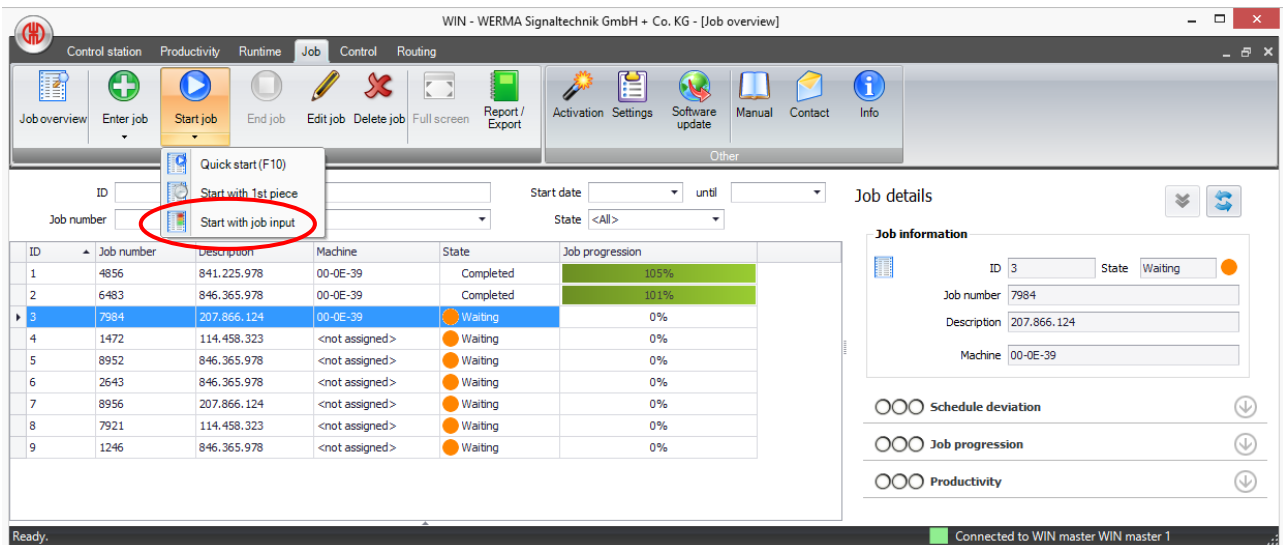


This "active waiting" job starts as soon as the first impulse on the counter input of the WIN slave performance is received by the WIN software.

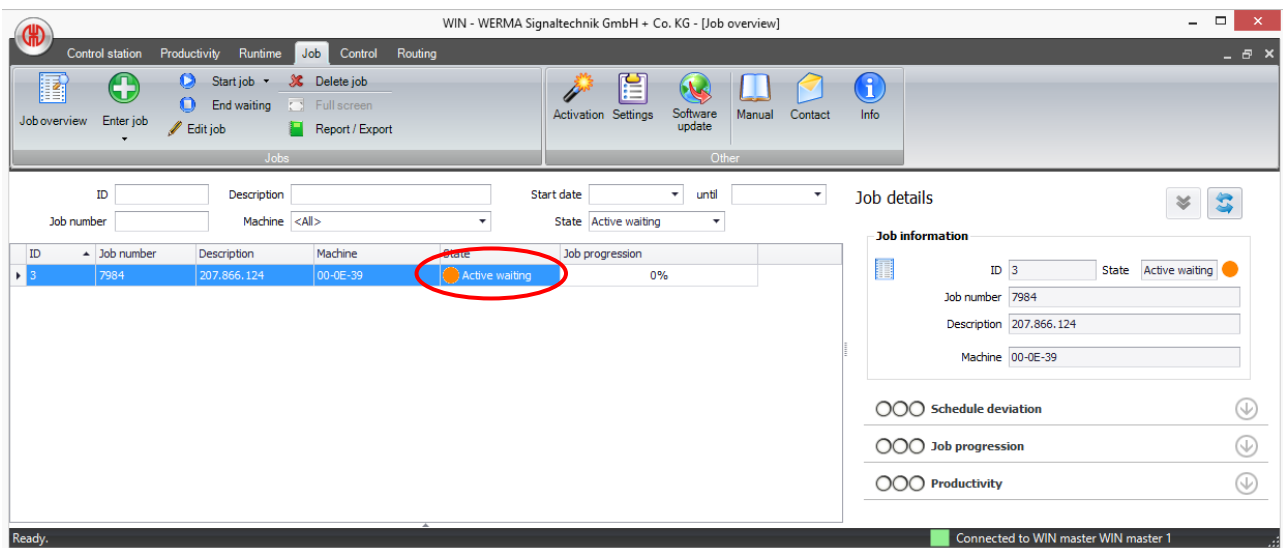
The job can then be completed with a click on "End job" or with an impulse on the job input (see chapter 7.1.3.2).

7.4.3.4 Start with job input

Select a "waiting job" from the Job overview list and click on the arrow under "Start job" and select "Start with job input". Alternatively, right-click on the waiting job and select "Start with job input".



Your job will be marked as "active waiting".



This "active waiting" job starts as soon as the first impulse is received on the tier of the WIN slave performance configured with the job input.

The job can then be completed with a click on "End job" or with a further impulse on the job input (see chapter 7.1.3.2).

7.4.4 End job

To finish a job, select the running job and click on "End job". Alternatively, right-click on the running job and select "End job".

WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]

Control station Productivity Runtime Job Control Routing

Job overview Enter job Start job End job Edit job Delete job Full screen Report / Export Activation Settings Software update Manual Contact Info

ID Description Start date until
Job number Machine <All> State <All>

ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Job details

Job information

ID 3 State Running

Job number 7984

Description 207.866.124

Machine 00-0E-39

Schedule deviation +0,0 hr

Job progression: 16%

Productivity: 250%

Ready. Connected to WIN master WIN master 1

7.4.5 Edit job

To edit a job, select the job and click on "Edit job". Alternatively, right-click on the job and select "Edit job".

WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]

Control station Productivity Runtime Job Control Routing

Job overview Enter job Start job End job Edit job Delete job Full screen Report / Export Activation Settings Software update Manual Contact Info

ID Description Start date until
Job number Machine <All> State <All>

ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Job details

Job information

ID 5 State Waiting

Job number 8952

Description 846.365.978

Machine <not assigned>

Schedule deviation

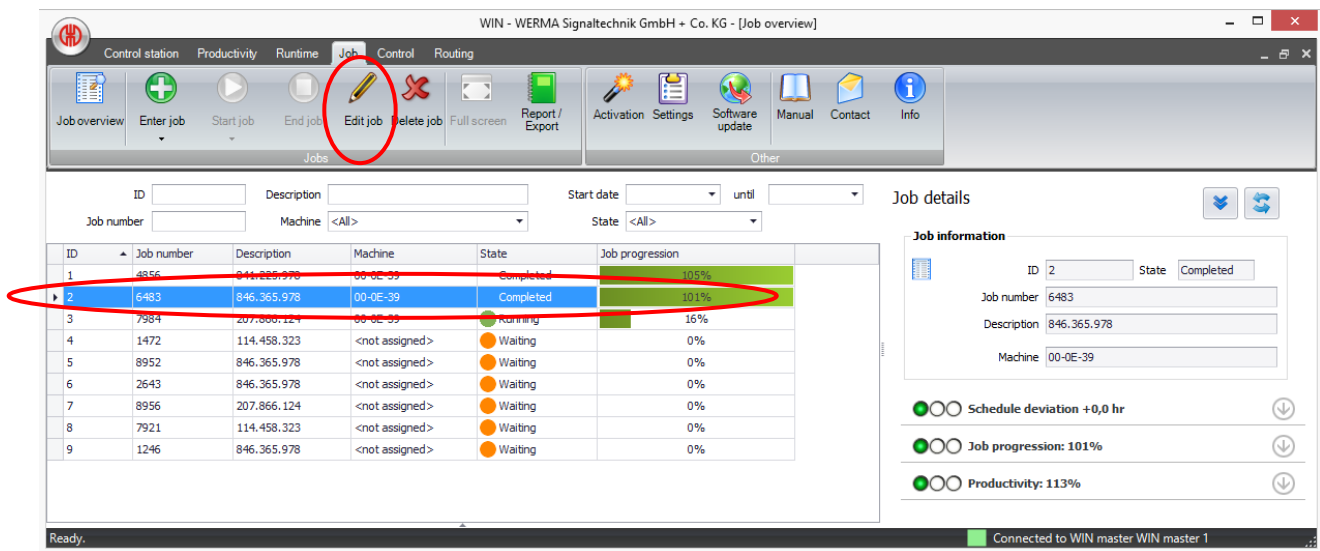
Job progression

Productivity

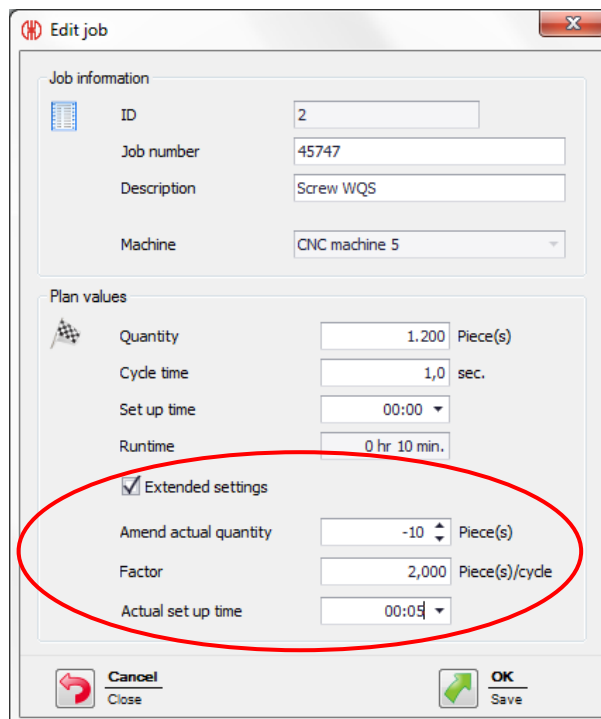
Ready. Connected to WIN master WIN master 1

7.4.6 Correction of a completed job

To correct a completed job, select the completed job and click "Edit job". Alternatively, right-click on the completed job and select "Edit job".



The following window opens:



In the "Extended settings" tab, you can enter a positive or negative value (e.g. -10). In addition, it is also possible to enter the actual set up time.

7.4.7 Delete job

To delete a job, select a job and click on "Delete job". Alternatively, right-click on the waiting job and select "Delete job".

WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]

Control station Productivity Runtime Job Control Routing

Job overview Enter job Start job End job Edit job Delete job full screen Report / Export Activation Settings Software update Manual Contact Info

ID: [] Description: [] Start date: [] until: []
Job number: [] Machine: <All> State: <All>

ID	Job number	Description	Machine	State	Job progression
1	4856	846.365.978	00-0E-39	Completed	100%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Job information

ID: 2 State: Completed
Job number: 6483
Description: 846.365.978
Machine: 00-0E-39

●○○ Schedule deviation +0,0 hr
●○○ Job progression: 101%
●○○ Productivity: 113%

Ready. Connected to WIN master WIN master 1

7.4.8 Duplicate a job

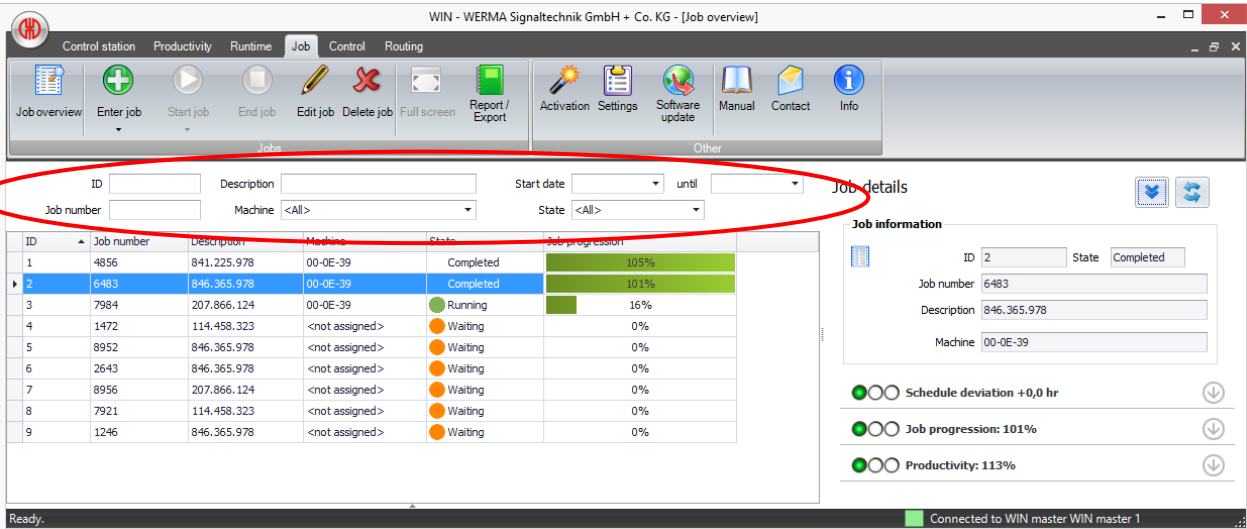
To duplicate a job, right-click on the job and select "Duplicate job".

7.4.9 Filter / sort jobs

All jobs in the job overview can be filtered and sorted according to various categories.

The following categories are available for selection:

- ID
- Job number
- Description
- Machine
- Start date
- State



WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]

Control station Productivity Runtime **Job** Control Routing

Job overview Enter job Start job End job Edit job Delete job Full screen Report / Export Activation Settings Software update Manual Contact Info

Jobs Other

ID Description Start date until

Job number Machine <All> State <All>

ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Job details

Job information

ID State

Job number

Description

Machine

●○○ Schedule deviation +0,0 hr

●○○ Job progression: 101%

●○○ Productivity: 113%

Ready. Connected to WIN master WIN master 1

To perform an ascending or descending sort, click on the column name in the job overview. The jobs are sorted accordingly.

WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]

Control station Productivity Runtime Job Control Routing

Jobs: Job overview, Enter job, Start job, End job, Edit job, Delete job, Full screen, Report/Export

Other: Activation, Settings, Software update, Manual, Contact, Info

Search filters: ID, Description, Start date, until, Job number, Machine, State

ID	job number	Description	Machine	State	Job progression
9	1246	846.365.978	<not assigned>	Waiting	0%
4	1472	114.458.323	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
8	7921	114.458.323	<not assigned>	Waiting	0%
3	7984	207.866.124	00-0E-39	Running	16%
5	8952	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%

Job details

Job information

ID 9 State Waiting

Job number 1246

Description 846.365.978

Machine <not assigned>

Schedule deviation

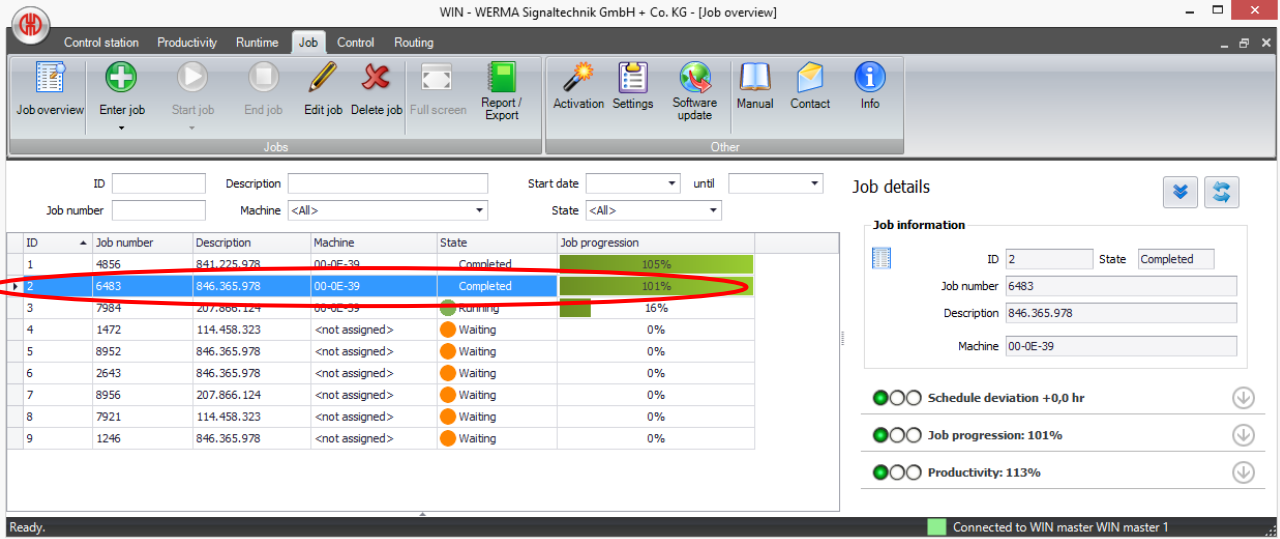
Job progression

Productivity

Ready. Connected to WIN master WIN master 1

7.4.10 Job details

To view the job detail, select a job from the Job overview.



The screenshot shows the 'Job overview' window with the following data table:

ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

The 'Job details' panel on the right displays the following information:

- Job information: ID 2, State Completed
- Job number: 6483
- Description: 846.365.978
- Machine: 00-0E-39
- Schedule deviation: +0,0 hr
- Job progression: 101%
- Productivity: 113%

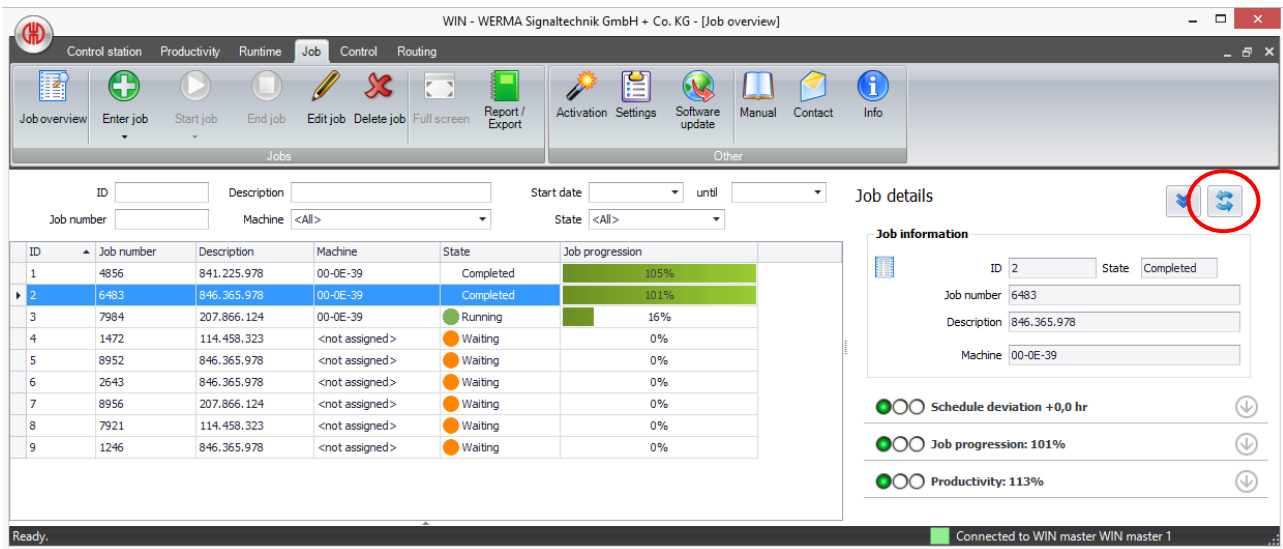
The following details are displayed:

- Job information
- Schedule deviation
- Job progression
- Productivity

The last three points are also equipped with a traffic light system, so you can see at a glance how the job is running.

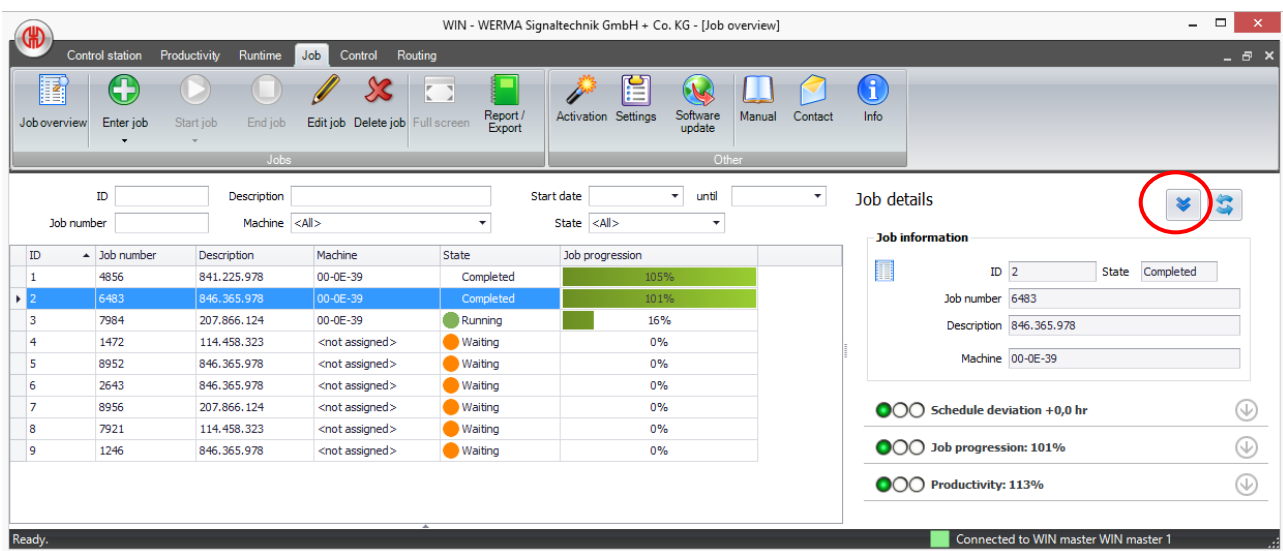
7.4.10.1 Update job details

Click on "update" to refresh all data in this area for this job as well as the table on the left hand side.



7.4.10.2 Module change

Clicking on the "arrow" takes you either to the Productivity module or to the Runtime module.



Note: The selected time period in the Productivity or the Runtime module corresponds to the time period of the chosen job.

7.4.10.3 Editing the traffic light settings

The traffic lights for schedule deviation, job progression and productivity can be individually adjusted.

Note: The traffic light settings are stored per user.

To configure the traffic light you need to adjust the locally stored ini-file.

To change go to:

- **<C:\ProgramData\WERMA\WERMA-WIN-3.0.>** in Windows Vista or Windows 7
- **<C:\Documents and Settings\All Users\Application Data\WERMA\WERMA-WIN-3.0.>** in Windows XP

and open the ini-file.

In the file, see the following section:

[Orders]

ProductivityGreenLimit=100

ProductivityYellowLimit=75

CompletionGreenLimit=100

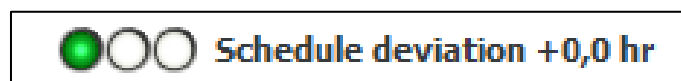
CompletionYellowLimit=90

RuntimeGreenLimit=100

RuntimeYellowLimit=110

Proceed as follows to adjust the traffic light settings:

- For the schedule deviation traffic light:



1. If the "RuntimeYellowLimit=110", the traffic light is set to red from +11%.
2. If the "RuntimeGreenLimit=100", the traffic light is set to yellow from +1% to +10% inclusive.
3. Only for +0% or a negative deviation the traffic light is set to green.
4. You can adjust the setting individually ($199 \geq 100$).
5. Save the ini file.

-
- For the job progression traffic light:



1. If the "CompletionYellowLimit=90", the traffic light is set to red from 0% to including 89%.
2. If the "CompletionGreenLimit=10", the traffic light is set to yellow from 90% to including 99%.
3. Only for >100% the traffic light is set to green.
4. You can adjust the setting individually (100≥0).
5. Save the ini file.

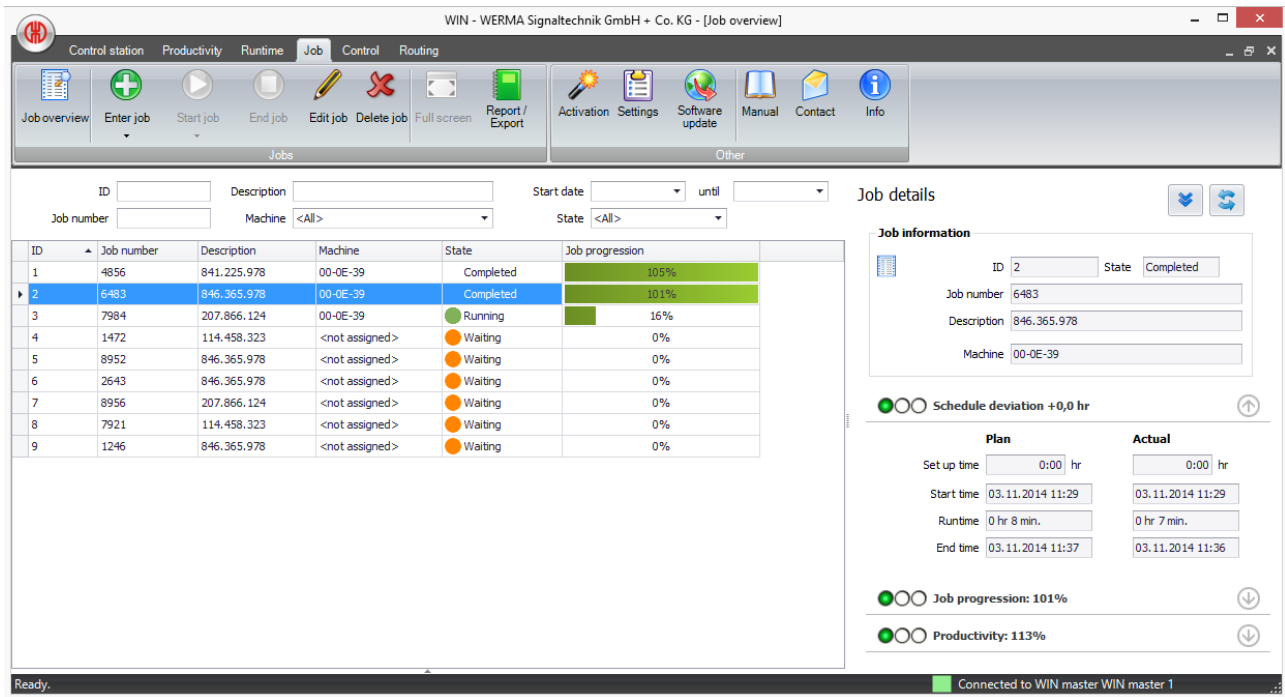
- For the productivity traffic light:



1. If the "ProductivityYellowLimit=75", the traffic light is set to red from 0% to including 74%.
2. If the "ProductivityGreenLimit=100", the traffic light is set to yellow from 75% to including 99%.
3. Only for >100% the traffic light is set to green.
4. You can adjust the setting individually (100≥0).
5. Save the ini file.

7.4.10.4 Schedule deviation

The schedule deviation area provides information about set up time, start time, runtime and end time. Plan and the Actual times are given for each of these. The schedule deviation is specified in machine hours.



The screenshot shows the 'WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]' window. It features a menu bar with 'Control station', 'Productivity', 'Runtime', 'Job', 'Control', and 'Routing'. Below the menu is a toolbar with icons for 'Job overview', 'Enter job', 'Start job', 'End job', 'Edit job', 'Delete job', 'Full screen', 'Report / Export', 'Activation', 'Settings', 'Software update', 'Manual', 'Contact', and 'Info'. The main area is divided into a search/filter section and a 'Job details' panel.

Job details panel:

- Job information:** ID 2, State Completed, Job number 6483, Description 846.365.978, Machine 00-0E-39.
- Schedule deviation:** +0,0 hr.
- Plan vs Actual comparison:**

Category	Plan	Actual
Set up time	0:00 hr	0:00 hr
Start time	03.11.2014 11:29	03.11.2014 11:29
Runtime	0 hr 8 min.	0 hr 7 min.
End time	03.11.2014 11:37	03.11.2014 11:36
- Job progress:** 101%
- Productivity:** 113%

Job Overview Table:

ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Ready. Connected to WIN master WIN master 1

Note: 0.1 machine hours correspond to 6 minutes; 1 machine hour corresponds to 60 minutes.

7.4.10.5 Job progression

The job progression area provides information about plan quantity and actual quantity. In addition, you can see and amend actual quantity and the factor, entered for this job.

For a **running job**, the Job progression is the **current** actual quantity divided by the **current** plan quantity, expressed as a percentage.

For a completed job the Job progression is the actual quantity divided by the plan quantity, expressed as a percentage.

WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]

Control station Productivity Runtime Job Control Routing

Job overview Enter job Start job End job Edit job Delete job Full screen Report / Export Activation Settings Software update Manual Contact Info

Jobs Other

ID: Description: Start date: until:

Job number: Machine: <All> State: <All>

ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

Job details

Job information

ID: 2 State: Completed

Job number: 6483

Description: 846.365.978

Machine: 00-0E-39

●○○ Schedule deviation +0,0 hr

●○○ Job progression: 101%

Piece

Actual

0 127 254 381 508

Actual total quantity: 508 Plan total quantity: 500

Amend actual quantity: Piece(s)

Factor: Piece(s)/cycle

●○○ Productivity: 113%

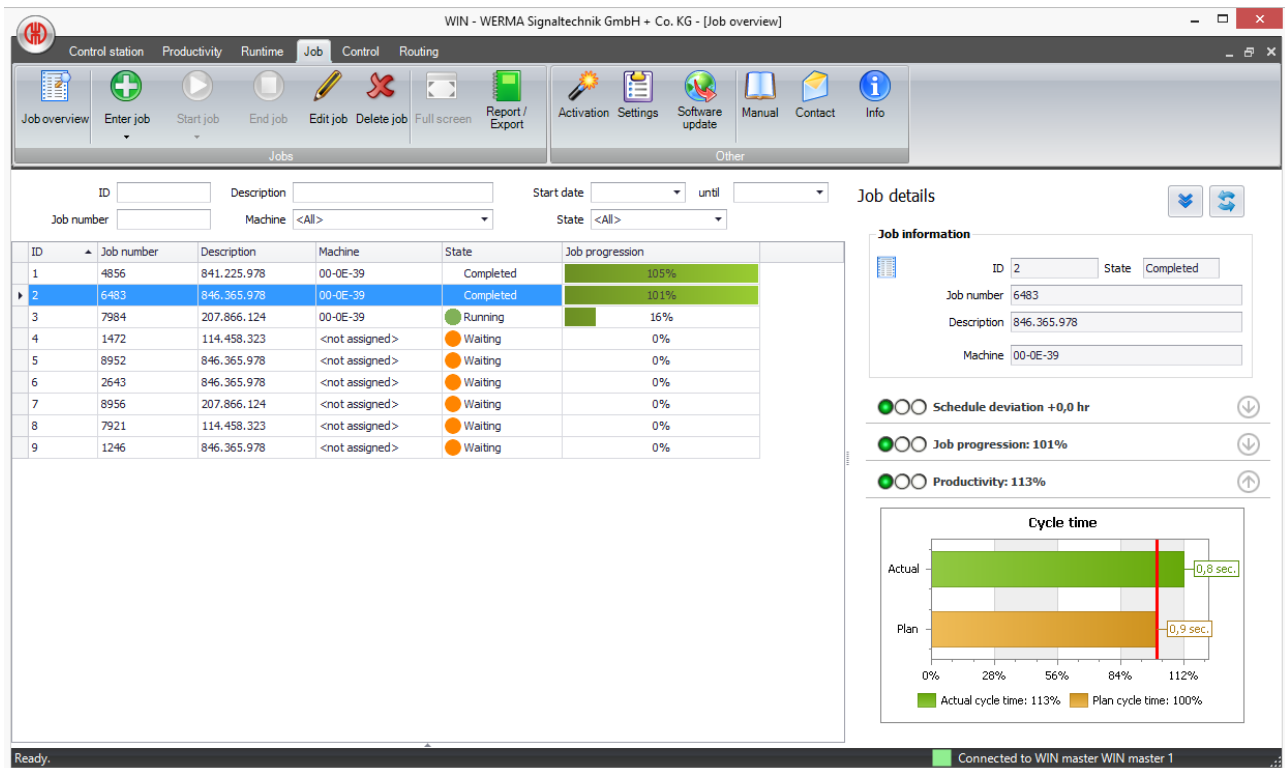
Ready. Connected to WIN master WIN master 1

7.4.10.6 Productivity

The productivity area provides information about plan cycle time and actual cycle time.

For a **running job**, the productivity is the **current** actual cycle time divided by the **current** plan cycle time, expressed as a percentage.

For a completed job, the productivity is the actual cycle time divided by the plan cycle time expressed as a percentage.



The screenshot shows the 'WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]' window. The interface includes a menu bar with options like 'Control station', 'Productivity', 'Runtime', 'Job', 'Control', and 'Routing'. Below the menu is a toolbar with icons for 'Job overview', 'Enter job', 'Start job', 'End job', 'Edit job', 'Delete job', 'Full screen', 'Report / Export', 'Activation', 'Settings', 'Software update', 'Manual', 'Contact', and 'Info'.

The main area is divided into two sections: 'Jobs' and 'Job details'. The 'Jobs' section contains a table with the following data:

ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

The 'Job details' section on the right provides information for job ID 2 (Job number 6483, Description 846.365.978, Machine 00-0E-39). It shows a 'Completed' state and a 'Productivity: 113%' indicator. Below this is a 'Cycle time' bar chart comparing 'Actual' and 'Plan' cycle times. The 'Actual' cycle time is 0,8 sec (113%) and the 'Plan' cycle time is 0,9 sec (100%).

At the bottom of the window, the status bar shows 'Ready.' and 'Connected to WIN master WIN master 1'.

7.4.11 Report

Note: Reports generated are based on the on the currently-selected filters and sorting. Filtering by machine will result in all jobs for that machine being considered.

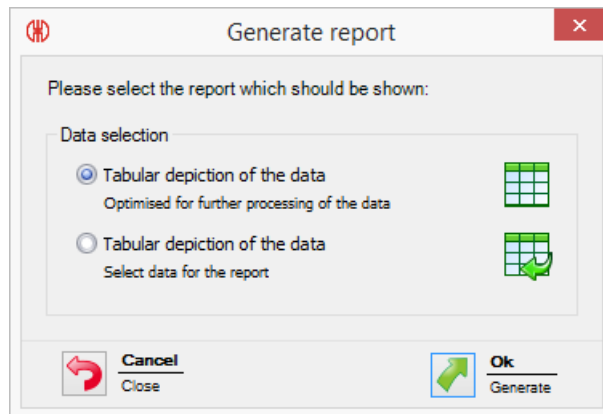
To generate a report, proceed as follows:

1. Click on "Report/Export".

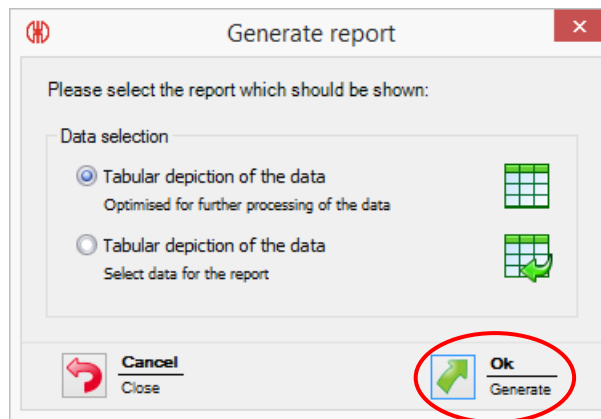
ID	Job number	Description	Machine	State	Job progression
1	4856	841.225.978	00-0E-39	Completed	105%
2	6483	846.365.978	00-0E-39	Completed	101%
3	7984	207.866.124	00-0E-39	Running	16%
4	1472	114.458.323	<not assigned>	Waiting	0%
5	8952	846.365.978	<not assigned>	Waiting	0%
6	2643	846.365.978	<not assigned>	Waiting	0%
7	8956	207.866.124	<not assigned>	Waiting	0%
8	7921	114.458.323	<not assigned>	Waiting	0%
9	1246	846.365.978	<not assigned>	Waiting	0%

2. Now select which report you want to generate. Choose between:

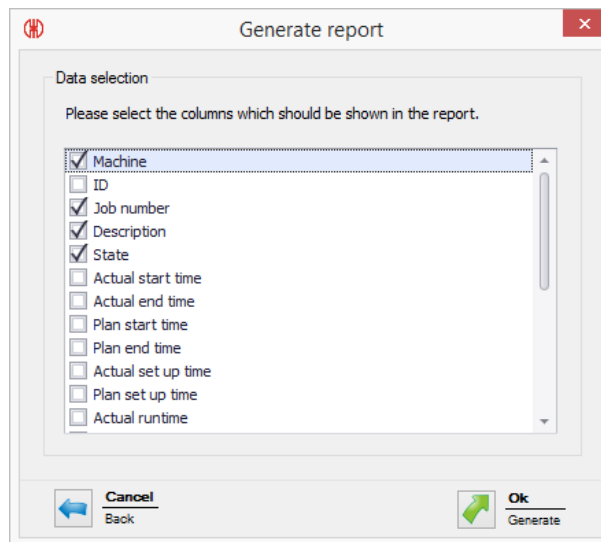
- Tabular depiction of the data
- Tabular depiction of the data (individual)



3. Confirm your selection with "OK".



4. If you select the second option, a further window will open which allows you to select the columns for your report by checking the boxes.



5. You can now see a preview of your selected report. Additional functions are described in section 7.7, "Report and Export Functions".

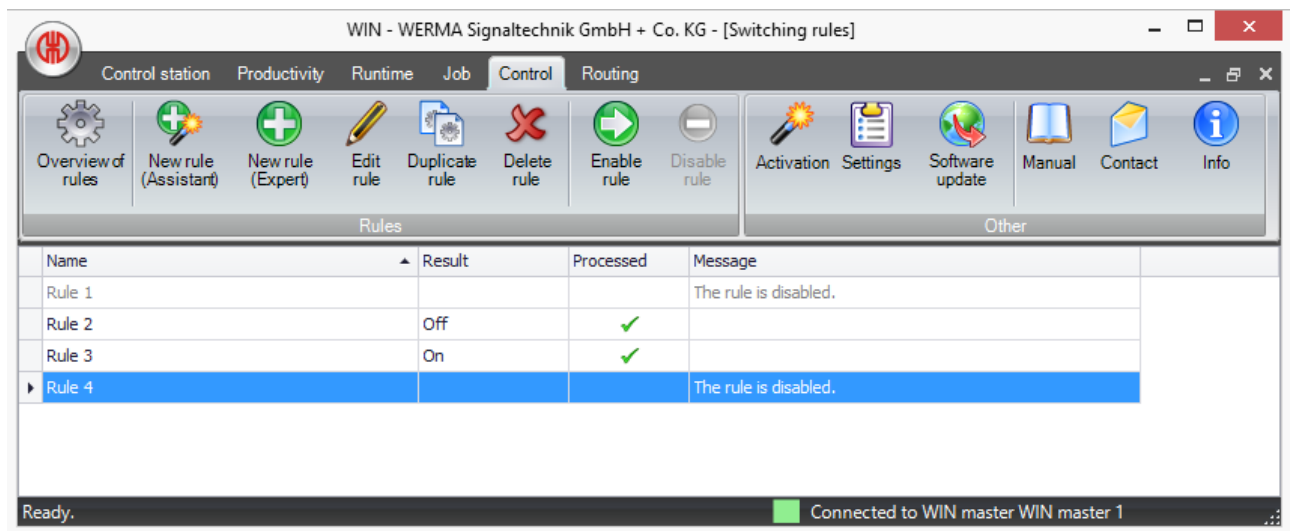
7.5 Control Module

In this module you can define rules with certain logic functions with which you can switch or control a WIN slave control. You can use as an input signal for the logic function those WIN slaves forming part of the network.

Note: A user with **WIN slave / WIN slave performance** cannot access this module – for this the **WIN slave control** hardware is required.

7.5.1 Overview of rules

In the overview of rules you can see all rules which have been set up.



In the column "Result" you will see if the rule is running or not.

- Rule showing = "On"
- Rule not showing = "Off"

Column "Processed" shows the following:

- Rule being processed = "Green Tick"
- Transmission error to WIN control slave = "Red Cross"
- Switch being processed = "Egg timer"

Further information on whether the rule has been activated or not can be found in the "Message" column.

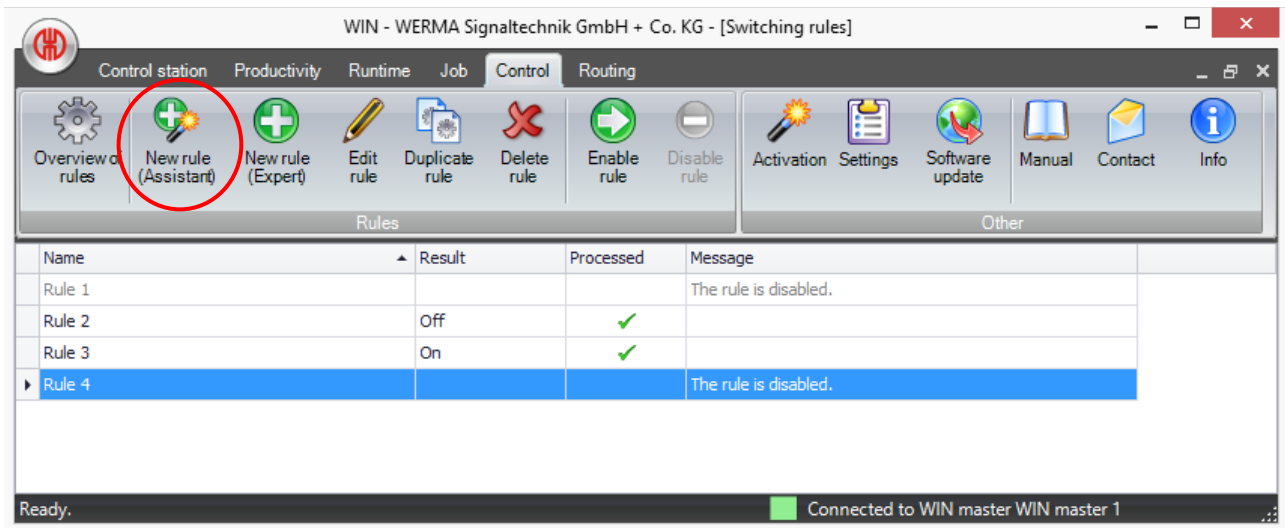
7.5.2 Define a new rule

There are two ways to define a new rule. Firstly there is an Assistant which takes you through the process step by step or secondly the Expert option with which you can define your own individual rules.

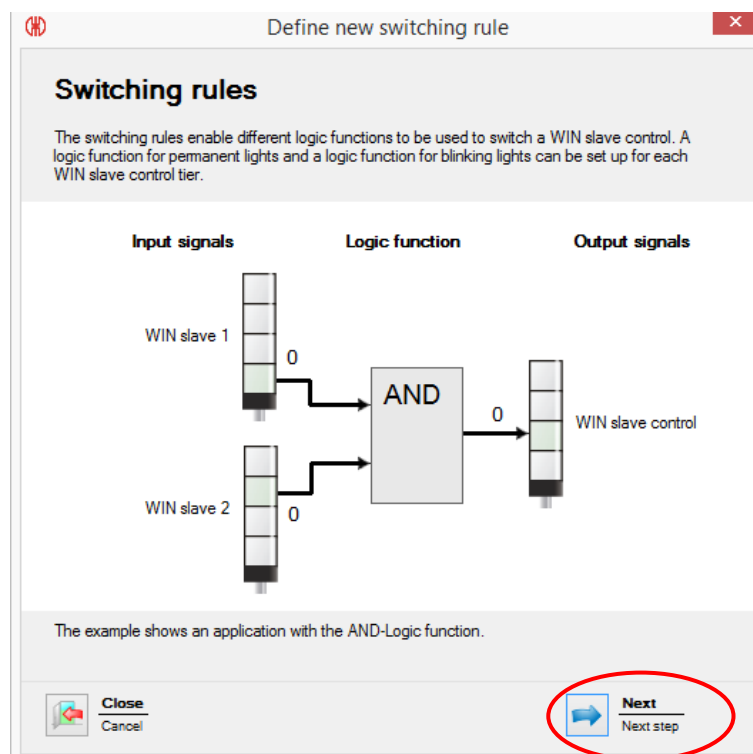
7.5.2.1 New rule with Assistant

To define new rules with the Assistant please proceed as follows:

1. Click on "New rule (Assistant)" to define a new rule.



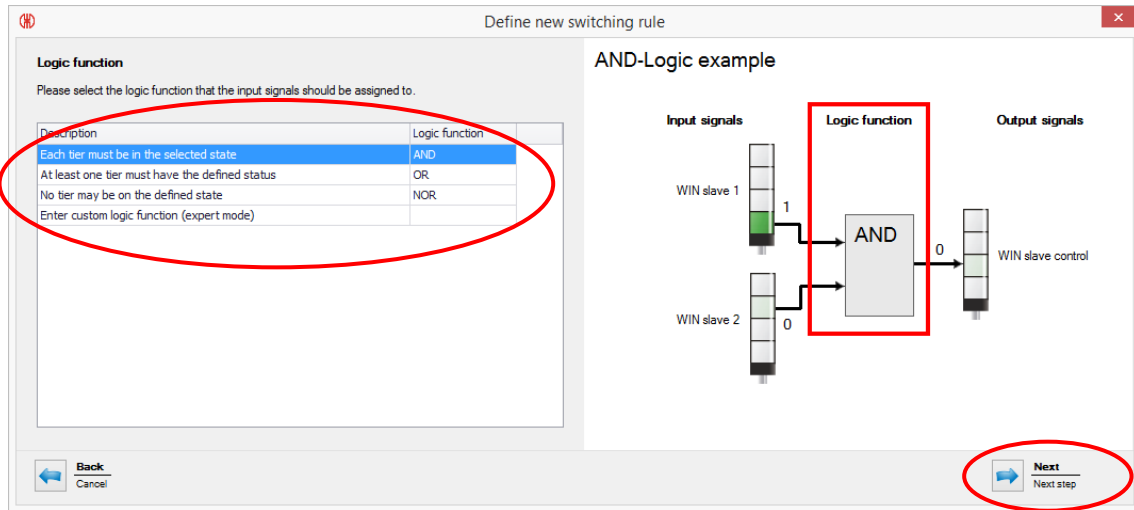
2. The following window appears which shows you an example using AND Logic. Click on "Next".



3. In the next window you can set the rule up and define the tiers to be switched by the new rule. You can choose between:

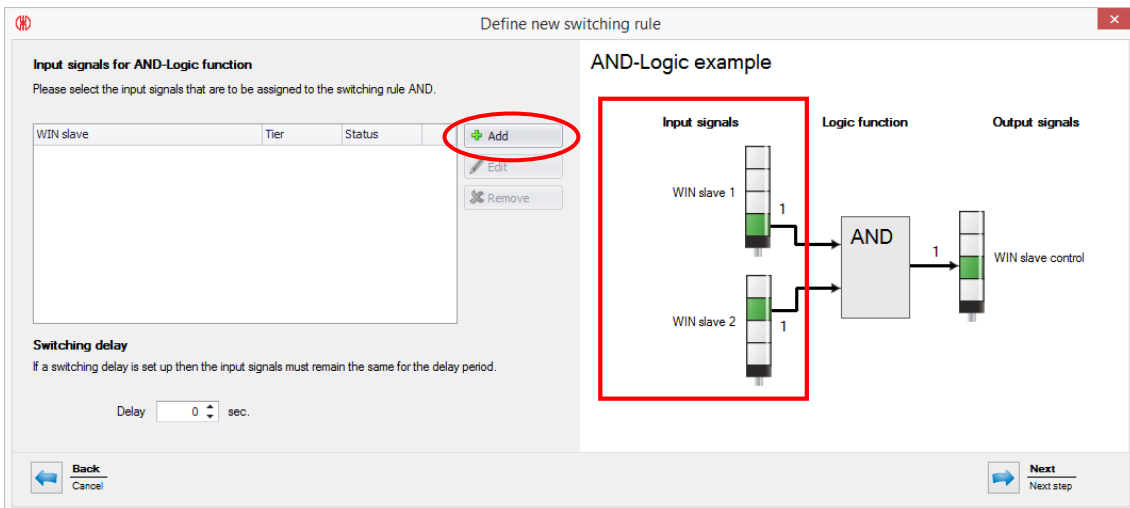
- AND – Each tier must be in the selected status
- OR – At least one tier must have the defined status
- NOR – No tier may be in the defined status
- Enter custom logic function (expert mode), see chapter 7.5.2.3.

Click then on “next”.



Note: In the picture right hand side you will see a picture of the selection made. You can define more than one input signal.

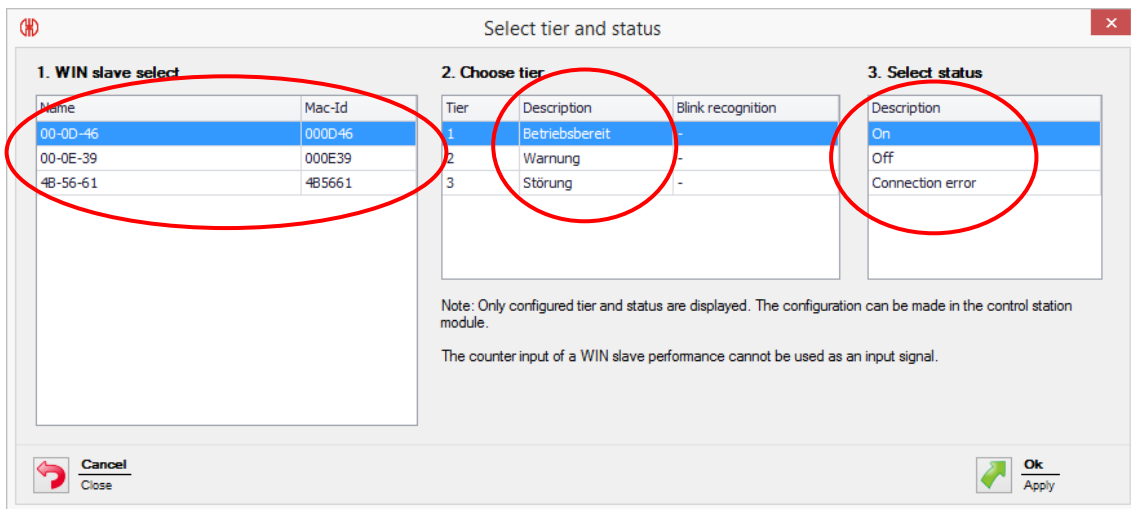
4. In the next step you can select the input signal which will apply for the selected Logic function. Click here on “Add”.



5. In this dialogue box you can select the input signal by tier and status for one of the WIN slaves connected to the WIN network.

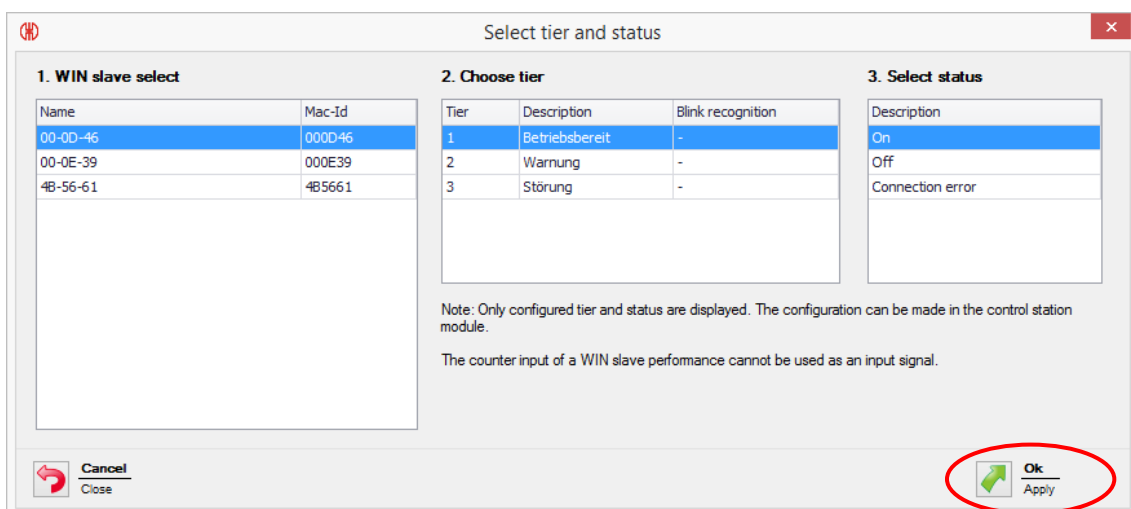
First select a WIN slave from the left hand column. Then you will see the tiers displayed as have been defined in the control station view.

Select tier and then the status in which this tier must be for the input signal to apply. You have the choice between "On", "Off", "Connection error" and "Blinking". "Blinking" is displayed only when the "blink recognition" has been activated for this tier.

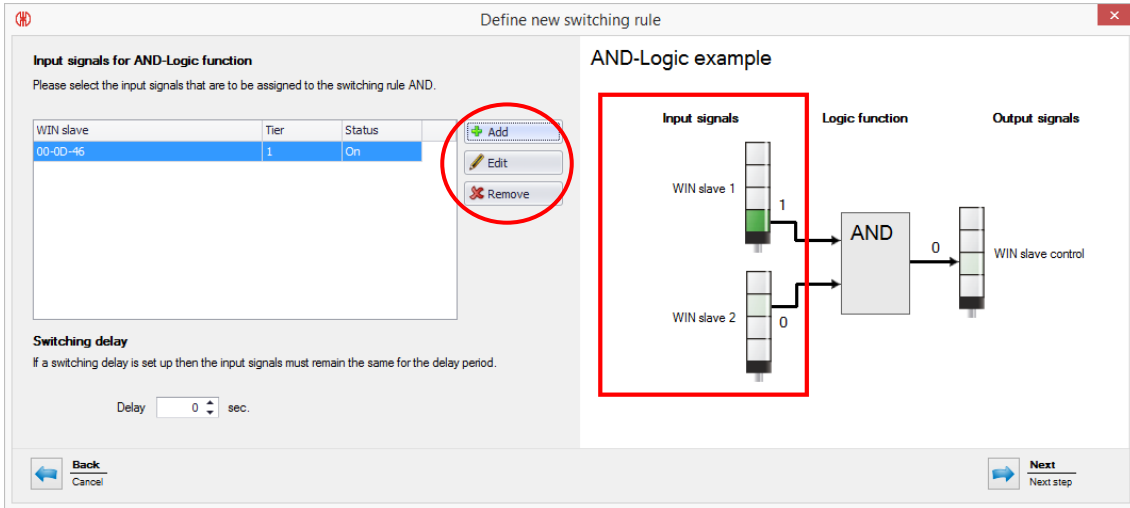


Note: The counting input signal of a WIN slave performance cannot be used as an input signal for a Logic function.

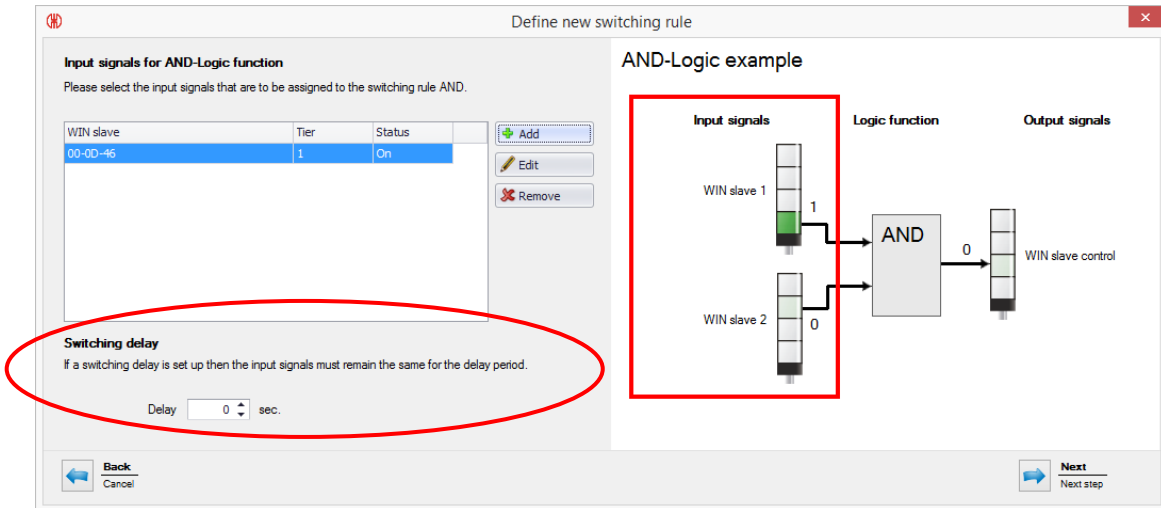
6. Confirm your selection with "Ok".



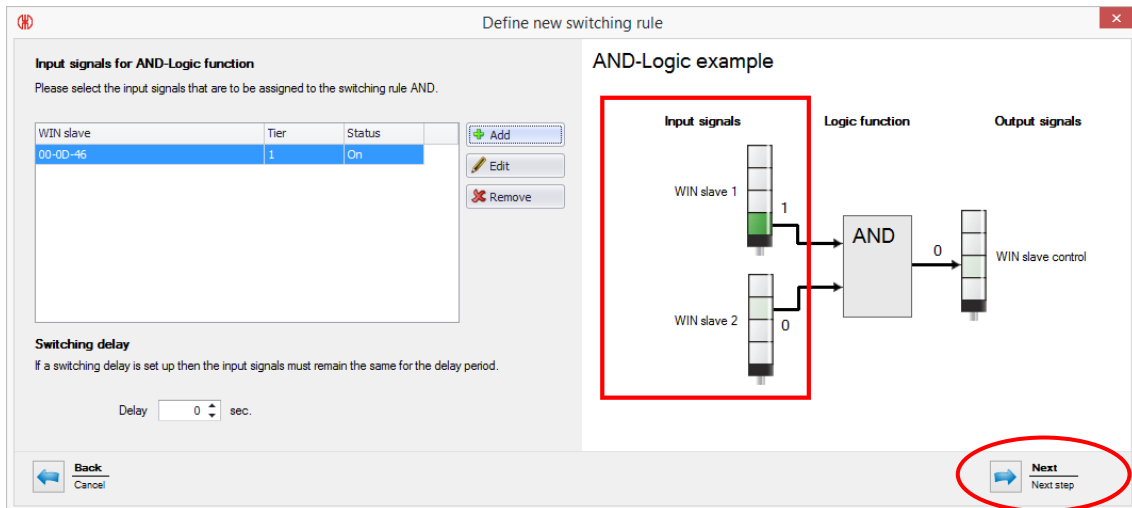
7. To define additional input signals click on "Add" and repeat steps 5 and 6 as before. The "Edit" function allows you to modify an input signal which has already been defined. "Remove" cancels an existing input signal.



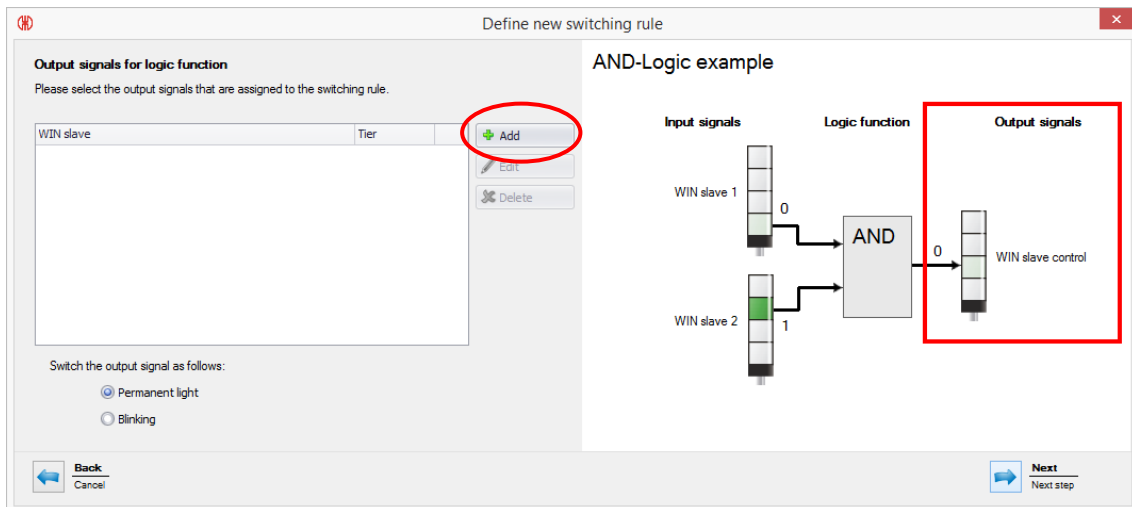
8. For each rule you can set up a switching delay. In this case every input signal must have been on for at least the time selected for the switching delay.



9. Click on "Next" to confirm your selection.



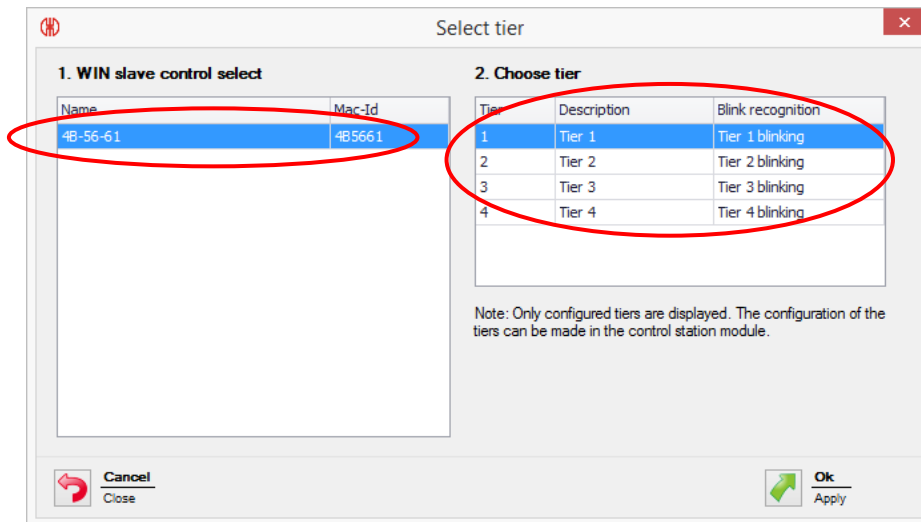
10. The last step of the Logic function is to define the output signal. Click on "Add".



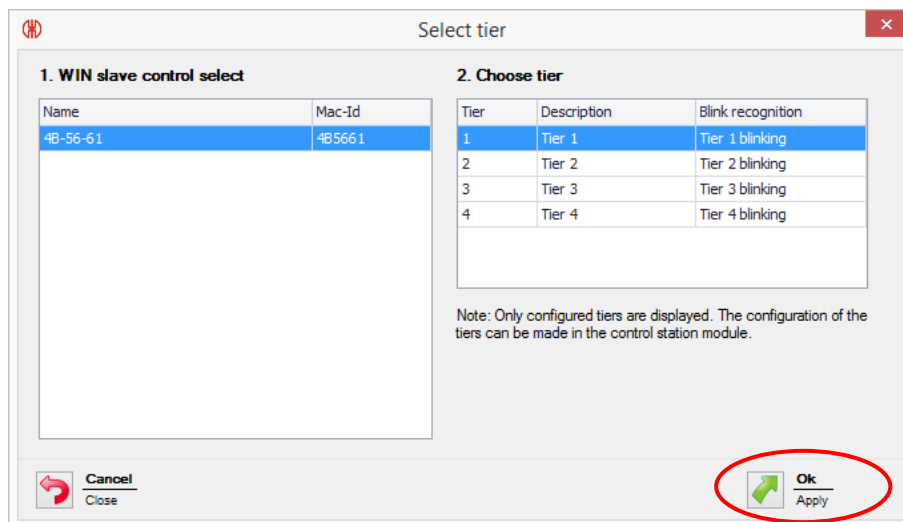
11. Only the tiers of the WIN slave control can be used as output signals.

Only those WIN slaves control connected to the WIN network will be displayed as options for output signals.

Select the tier to be switched.



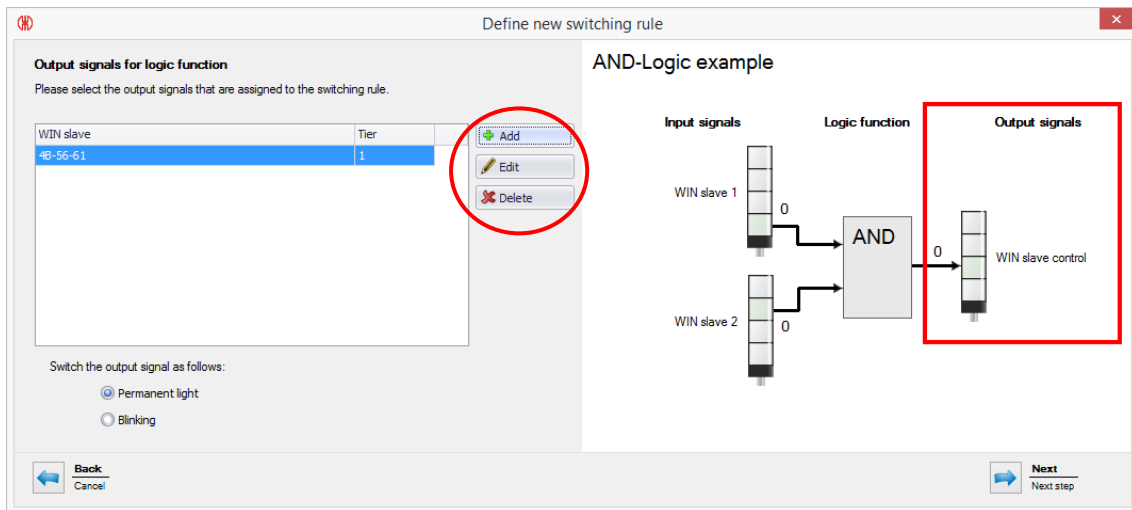
12. Confirm the selection with „Ok“.



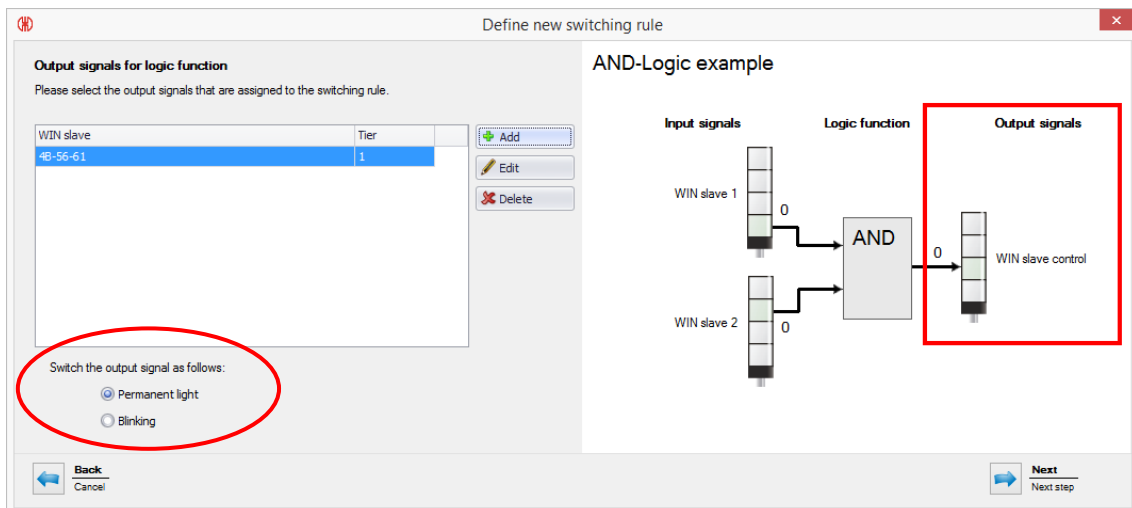
13. To set an additional output signal click on “Add” and repeat steps 11. and 12.

The “Edit” function allows you to modify an output signal which has already been defined.

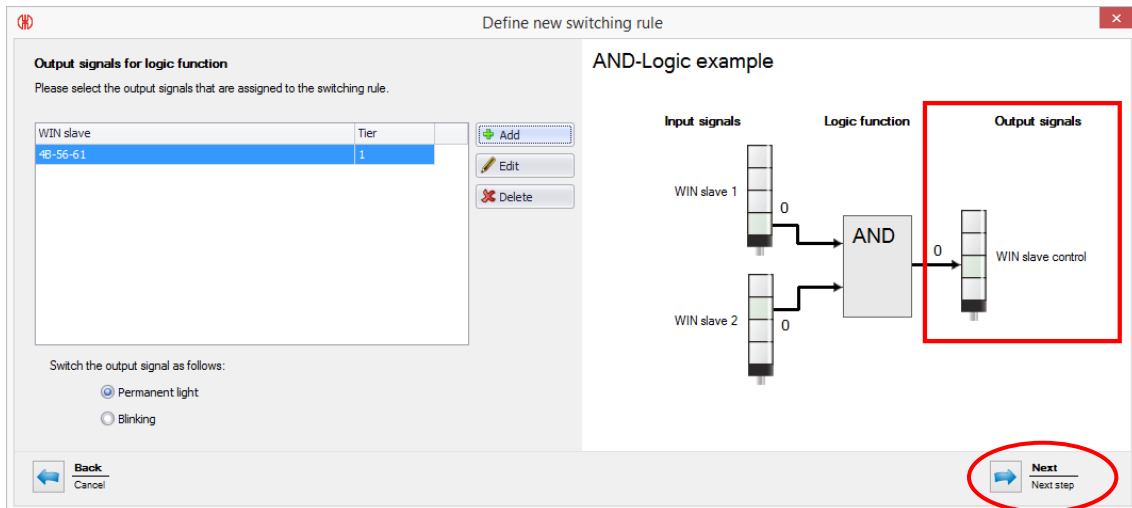
“Delete” cancels an existing output signal.



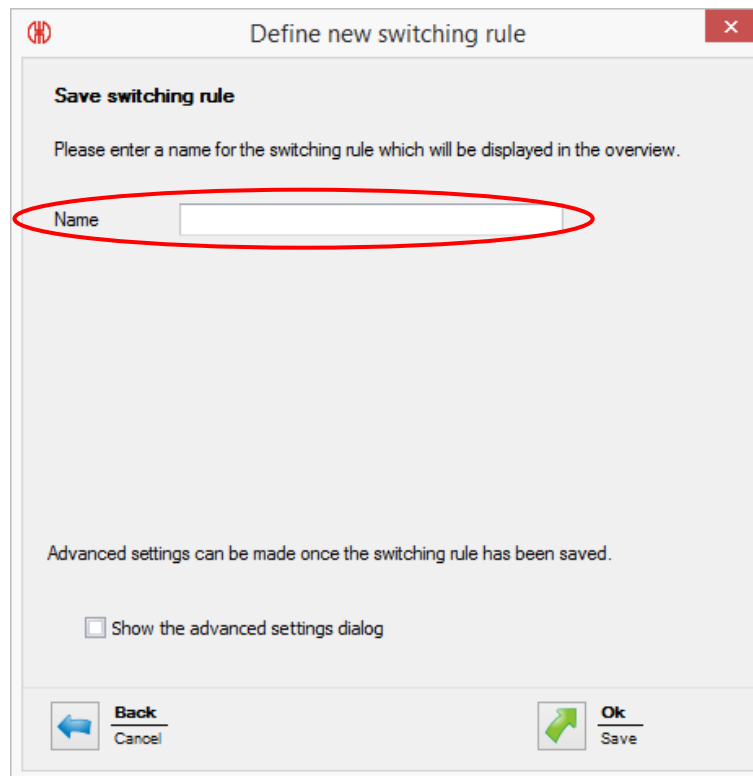
14. Define whether the output signal should be as a “permanent” or “blinking” light.



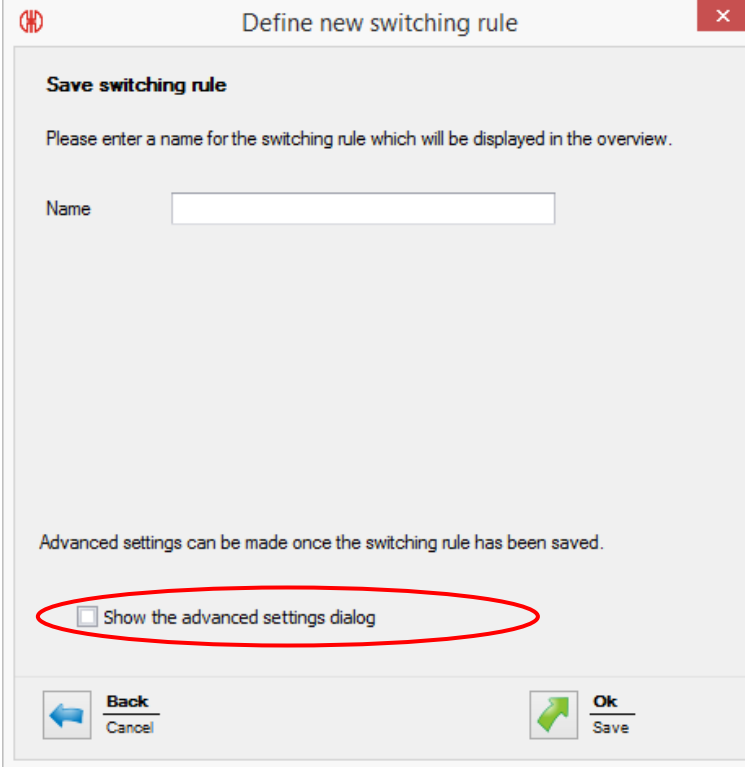
15. Confirm the selection with "Next".



16. Save finally the rule set up with a name you define.

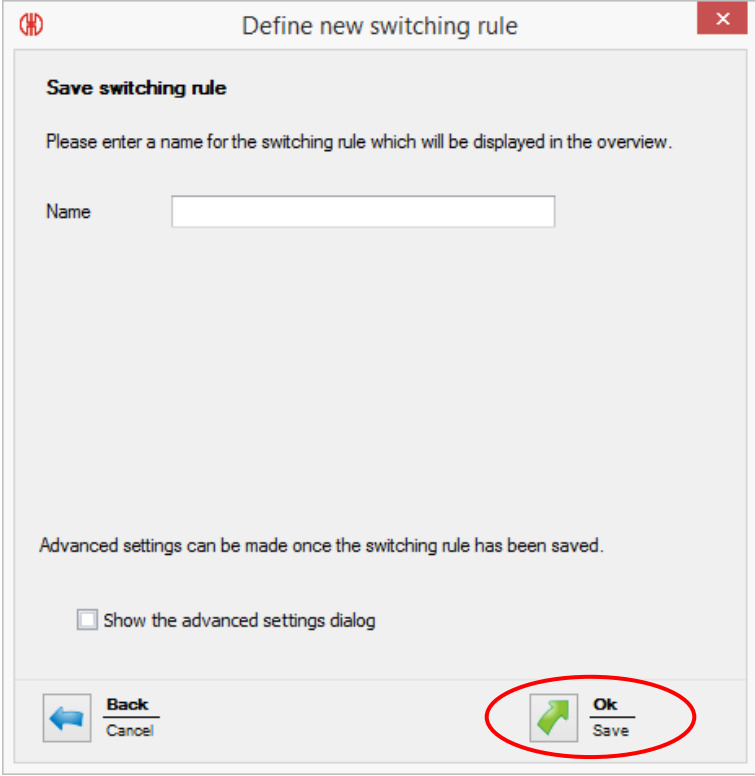


17. In order to make further adjustments to the rule, activate the check box.



The screenshot shows a dialog box titled "Define new switching rule" with a close button (X) in the top right corner. The main content area is titled "Save switching rule" and contains the instruction "Please enter a name for the switching rule which will be displayed in the overview." Below this is a text input field labeled "Name". Further down, there is a note: "Advanced settings can be made once the switching rule has been saved." At the bottom of the main area, there is a checkbox labeled "Show the advanced settings dialog", which is circled in red. The bottom of the dialog box features two buttons: "Back" (with a blue arrow icon) and "Cancel", and "Ok" (with a green arrow icon) and "Save".

18. Confirm your selection with „Ok“.

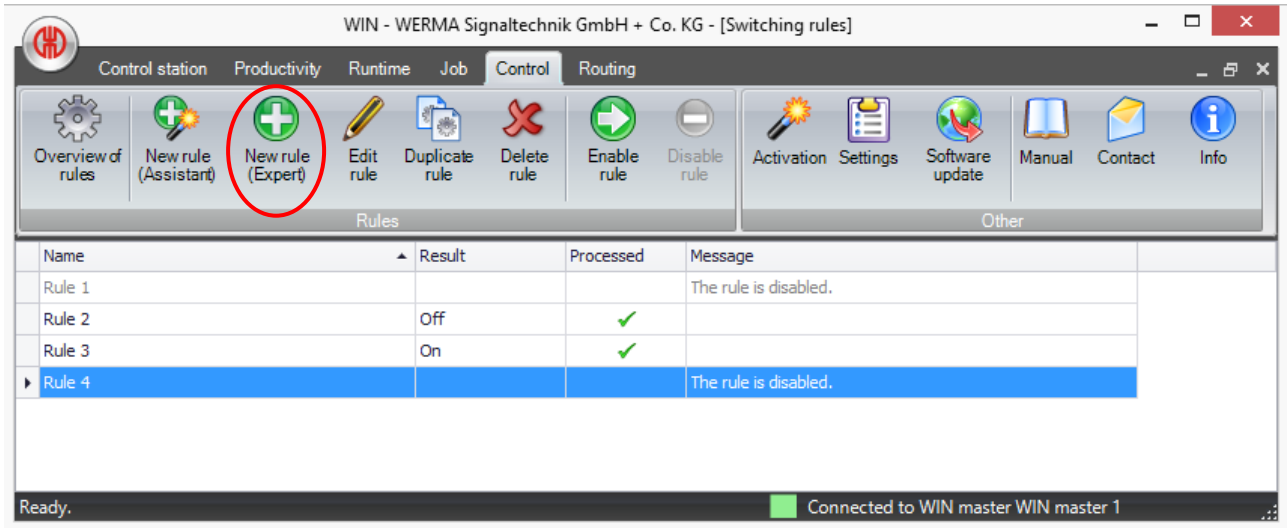


This screenshot is identical to the previous one, showing the "Define new switching rule" dialog box. However, in this image, the "Ok" button (with a green arrow icon) is circled in red, indicating the next step in the process.

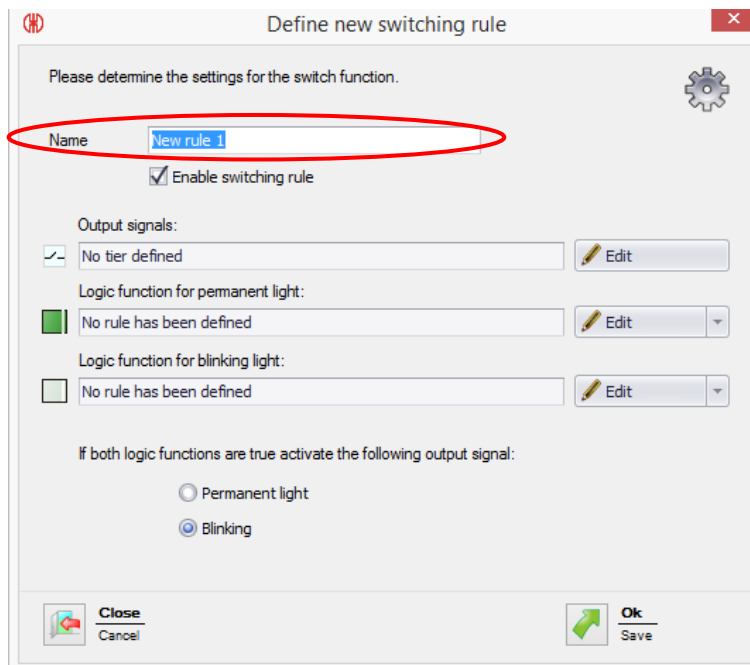
7.5.2.2 Defining a new rule in the Expert mode

In order to set up a new rule in the expert mode proceed as follows:

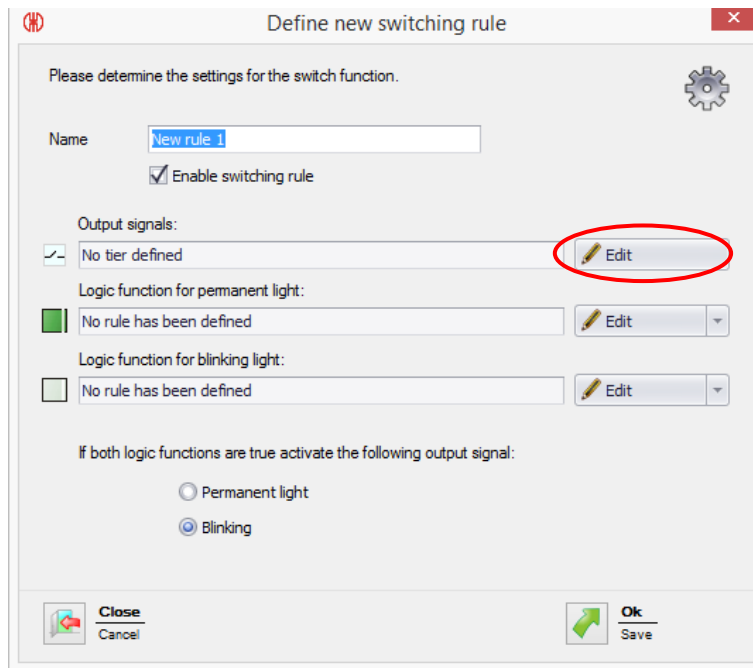
1. Click on "New rule (Expert)".



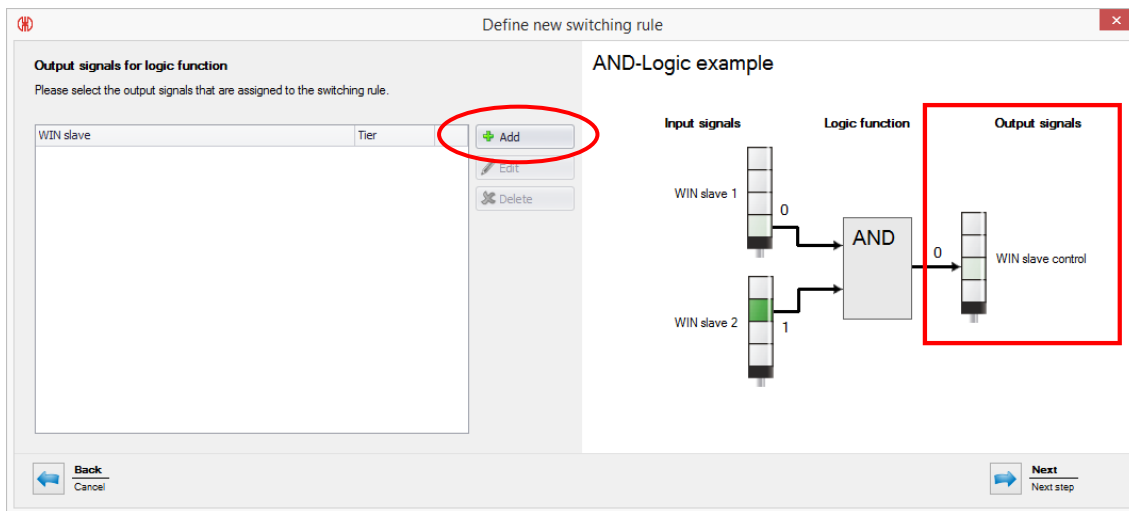
2. A window will open in which you can first define the name of the new rule.



3. Next, define the output signal and click on "Edit".

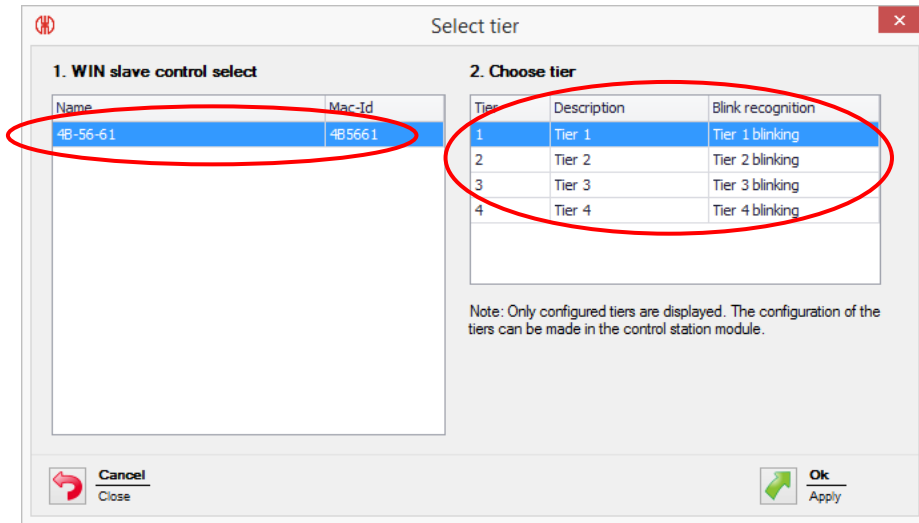


4. To define the output signal click on "Add".

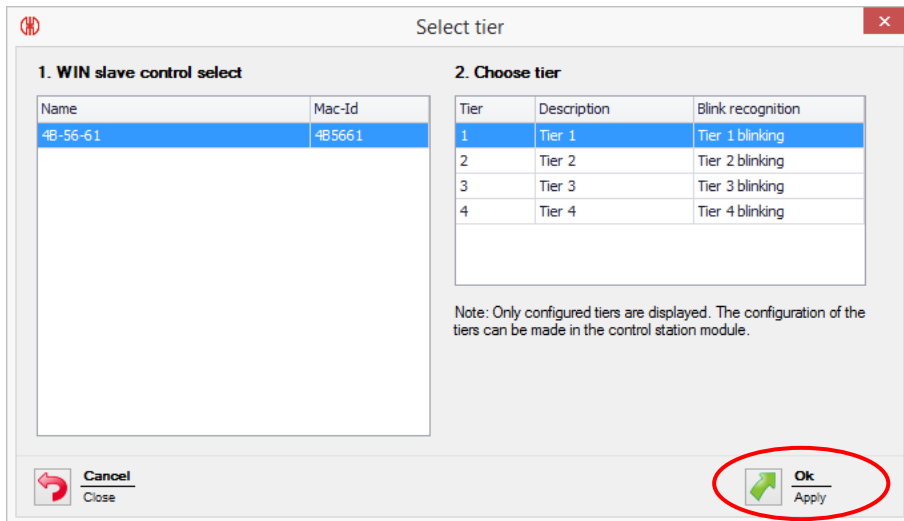


5. Only the tiers of the WIN slave control can be used as output signals.
Only those WIN slaves control connected to the WIN network will be displayed as options for output signals.

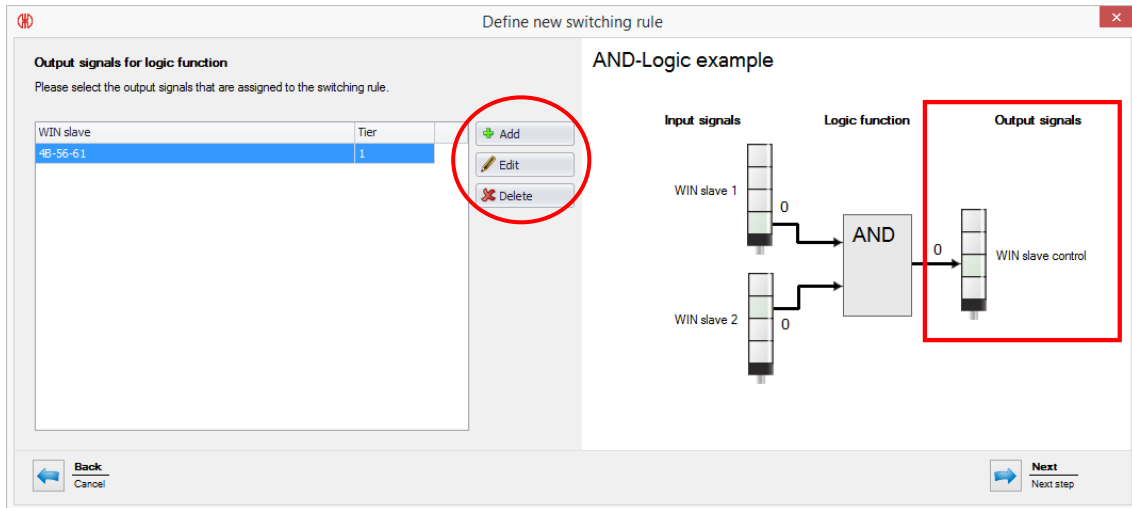
Select the tier to be switched.



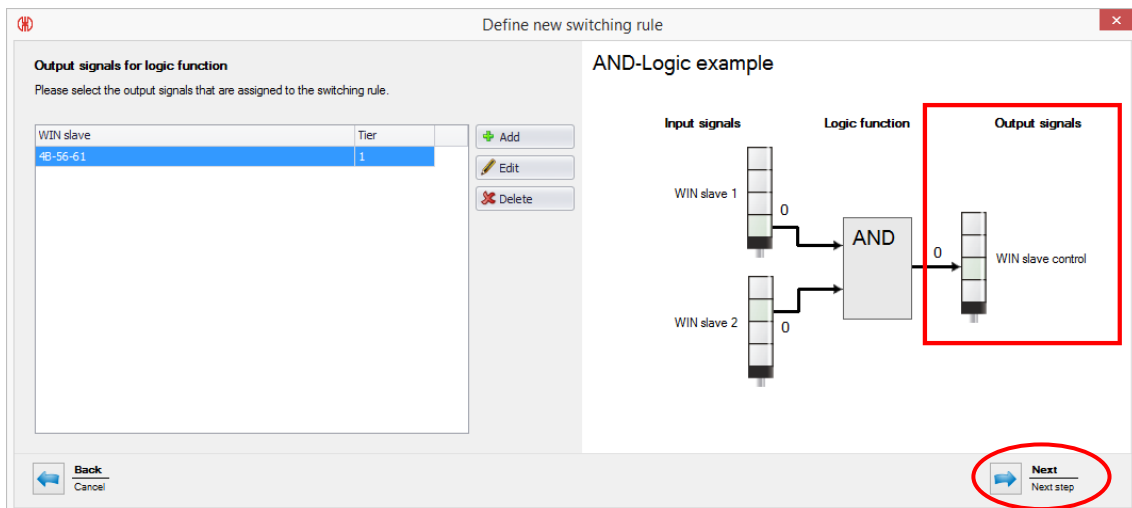
6. Confirm the selection with "Ok".



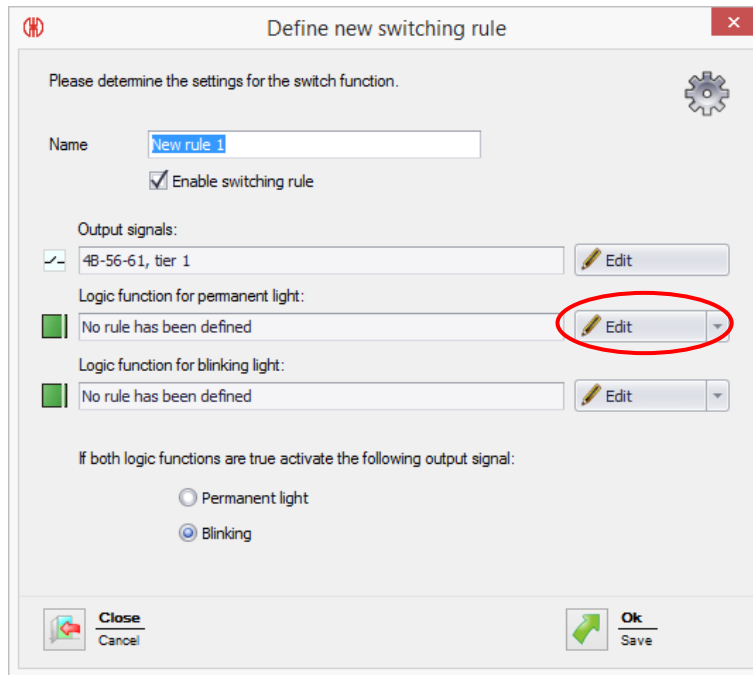
7. To set an additional output signal click on "Add" and repeat steps 11. and 12.
The "Edit" function allows you to modify an output signal which has already been defined.
"Delete" cancels an existing output signal.



8. Click on "Next" to confirm your selection.



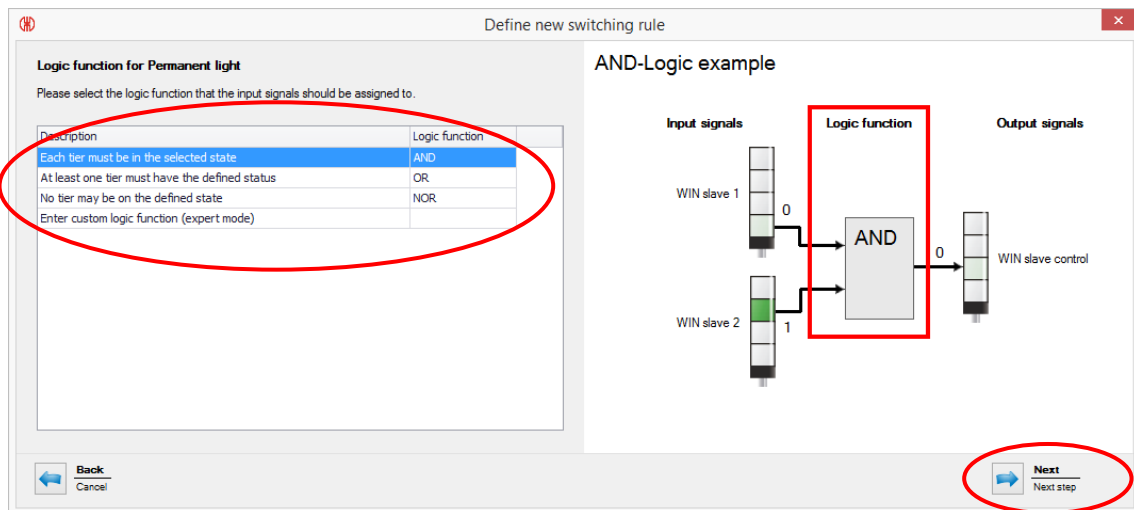
9. Next define the Logic function of the permanent light of the WIN slave control by clicking on "Edit".



10. Next you will find the switching rule / Logic function with which the input signals should be connected. You can choose between:

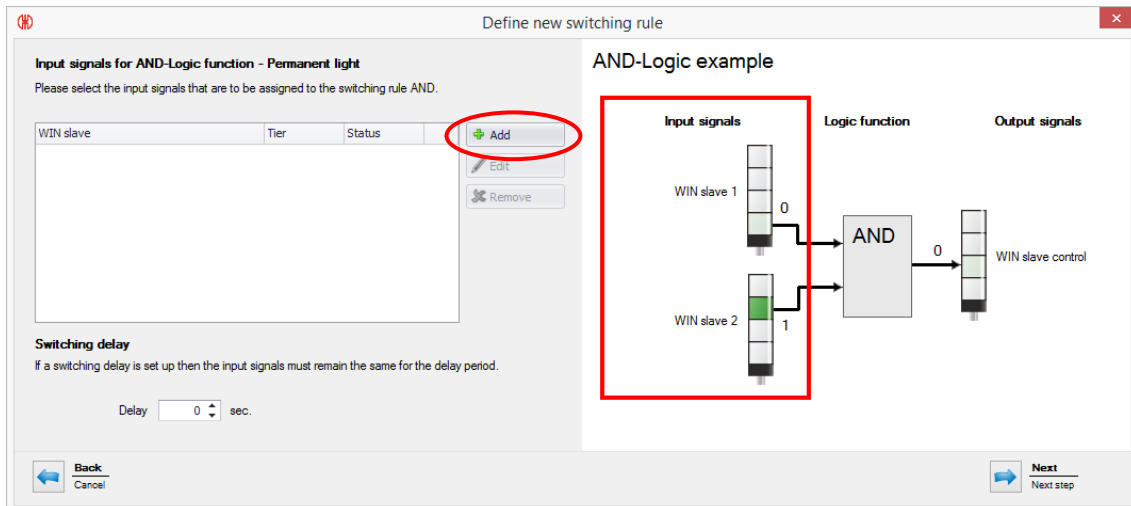
- AND – Each tier must be in the selected status
- OR – At least one tier must have the defined status
- NOR – No tier may be in the defined status
- Enter custom logic function (expert mode), see chapter 7.5.2.3.

Click "Next".



Note: The picture right shows you an example of the selected functions.

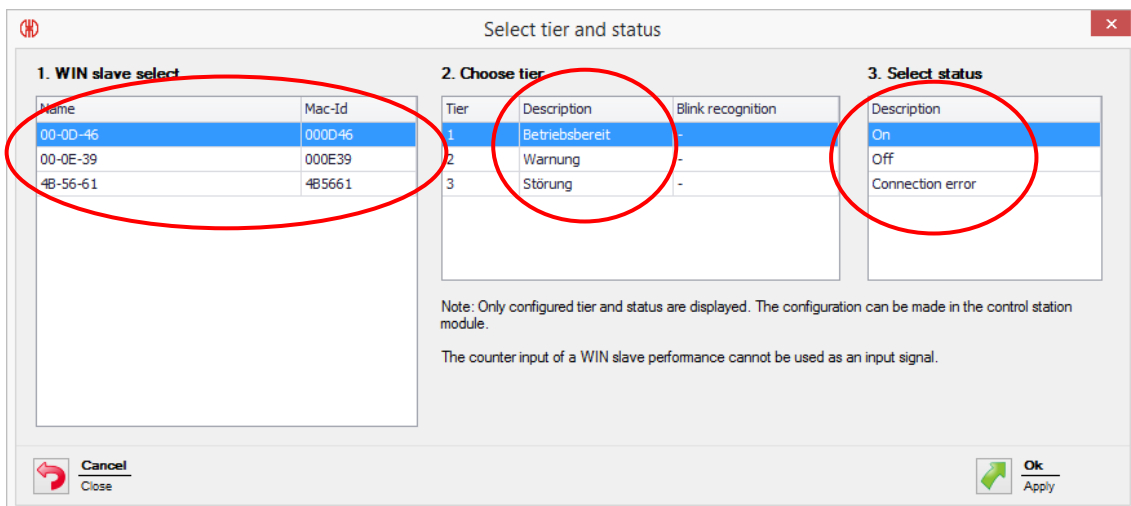
11. Next you can select the input signal for the chosen Logic function, click on "Add".



12. In this dialogue box you can select the input signal by tier and status for one of the WIN slaves connected to the WIN network.

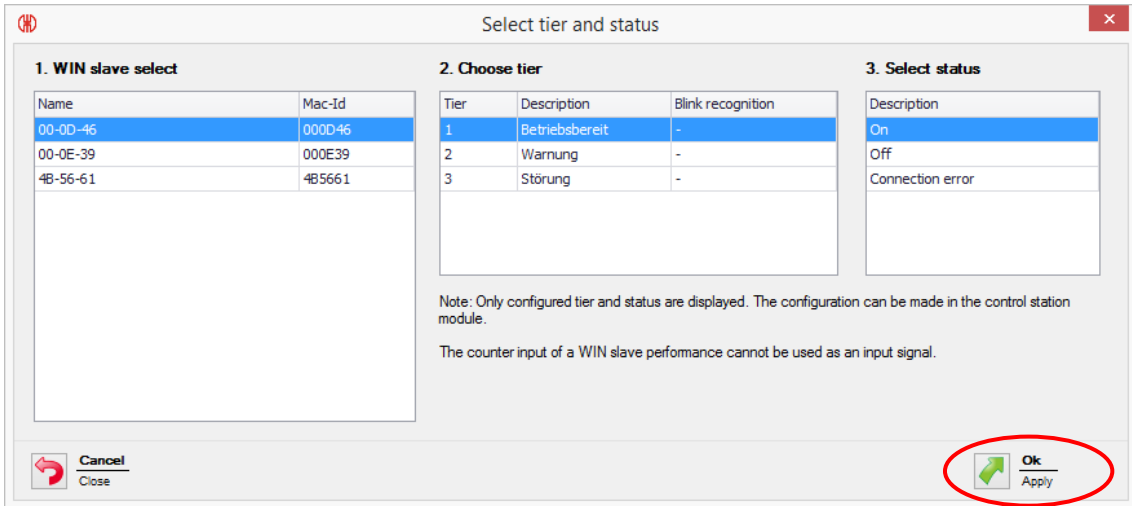
First select a WIN slave from the left hand column. Then you will see the tiers displayed as have been defined in the control station view.

Select tier and then the status in which this tier must be for the input signal to apply. You have the choice between "On", "Off", "Connection error" and "Blinking". "Blinking" is displayed only when the "blink recognition" has been activated for this tier.



Note: The counter input of a WIN slave performance cannot be used as input to a logic function.

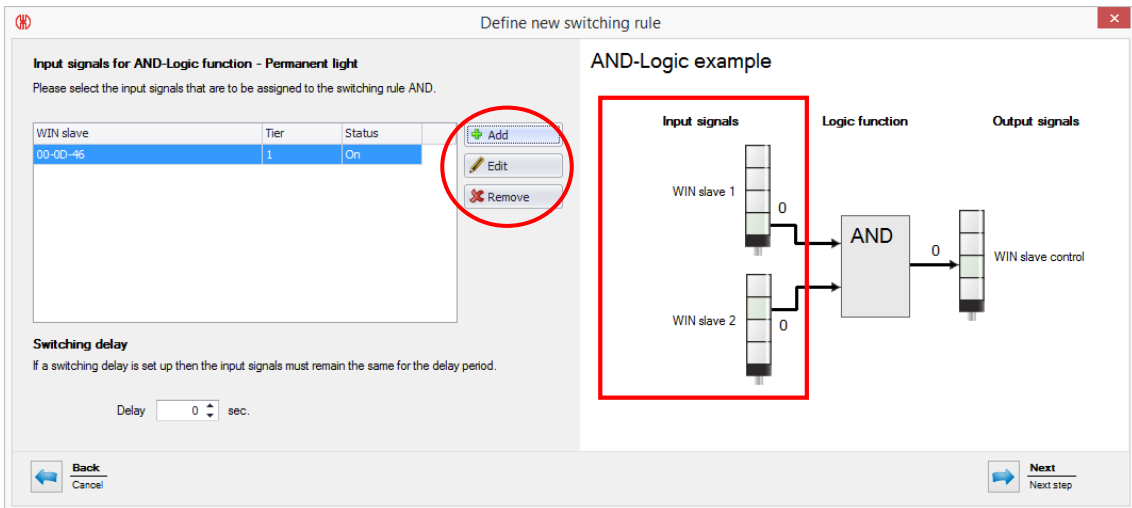
13. Confirm with "OK".



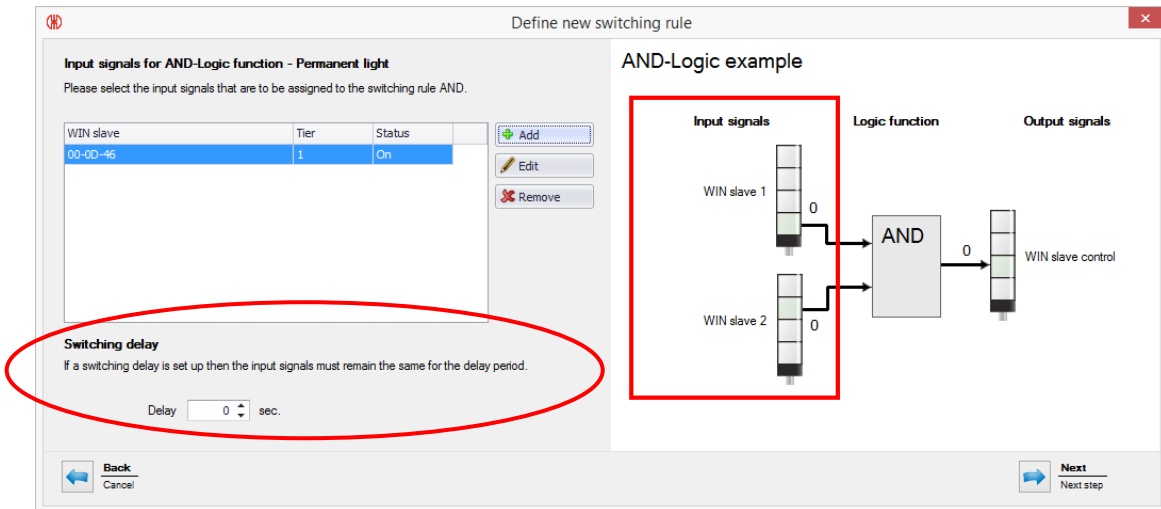
14. To define another input signal click on "Add" and repeat steps 5. and 6.

Click on "Edit" to alter an existing output signal.

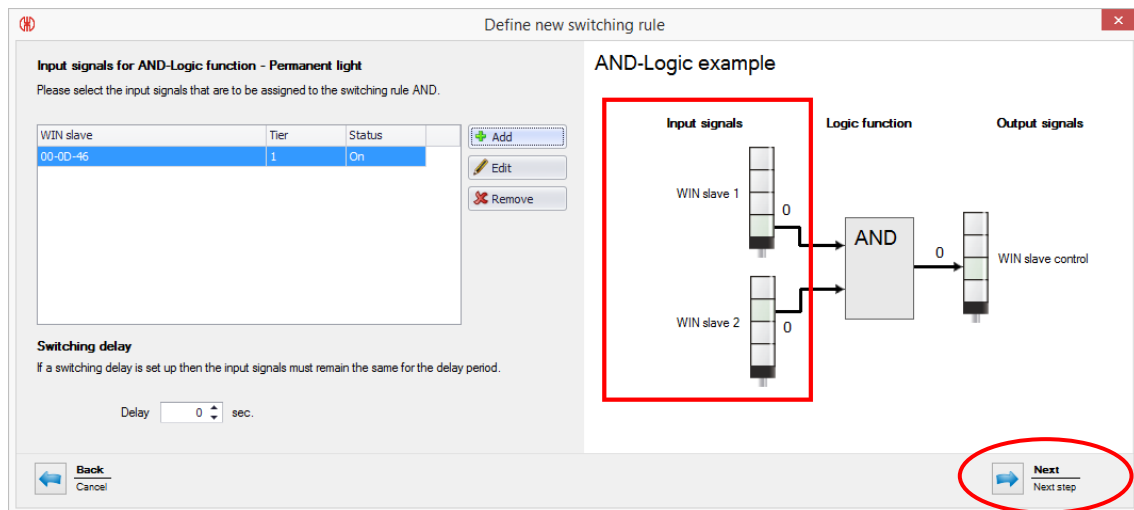
Click on "Remove" to remove an output signal.



15. For each switching rule you can set a time delay but the input signal status must have been on for at least the same time as the time delay.



16. Select by clicking on "Next".



17. Next define the Logic function for the blinking of the WIN slave control by clicking on "Edit". Repeat steps 9. to 15. as for a permanent light.

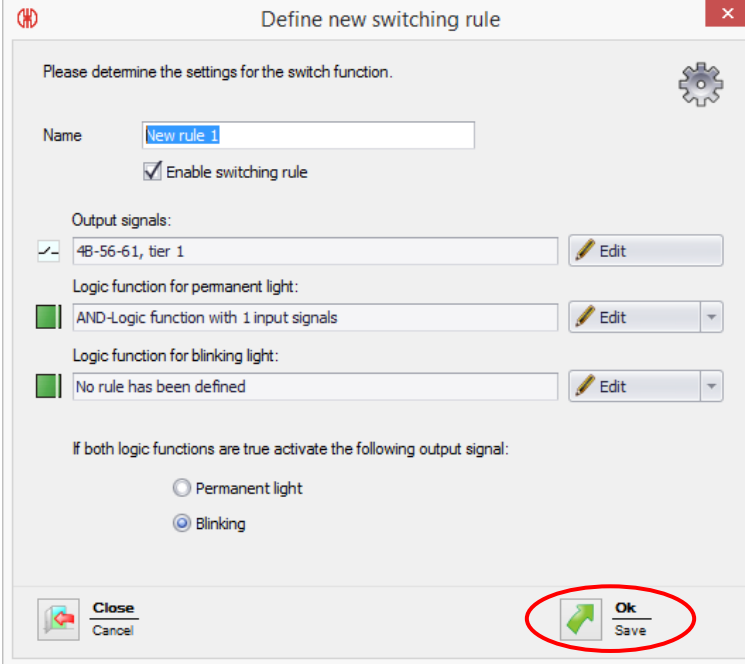
The screenshot shows a dialog box titled "Define new switching rule". It contains the following elements:

- Name: New rule 1
- Enable switching rule
- Output signals: 4B-56-61, tier 1 (with an Edit button)
- Logic function for permanent light: AND-Logic function with 1 input signals (with an Edit button)
- Logic function for blinking light: No rule has been defined (with an Edit button highlighted by a red circle)
- If both logic functions are true activate the following output signal:
 - Permanent light
 - Blinking
- Buttons: Close/Cancel and Ok/Save

18. Lastly please define which Logic function has the higher priority, which means which function should be switched first if both Logic functions occur at the same time.

This screenshot is identical to the one above, but with a red circle highlighting the "Blinking" radio button in the "If both logic functions are true activate the following output signal:" section.

19. Save the switching rule with "Ok".



Define new switching rule

Please determine the settings for the switch function.

Name:

Enable switching rule

Output signals:

4B-56-61, tier 1

Logic function for permanent light:

AND-Logic function with 1 input signals

Logic function for blinking light:

No rule has been defined

If both logic functions are true activate the following output signal:

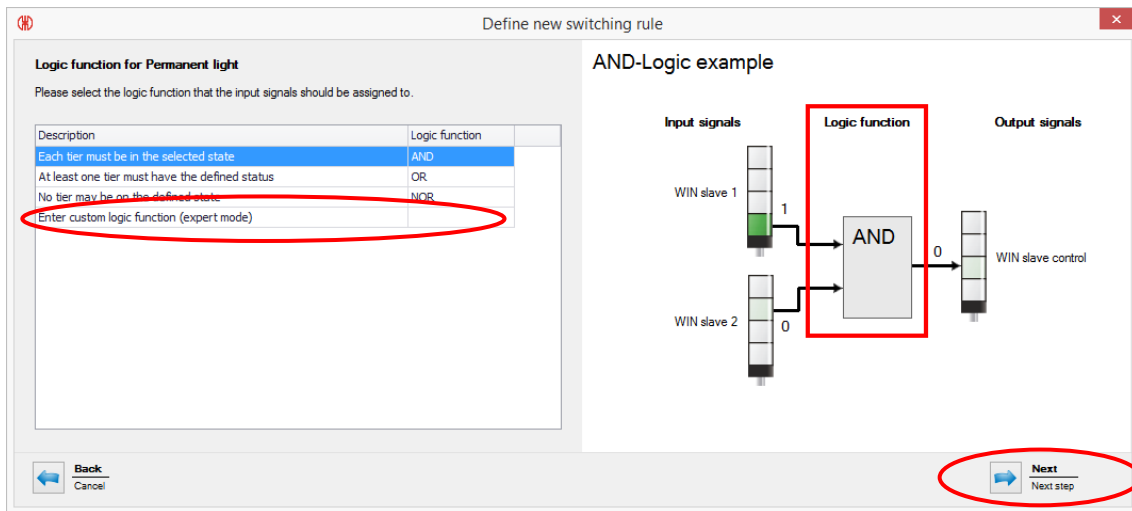
Permanent light

Blinking

7.5.2.3 Customised Logic function in Expert mode

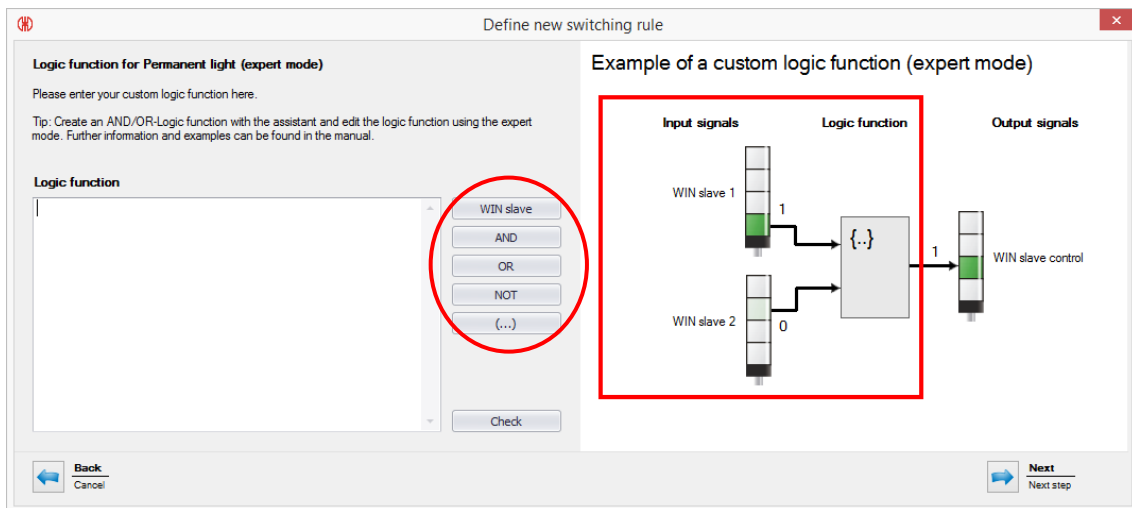
To input a Logic function in expert mode follow these steps:

1. Select "Enter custom logic function (expert mode)" and click on "Next".



2. Next define your own logic function. The rule will be input as a program code in Visual Basic Syntax. You can make up more complex rules by using the functions "AND", "OR", "NOT" and brackets.

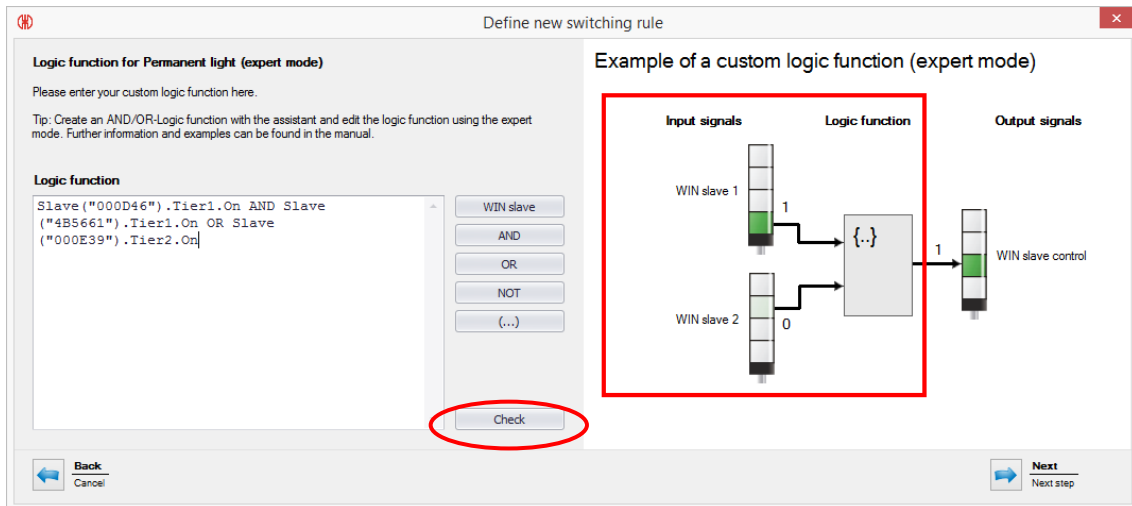
Use either the boxes or input the functions directly as text.



Note: The program code uses the MAC-IDs of the WIN slave, not the individual WIN slave names.

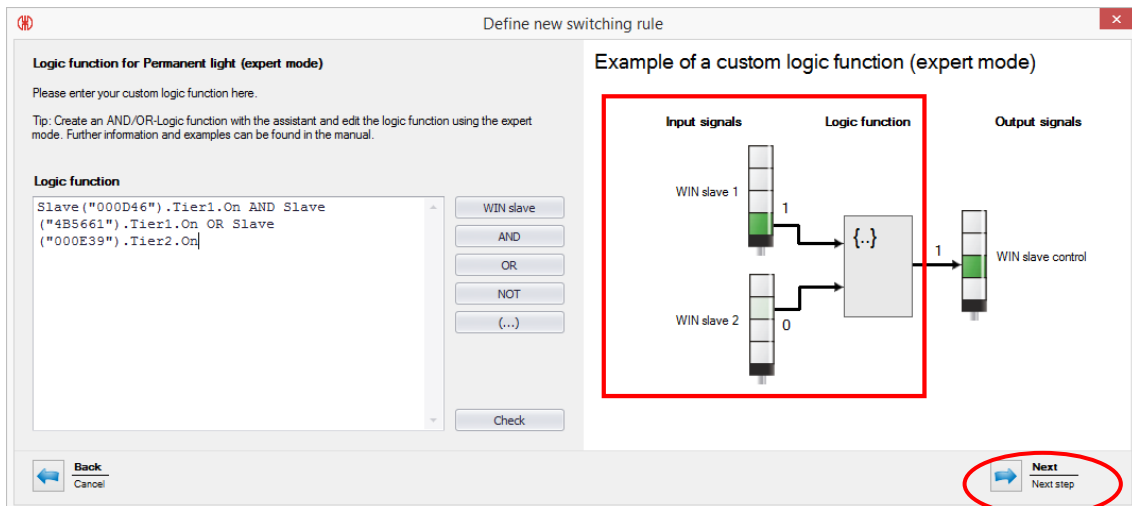
Note: You can find examples of functions in chapter 7.5.2.4.

3. Check your custom rule by clicking on "Check".



Note: You can scale the window for optimum definition of Logic function.

4. Save the switching rule by clicking on "Next".



7.5.2.4 Examples of Logic functions in Expert mode

Example 1:

AND-Rule, under which tiers 1 and 2 of a WIN slave must be "On":

```
Slave("0024B1").Tier1.On AND Slave("0024B1").Tier2.On
```

Example 2:

OR-Rule, under which tier 1 "Blinks" or tier 2 is "Off".

```
Slave("0024B1").Tier1.Blink OR Slave("0024B1").Tier2.Off
```

Example 3:

NOR-Rule, under which neither of the two slaves may show a transmission error:

```
NOT (Slave("0024B1").Tier1.Error OR Slave("0024B2").Tier1.Error)
```

Example 4:

Logic function using variables:

Note: You can use program code with Visual Basic Syntax.

```
' declare variables
Dim a As Boolean
Dim b As Boolean
Dim x As Boolean

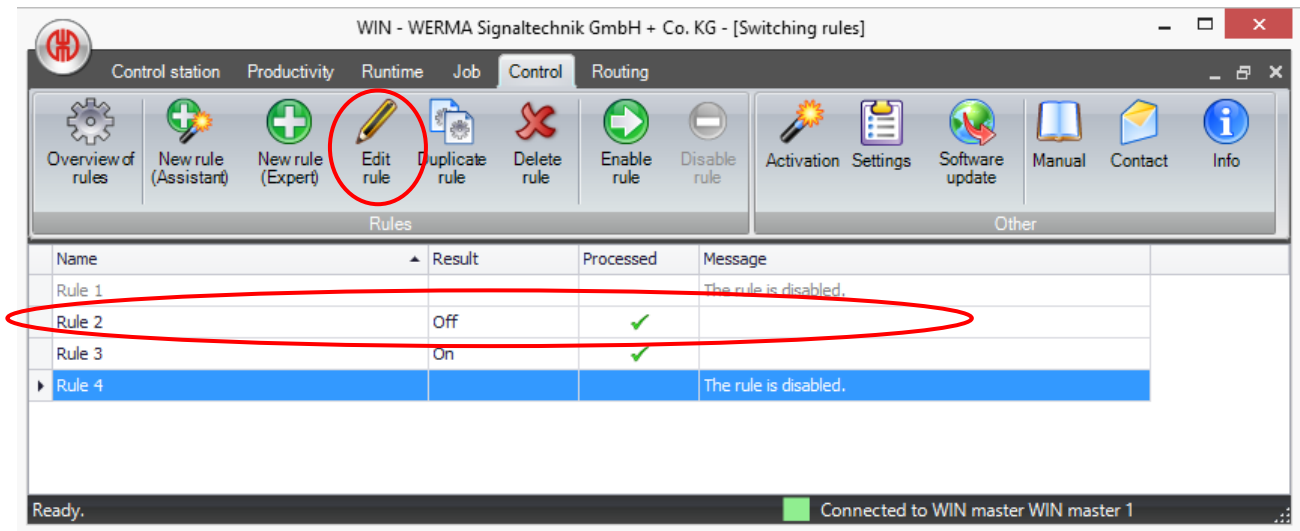
' read out Slave status and store in variables
a = Slave("0024A1").Tier1.On
b = Slave("0024A2").Tier1.On

' Program code, which processes the variables.
x = a OR b

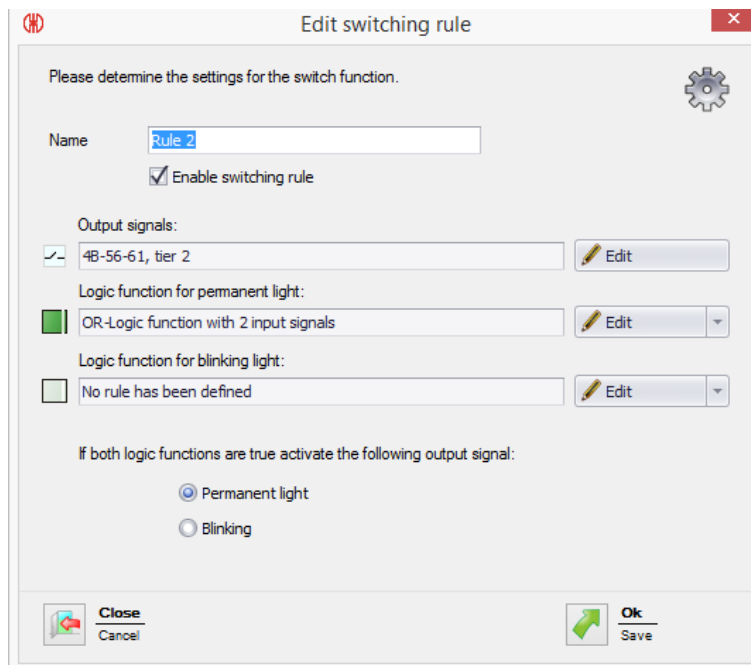
' Note: If multiple program lines are entered,
' the result of the logic function must be returned
' as Boolean data type with Return.
Return x
```

7.5.3 Edit Rule

1. To edit a rule, select the rule and click on "Edit rule". Alternatively, right-click on a rule and select "Edit".



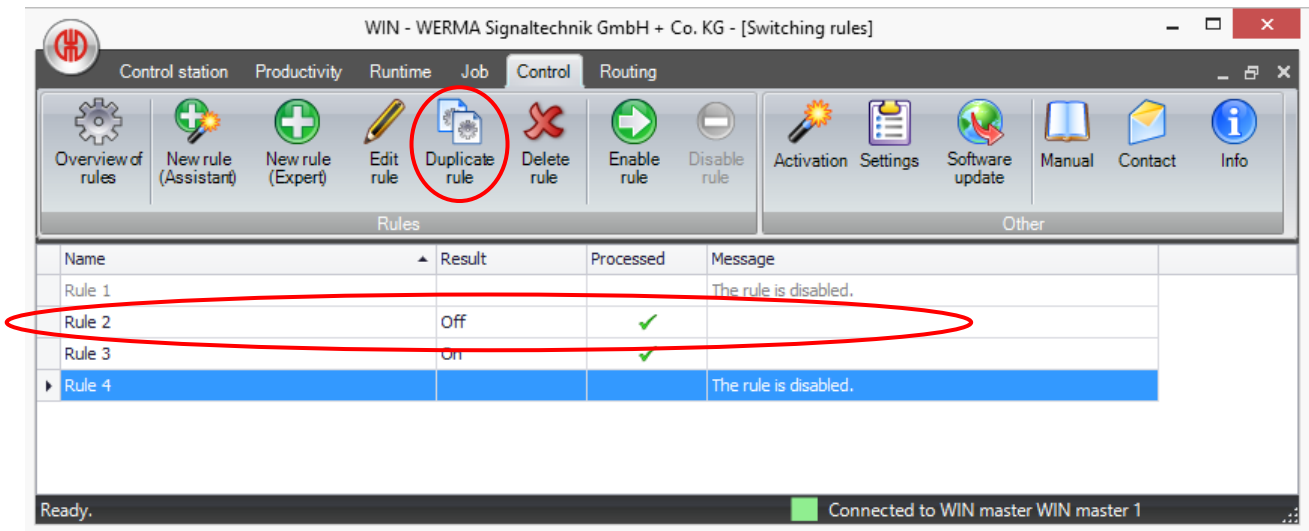
2. You can edit the output signals, input signals and Logic function by following the steps in 7.5.2.2.



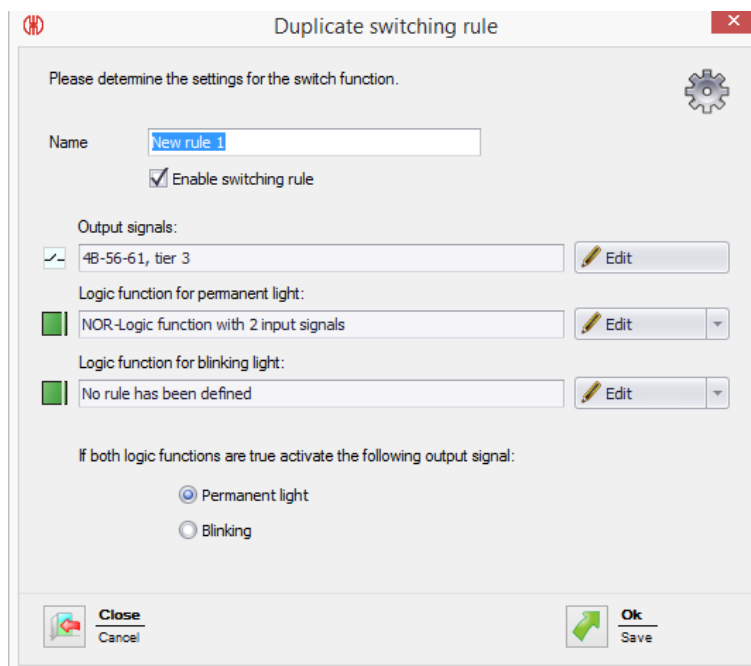
3. Confirm with "Ok".

7.5.4 Duplicate a rule

1. Select the rule and click on "Duplicate rule". Alternatively, right-click on a rule and select "Duplicate rule".



2. To duplicate the rule confirm with "Yes".
3. You can edit the output signals, input signals and Logic function by following the steps in 7.5.2.2.

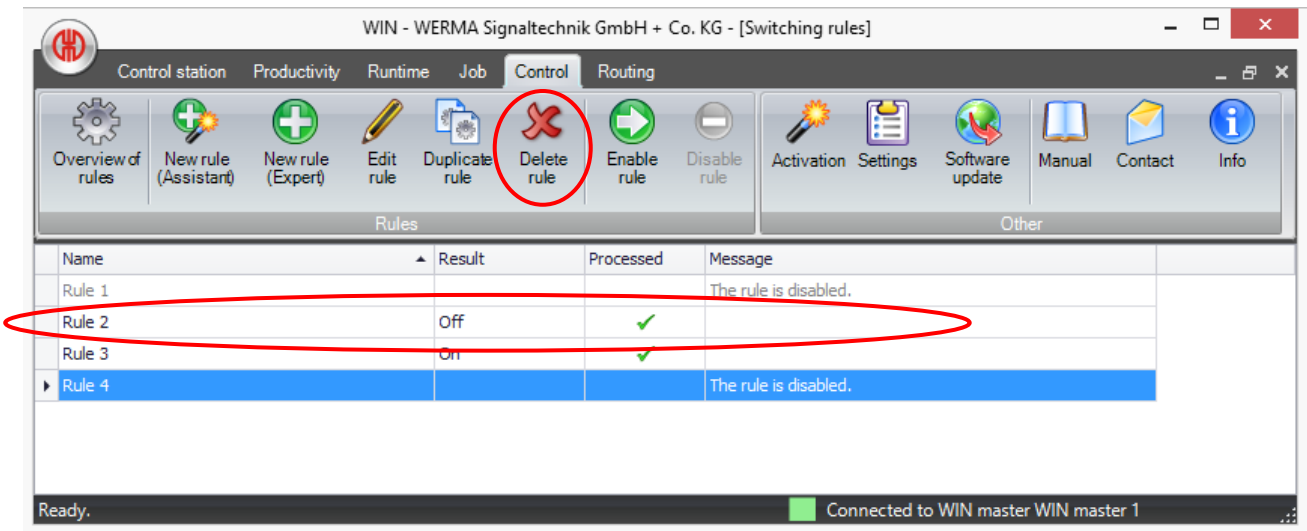


4. Confirm with "Ok".

Note: Should you duplicate a rule it will automatically be shown as a deactivated rule. Only one rule per output signal can be activated.

7.5.5 Delete rule

1. To delete a rule select the rule and click on "Delete rule". Alternatively, right-click on a rule and select "Delete rule".

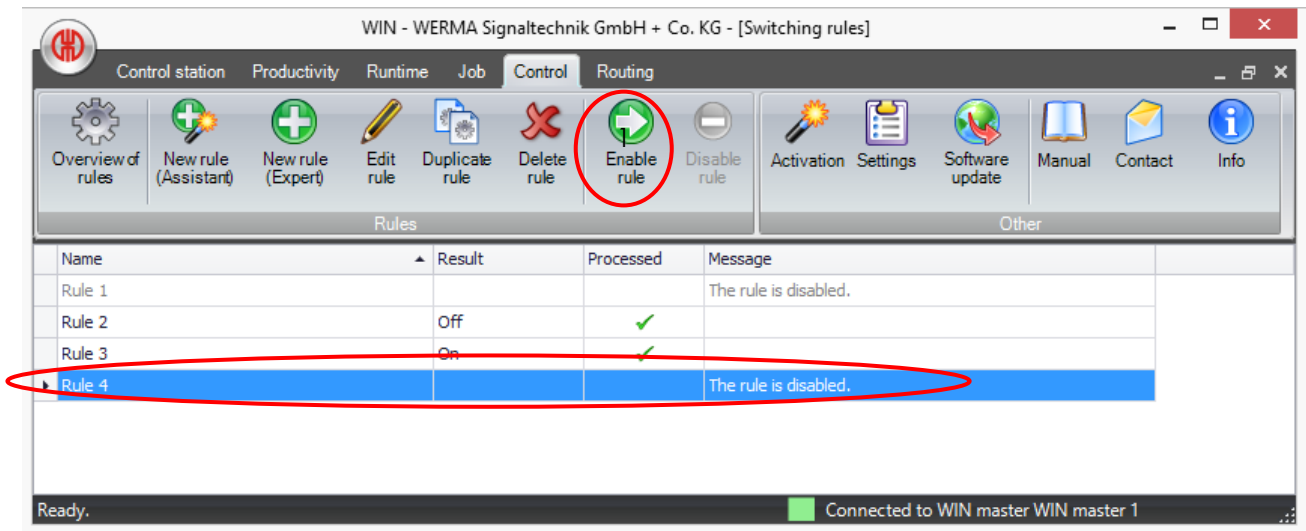


2. To delete the rule confirm with "Yes".

Note: If you delete the switching rule, the WIN slave control will remain in the last transmitted status.

7.5.6 Enable a rule

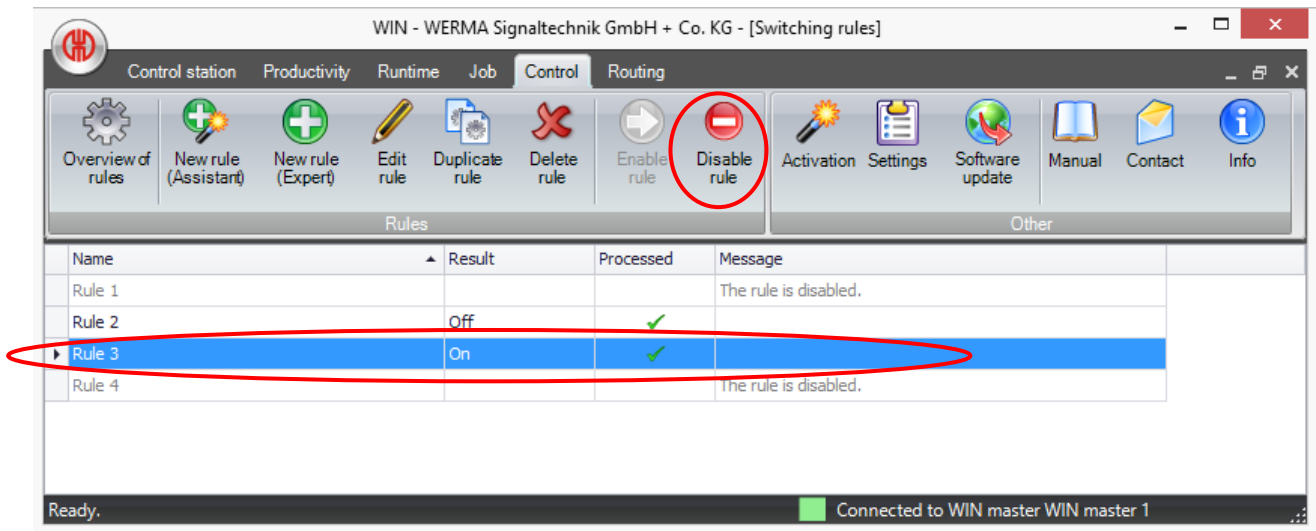
1. To enable a rule you must select a disabled rule and then click on "Enable rule". Alternatively, right-click on a rule and select "Enable rule".



2. To enable the rule confirm with "Yes".

7.5.7 Disable a rule

1. To disable a rule you must select an enabled rule and then click on "Disable rule". Alternatively, right-click on a rule and select "Disable rule".



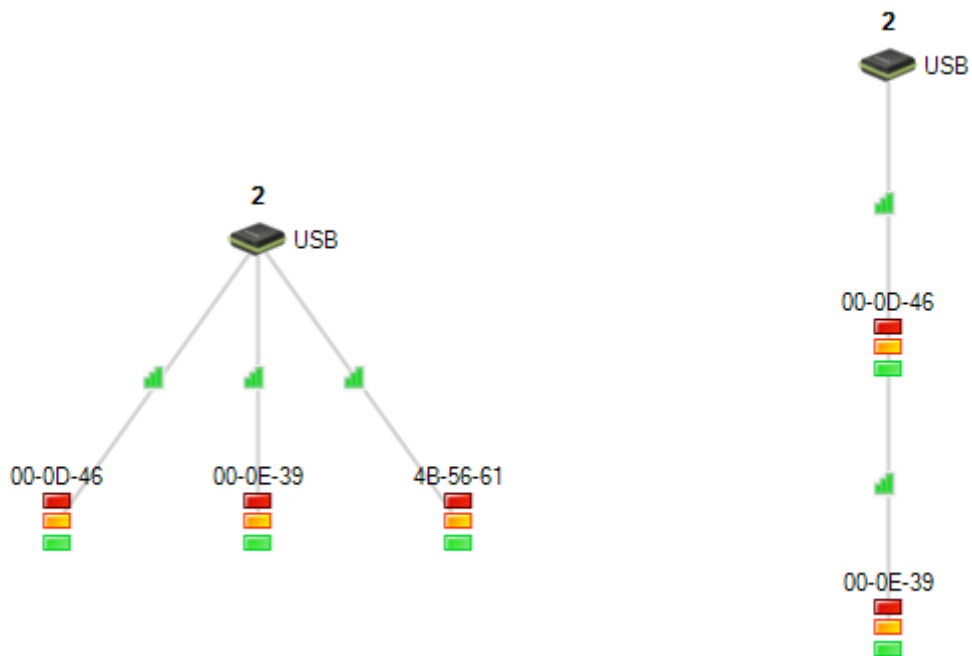
2. To disable the rule confirm with "Yes".

Note: If you disable the switching rule, the WIN slave control will remain in the last transmitted status.

7.6 Routing Module

The Routing Module assists in setting up or adjusting the best network for WIN. The network routing graphic shows the current set up of the WIN network and the signal strength of each WIN slave. Each WIN slave will automatically select the best route back to the WIN master either directly, or indirectly.

7.6.1 Wireless communication



The WIN slave may either connect directly to the WIN master (left) or via another WIN slave, which acts as a “repeater” (right).

This repeater function is activated whenever wireless communication between the WIN slave and the WIN master can be improved by this function.

Note: A WIN slave can be connected to the WIN master via a maximum of two WIN slaves. This will extend the transmission range.

7.6.2 Connection type

A WIN master is marked "USB" when the connection for data transmission is via "USB".



A WIN master is marked "TCP/IP" when the connection for data transmission is via "Ethernet". Only possible with the WIN ethernet master.



7.6.3 Signal strength

The bar graphs on the connection lines indicate the signal quality. The more bars that are filled in, the better the signal strength.



High signal quality



Low signal quality



Bad signal quality

A red connection line indicates poor wireless communication between the stations.

Note: Low signal quality (red lines) may result in connection errors. It is recommended that the wireless communication be optimised (refer to chapter 0)

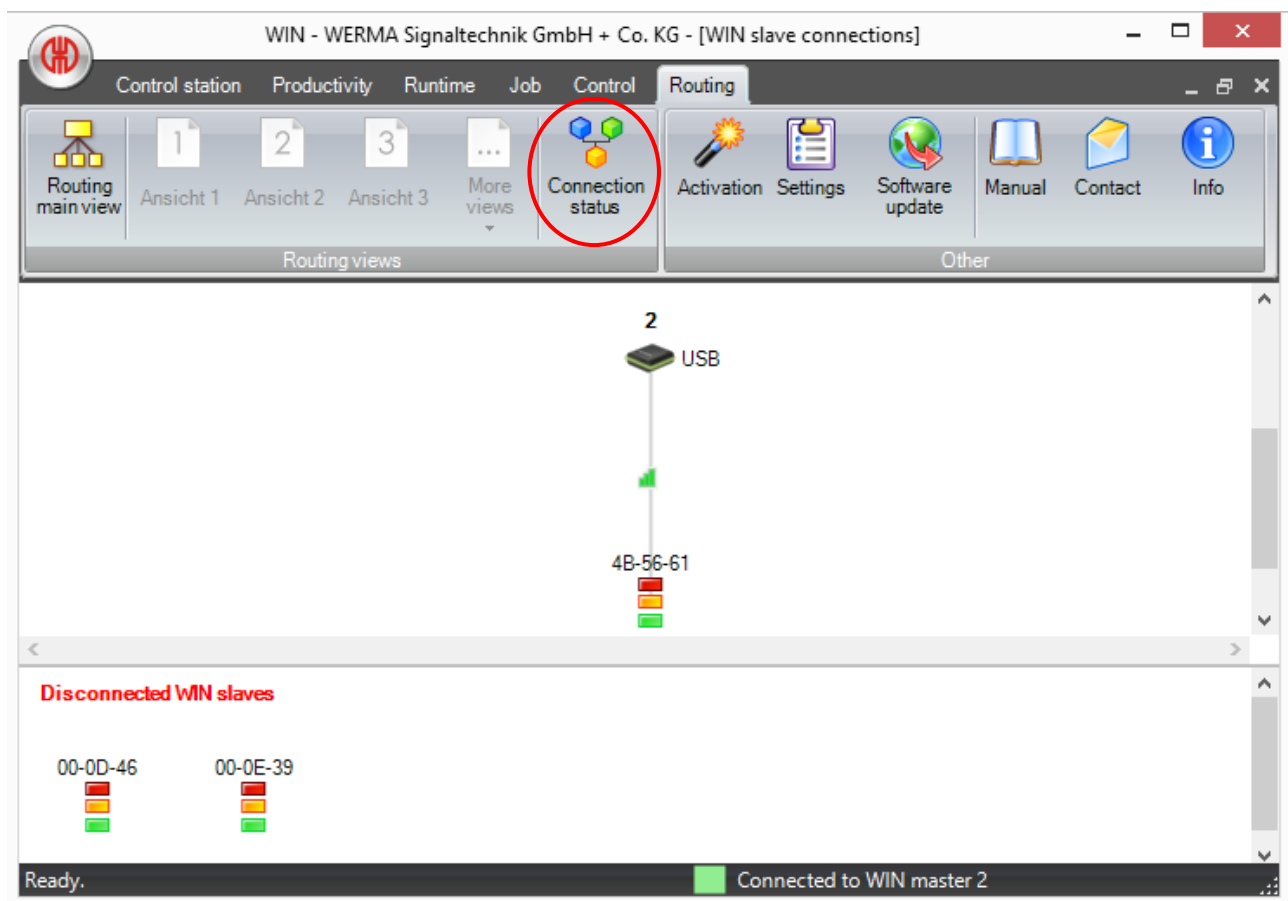
7.6.4 Optimising wireless communication

Wireless communication can be improved by implementing the following measures:

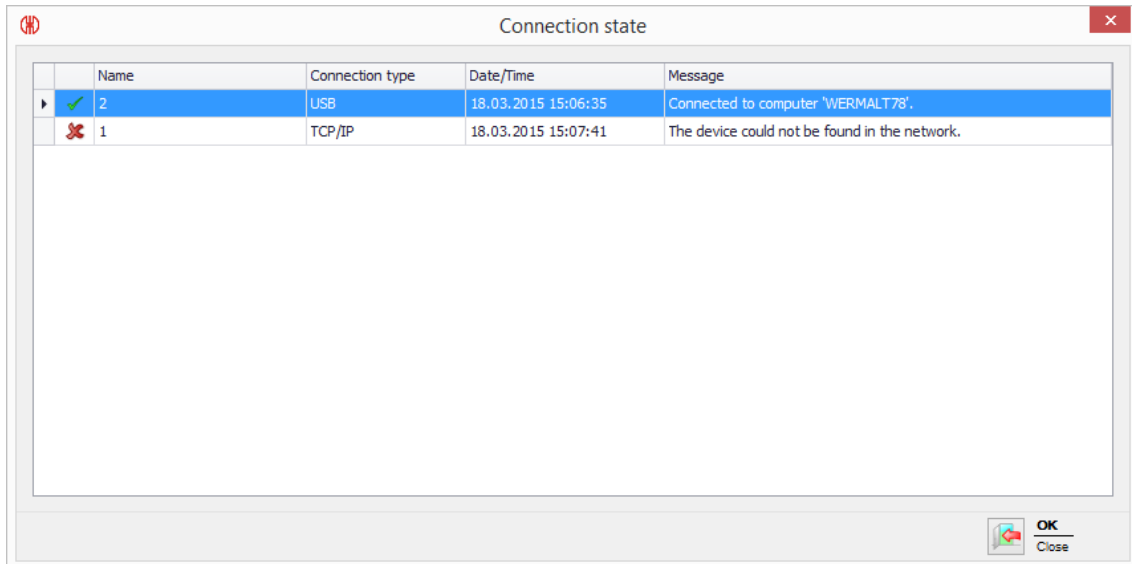
- The stations should be positioned within line of sight.
- Remove metal surfaces between the stations.
- Position the WIN master in the best possible way (see chapter 4)
- Poor wireless communication can be improved by means of the “repeater” (WIN slave) function.
- System components outside the transmission range can be networked via another WIN master (refer to chapter 5.2.1).

7.6.5 Connection status

Clicking on “Connection status” opens another window.



The "Connection State" window will display all WIN masters which are integrated in the WIN database, each with connection type and connection states.



Examples of messages:

Message: There is no connection to the device.

Solution: Message immediately after the start of the server service. For the WIN master (USB) the message will remain until the WIN master (USB) is connected. For the WIN ethernet master the message changes to a connection error.

Message: Connected to computer "..."

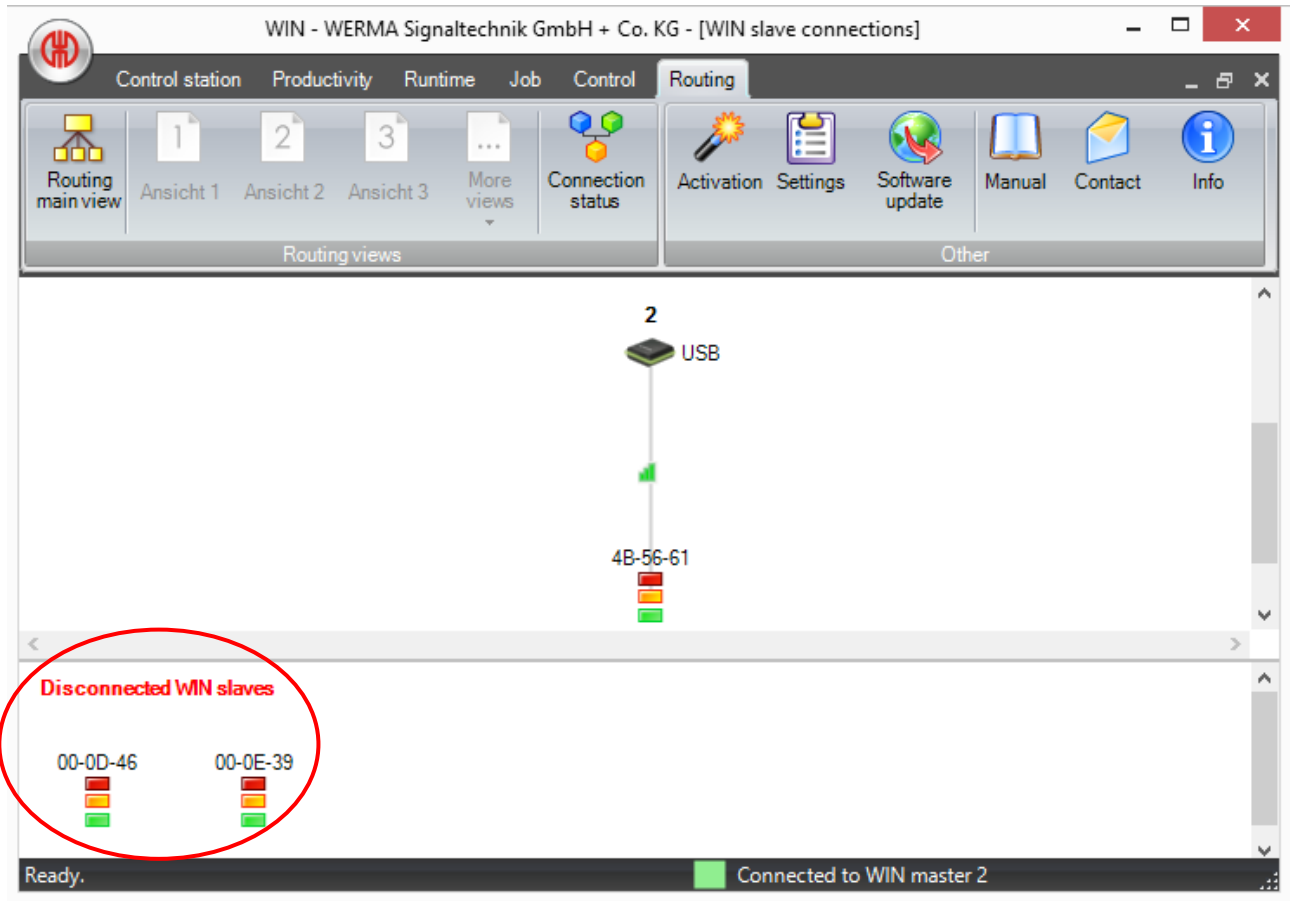
Solution: The USB device is connected to this computer and the data is collected.

Message: connection closed

Solution: USB cable was disconnected from the WIN master (USB).

7.6.6 Disconnected WIN slaves

Configured but disconnected WIN slaves are displayed in the window at the bottom of the screen.



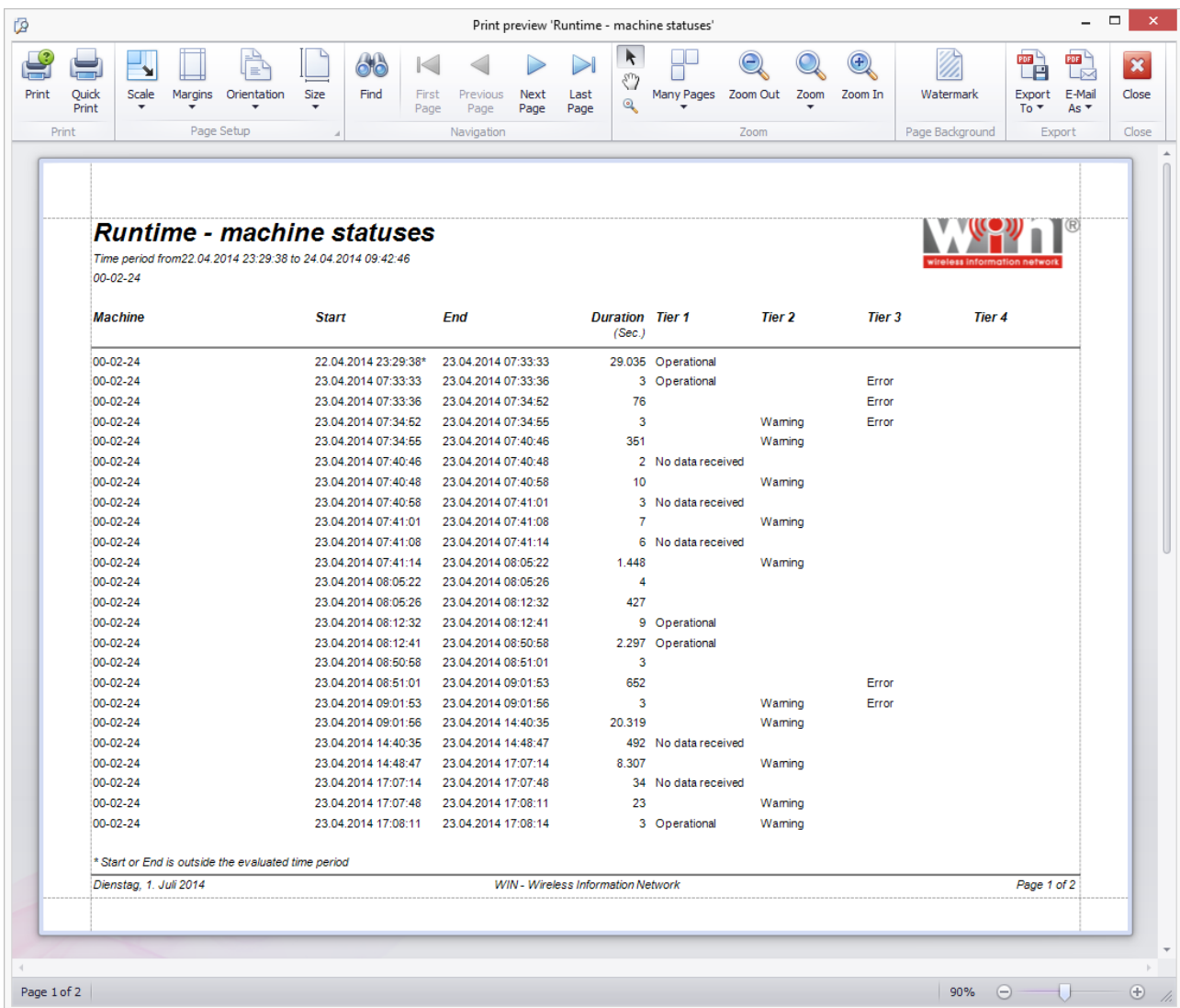
7.7 Reporting and Data Export function

Reporting and Data Export functions are available in the following modules:

- Control Station Module
- Productivity Module
- Runtime Module
- Job Module

Details of how to generate a report in individual modules are given in the relevant module chapters (7.1 to 7.4)

After selection of data for the report, a preview is generated.



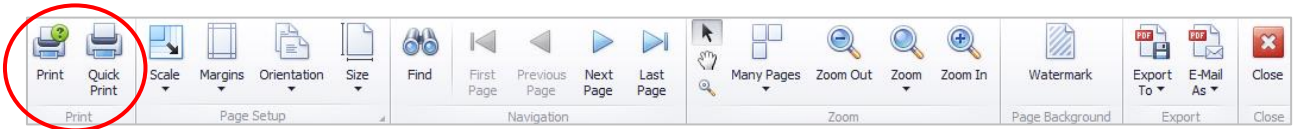
Runtime - machine statuses
Time period from 22.04.2014 23:29:38 to 24.04.2014 09:42:46
00-02-24

Machine	Start	End	Duration (Sec.)	Tier 1	Tier 2	Tier 3	Tier 4
00-02-24	22.04.2014 23:29:38*	23.04.2014 07:33:33	29.035	Operational			
00-02-24	23.04.2014 07:33:33	23.04.2014 07:33:36	3	Operational		Error	
00-02-24	23.04.2014 07:33:36	23.04.2014 07:34:52	76			Error	
00-02-24	23.04.2014 07:34:52	23.04.2014 07:34:55	3		Warning	Error	
00-02-24	23.04.2014 07:34:55	23.04.2014 07:40:46	351		Warning		
00-02-24	23.04.2014 07:40:46	23.04.2014 07:40:48	2	No data received			
00-02-24	23.04.2014 07:40:48	23.04.2014 07:40:58	10		Warning		
00-02-24	23.04.2014 07:40:58	23.04.2014 07:41:01	3	No data received			
00-02-24	23.04.2014 07:41:01	23.04.2014 07:41:08	7		Warning		
00-02-24	23.04.2014 07:41:08	23.04.2014 07:41:14	6	No data received			
00-02-24	23.04.2014 07:41:14	23.04.2014 08:05:22	1.448		Warning		
00-02-24	23.04.2014 08:05:22	23.04.2014 08:05:26	4				
00-02-24	23.04.2014 08:05:26	23.04.2014 08:12:32	427				
00-02-24	23.04.2014 08:12:32	23.04.2014 08:12:41	9	Operational			
00-02-24	23.04.2014 08:12:41	23.04.2014 08:50:58	2.297	Operational			
00-02-24	23.04.2014 08:50:58	23.04.2014 08:51:01	3				
00-02-24	23.04.2014 08:51:01	23.04.2014 09:01:53	652			Error	
00-02-24	23.04.2014 09:01:53	23.04.2014 09:01:56	3		Warning	Error	
00-02-24	23.04.2014 09:01:56	23.04.2014 14:40:35	20.319		Warning		
00-02-24	23.04.2014 14:40:35	23.04.2014 14:48:47	492	No data received			
00-02-24	23.04.2014 14:48:47	23.04.2014 17:07:14	8.307		Warning		
00-02-24	23.04.2014 17:07:14	23.04.2014 17:07:48	34	No data received			
00-02-24	23.04.2014 17:07:48	23.04.2014 17:08:11	23		Warning		
00-02-24	23.04.2014 17:08:11	23.04.2014 17:08:14	3	Operational	Warning		

* Start or End is outside the evaluated time period
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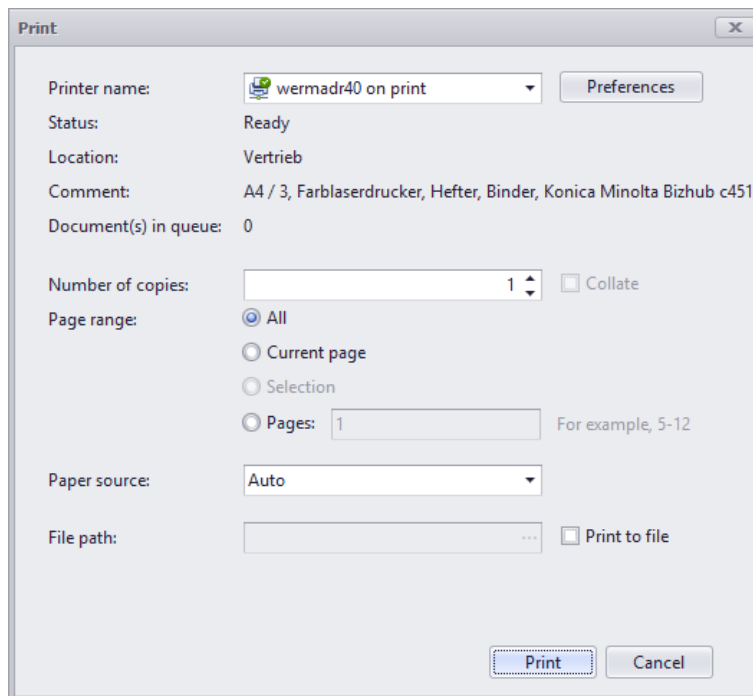
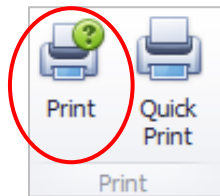
7.7.1 Print

In the "Print Menu" you can select two different printing options.



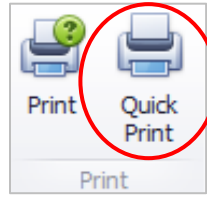
7.7.1.1 Print

Click on "Print" to select a printer, set up print settings, number of copies and further print preferences.



7.7.1.2 Quick Print

Click on "Quick Print" to print using the default printer settings.



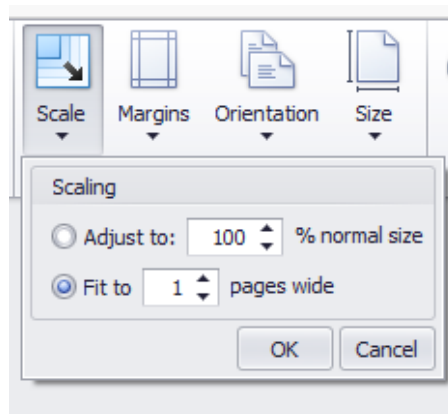
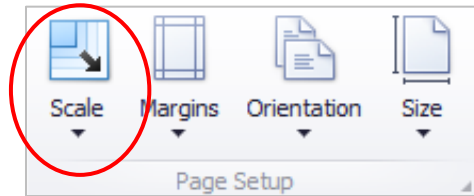
7.7.2 Page Setup

The "Page Setup Menu" allows you to alter the formatting of the report on the page.



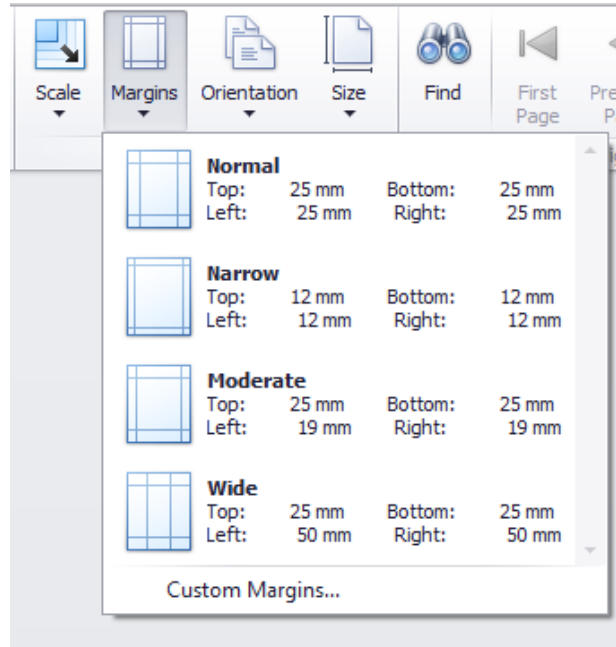
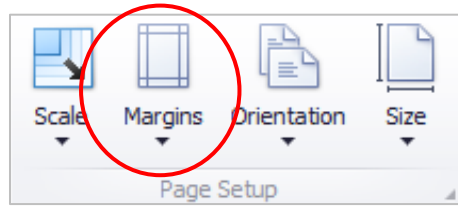
7.7.2.1 Scale

Click on "Scale" to increase or decrease the percentage of original size of the report or to fit to a fixed number of page widths.



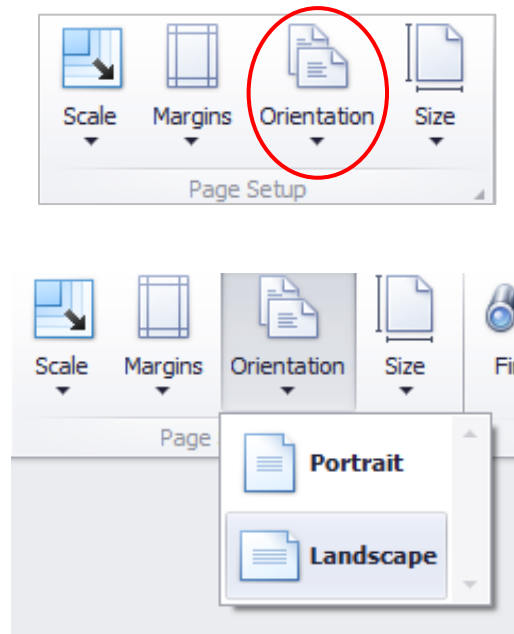
7.7.2.2 Margins

Click on "Margins" to open up a dialogue box to select preset or custom margins for your report.



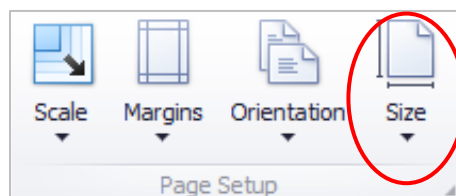
7.7.2.3 Orientation

Click on "Orientation" to switch between Portrait and Landscape formats.

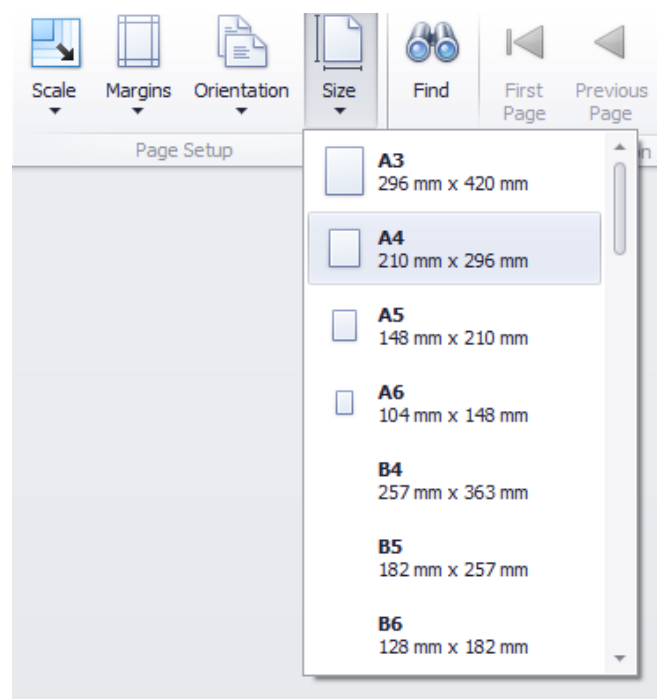


7.7.2.4 Size

Click on "Size" to select the desired paper size.

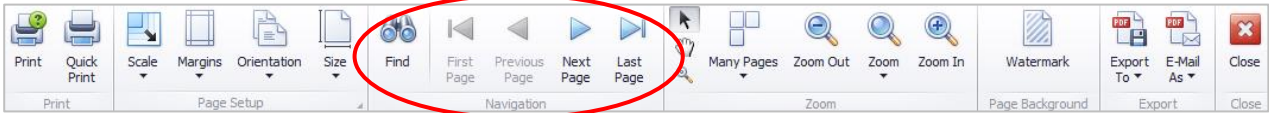


Note: All reports are optimised for size A4.



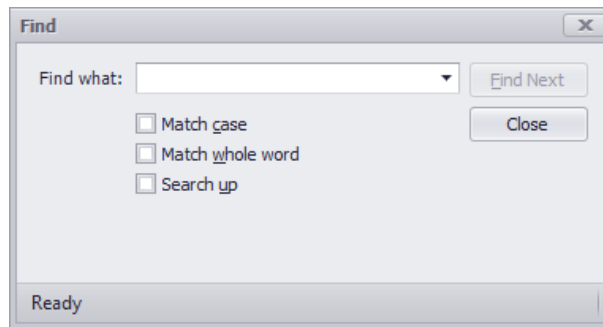
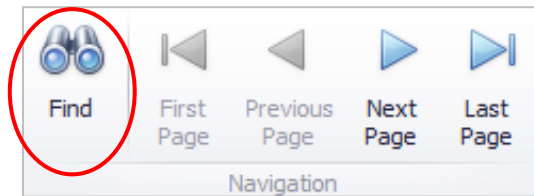
7.7.3 Navigation

The “Navigation Menu” allows you to search the report or move from page to page.



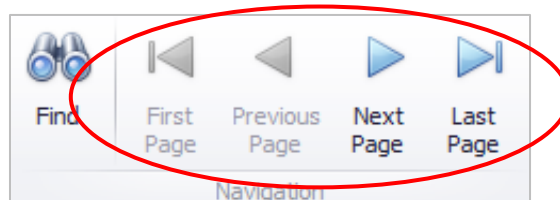
7.7.3.1 Find

Click on “Find” to open the dialogue box. Enter the text to be searched for and any additional criteria.



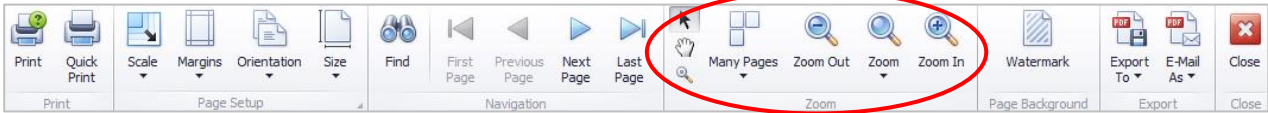
7.7.3.2 Navigation

Use the “Arrow Buttons” to move around the report; you can select First Page, Last Page, Previous Page or Next Page.



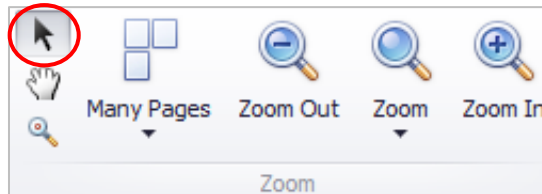
7.7.4 Zoom

The "Zoom Menu" gives you tools to scale the document to get a better overview.



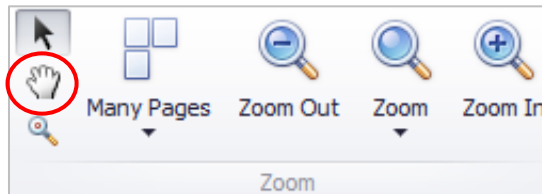
7.7.4.1 Cursor

Displays the "Cursor".



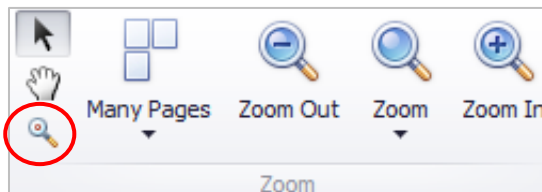
7.7.4.2 Hand

Uses the "Hand" to click and drag the page.



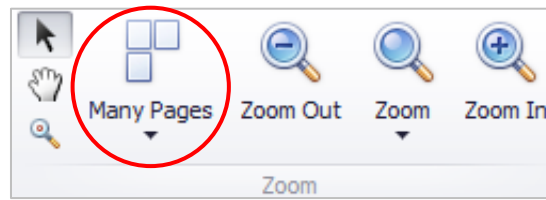
7.7.4.3 Magnifying Glass

Click on the report to zoom in. Clicking again will zoom out.

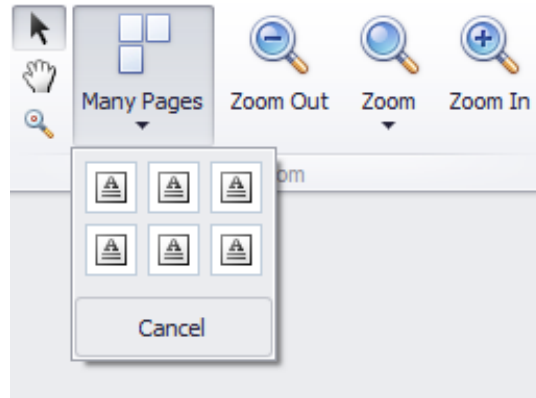


7.7.4.4 Many Pages

Selects the layout in which the Print Preview will be displayed.

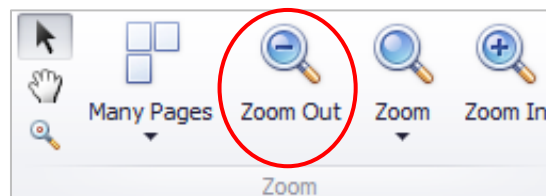


The dialogue box allows you to select the number of pages to be displayed.



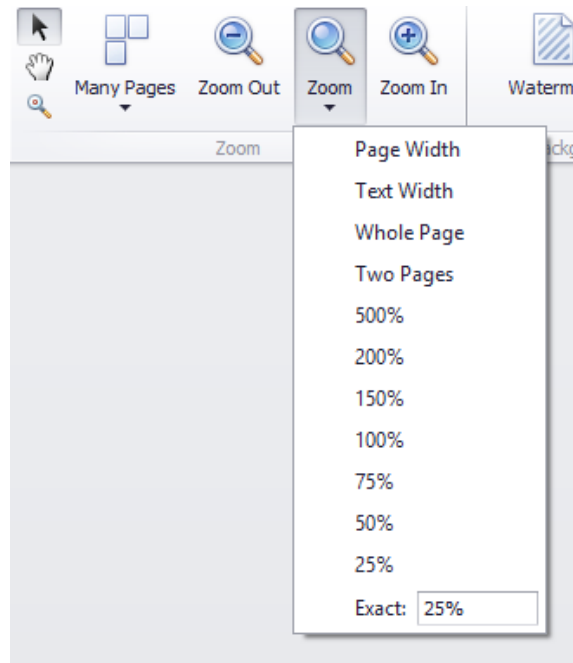
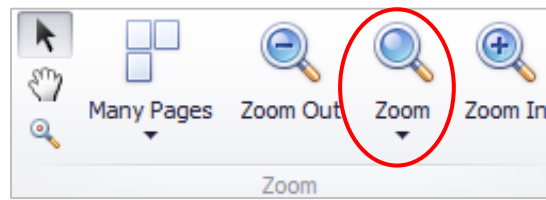
7.7.4.5 Zoom Out

Zooms out to the next size level.



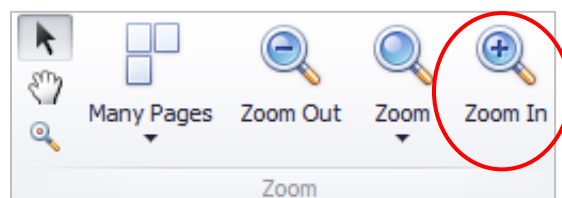
7.7.4.6 Zoom

Click to select preset or custom levels of Zoom.

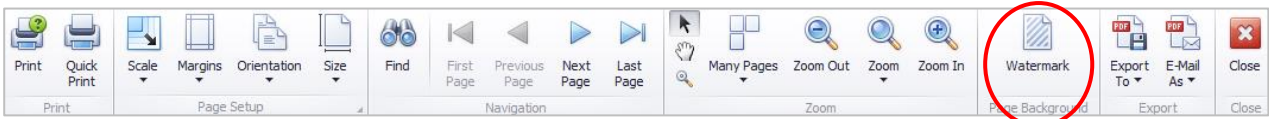


7.7.4.7 Zoom In

Zoom in to the next size level.

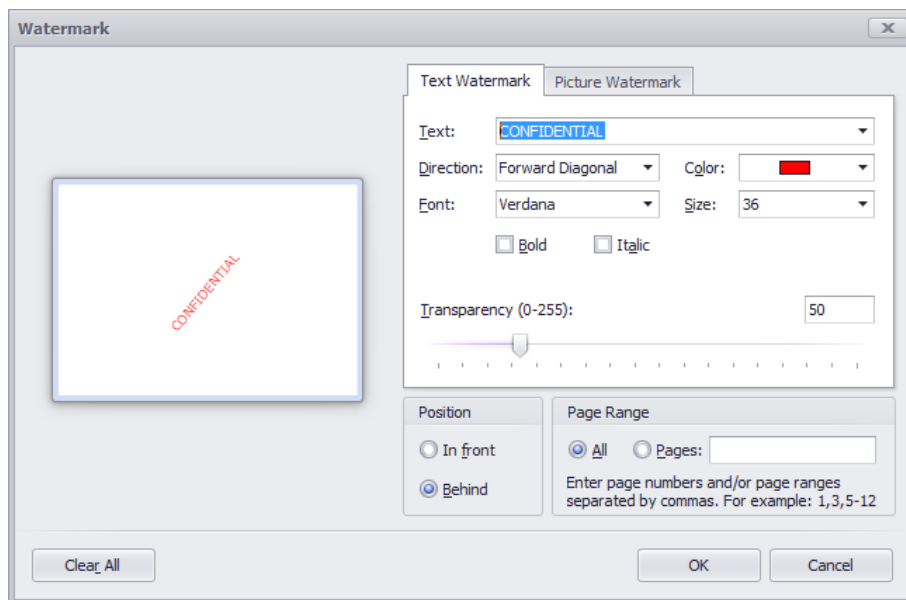


7.7.5 Watermark

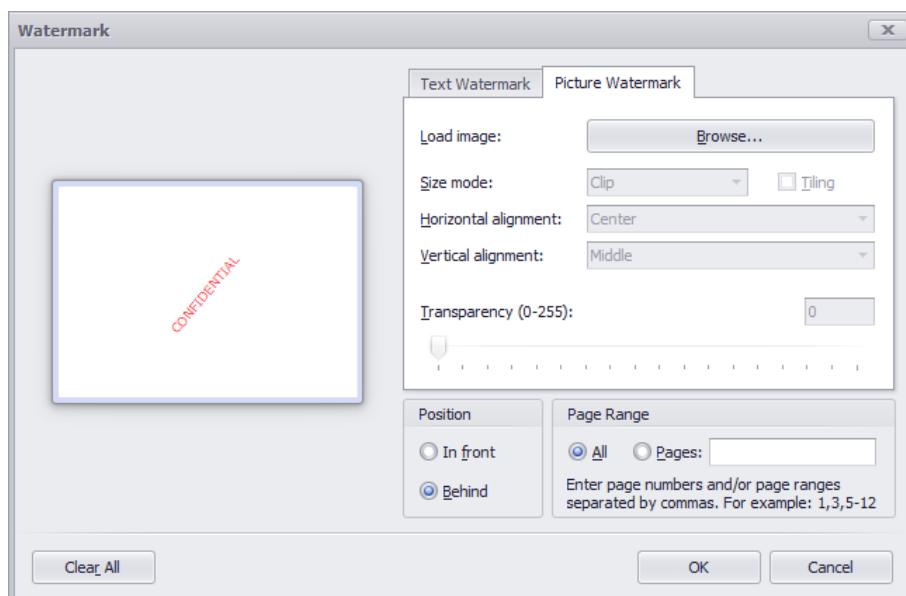


Click on “Watermark” to open the settings dialogue.

In the “Text Watermark tab”, you can add your text or select a predefined text. You can also define additional options, such as Direction, Colour, Font, Size, Transparency, etc.

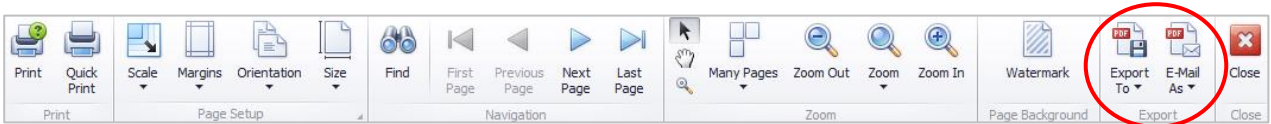


In the “Picture Watermark tab”, you can add an image as a watermark. Click Browse... to navigate to and select the desired image. You can also define additional options, such as Alignment, Transparency, etc.



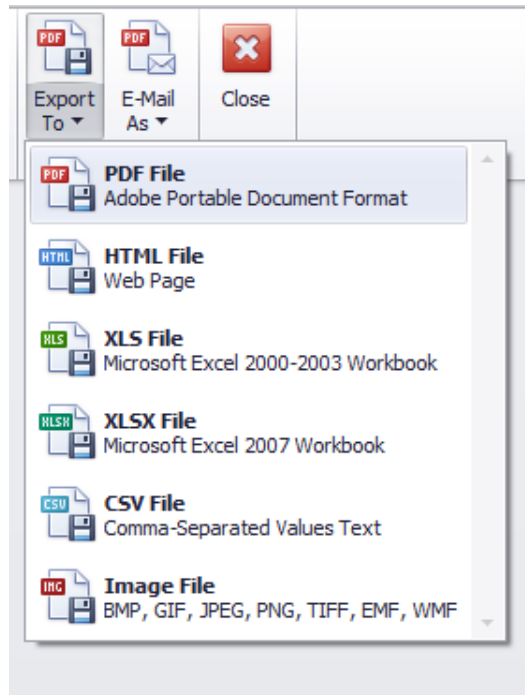
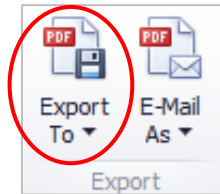
7.7.6 Export

The "Export Menu" allows you to save or send the report by email.



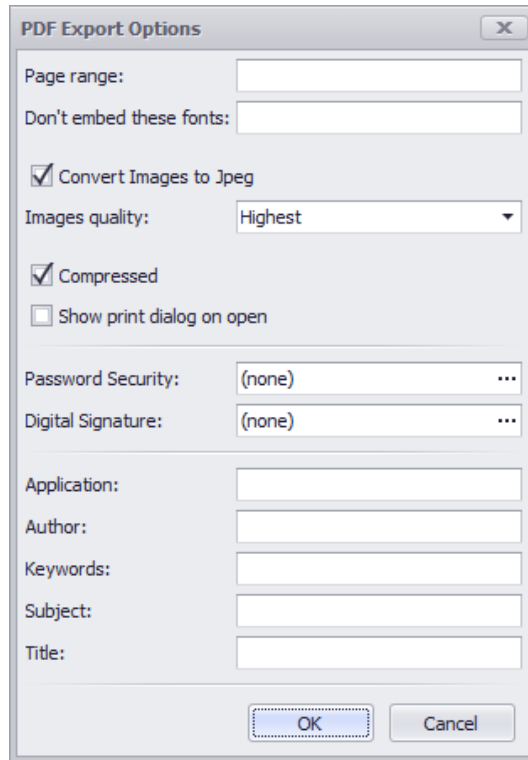
7.7.6.1 Export To

Click "Export To" and select the required file format from the dialogue box.

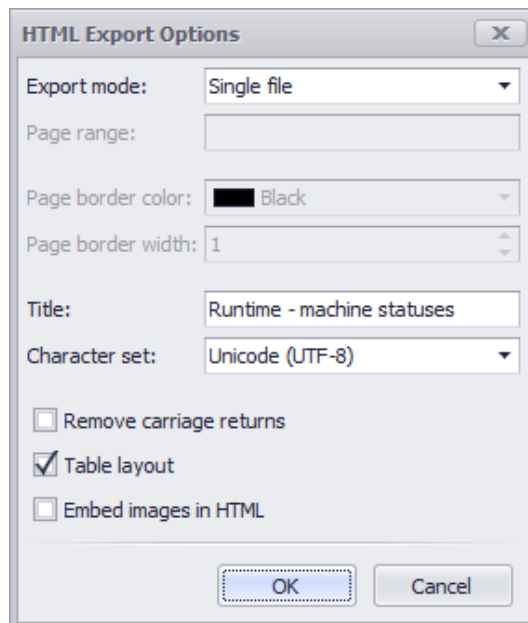


Example:

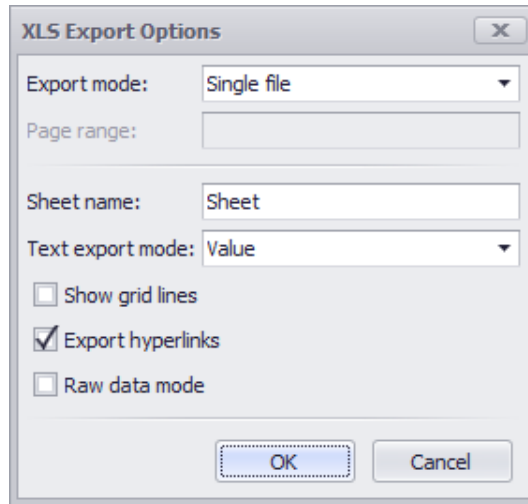
- PDF file:
 - In the PDF export, you can define security settings for the document.



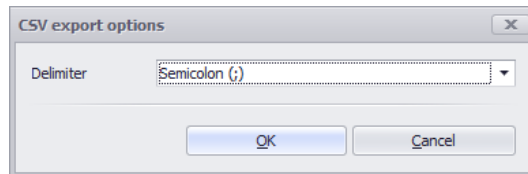
- HTML file:
 - Select an export mode and a character set to create your individual web page.



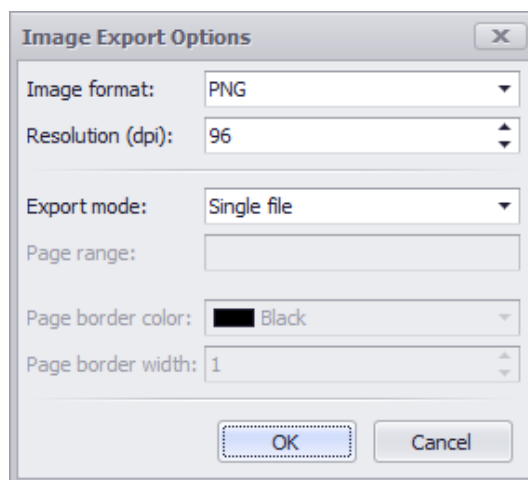
- Excel file:
 - Select an export mode and formatting and create your individual document.
 - By selecting "Raw data mode", the data is optimised for further processing in Excel.



- CSV file:
 - The CSV export can be used for easy processing in other applications.
 - Select your desired delimiter.

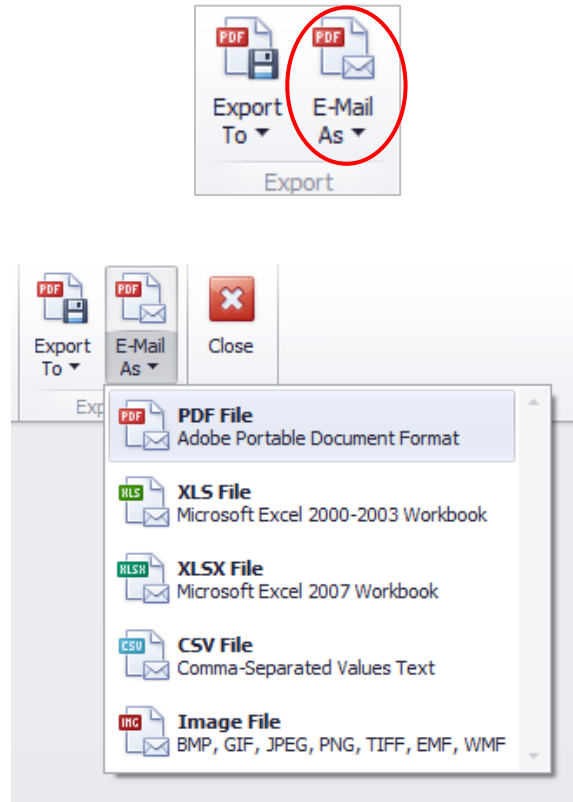


- Image File:
 - Select the image format and resolution.



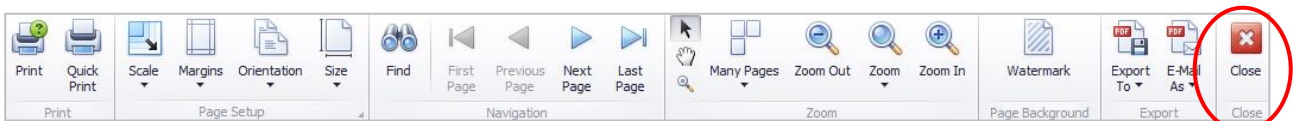
7.7.6.2 E-mail As

Click "E-mail As" and select the required file format from the dialogue box.



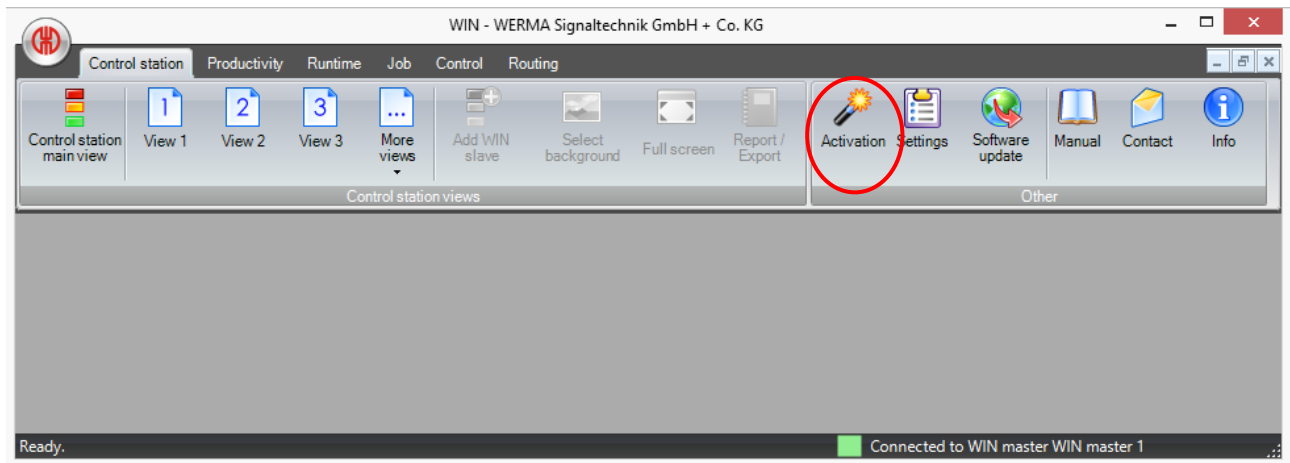
7.7.7 Close Print Preview

Click "Close" to close the Print Preview menu.



8. Activation

Click "Activation" on the menu bar.



This window opens.



8.1 Activate WIN device

Proceed as described in chapter 5.2 for the currently selected hardware component.

8.2 Change transmission channel

For the option "Change transmission channel", proceed as follows:

1. Select "Change transmission channel".



2. Proceed as described in chapter 5.2.1, including point 5.

3. In the following window, change your transmission channel and click "Next".



Activation

win
wireless information network

WIN master configuration

Enter the name of the WIN master. When configuring the WIN slave, you have to select the name of the WIN master again.

Name
e.g. Production

Channel Please do not change unless you are running multiple WIN systems in parallel - in this case refer to manual.

By clicking Next, the name for this WIN master is saved and the WIN slave configuration is started.

 **Cancel**
Close

 **Next**
Next step

Note: If you change the transmission channel of the WIN master, all WIN slaves (which have so far communicated with this WIN master) have to be re-configured. Only then will the WIN slaves communicate on the same channel as the WIN master. See chapter 5.2 for configuration of the WIN slaves.

8.3 Firmware update

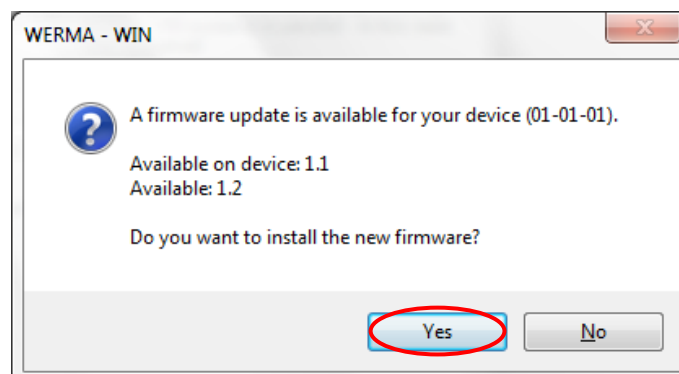
For the option "Firmware update", proceed as follows:

1. Select the option "Firmware update".

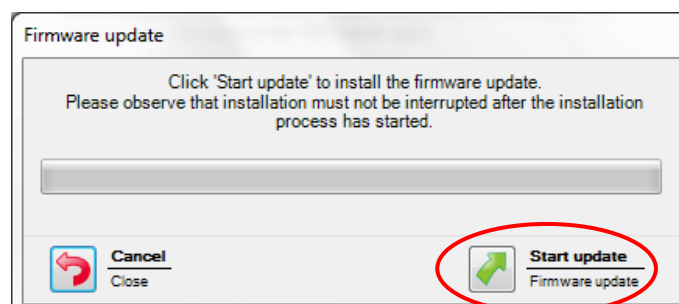


2. Proceed as described in chapter 8.1 , including point 5.

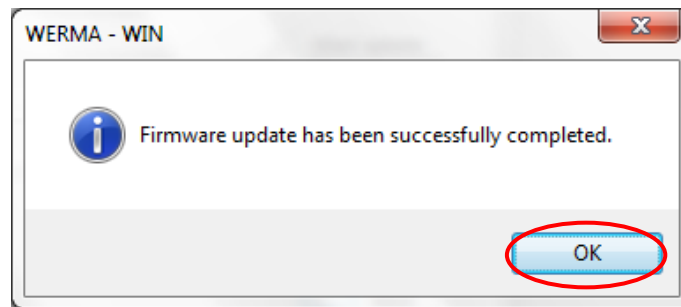
3. Confirm the following message with "Yes".



4. Click „Start update“. This process can take several minutes to complete.



5. The firmware update has been successfully completed. Click „OK“.



8.4 Swap WIN master (USB) and WIN ethernet master

The swap function enables you to integrate the WIN ethernet master into an existing installation without having to reconfigure the WIN slaves. The wireless parameters of both devices will be swapped.

Proceed as follows:

1. Choose "Swap WIN master (USB) and WIN ethernet master" in the selection window.



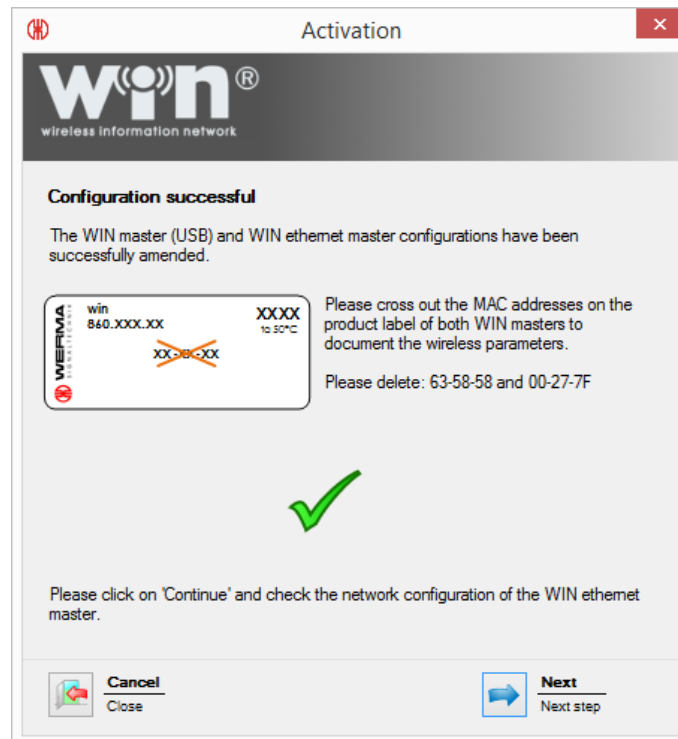
2. Connect both the WIN master (USB) and the WIN ethernet master to the computer and click to "Search".



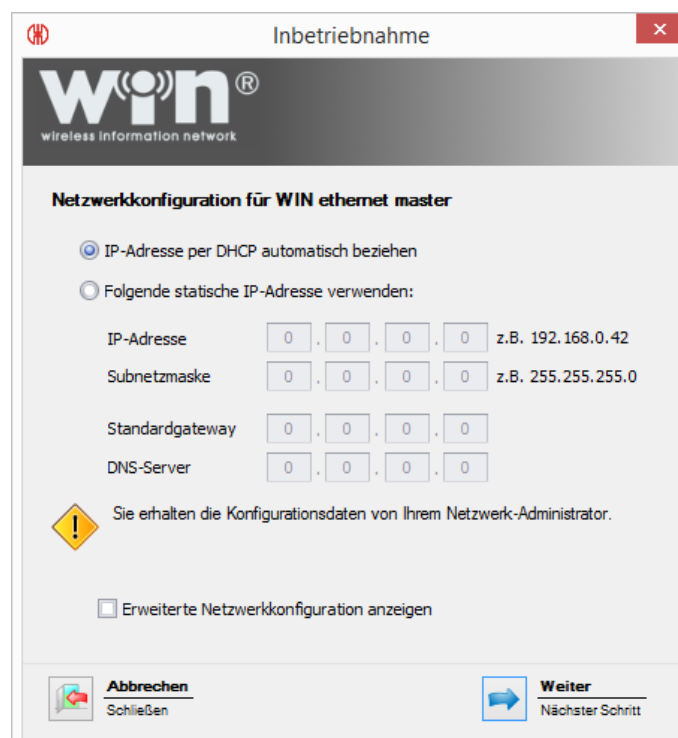
3. When the WIN masters are detected, click "Next".



- The exchange was successful. To avoid later confusion, correct or cross out the MAC addresses on the printed labels on the masters. Click "Next" to complete the swap and to check the network configurations of the WIN ethernet master.

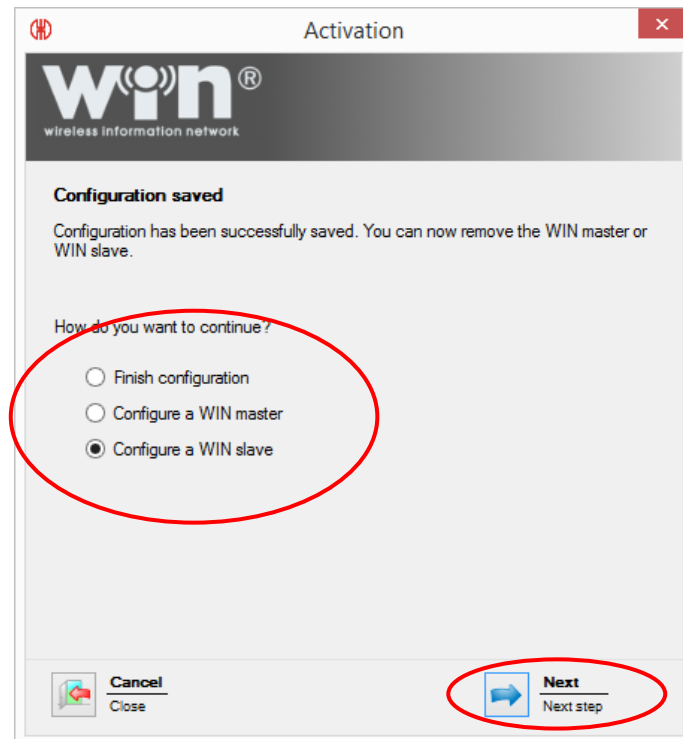


- Check the configuration data and correct it if necessary. Confirm with "Next".



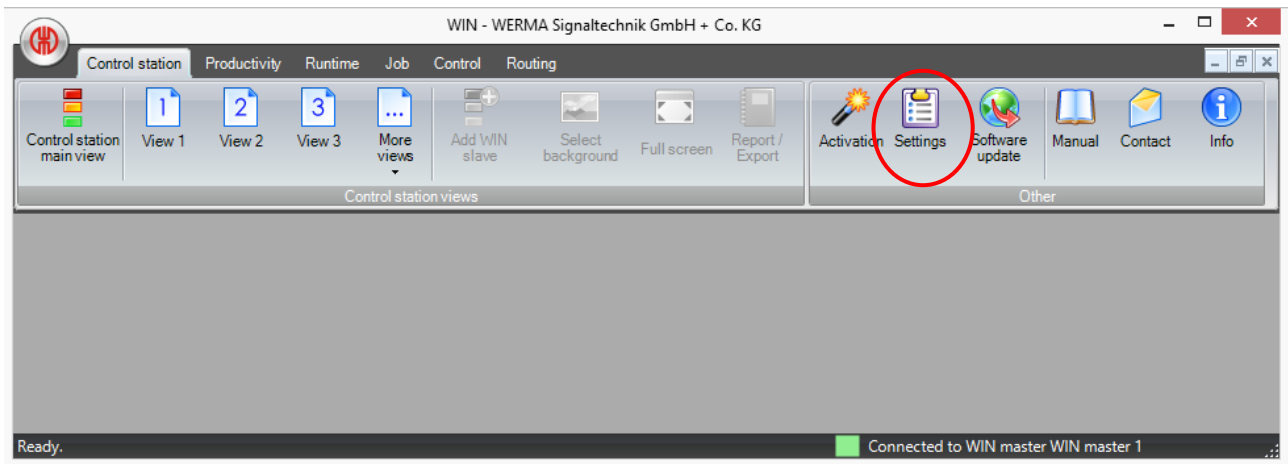
6. The configuration is successfully completed. Now choose whether you want to make a further configuration or quit this configuration.

Click "Next".



9. Settings

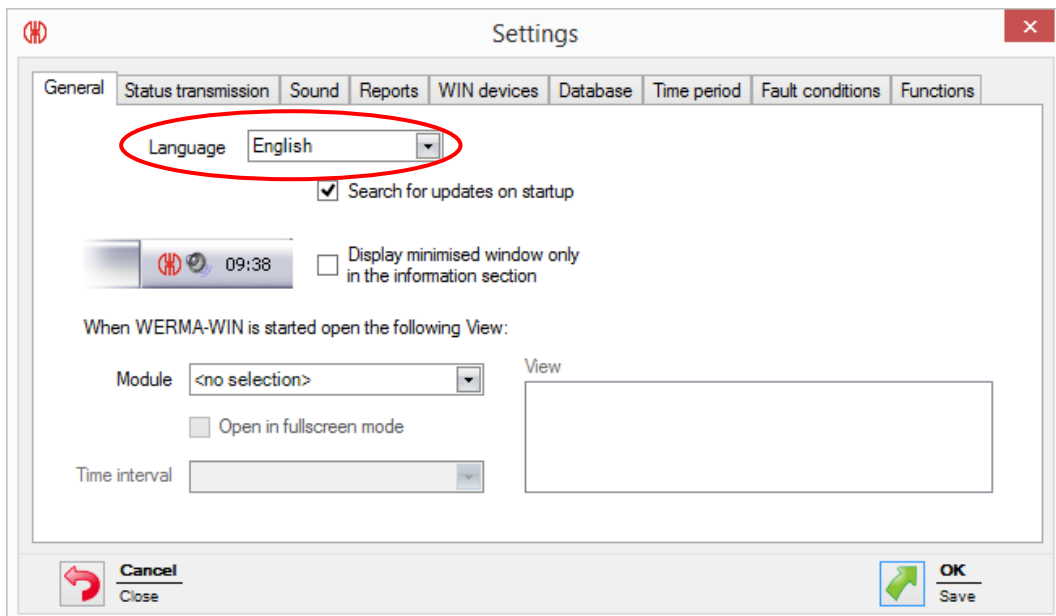
Click "Settings" on the menu bar.



9.1 General

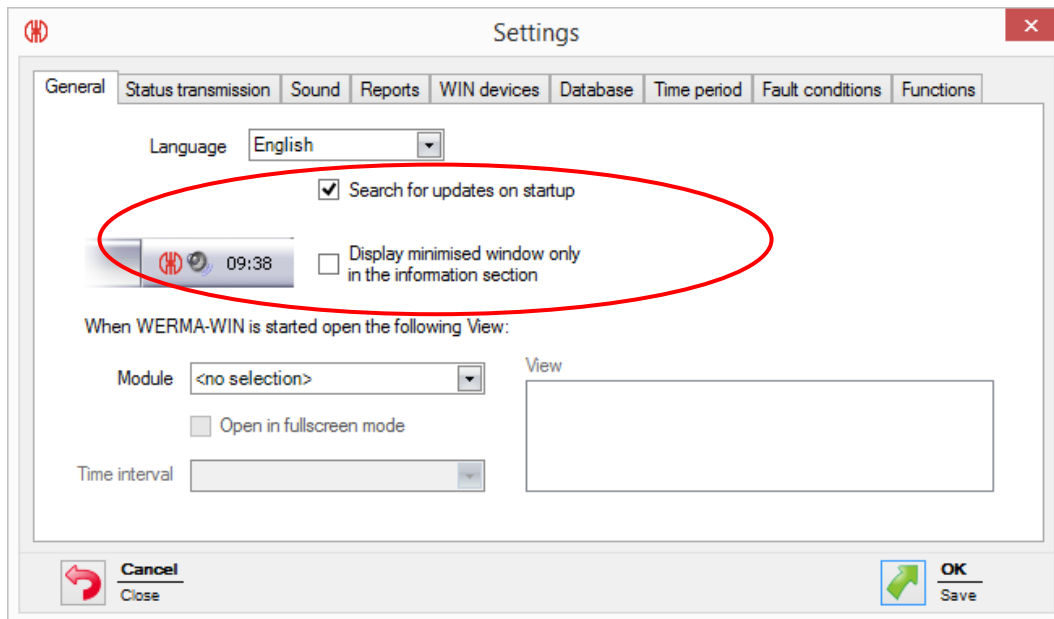
9.1.1 Language Setting

This menu can be used to change the language of the WIN software. Select the desired language.



9.1.2 Setting for the WIN software

If you have selected the "Search for updates on startup" box, the WIN software will search for updates each time it starts up.



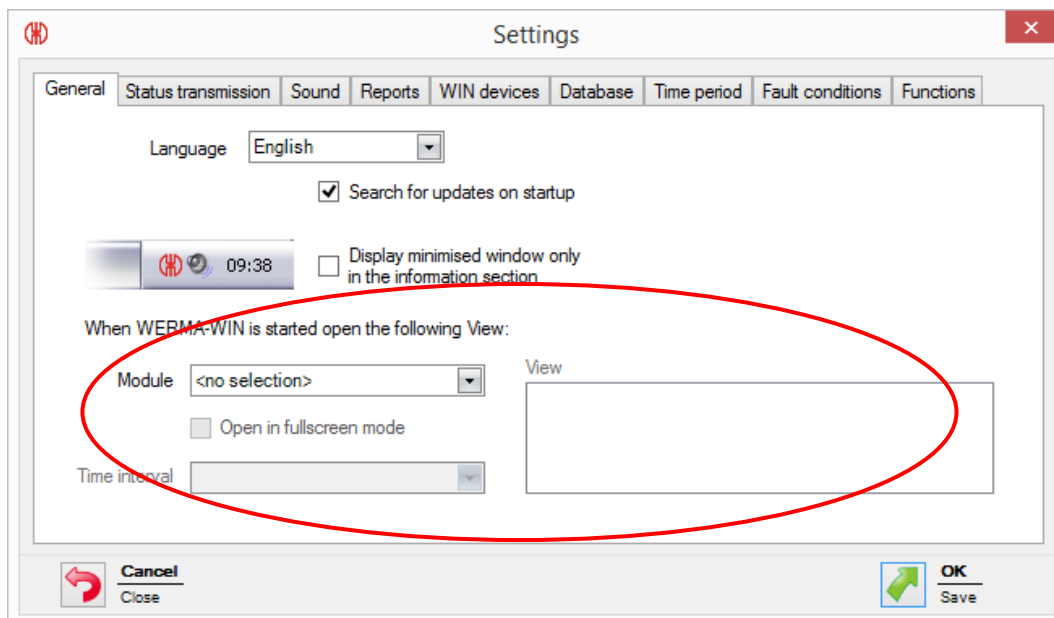
Note: In order to search for product updates, it is essential that an Internet connection to www.werma.com can be established.

You can also decide whether the minimised program window should be displayed in the task bar or in the information section (system tray).

9.1.3 Autostart functions

The autostart function can be used to open a specific view each time the WIN software is opened. The following table provides an overview of the autostart functions.

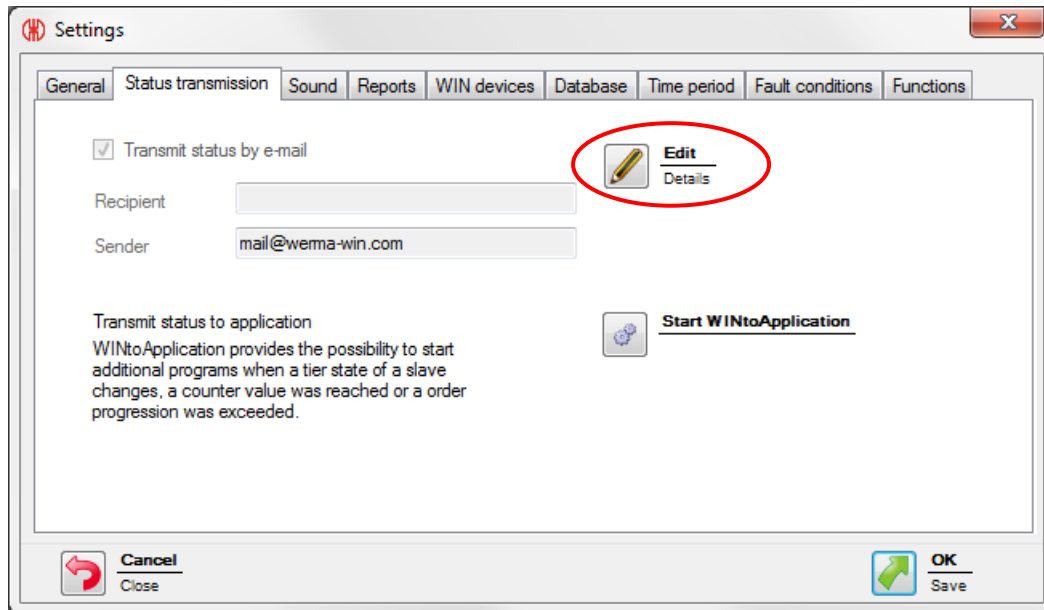
Module	Main View	Further Views	Time interval	Full screen mode
Control station	✓	✓	✗	✓
Productivity	✓	✓	✓	✓
Runtime	✓	✓	✓	✗
Job	✓	✗	✗	✗
Control	✓	✗	✗	✗
Routing	✓	✗	✗	✗



Note: A number of WIN slaves can be selected for the automatic start in the Runtime module by simply clicking on the relevant WIN slaves.

9.2 Status transmission

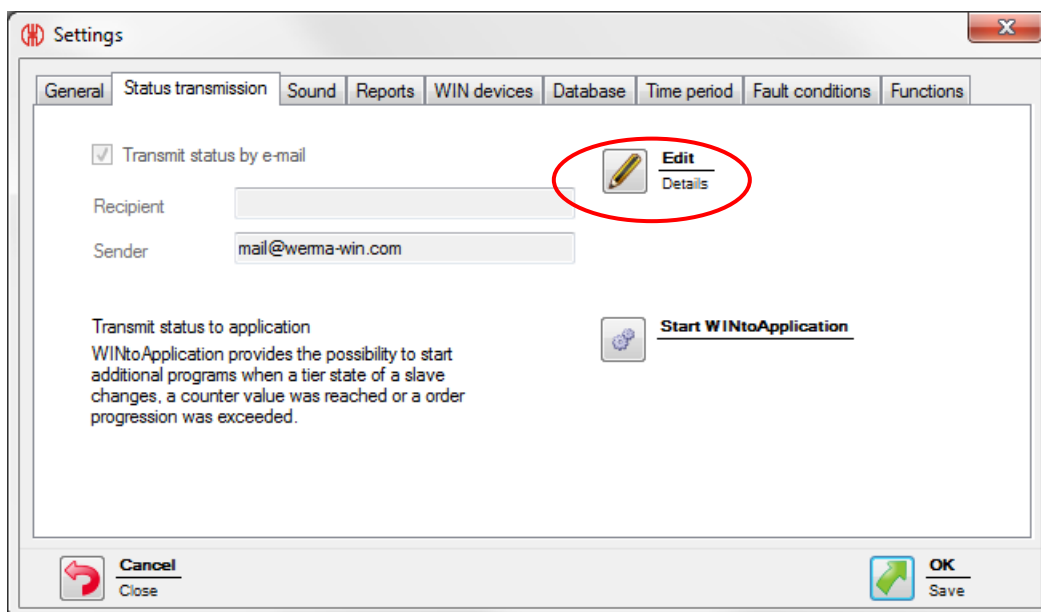
You can transmit the status by e-mail or to an application. Click "Edit" for the relevant configuration.



In order to activate the status transmission for individual WIN slaves, proceed as described in chapter 7.1.7.

9.2.1 E-mail settings

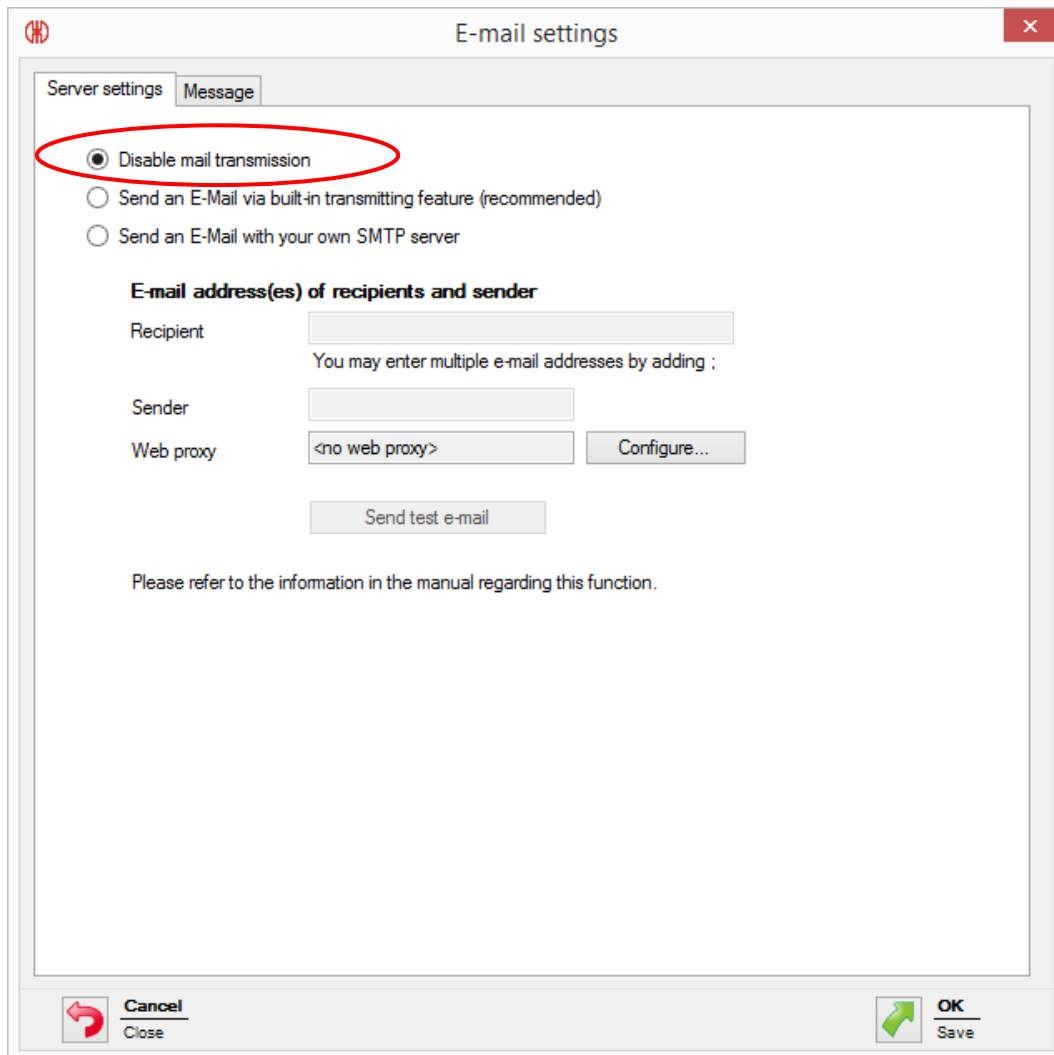
1. Select "Edit" in the area of "Transmit status by e-mail".



2. In E-mail settings you can choose between "Disable mail transmission", "Send an E-mail via built-in transmitting feature (recommended)" and "Send an E-mail with your own SMTP server".

9.2.1.1 Disable mail transmission

Select to disable the e-mail transmission the corresponding selection option.

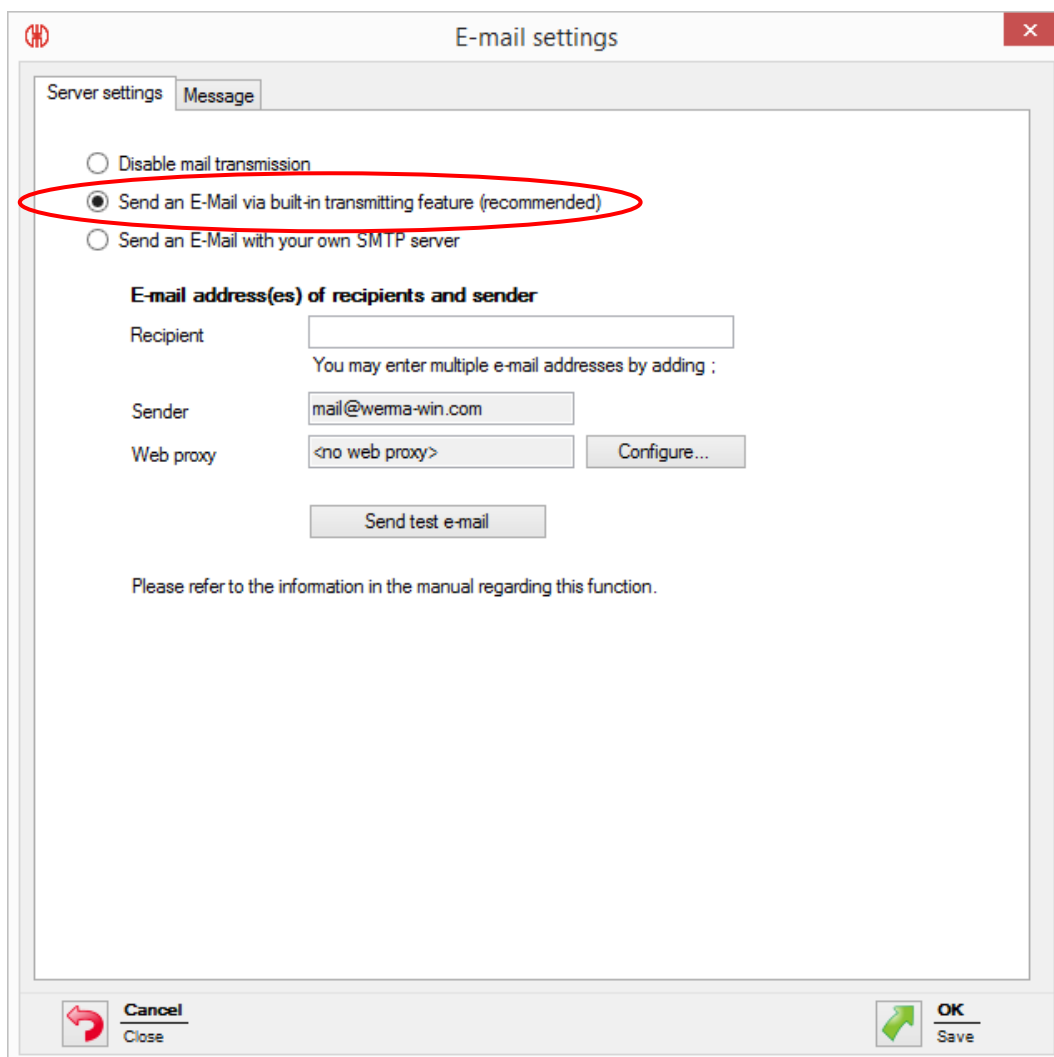


9.2.1.2 Send an E-mail via built-in transmitting feature (recommended)

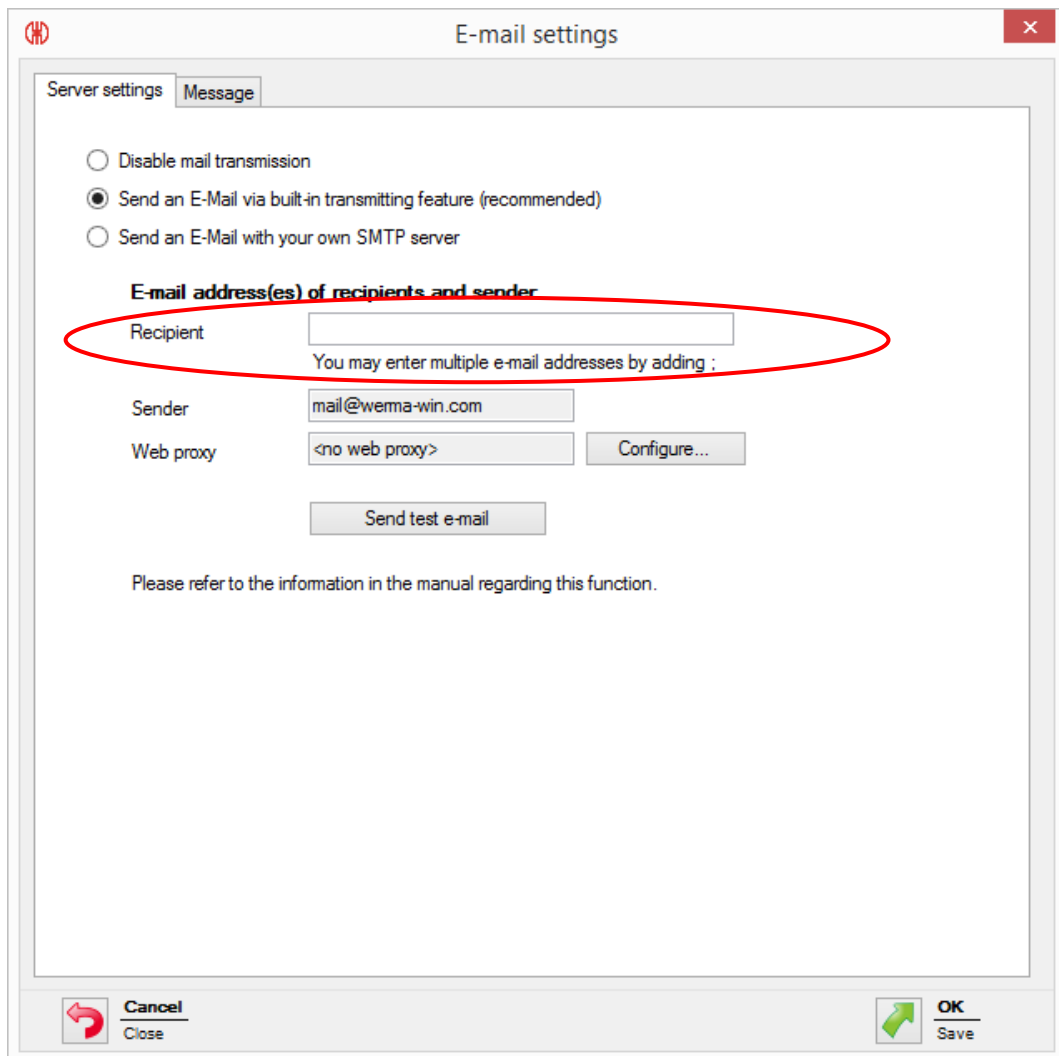
Note: Please note the following limitations when using the built-in transmitting feature for each installation:

- Max. 10 recipients per E-mail
- Max. 100 different recipients in seven days
- Max. 240 E-mails in four hours
 - ➔ When exceeding the 240 E-mails the message delivery is interrupted for an hour.
 - ➔ Messages in the meantime will not submit.
- Should you wish to use the transmission function beyond the given limits we recommend sending the E-mails via your own SMTP server, see chapter 9.2.1.3.

1. Choose "Send an E-mail via built-in transmitting feature (recommended)".

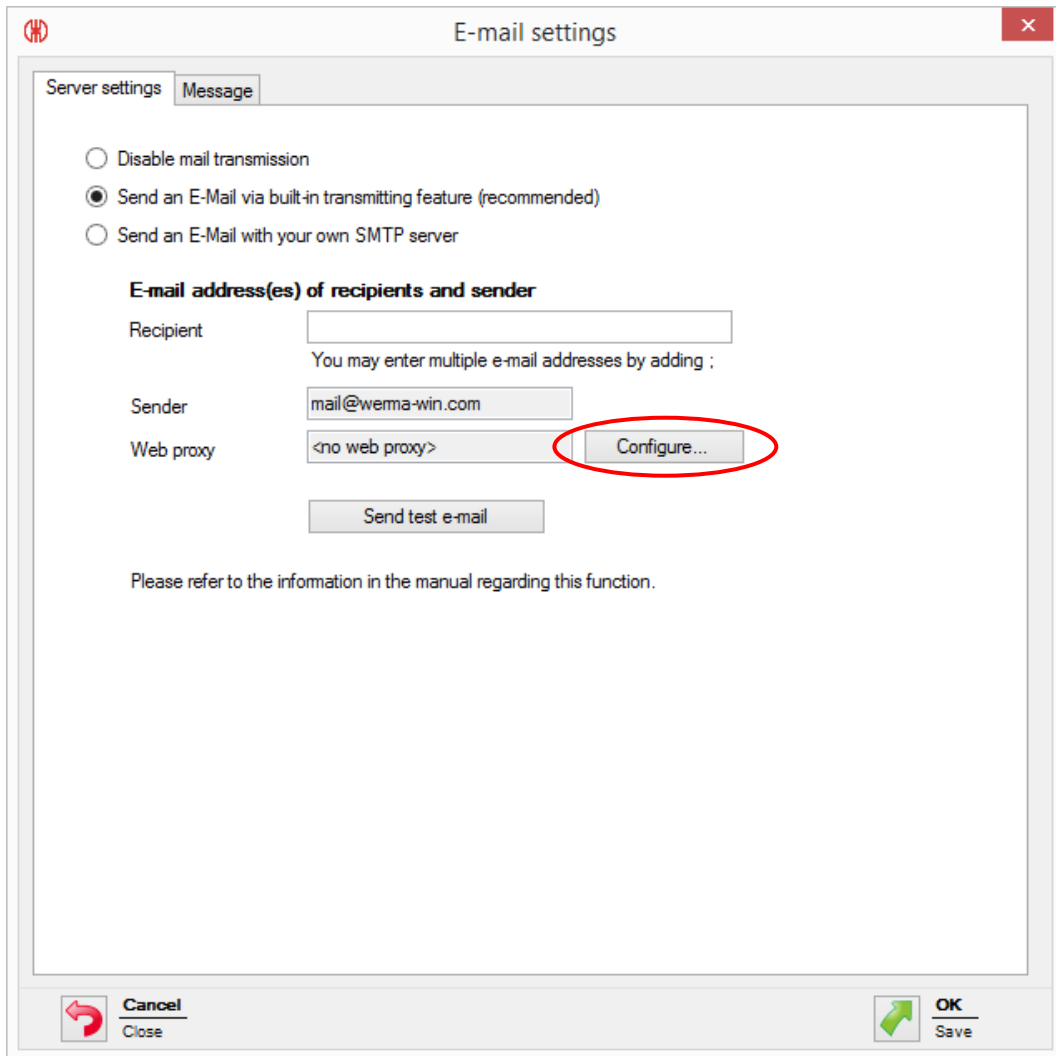


-
2. Please enter an e-mail recipient. To separate multiple e-mail addresses enter a semicolon after each address.



Note: If no recipient entered at this point, a recipient will required to be set for each WIN slave, see chapter 7.1.7.

3. Please enter the required configuration for the web proxy if your network requires the usage of a web proxy. Click on "Configure...".



E-mail settings

Server settings | Message

Disable mail transmission

Send an E-Mail via built-in transmitting feature (recommended)

Send an E-Mail with your own SMTP server

E-mail address(es) of recipients and sender

Recipient:

You may enter multiple e-mail addresses by adding :

Sender:

Web proxy: **Configure...**

Please refer to the information in the manual regarding this function.

Close Save

4. Please enter the required configuration for the web proxy,

The 'WERMA WIN server service' needs to access https-websites in order to send an E-Mail via built-in transmitting feature. Please enter the required configuration here, if your network requires the usage of a web proxy.

Configuration of https web proxy

Server

Port

User

Password

The configuration will be provided by your network administrator or internet service provider.

Close Save

Note: The configuration will be provided by your network administrator or internet service provider.

5. Click on "Check" to verify your settings.

The 'WERMA WIN server service' needs to access https-websites in order to send an E-Mail via built-in transmitting feature. Please enter the required configuration here, if your network requires the usage of a web proxy.

Configuration of https web proxy

Server

Port

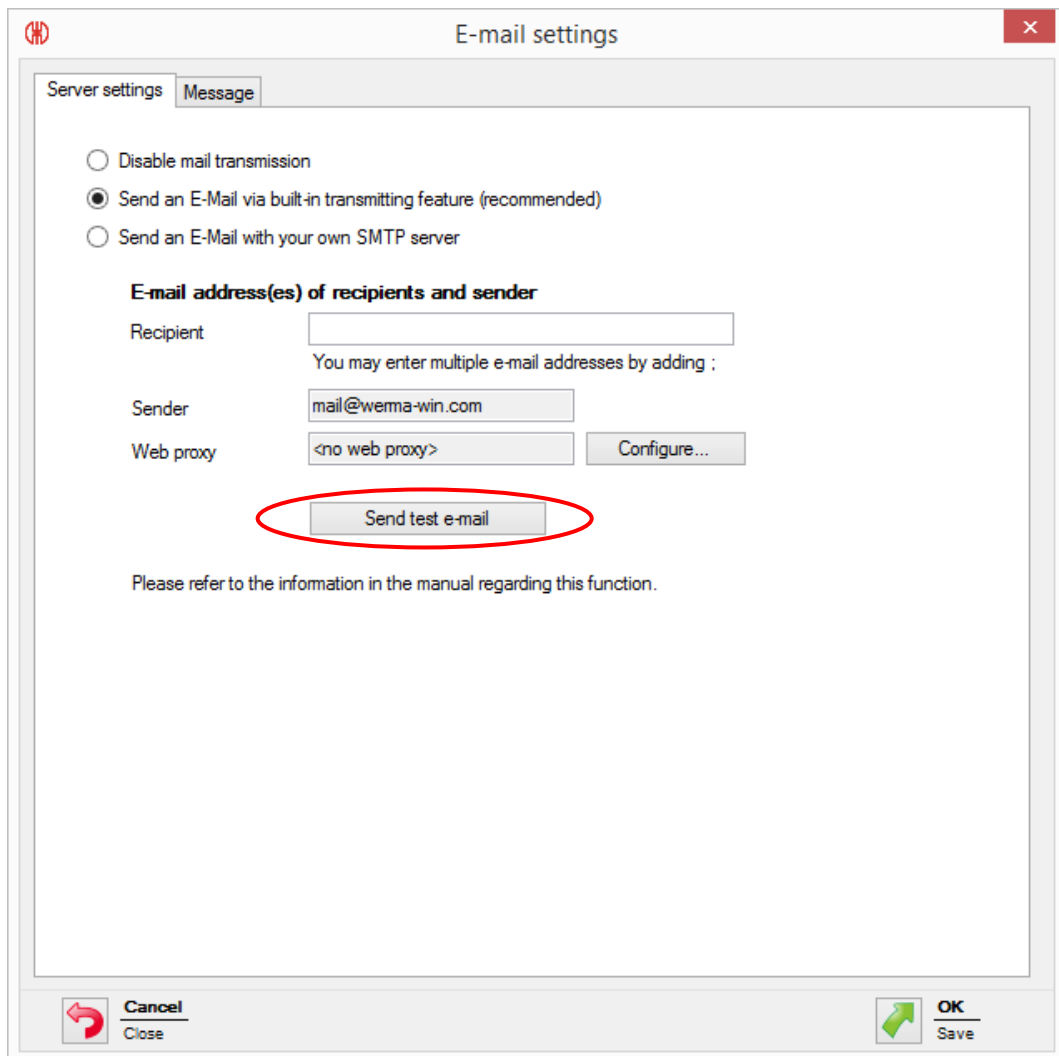
User

Password

The configuration will be provided by your network administrator or internet service provider.

Close Save

- When you have completed the settings, click "Send test e-mail" to send a test e-mail using the specified data.



9.2.1.3 Send an E-mail with your own SMTP server

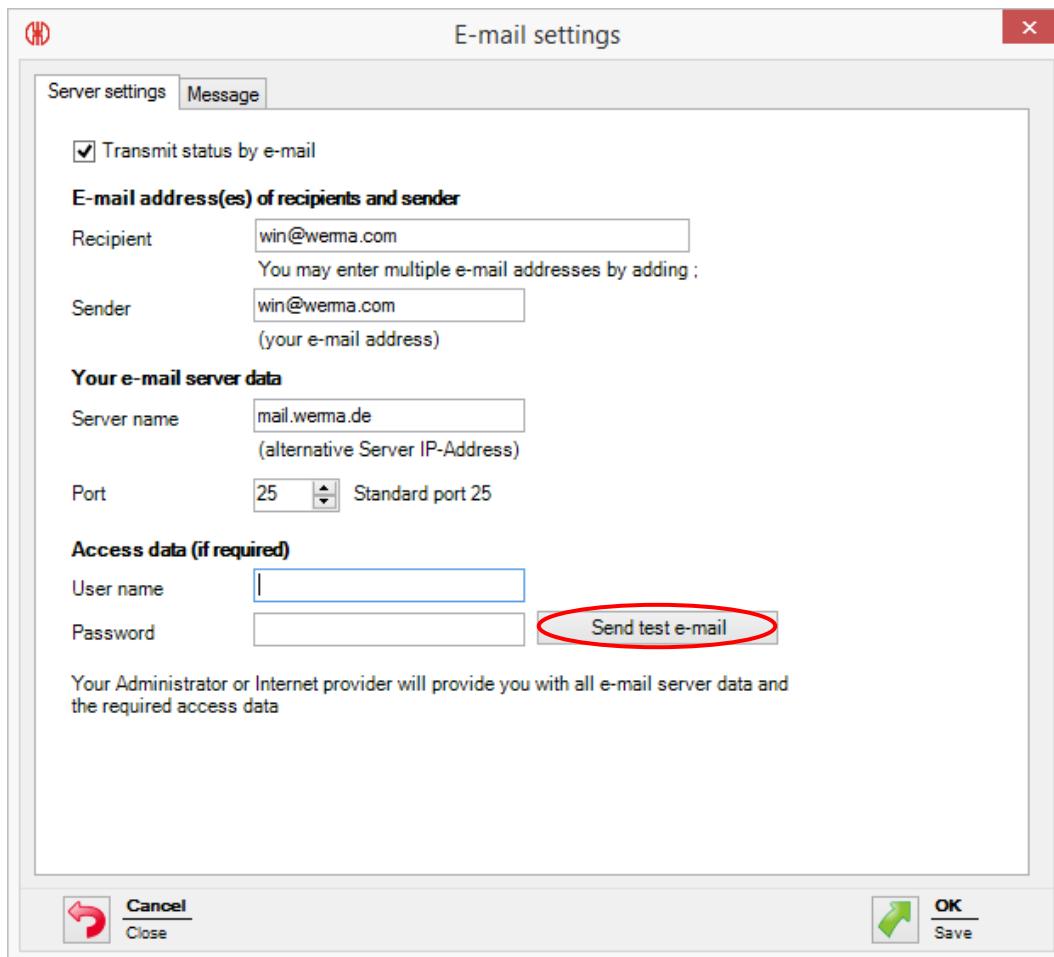
Note: Your Administrator or Internet provider can provide all e-mail server data and the required access data.

1. When using your own SMTP server, please enter the fields below.

The screenshot shows a dialog box titled "E-mail settings" with a close button (X) in the top right corner. It has two tabs: "Server settings" (selected) and "Message". Under "Server settings", there are three radio button options: "Disable mail transmission", "Send an E-Mail via built-in transmitting feature (recommended)", and "Send an E-Mail with your own SMTP server" (which is selected and circled in red). Below these are sections for "E-mail address(es) of recipients and sender" with "Recipient" and "Sender" text boxes, "Your e-mail server data" with "Server name" and "Port" (set to 25) text boxes, and "Access data (if required)" with "User name" and "Password" text boxes. A "Send test e-mail" button is next to the password field. At the bottom, there are "Cancel" and "OK" buttons with "Close" and "Save" labels respectively.

- Enter the recipient's e-mail address in the "Recipient" field. To separate multiple e-mail addresses enter a semicolon after each address. This is the default address to which emails will be sent.
- Enter the sender's e-mail address in the "Sender" field. The e-mail will be sent from this e-mail account.
- Enter the name of the e-mail server in the "Server name" field.
- Enter the port number for e-mail exchange for your server in the "Port" field.
- If access data is required to send e-mails, enter the user name in the "User name" field and the relevant password in the "Password" field.

2. When you have completed the settings, click "Send test e-mail" to send a test e-mail using the specified data.



E-mail settings

Server settings | **Message**

Transmit status by e-mail

E-mail address(es) of recipients and sender

Recipient:

You may enter multiple e-mail addresses by adding ;

Sender:
(your e-mail address)

Your e-mail server data

Server name:
(alternative Server IP-Address)

Port: Standard port 25


Access data (if required)


User name:

Password:

Send test e-mail

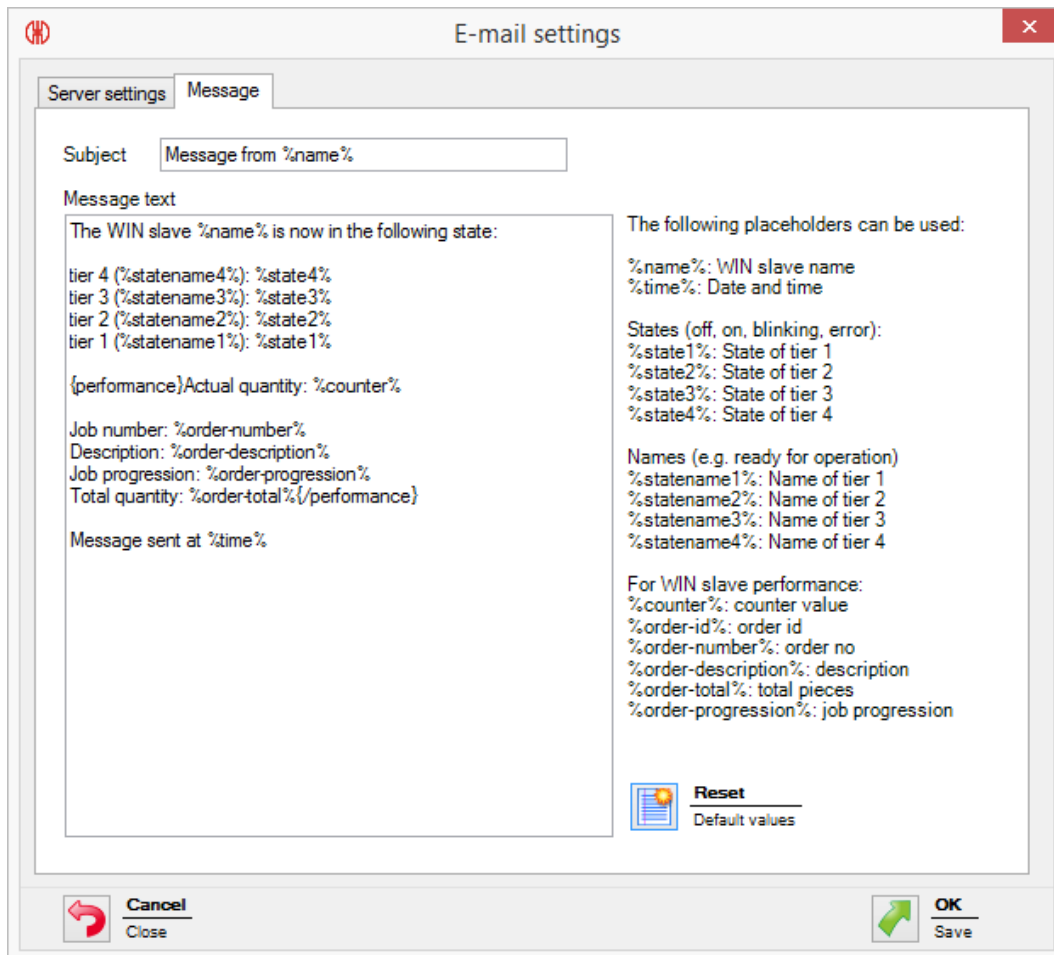
Your Administrator or Internet provider will provide you with all e-mail server data and the required access data

 **Cancel**
Close

 **OK**
Save

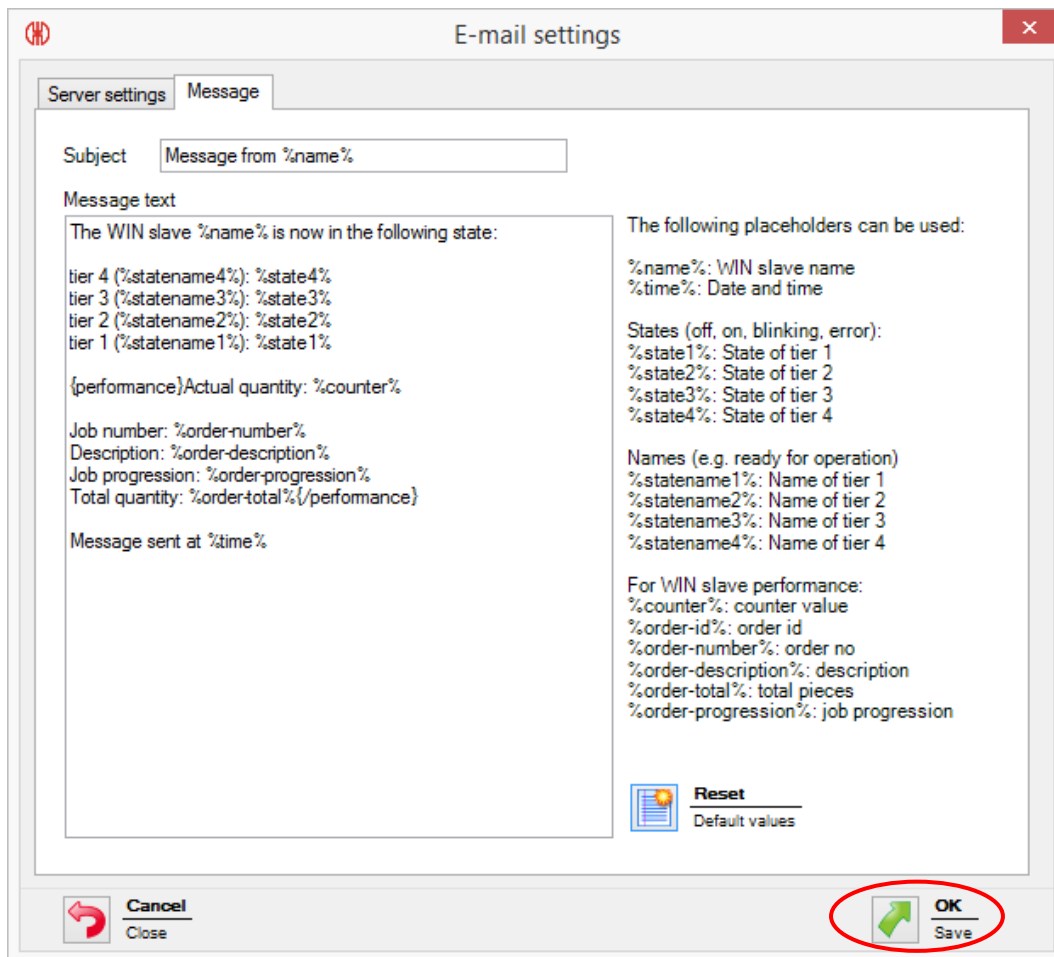
9.2.1.4 Modify message text

1. The message text can be modified using the "Message" tab.



- Both the subject as well as the message text of the e-mail can be modified. Different placeholders can be used to write the individual message text. The placeholders each start and end with a percentage symbol (%).
- Example of a message text:
The WIN slave %name% changed its status at %time%.
tier 4 (%statername4%): %state4%
tier 3 (%statername3%): %state3%
tier 2 (%statername2%): %state2%
tier 1 (%statername1%): %state1%

2. When you have completed all the settings click "OK" to save your settings.



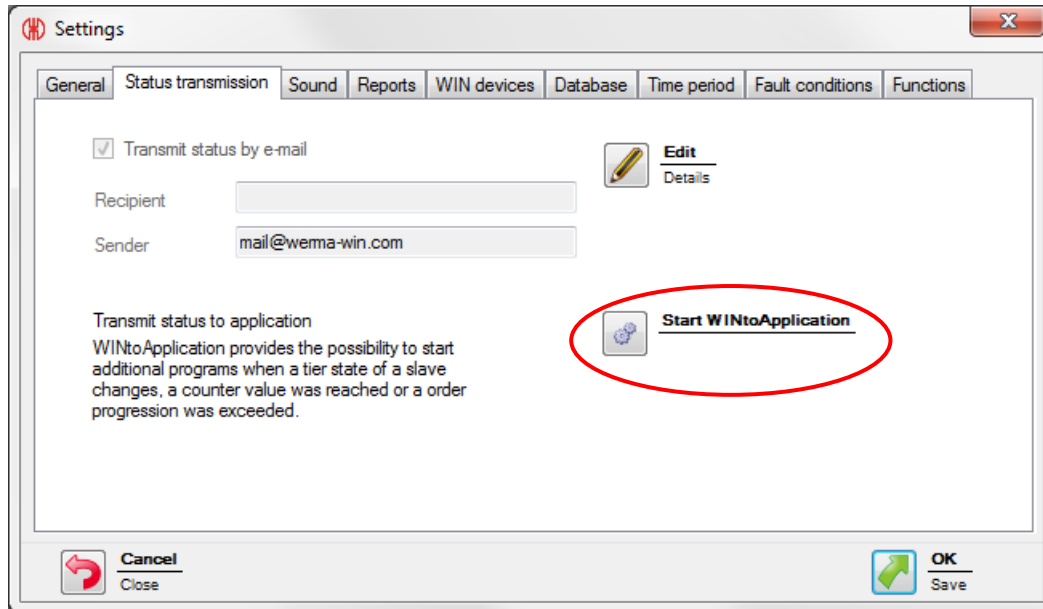
Note: To reset your message text to the default values click the "Reset" button.

9.2.2 WINtoApplication

The application setting allows you to transmit the statuses of your signal towers to another application for further processing. This application can be set individually for each user.

The application data is stored, user-related and not in the central WIN database.

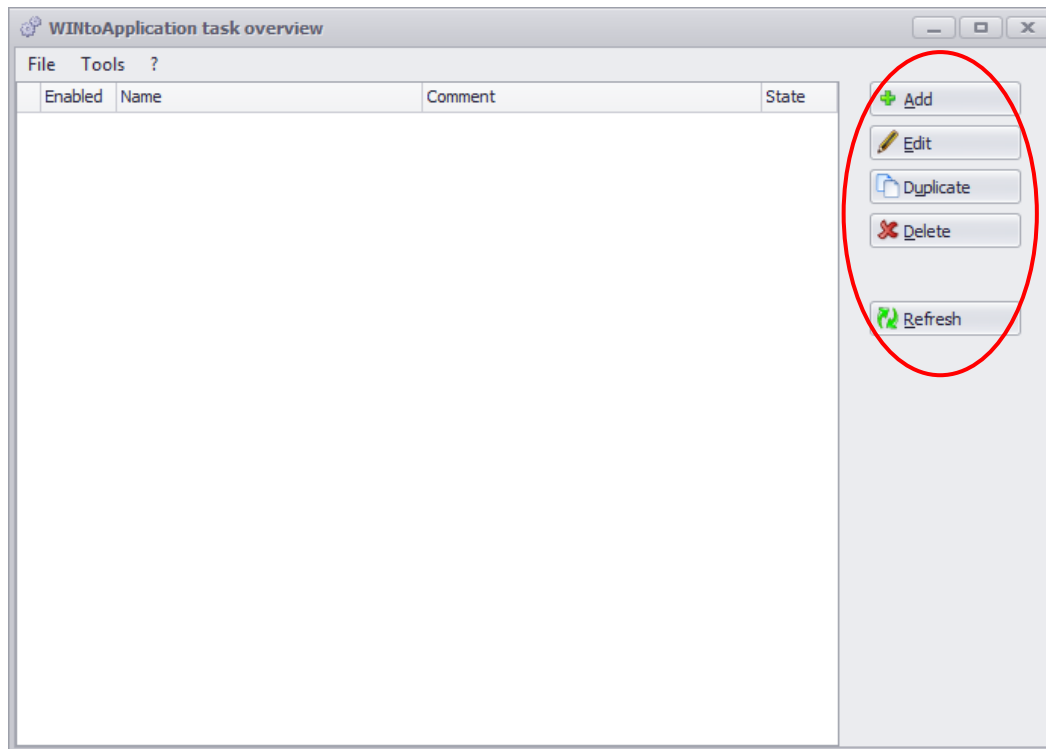
To start the application, open the "Settings" , there the tab "Status transmission" and select "Start WINtoApplication"



Note: WINtoApplication only works with an active user logged in. Therefore make sure that a user is logged in for the following steps.

9.2.2.1 Task overview

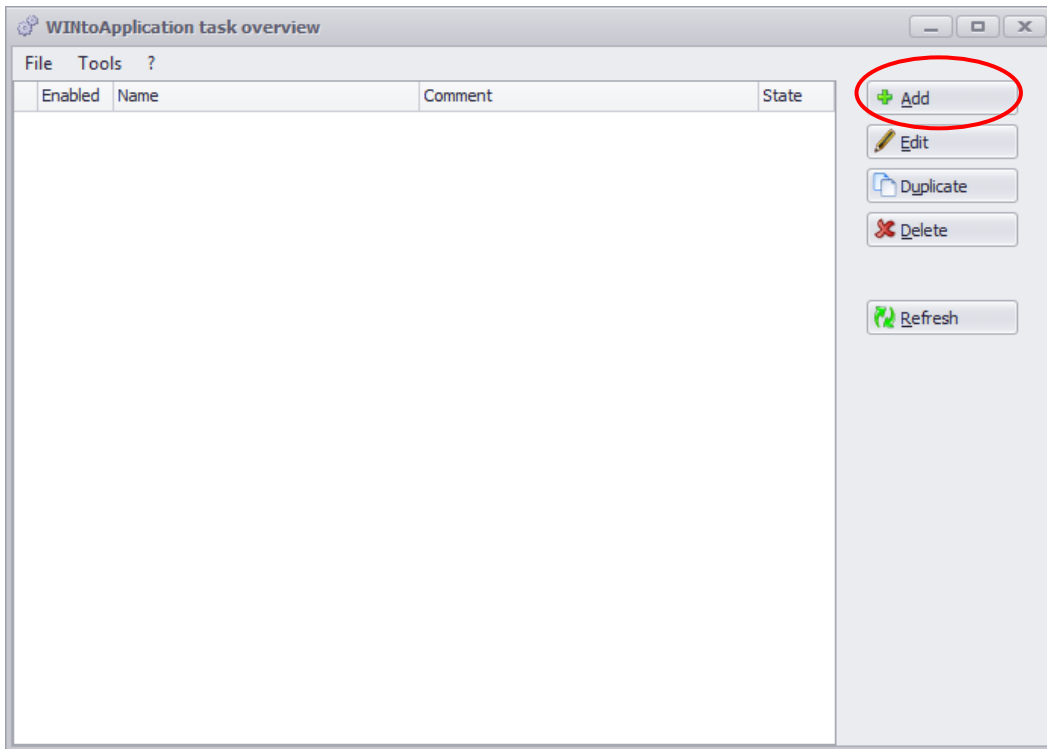
By selecting individual tasks, you can use various functions.



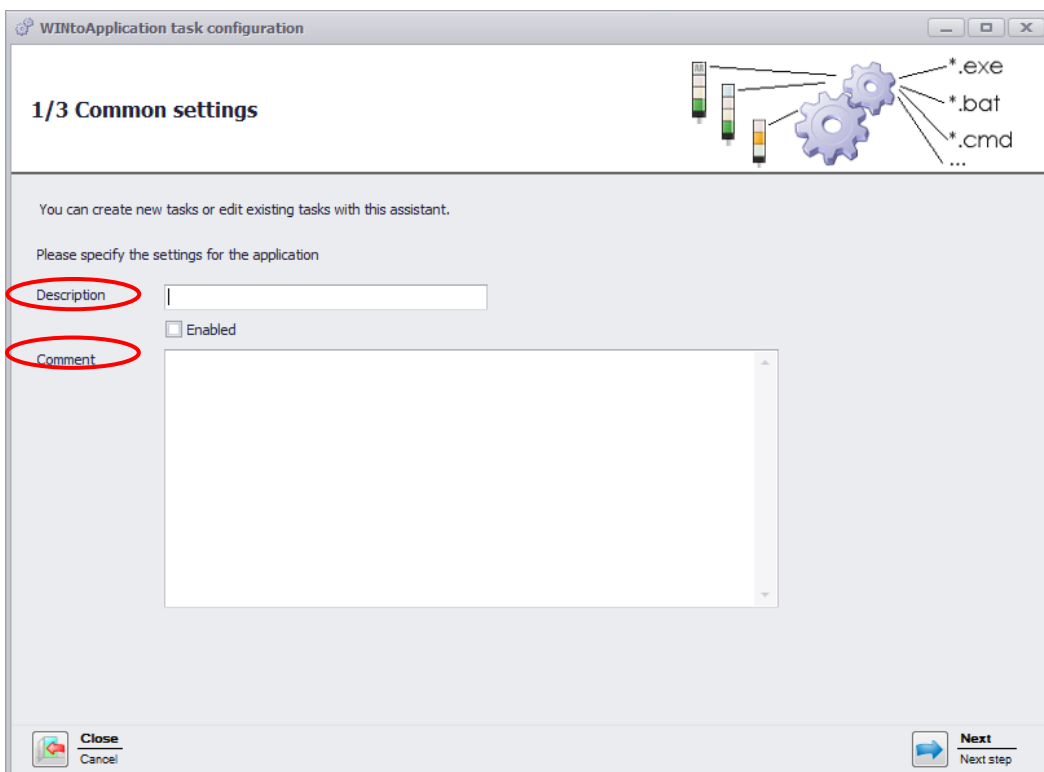
- **Add Task**
Tasks can be configured and added to the Task Overview (Chapter **Fehler!** **Verweisquelle konnte nicht gefunden werden.**).
- **Edit Tasks**
The previously selected configuration can be changed by selecting the task and clicking on the button "Edit" or by double-clicking on the task.
- **Duplicate task**
To duplicate a task, select task and duplicate it with all selected configurations.
- **Delete task**
To delete a task, select it and click to "Delete"
- **Status update**
The Status in the Task Summary can be manually updated with this button, (Chapter 9.2.2.3).
In addition, a history log can be started (Chapter 9.2.2.4).
- **More functions**
You will find additional functions in the menu bar (see chapter 9.2.2.6).

9.2.2.2 Add Task

1. To add and configure a new task for your external application, select "Add".



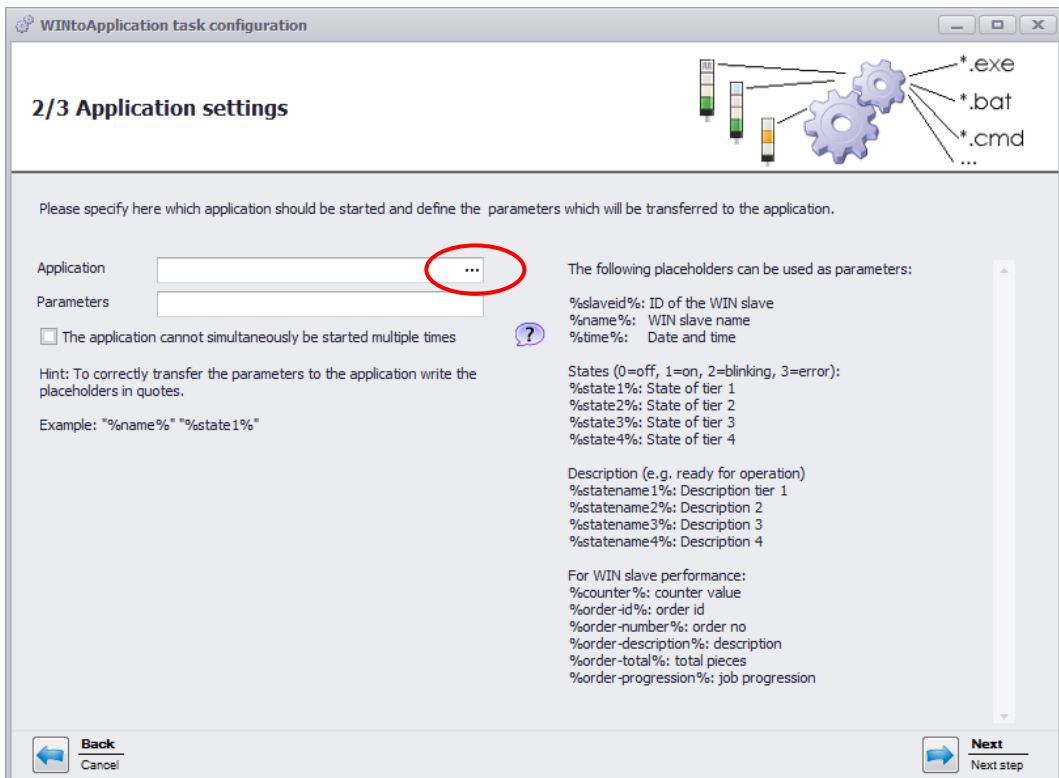
2. To capture the general data, a dialog window opens.
Enter a description and add any comments.



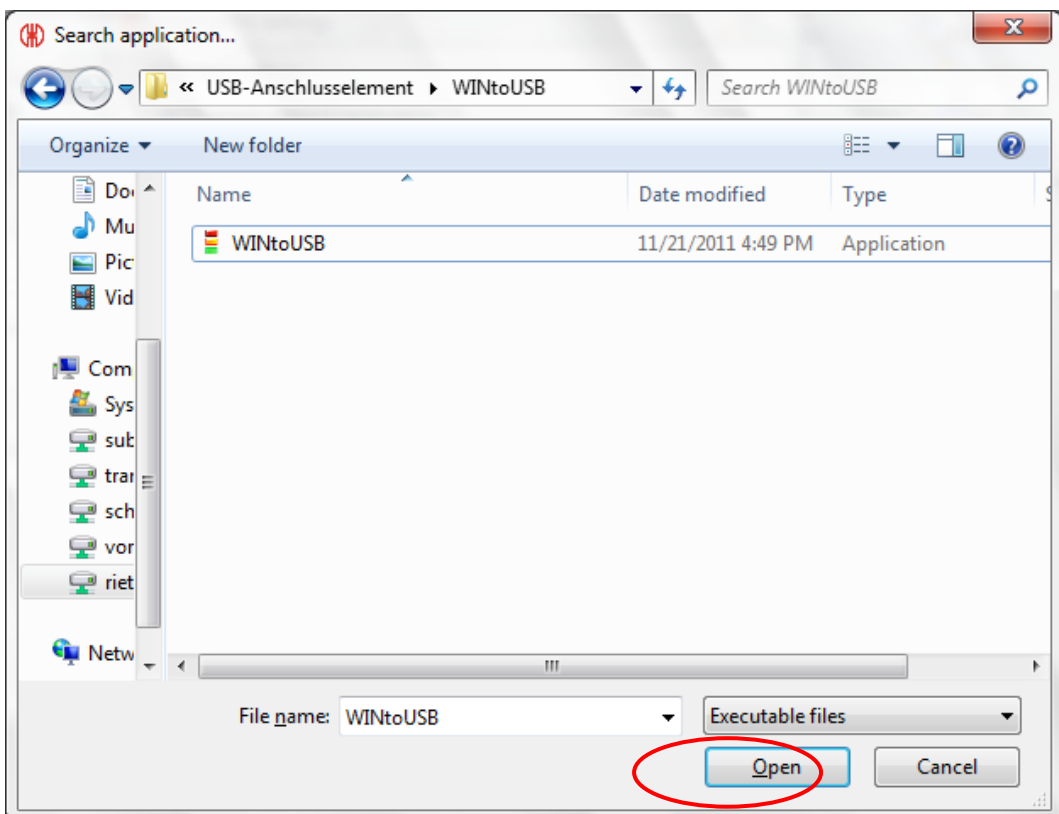
To activate the task from start-up, check the "Enabled" box. Confirm your settings with "Next".

Note: You can change this status at any time in the task list by using the check box.

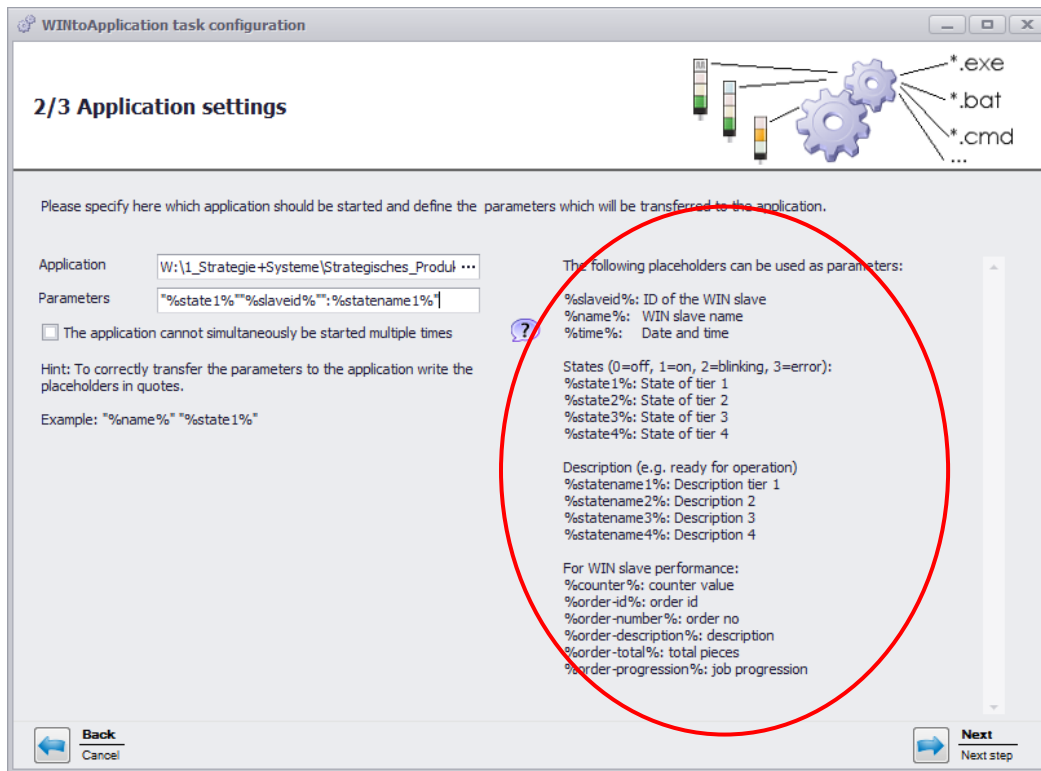
3. In the "Application" box you can browse for and select your external application.



4. Select your external application and click "Open."

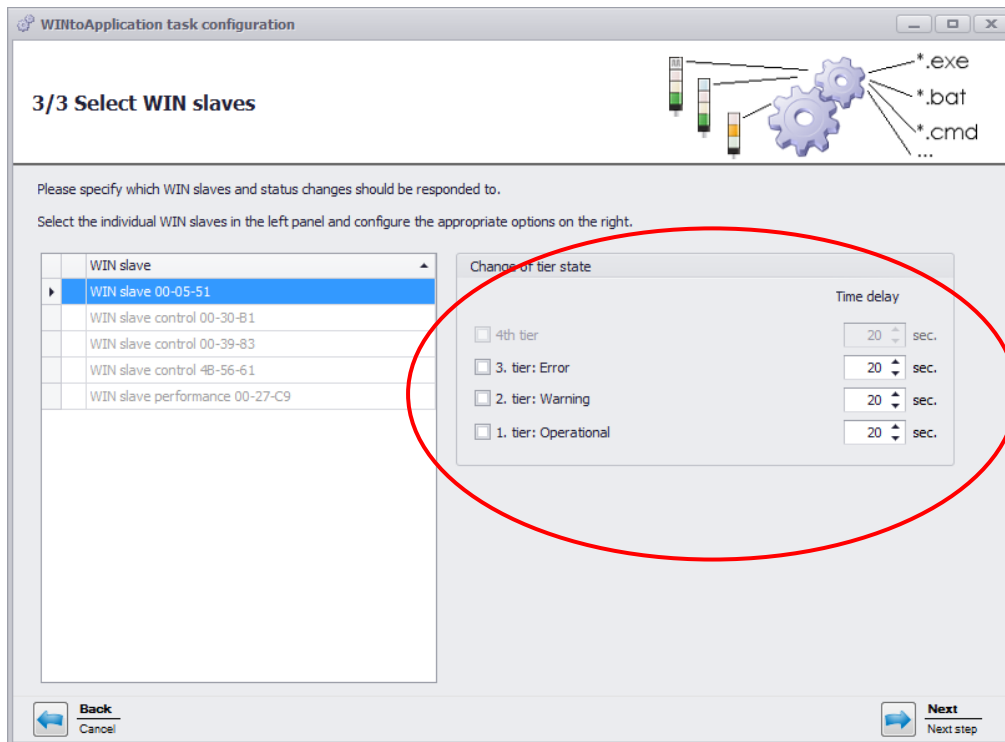


5. You can now define which parameters you want to transfer to the application, using the described placeholders; see the example below.
6. Confirm your entries with "Next".



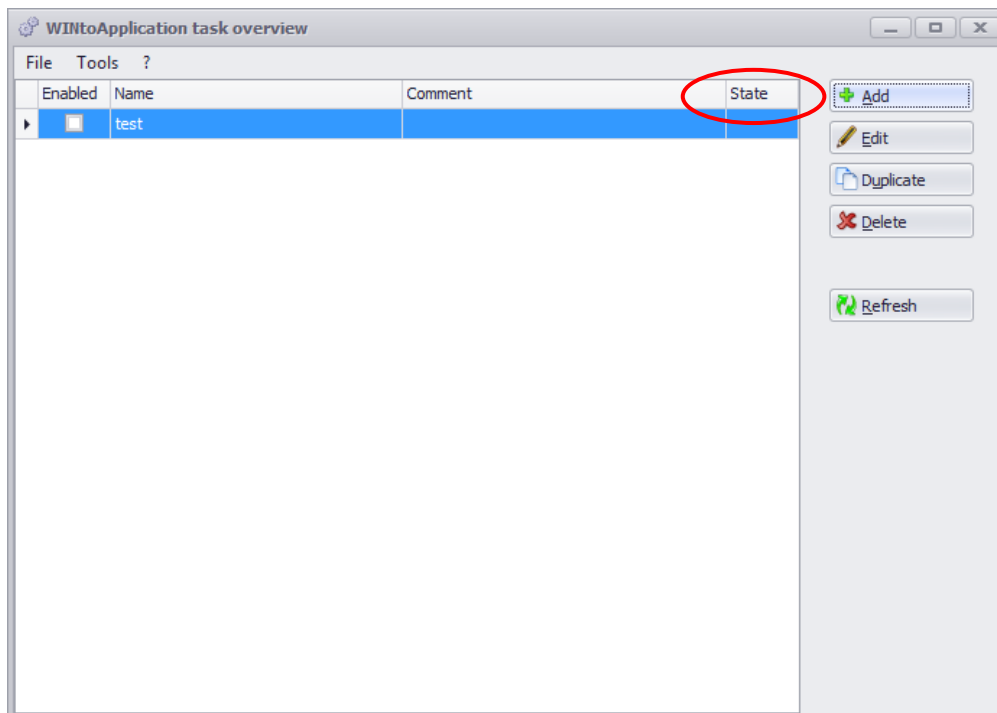
Note: By activating "The application cannot simultaneously be started", the application waits until the current program is ready to access the application again. For applications that expect to start multiple times this button should not be activated.




- This opens the "tasks configuration" dialog box. Here you have to define which WIN slaves responding to which status changes and when, start the external application. Confirm your selection with "Next".



9.2.2.3 Task state

In the task list, the status of each task is displayed in the "State" column.



State Symbol	Meaning
	The task has been successfully performed
	There has been an error during the last session. Error details can be found in the history (see chapter 9.2.2.4)
	The task is running

9.2.2.4 History

To understand processes better, a history log is created. This indicates which parameters have been sent to which external application.

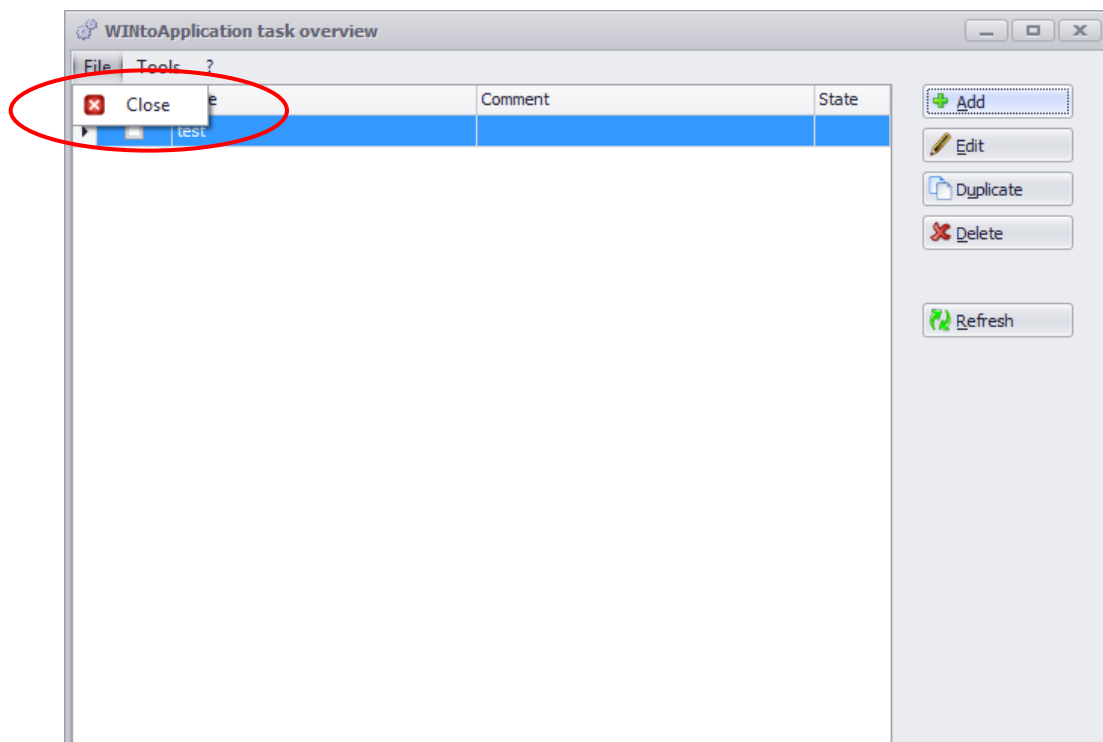
The history log is displayed by hovering over the "State" entry in the relevant task line.

9.2.2.5 Additional functions

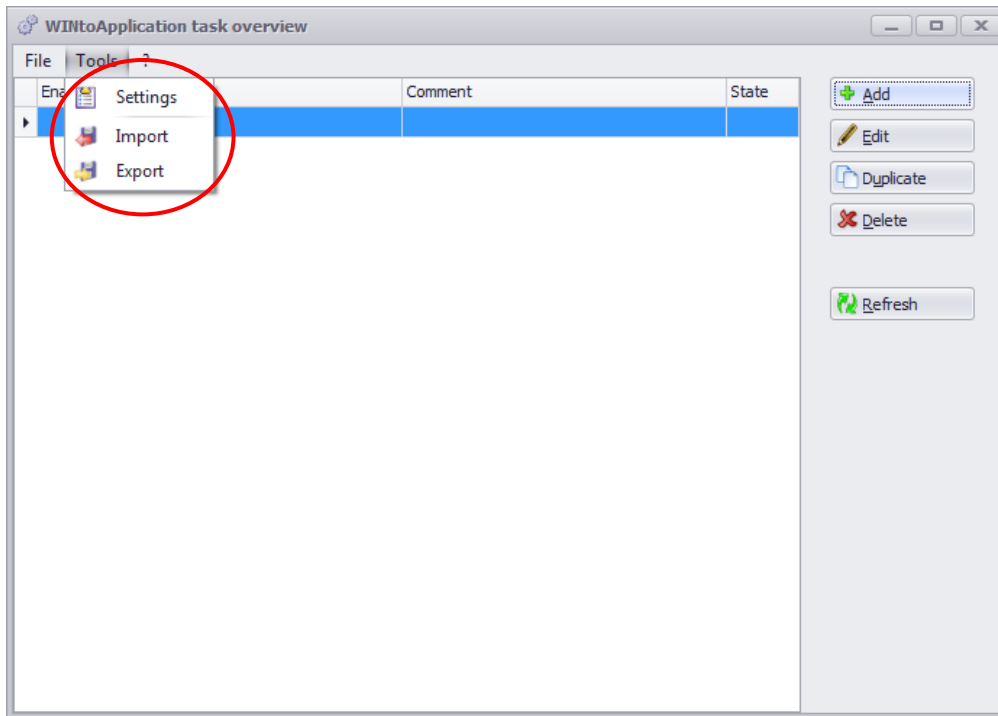
To import / export task lists and to make further adjustments to the WINtoApplication, use the top menu bar.

- **File**

The Task overview will be closed, but WINtoApplication will continue to run in the background and is available in the system tray (chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**)

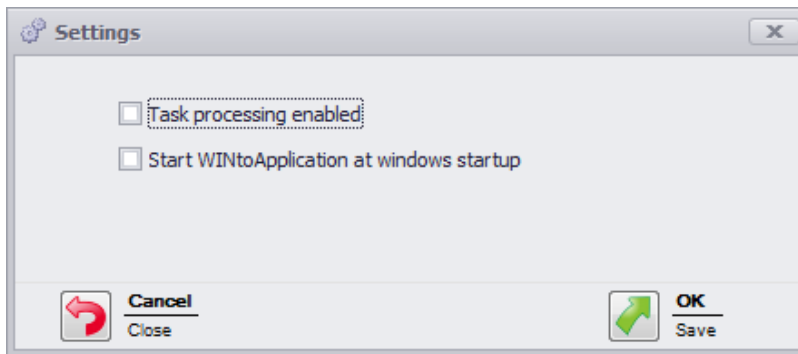


- **Tools**

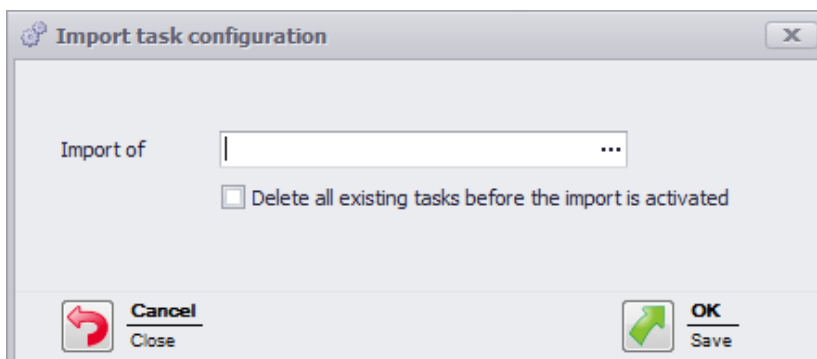


Settings: Activate the processing of the incoming signals.

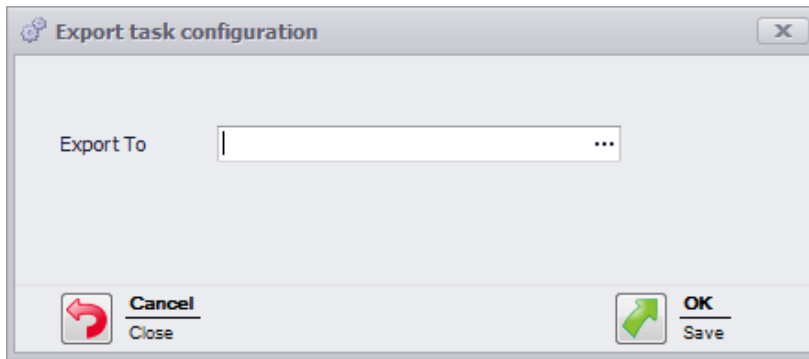
In addition, you can activate the autostart function. At every Windows start up and user logon, WINtoApplication will automatically start.



Import: Import configurations from a CSV file. Entries with the same name will be overwritten by the imported file. You can delete or rename existing files before importing.

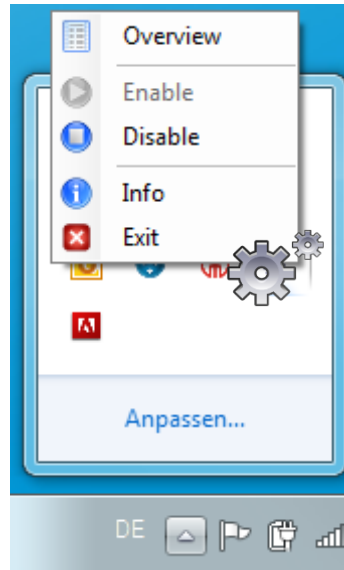


Export: Exporting configurations are exported quickly and easily as a XML.



9.2.2.6 System Tray

After you start the application for the first time, an icon appears at the right of your taskbar (system tray). It allows you to quickly and easily open WINtoApplication. Right-clicking on this icon causes a menu with the following functions to appear:

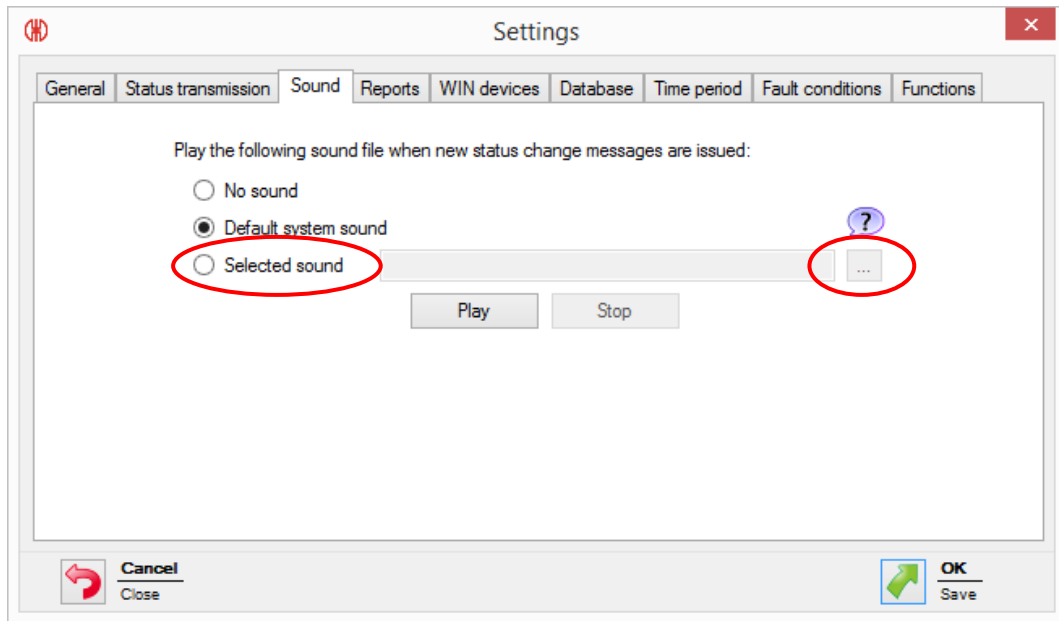


- **Overview**
The task overview will be opened.
- **Enable/Disable**
The state will continue to be monitored and processed but the status transmission to your external application is suppressed.
- **Info**
Shows the current version of WINtoApplication.
- **Exit**
Close and exit the application. Tasks will cease to run until WINtoApplication is restarted.

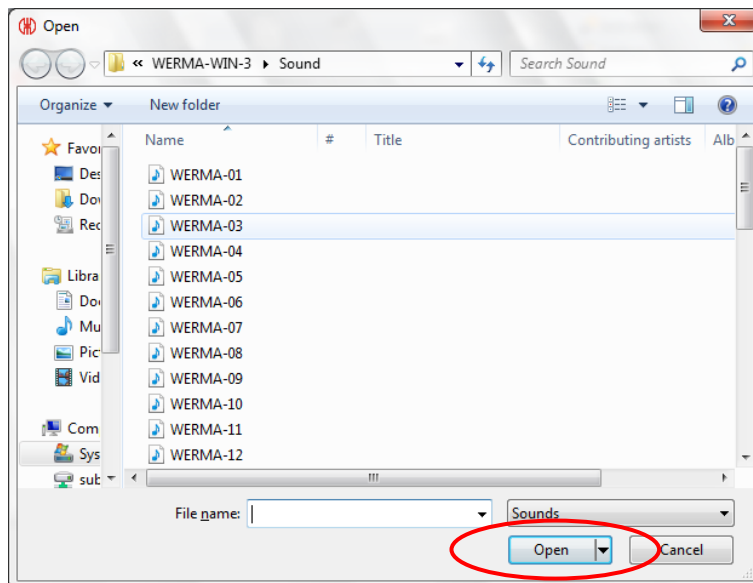
9.3 Sound

You can select an individual sound for the status change messages (see chapter 7.1.6).

1. You can choose to play no sound, the default system sound or a selected sound. If you want to use a selected sound, click "Selected sound" and then "..." to navigate to the location of the desired sound file.

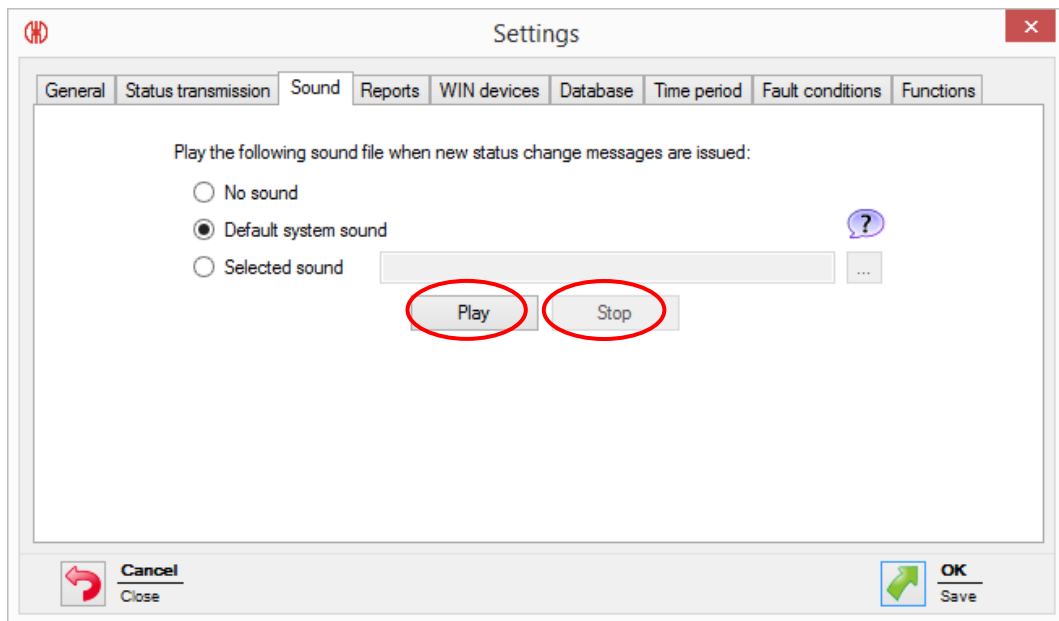


2. Select the sound and click the "Open" button to confirm.



Note: You can select all common audio formats (such as mp3, wav, etc.) as sounds.

- When you have chosen the relevant sound, you can click "Play" to listen to it and "Stop", to stop the playback.

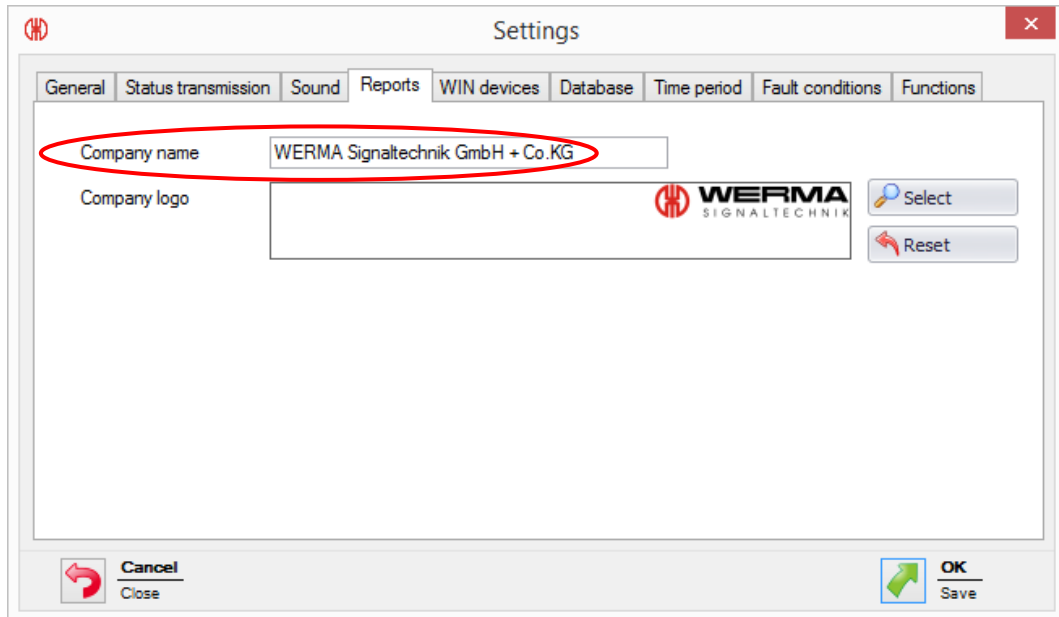


Note: WERMA WIN offers a pre-selection of signalling sounds. To read the description of the tones, click the "Question mark" button.

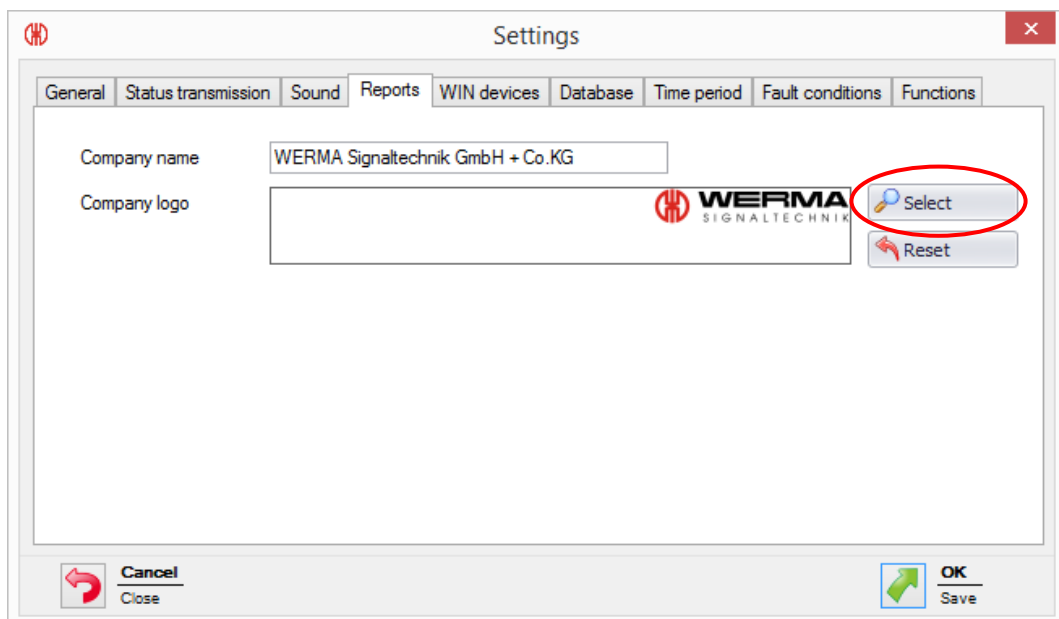
9.4 Reports

You can define a custom header and footer for the Report or Export functions.

1. To define a custom footer, enter the company name in the box.



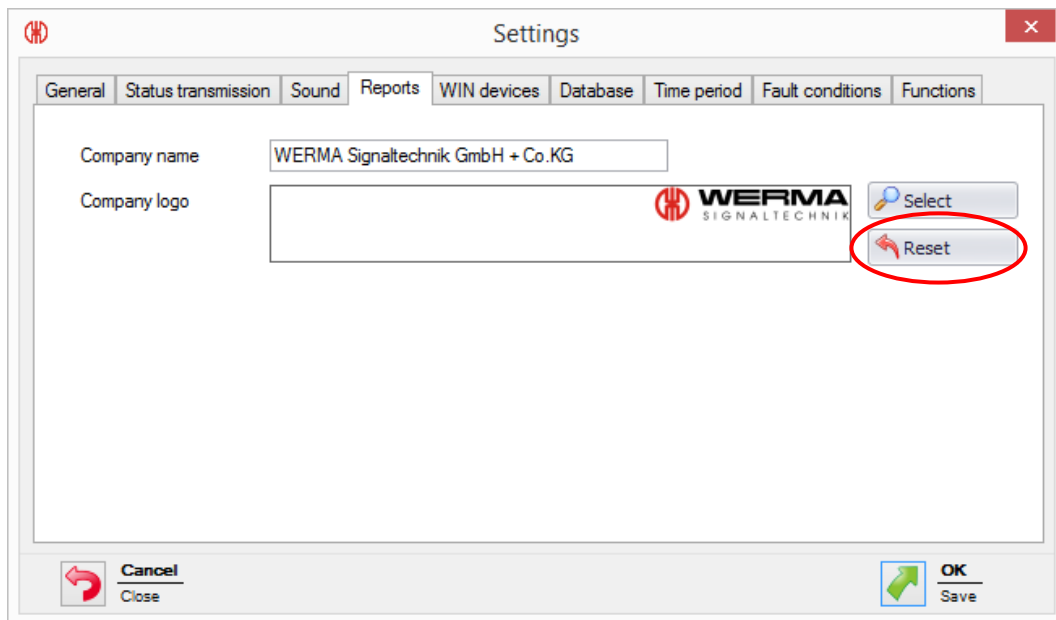
2. To define a custom header with your company logo, click on select and navigate to and select the required image file.



Note: The company logo must fulfil the following requirements:

- File size max. 1MB
- Height and width max. 2000 Pixel

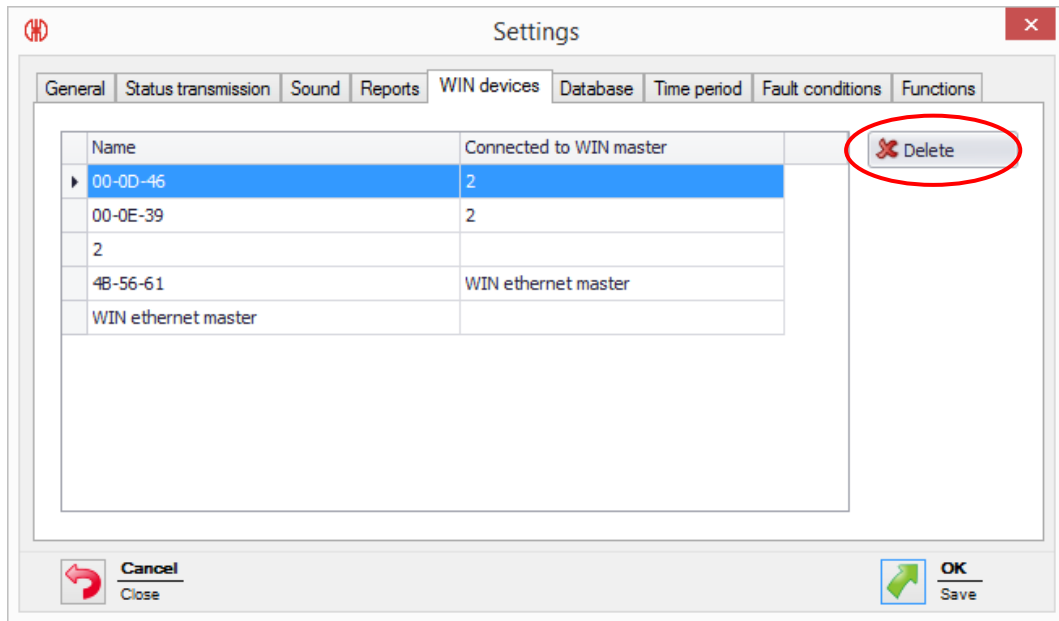
3. Clicking "Reset" will return the company logo to the default setting



9.5 WIN devices

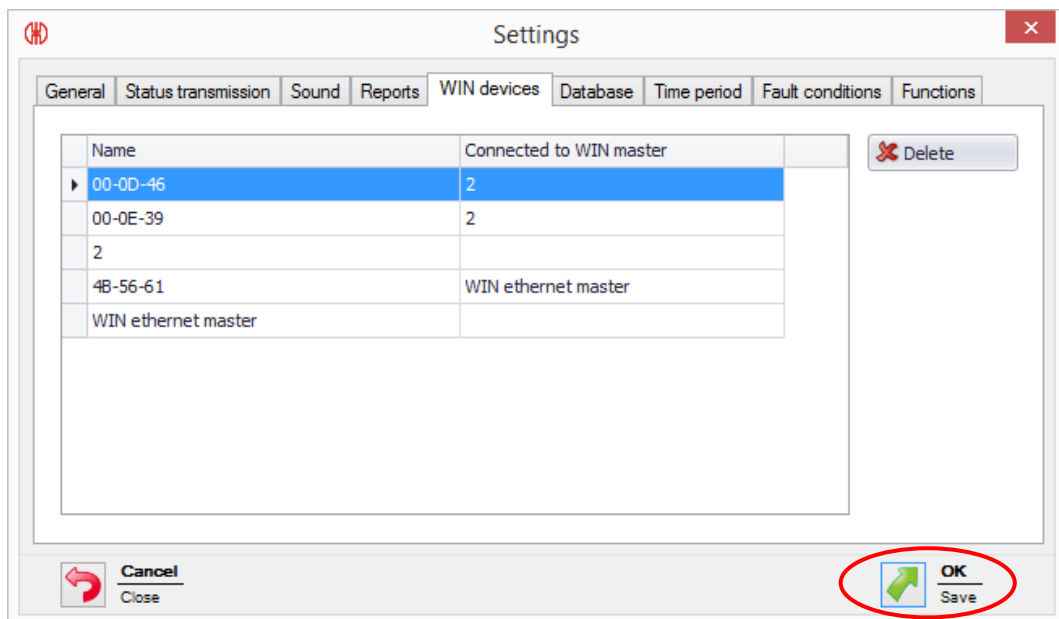
This menu can be used to remove WIN devices which are no longer part of your network. This function will make permanent changes to your WIN configuration and data so use it with extreme caution.

1. Select the WIN device to be removed and click "Delete".



Note: If you want to delete several WIN devices then you can select them with "CTRL" and "click".

2. Click "OK" to complete the deletion process.



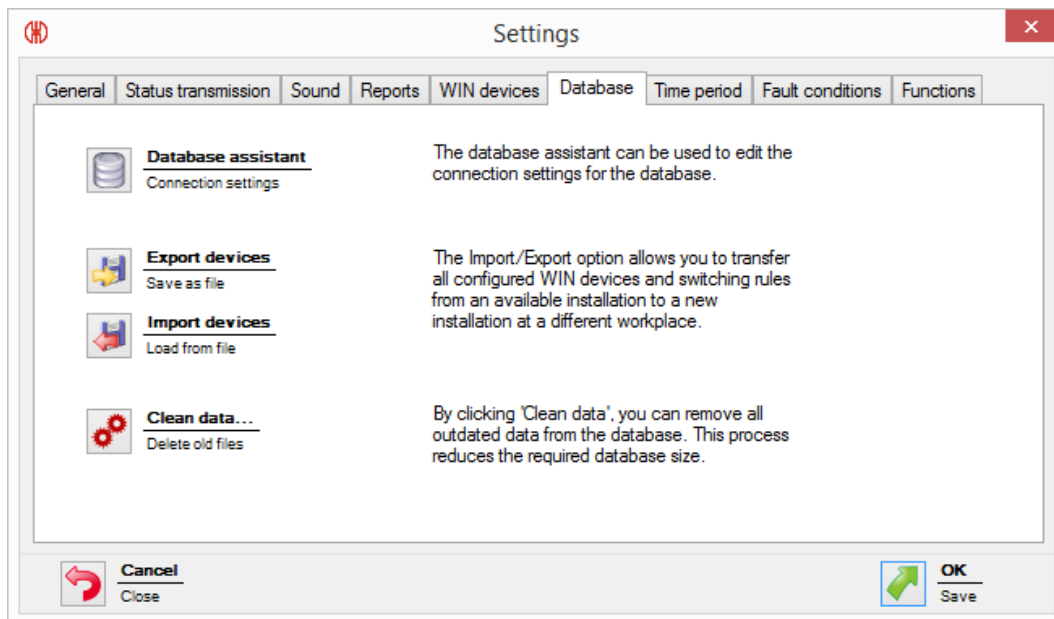
Note: By removing a WIN device, all data collected by that WIN device will be deleted.

Note: A WIN slave can only be removed when the power supply of the WIN slave is interrupted.

Note: A WIN master can only be removed if the associated WIN slaves are deleted or it has been configured to another WIN master.

9.6 Database

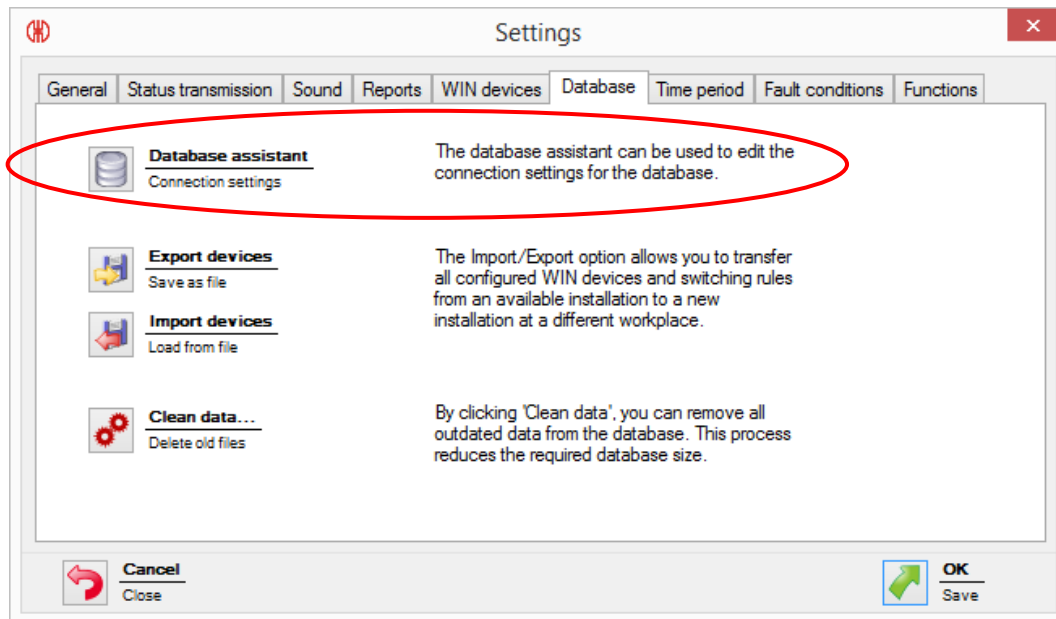
In the Database tab, you can open the database assistant, import and export your WIN device profiles and clean up your data.



9.6.1 Database assistant

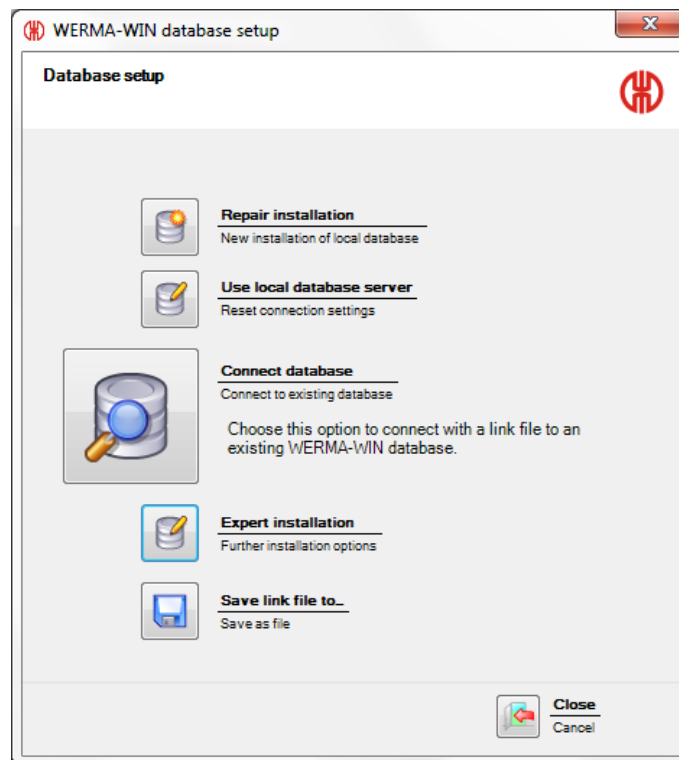
The database assistant can be used to edit the connection settings for the database.

1. By clicking on "Database assistant" the database assistant opens.



Note: Opening the Database assistant closes the WIN software.

2. The following window appears.



3. You can select the following functions for the database:

- Repair installation:

A fresh installation of the local database will be carried out. The existing WIN database will be overwritten and the files will be lost.

- Use local database server:

The existing connection settings will be reset.

- Connect database:

You can connect to an existing WIN database and thus make a multiple access possible. Use this option to connect to a database on a shared drive.

- Expert installation:

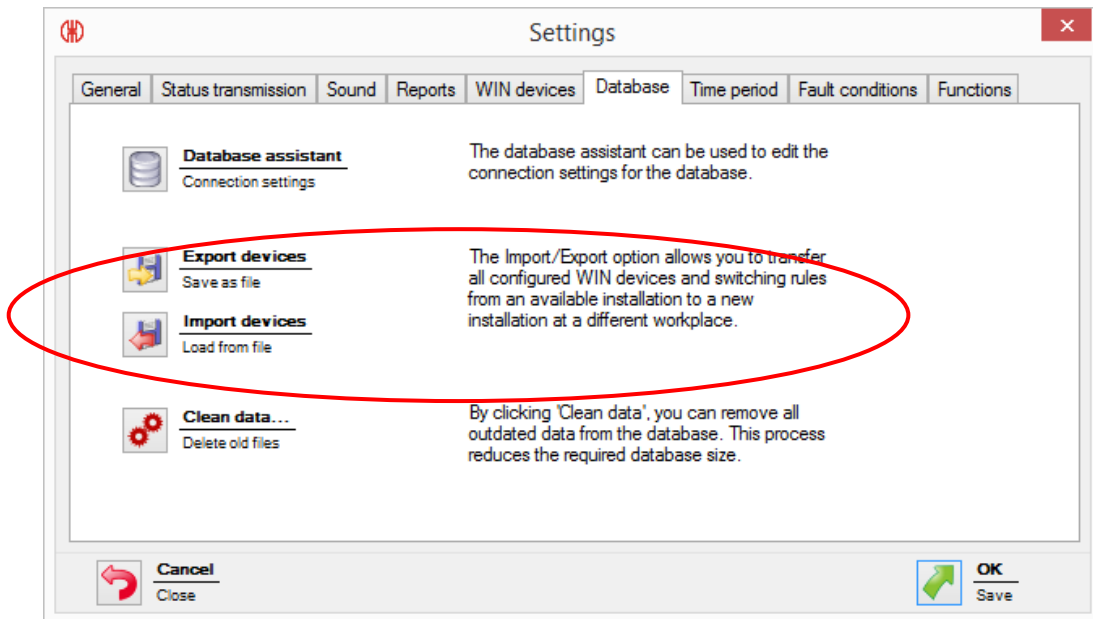
Perform an advanced installation. See chapter 2.3. You also have the ability to edit your saved connection settings.

- Save link file to...:

You can save the link file to a suitable location for use when configuring multiple access to the database.

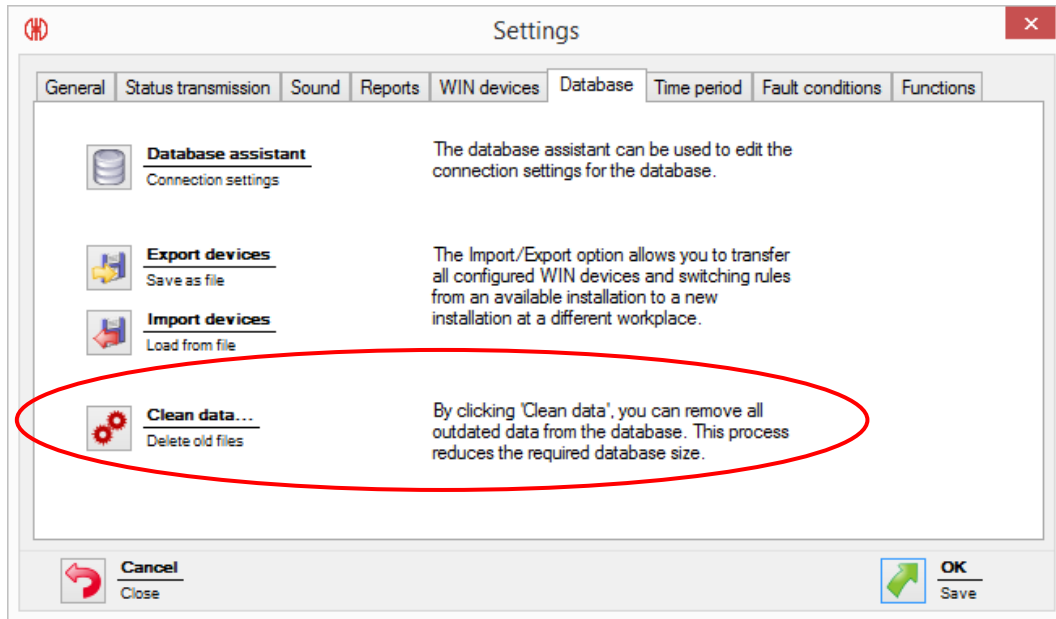
9.6.2 Export devices / Import devices

The "Import/Export" option allows you to transfer all configured WIN masters, WIN slaves from an available installation to a new installation at a different location.

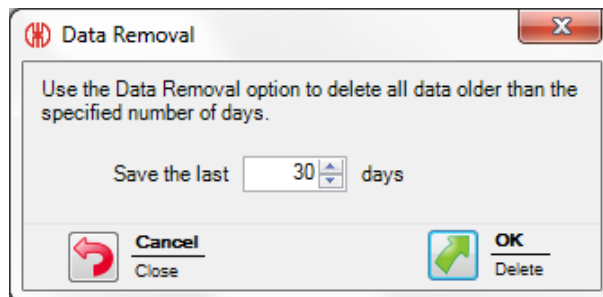


9.6.3 Data removal

Deletes old data. Here you can specify the time from which data should be kept.

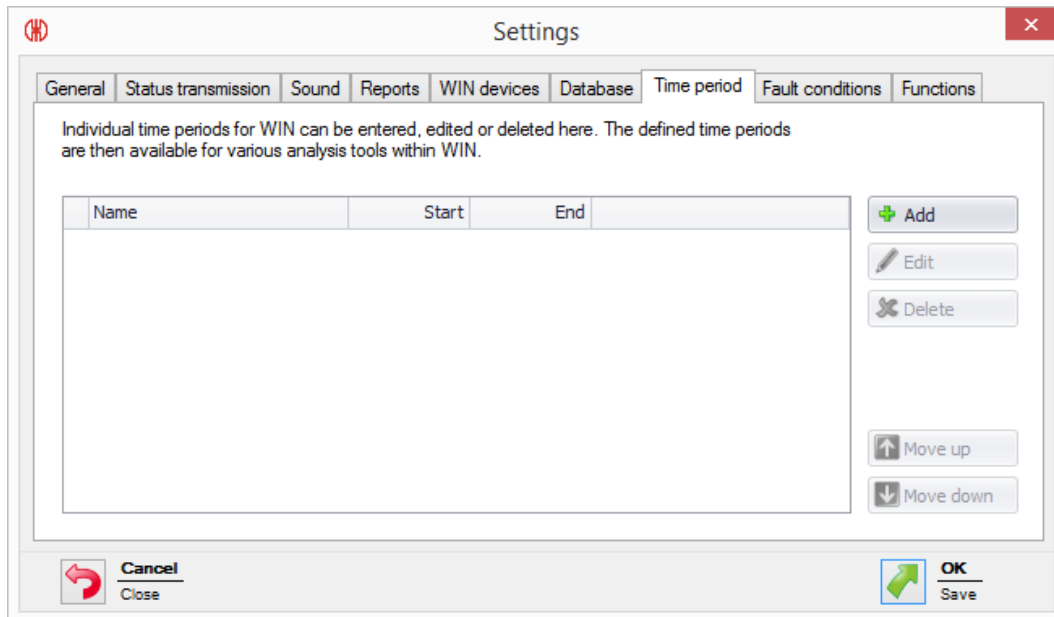


Click the "Clean data..." button and enter the period for which you wish to save the data. To confirm the deletion click "OK".



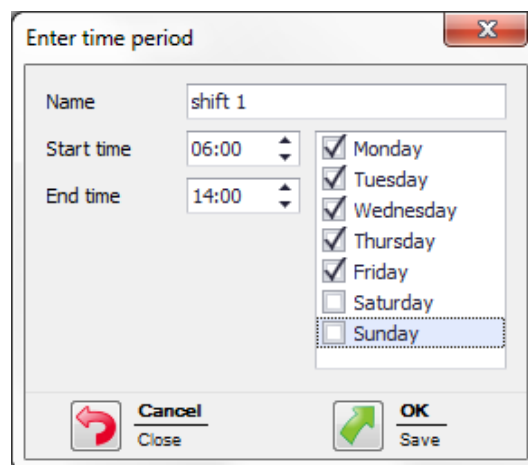
9.7 Time period

Define unique time periods, such as shift times. These can be used within the Productivity module.



To define a time period please proceed as follows:

1. Click on "Add".
2. Enter your desired time period and click "OK" to save your input.

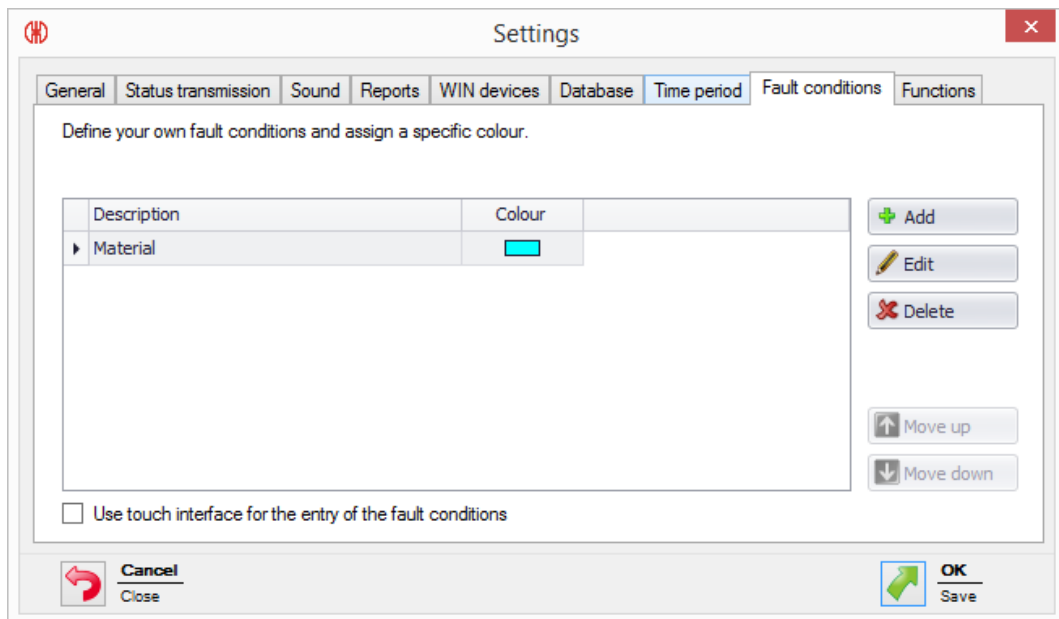


Then you can edit, sort or delete the time period.

Note: Time periods can be selected in the Productivity module in the selection of a period.

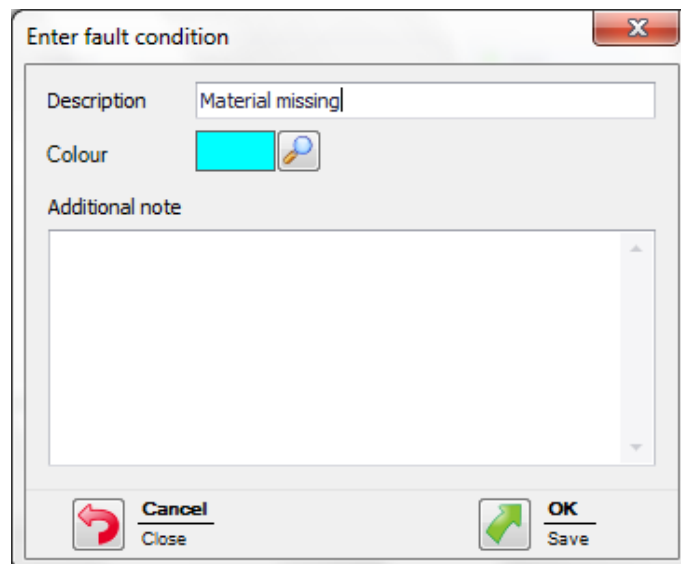
9.8 Fault condition

Define unique fault conditions for errors, such as material missing. If an error occurs you can select a defined fault condition in the runtime module when creating a note.

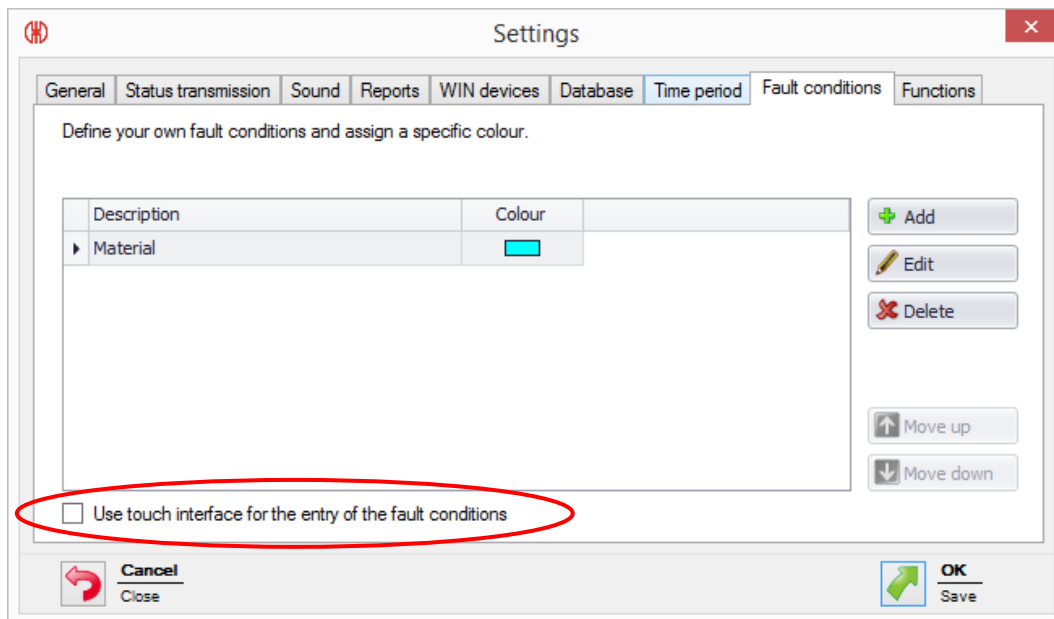


To define a fault condition please proceed as follows:

1. Click on "Add".
2. Enter your desired fault condition with description and colour. Click "OK" to save your input.

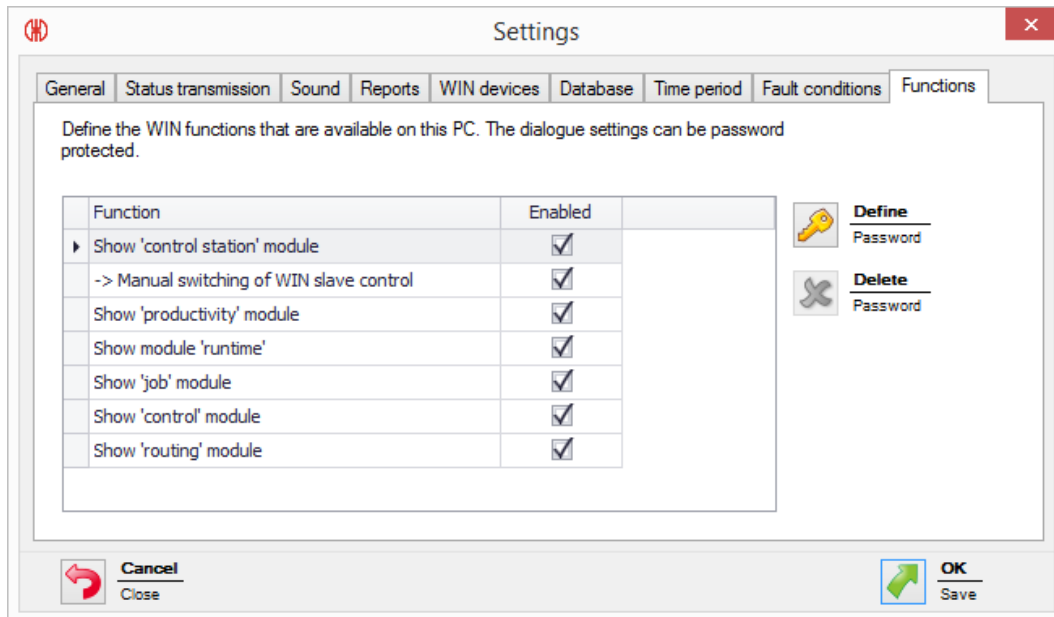


You can edit, sort or delete the fault conditions. By activating "Use touch interface for the entry of fault conditions", you can select easily in the runtime module the desired fault condition (see chapter 7.3.4.1).



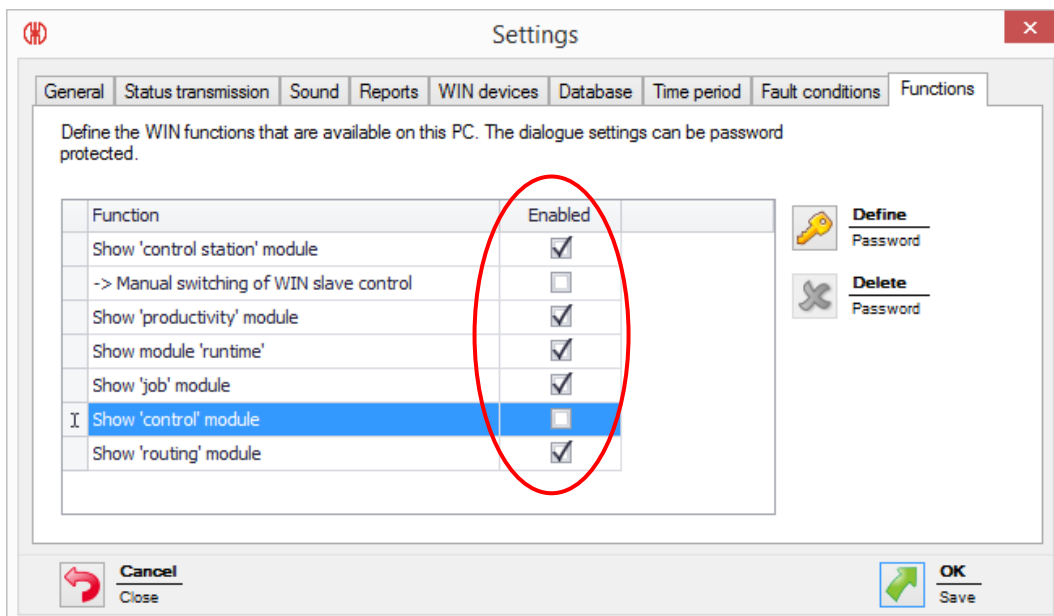
9.9 Functions

Define which function is enabled or disabled.

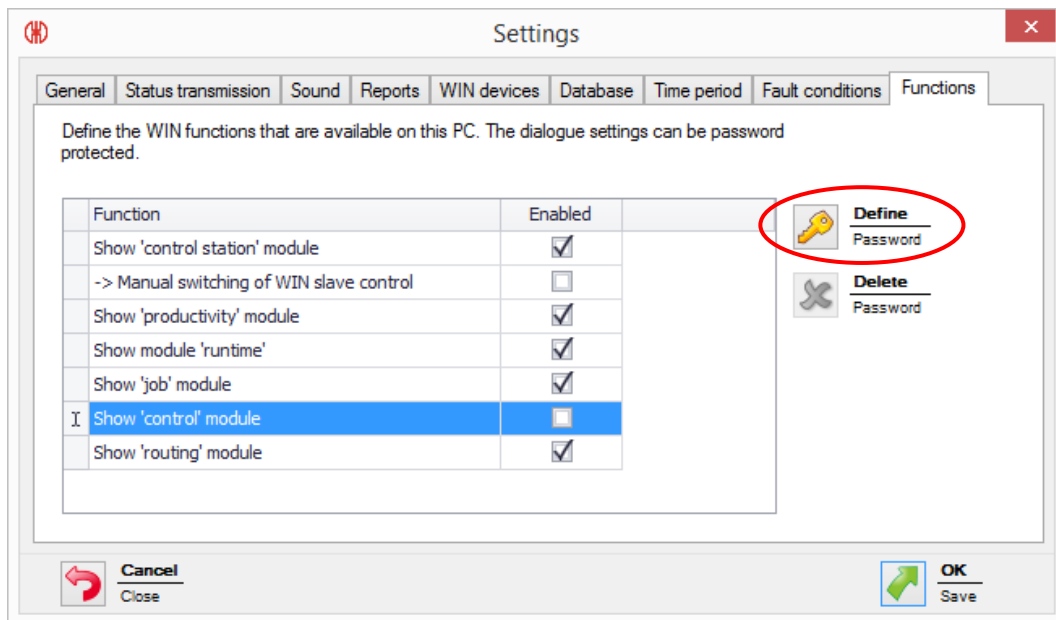


To disable a function, please proceed as follows:

1. Disable the desired function.



2. Click on "Define Password" assign a password to protect the Setting menu.

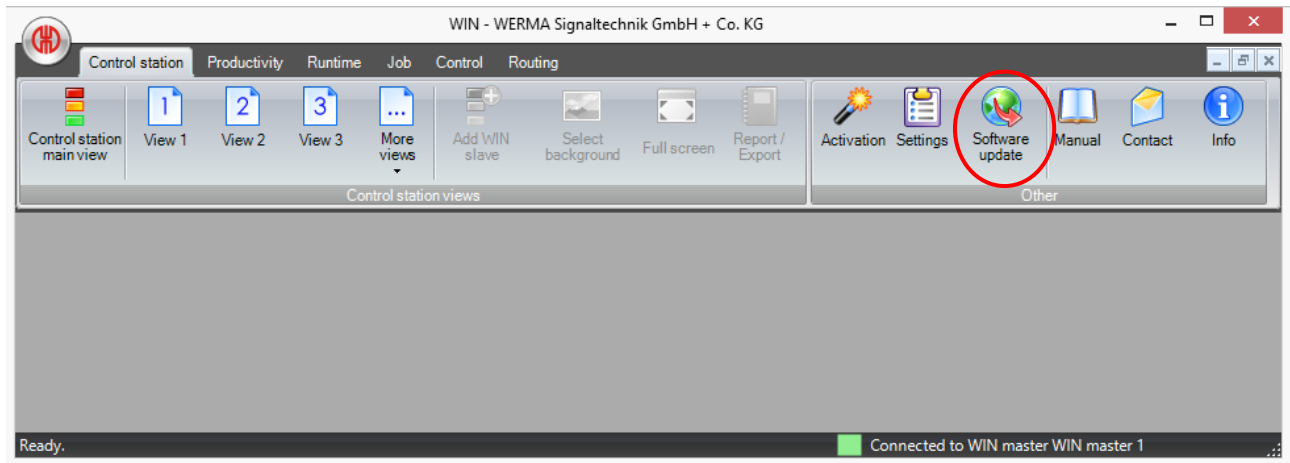


3. Click on "OK" to save your settings.



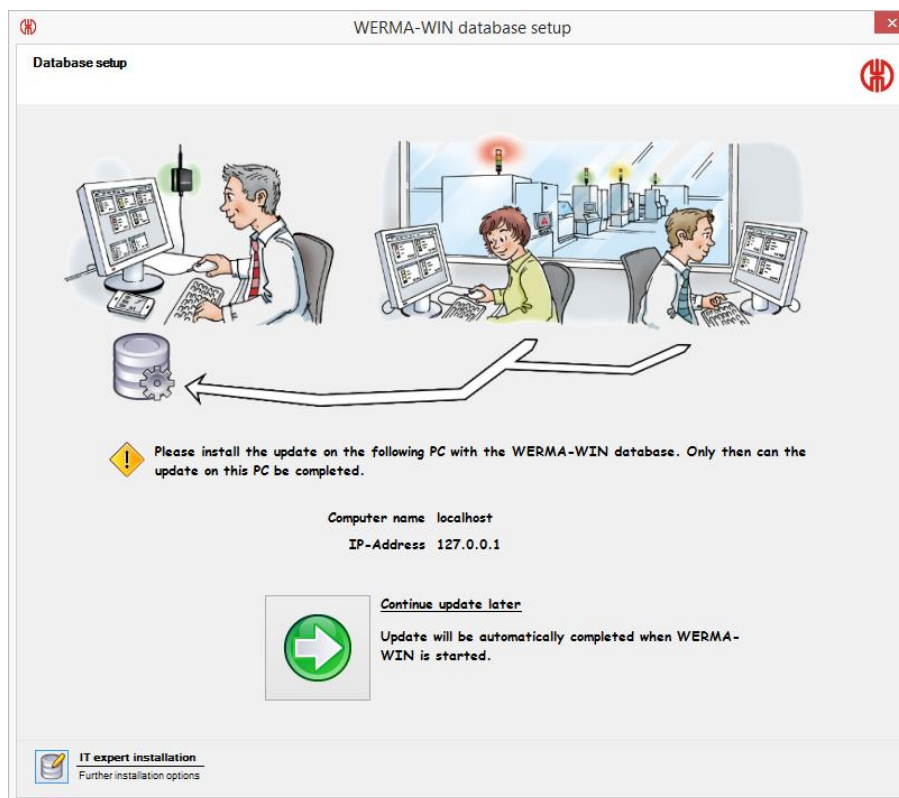
10. Software update

Future software updates which become available can be downloaded via "Software update". To update your software, click the "Software update" menu item in the upper task bar of the user interface.



You will then be automatically connected to the download area of the WERMA website. Please download the database update and install on your PC.

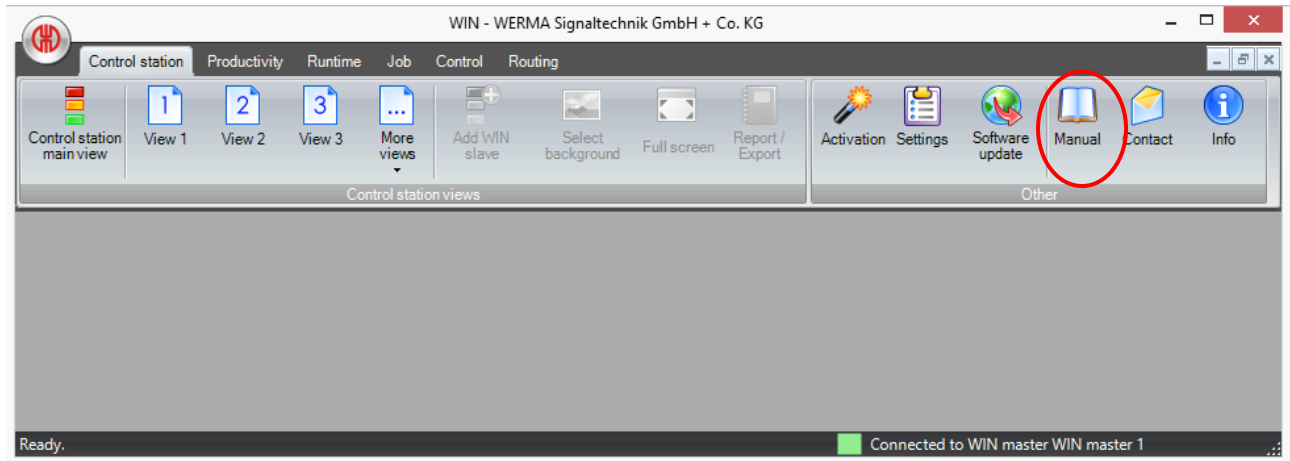
Please note that in the case of multi-client users the database must first be installed on Server PC accessible by all clients. If the database is to be installed first on a client PC the following message will appear:



Note: Please note that in the case of a multi user access to the WIN database the software update has to be installed on all PCs.

11. Manual

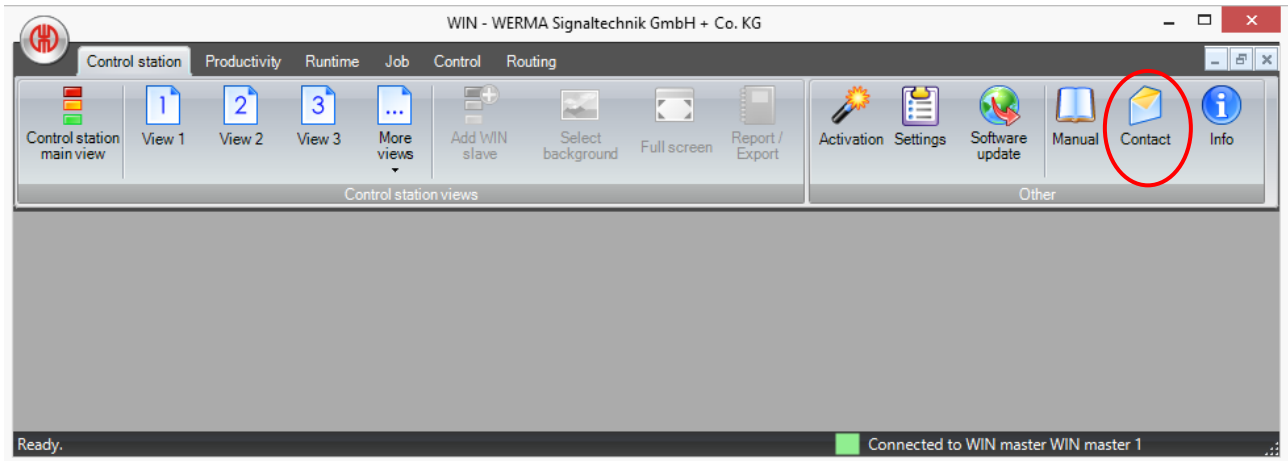
Clicking on the "Manual" button or, alternatively, pressing the "F1" button automatically connects the user to the download area of the WERMA homepage which contains the current version in pdf format.



Note: View the manual requires Adobe Acrobat Reader which can be downloaded from www.adobe.com. In the download section you can find the Adobe Reader, which is required for the display of this manual.

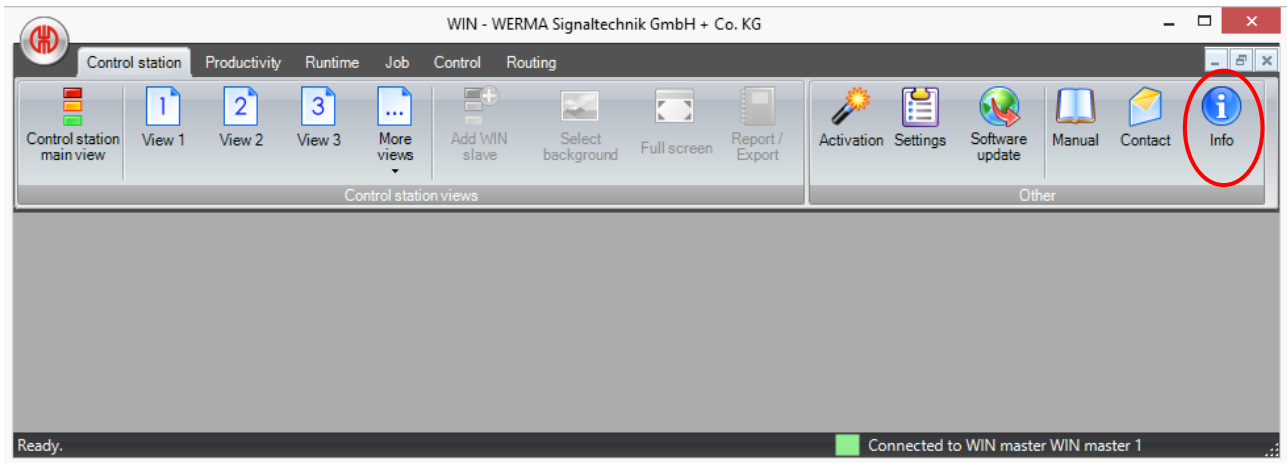
12. Contact

In case of any questions, comments or suggestions concerning the Wireless Information Network (WIN), please do not hesitate to fill in the contact form. We are happy to answer your requests. By clicking on "Contact" in the menu, you will be directed to our contact form.



13. Information

Information on the current version is available by clicking the “Info” menu item.

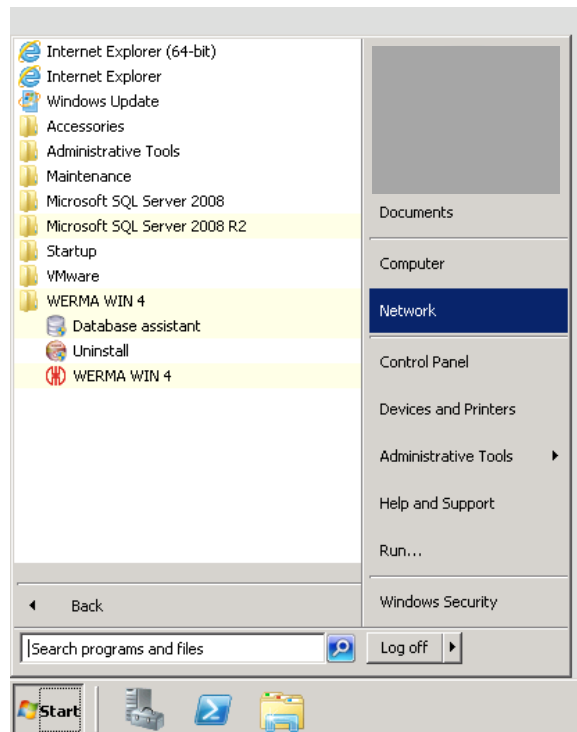


14. Uninstalling the WIN-Software

To remove the WIN software from the system, ensure that the WIN master is no longer connected to the USB port of the PC and that the program has been closed.

(The software may otherwise not be completely uninstalled.)

1. To uninstall the software, go to → Programs → WERMA WIN 4 → Uninstall in the start menu



2. Click on "Next" and in the subsequent window, enter the relevant file locations.



3. Click "Finish" in the pop-up window to complete the uninstallation process.

Note: The WIN software has now been removed from your operating system. The database used has however not been deleted.

FAQ – Frequently Asked Questions

Q: Which frequency band does the WIN system use?

A: WIN operates within the frequency band 868.0 – 868.6 MHz. This short-range system has no effect on Wi-Fi or Bluetooth networks.

Q: Can the WIN system be operated on different radio channels?

A: Yes, you may choose between 4 transmission channels. You can operate one WIN master per channel. Channel 1 operates on the frequency of 868.15 MHz, channel 2 on the frequency of 868.25 MHz, channel 3 on the frequency of 868.35 MHz and channel 4 on the frequency of 868.45 MHz.

Q: Why do I need different channels and when do I have to change them?

A: If you use more than one WIN master on one channel, this may cause radio transmission problems between the systems. This will generate frequent connection errors. In this case the WIN masters need to be operated on different frequencies (see chapter 8.2).

Q: How can I increase the range?

A: Every WIN slave possesses a repeater function, by which the range between the WIN master and the WIN slave can be increased. Every WIN slave can thereby establish a connection with the master via a maximum of two other WIN slaves (repeater).

Q: Is the wireless transmission encrypted?

A: WIN is equipped with several protection mechanisms, which prevent the transmissions being intercepted. In addition, confidential data from the WIN system will not be transmitted wirelessly.

Q: How often does the WIN slave transmit the signal status to the WIN master?

A: If the status of the signal tower changes, the WIN slave sends this new status to the WIN master within 5 seconds. If the signal status does not change, the WIN slave transmits the signal status every 15 seconds.

Q: Why does my WIN not establish a connection to my WIN master?

A: Please check the following points:

- Has a USB connection been established to the WIN master? → Red or green LED must be illuminated
- Is the WIN slave connected to the power supply? → Red or green LED must be illuminated.
- Have you configured your WIN slave?
- Is the wireless connection strong enough? (Optimise transmission range see (chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**)
- The WIN master has been configured to another channel.

Q: There are often connection errors to the WIN slaves. What can I do?

A: You can do the following:

- Data will only be logged, whilst the WIN software is working. Make sure that this is the case during the monitoring period.
- Check the connection quality in the Routing Module. If there are red connection lines, you should use more WIN slaves as repeaters. Simply position a WIN slave at the critical location (Optimise transmission range see chapter 7.6.4)
- Ensure that a permanent 24V supply is connected to terminal 5 of each WIN slave.

Q: Why does my computer not recognise the WIN master?

A: Please check the following points:

- Ensure that the WIN software has been installed.
- Disconnect the USB connection to the WIN master and re-connect it.
- Manually install the driver. (see chapter 2.4)
- The Windows Service "WERMA WIN 4 Connector Service" has not started.

Q: Why am I not able to install the WIN software?

A: To install the software you need administration rights for your PC. Please contact your IT-administrator.

Q: How many WIN slaves can be monitored by one WIN master?

A: Up to 50 WIN slaves can be monitored.

Q: What happens, if I connect more than 50 WIN slaves?

A: This may cause connection errors between the WIN slaves.

Q: How many elements can be monitored per WIN slave?

A: You can monitor up to 4 elements per WIN slave. (or with the help of the blinking recognition up to 8 statuses).

F: How many elements can be monitored per WIN slave performance?

A: You can monitor up to 3 elements per WIN slave performance (or with the help of the blinking recognition up to 6 statuses). One tier of the WIN slave performance is necessary for the counter input. If you use the additional the job input on one tier, you can only monitor up to 2 elements or 4 statuses.

F: How many cycles per minute can the WIN software count/record?

A: The WIN software can monitor up to 600 cycles per minute. It is important that the count output from the machine is set up correctly.

Q: Why is the red LED on the WIN master illuminated?

A: The WIN master has no connection to a WIN slave, but is connected to a PC and is receiving power.

Q: Why is the red LED on the WIN slave illuminated?

A: The WIN slave is not connected to a WIN master.

Q: What is the maximum permissible USB cable length between the WIN master and the PC?

A: The cable length should not exceed 3 metres. The cable length can be increased via USB hubs.

Q: Is there an opportunity to work with the acquired data?

A: Yes, all data is stored in a Microsoft SQL Server database (see chapter 2). You can export the data (Excel, Access, ...), but cannot change the database (may cause data loss).

Q: What steps need to be taken when the clocks are changed?

A: Changing the time can lead to a data loss. If the time is repeatedly synchronised within your IT system (e.g. automatically via the server), we recommend that the synchronisation takes place outside the monitoring period (e.g. when your machines are not in use)

Q: Can a WIN slave performance be configured so that it has the same configuration as a WIN slave?

A: No, a WIN slave performance always needs one tier allocated to the counter input.

Q: What must be considered when installing WERMA WIN?

A: Please note the safety instructions and system requirements.

Q: How fast can a WIN slave performance count on the tier with the counter input?

A: The count impulse can be up to 10 Hz. Please note the conditions in chapter 1.4.4 and 7.1.3.2.

Q: Can the blink recognition be set for all tiers of the WIN slave performance?

A: No, the blink recognition cannot be selected for the tier with a counter input and not for the tier with job input.

Q: It is possible to read in data from an ERP system?

A: Yes, you can create a CSV file with an appropriate format (see chapter 7.4.2.2). These can then be imported into the WIN software.

Q: Are there any keyboard short-cut functions in the software?

A: Yes, these are:

- „F1“ → opens the manual (see chapter 0)
- „F10“ → Job quick start (see chapter 7.4.3.2)
- „F11“ → Opens the Runtime Module (see chapter 7.3)

Q: What has to be observed when saving data to the WIN database?

A: We recommend the following:

- The PC and master to which it is connected must be on 24/7
- The PC where the database is installed must be on 24/7
- WIN WERMA 4 Server service and WERMA WIN connector service must be running

Q: What is the “WERMA WIN connector service” needed for?

A: The service runs in the background as soon as the PC (both client and server) is turned on. Collected WIN data through the WIN master will be transferred to the “WERMA WIN 4 Server service” without the WIN software running or a user being logged on.

Q: What is the “WERMA WIN 4 Server service” needed for?

A: The service runs in the background as soon as the PC or Server hosting the database is turned on. The WIN data is written to the WIN database without the WIN software running or a user being logged on.

Q: Can the Energy save or hibernate modes on a PC be switched by WIN?

A: We recommend deactivation of the energy save and hibernate modes as follows:

- PC with the WIN database
- PC with the WERMA WIN 4 Server service
- PC with the WIN master (USB) connected to it.

Q: Can the WIN ethernet master be operated via Internet?

A: From a technical point of view the WIN ethernet master can be operated via Internet. Despite the basic security measures we recommend the use of additional measures such as an encrypted VPN connection to the WIN ethernet master.

WIN slave	Mac (slave)	Name
<i>Example</i>	<i>00-45-86</i>	<i>CNC-Machine 1</i>
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2		
3		
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