podis®

wieland

Solutions for conveyor technology
The motor starter on the power bus

Full speed ahead

podis® –
Motor starter on the power bus

Motor starter, remote

Motor starter, direct plug-in

Maintenance switch

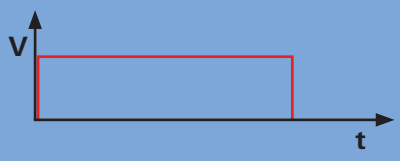
The ***podis***®/***gesis***® motor starters for decentralized applications close to motors are based on the ***podis***® power bus solution and can be used in harsh industrial environments.

Motor starters: In an especially compact housing, the ***podis***®MCU/***gesis***®MCU motor starters combine the function of an electronic motor starter with AS-i control, as well as the connection of up to three sensors. The motor starters are used in applications where three-phase standard motors of up to 1.5 kW are started with either one or two directions of rotation.

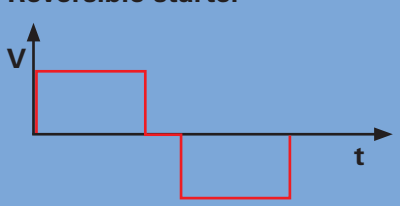
Soft starters: The new ***podis***®MSS/***gesis***®MSS electronic motor soft starters are used for soft starting and stopping of three-phase asynchronous motors. These soft starters start and stop the drive softly so that light materials that are being transported do not slip when the motor is switched on, and in order to protect the drive mechanically. The ramp-up time, the rampdown time and the breakaway torque can be adjusted continuously.

Maintenance switches: In order to achieve secure isolation of the drives in the event of repair or maintenance, "locally-placed" maintenance switches can disconnect individual conveyor lines or consumers from the mains without the complete system having to be shut down.

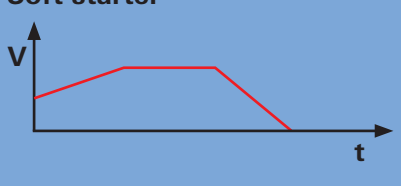
Direct starter



Reversible starter



Soft starter



Record-breaking – installation and commissioning time

Fast installation: With the new ***podis***®/***gesis***® motor starters, installation can be carried out up to 70 % faster than before.

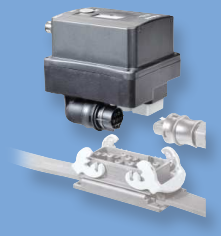
Space-saving design:
The ***podis***® motor starters are compact, and are simply mounted onto the flexible ***podis***® flat cable and terminated via two fast-closing manual locking levers. No more complicated and space-consuming mounting on separate mounting plates, thus saving space and simplifying project planning. Alternatively, the ***gesis***® motor starter can be mounted remotely on a mounting plate.

Easy installation in or on the wiring duct:
The compact design enables optimum ntegration into standard cable management systems. With the ***podis***® motor starter, ingoing and outgoing cables run behind the motor starter in the wiring duct, making side-by-side positioning possible. The remote ***gesis***® motor starter is mounted either at the motor on a separate mounting plate, or directly onto the cable management system.

Intelligent motor control:
The ***podis***®/***gesis***® motor starters can be operated as direct, reversing or soft starters of three-phase asynchronous motors up to 1.5 kW (2.01 hp). After the start-up phase, a switchover from the semiconductors to the internal mechanical bypass relays takes place.

Easy operation and optimum diagnostics:
Easy configuration via AS-Interface. When a motor starter is replaced, the settings are saved and can be automatically transferred rom the controller to the new motor starter. LED displays for status and error messages make fast on-site troubleshooting possible in the event of a fault, thus reducing expensive downtimes.

- **Direct, reversing or soft starters for asynchronous motors** from 0.09 to 1.5 kW (0.12 to 2.01 hp)
- **Considerable time saved during installation** can be connected directly onto the power busr
- **Electronic motor protection** for optimum protection of your motors
- **Parameter download for settings** shortens commissioning and maintenance
- **On-site diagnostics** status and error diagnostics right at the device
- **Maintenance-friendly** quick and easy replacement when required
- **Robust design** IP65 Degree of protection for rough industrial environments

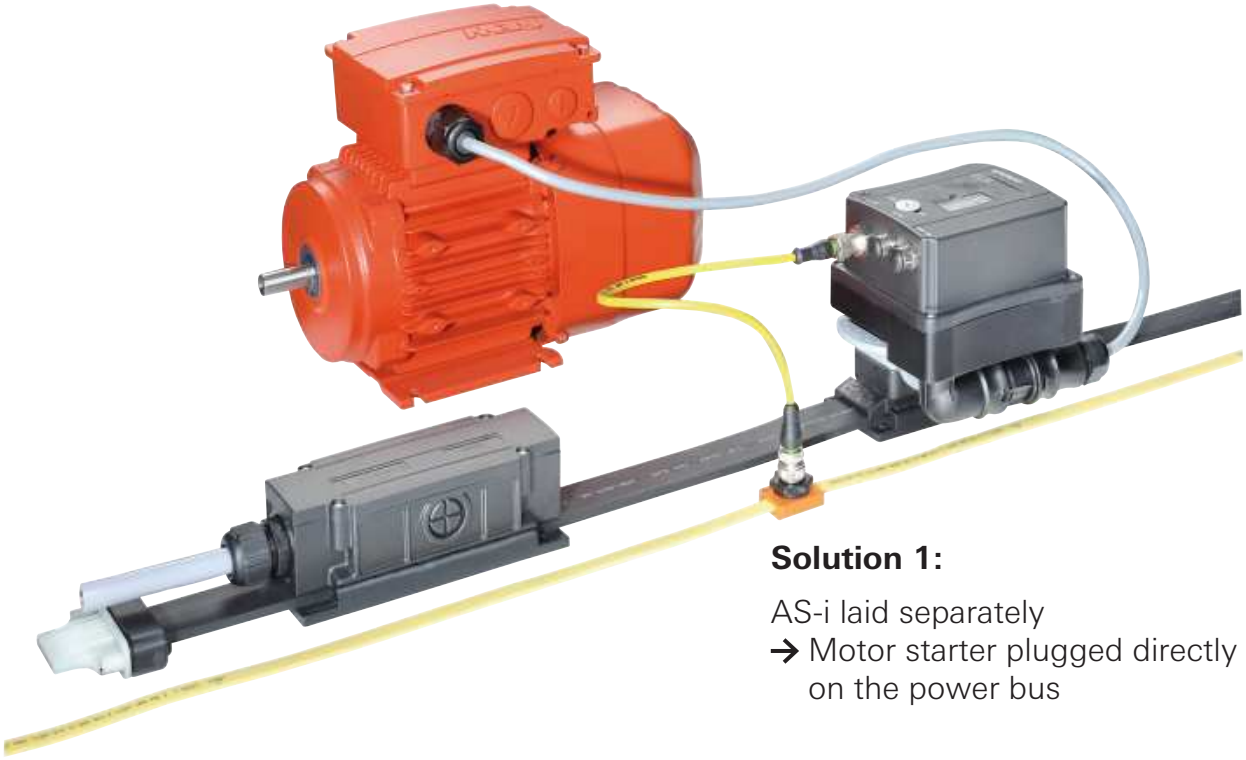


1 Plug together
Power, AS-i, and motor cable connection

2 Configure
Adressing via handheld, configuration via parameter download from the AS-i Master

3 … and start

Direct/reversing starter, direct plug-in



Solution 1:

AS-i laid separately
→ Motor starter plugged directly on the power bus

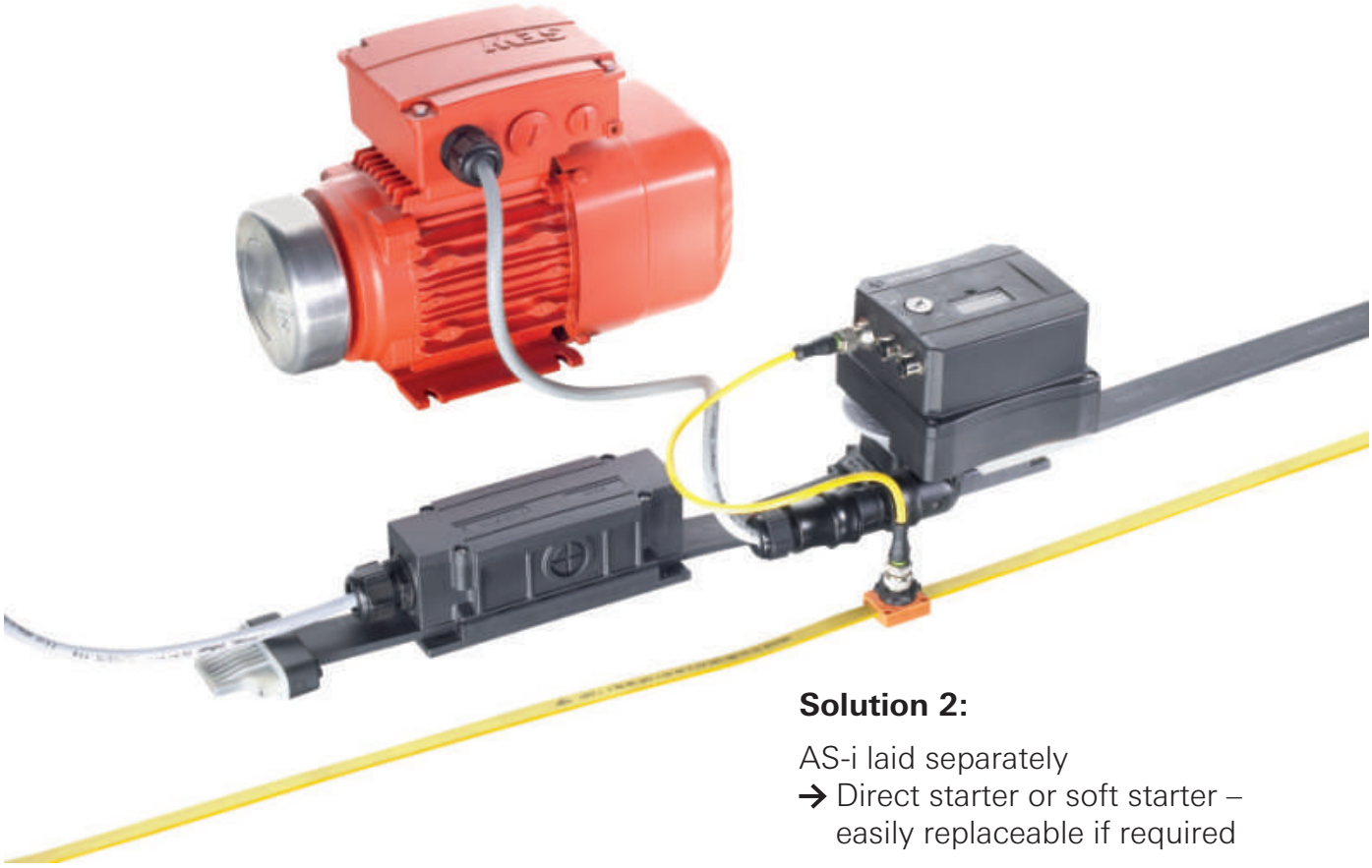
podis MCU FA C 3I/W1.5
Direct/reversing starter, direct plug-in

podis MCU FA C 3I/W1,5; FA C 3I/W1.5; reversing starter for three-phase asynchronous motors with electronic motor protection of 0.09-1.5 kW / 400 VAC; standard AS-i slave; AS-i specification 3.0 for 31 participants; auxiliary power from AS-i; 3 external digital initiator inputs via two M12 sockets; power (400 V) plug-in feed via **podis** outgoing flat cable FCS 4 7 SI BU (75.015.5153.1); AS-i via M12 socket; motor output via RST20i5 black, socket; parameterization of nominal motor current, minimum current, current asymmetry, reversing break, blocking of rotational direction (direct starter) via parameter download AS-i; diagnosis on the device via LED or AS interface

Description	Type	Order No
podis MCU	**FA C 3I/W1.5**	83.222.0009.5

Technical data	
Supply voltage of AC 50 Hz (V)	400
Supply voltage - voltage type	AC
Rated operating current of the motor (A)	4,0
Nominal power of the motor (min.- max.) (kW)	0.09 - 1.5
Frequency range (Hz)	50 - 60
Number of inputs	3
Number of motor outputs	1
AS-i specification	V3.0
Slave type	Standard slave
Current consumption of AS-i (mA)	max. 200
Motor current parameterization available	yes
Brake activation	no
Motor protection via thermistor	no
Motor protection via thermal motor model	yes
Switching rate	max. 1000/h
Conductor connection power feed-in	Plug connection **podis** CON
Connection type AS-i	Plug connection M12
Connection type Sensors	Plug connection M12
Connection type Motor output	Plug connection RST20i5
Degree of protection	IP65
Wall mounting	yes
Mounting orientation	horizontal and vertical
Ambient temperature	-20…+40°C (>40°C Derating)
W x H x D (mm) on FCS 4 7 SI BU	104 x 139 x 134
Approvals	-

The soft starter, plugged directly on the power bus



Solution 2:

AS-i laid separately
→ Direct starter or soft starter – easily replaceable if required

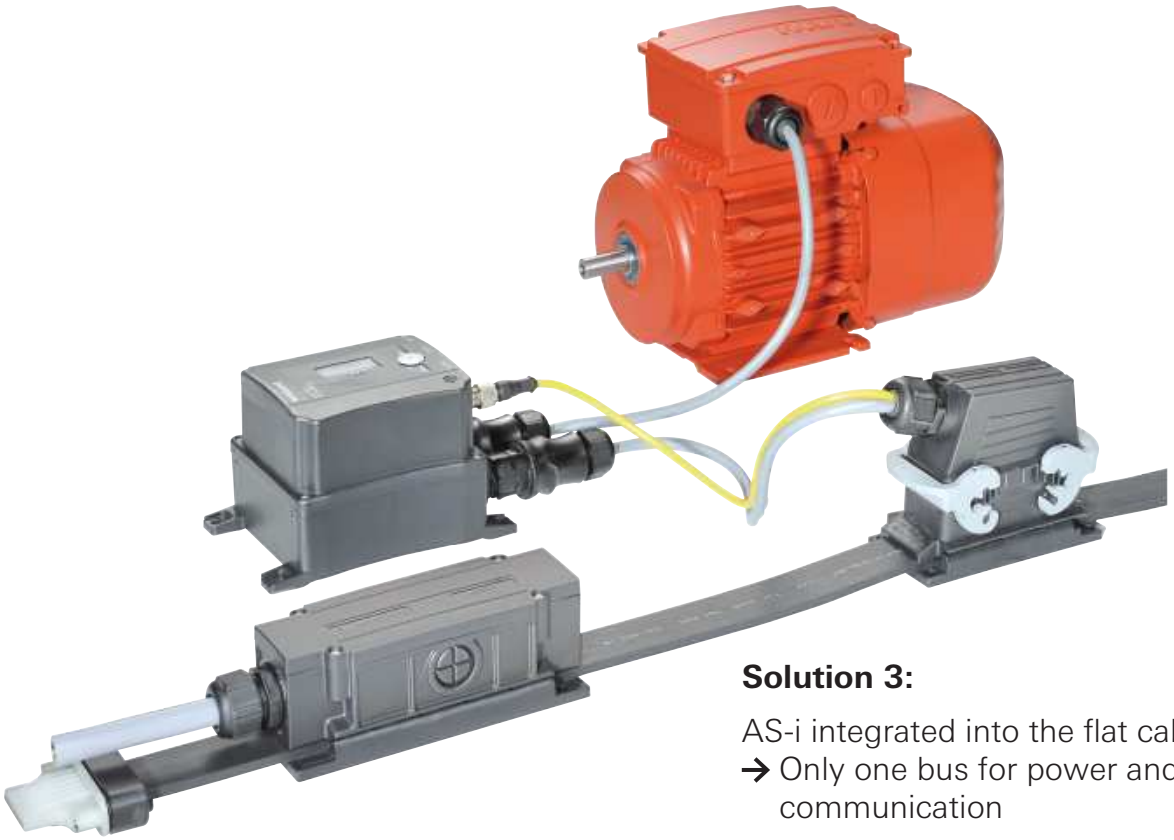
podisMSS FA C 3I/W1,5 soft starter direct plug-in

podisMSS FA C 3I/W1,5; soft starter with reversing function for threephase asynchronous motors of 0.09-1.5 kW / 400 V AC; standard AS-i slave; AS-i specification 3.0 for 31 participants; auxiliary power from AS-i; 3 external digital initiator inputs via two M12 sockets; power (400 V) infeed via podisCON flat cable outgoing feeder (75.015.5153.1) pluggable; motor output via RST20i5 black, socket; function: Soft starting and stopping; reversing function; electronic motor protection; parameterization of nominal motor current, ramp-up time/deceleration time; minimum current, current asymmetry, reversing break, blocking of rotational direction (direct starter) via parameter download AS-i; diagnosis on the device via LED or via AS-Interface

Description	Type	Order No
podisMSS	**FA C 3I/W1.5**	83.223.0009.5

Technical data	
Supply voltage of AC 50 Hz (V)	400
Supply voltage - voltage type	AC
Rated operating current of the motor (A)	4,0
Nominal power of the motor (min.- max.) (kW)	0.09 - 1.5
Frequency range (Hz)	50
Number of inputs	3
Number of motor outputs	1
AS-i specification	V3.0
Slave type	Standard slave
Current consumption of AS-i (mA)	max. 200
Motor current parameterization available	yes
Starting voltage	0-100%
Starting time	0.1-10s
Deceleration time	0.1-10s
Brake activation	no
Motor protection via thermistor	no
Motor protection via thermal motor model	yes
Switching rate max.	1000/h
Conductor connection power feed-in	Plug connection podisCON
Connection type AS-i	Plug connection M12
Connection type Sensors	Plug connection M12
Connection type Motor output	Plug connection RST20i5
Degree of protection	IP65
Wall mounting	yes
Mounting orientation	horizontal and vertical
Ambient temperature	-20…+40°C (>40°C Derating)
W x H x D (mm) on FCS 4 7 SI BU	104 x 139 x 152
Approvals	-

The direct/reversing starter, mounted remotely from the power bus



Solution 3:

AS-i integrated into the flat cable
→ Only one bus for power and communication

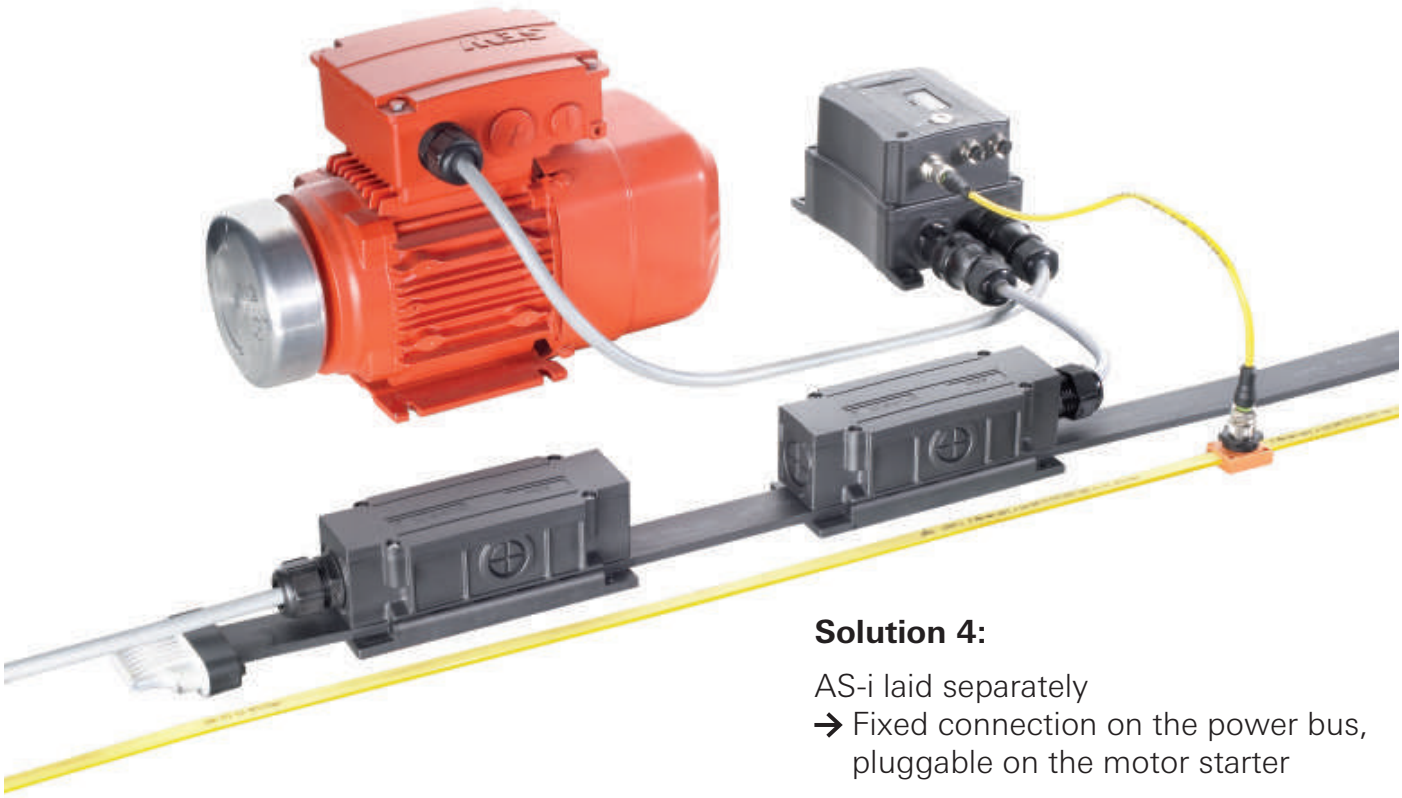
gesis MCU PA V 3I/W1.5
Direct/reversing starter, remote

gesis MCU PA V 3I/W1.5; reversing starter for three-phase asynchronous motors with electronic motor protection of 0.09-1.5 kW / 400 VAC; standard AS-i slave; AS-i specification 3.0 for 31 participants; auxiliary power from AS-i; 3 external digital initiator inputs via two M12 sockets; power (400 V) feed-in via RST 20i5 black, plug; motor output via RST 20i5 black, socket; parameterization of nominal motor current, minimum current, current asymmetry, reversing break, blocking of rotational direction (direct starter) via parameter download AS-i; diagnosis on the device via LED or AS interface

Description	Type	Order No
gesis MCU	**PA V 3I/W1.5**	83.234.0009.5

Technical data	
Supply voltage of AC 50 Hz (V)	400
Supply voltage - voltage type	AC
Rated operating current of the motor (A)	4,0
Nominal power of the motor (min.- max.) (kW)	0.09 - 1.5
Frequency range (Hz)	50 - 60
Number of inputs	3
Number of motor outputs	1
AS-i specification	V3.0
Slave type	Standard slave
Current consumption of AS-i (mA)	max. 200
Motor current parameterization available	yes
Brake activation	no
Motor protection via thermistor	no
Motor protection via thermal motor model	yes
Switching rate	max. 1000/h
Conductor connection power feed-in	Plug connection RST20i5
Connection type AS-i	Plug connection M12
Connection type Sensors	Plug connection M12
Connection type Motor output	Plug connection RST20i5
Degree of protection	IP65
Wall mounting	yes
Mounting orientation	horizontal and vertical
Ambient temperature	-20…+40 °C (>40 °C Derating)
W x H x D (mm)	104 x 96 x 161
Approvals	-

The soft starter, mounted remotely from the power bus



Solution 4:

AS-i laid separately
→ Fixed connection on the power bus, pluggable on the motor starter

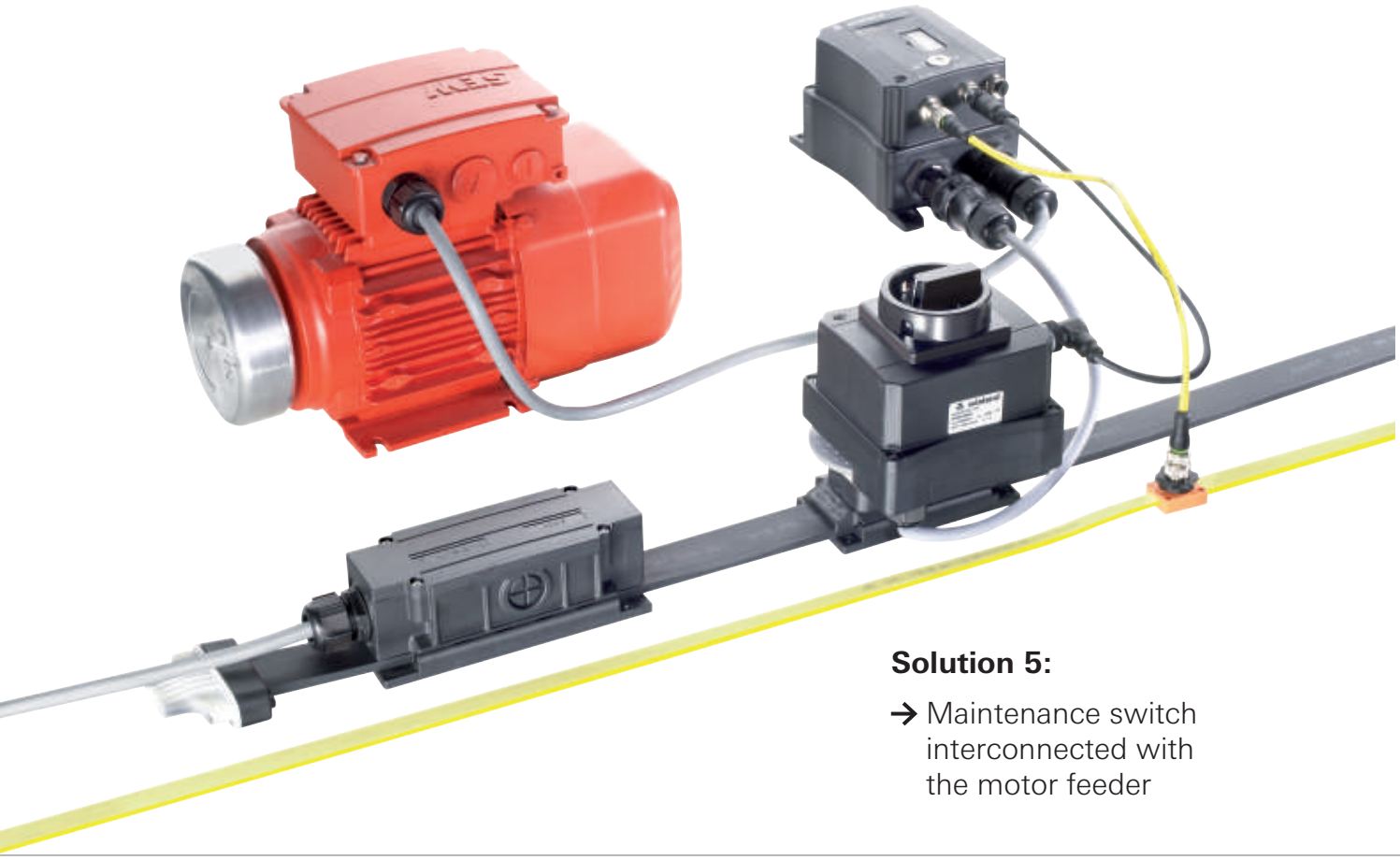
gesis MSS PA V 3I/W1,5
Soft starter direct plug-in

gesis MSS PA V 3I/W1,5; soft starters with reversing function for three-phase asynchronous motors of 0.09 - 1.5 kW / 400 V AC; standard AS-i slave; AS-i specification 3.0 for 31 participants; auxiliary power from AS-i; 3 external digital initiator inputs via two M12 sockets; power (400 V) infeed via RST20i5 black, plug; motor output via RST20i5 black, socket; function: Soft starting and stopping; reversing function; electronic motor protection; parameterization of nominal motor current, ramp-up time/deceleration time; minimum current, current asymmetry, reversing break, blocking of rotational direction (direct starter) via parameter download AS-i; diagnosis on the device via LED or via AS-Interface

Description	Type	Order No
gesis MSS	**PA V 3I/W1.5**	83.235.0009.5

Technical data	
Supply voltage of AC 50 Hz (V)	400
Supply voltage - voltage type	AC
Rated operating current of the motor (A)	4,0
Nominal power of the motor (min.- max.) (kW)	0.09 - 1.5
Frequency range (Hz)	50
Number of inputs	3
Number of motor outputs	1
AS-i specification	V3.0
Slave type	Standard slave
Current consumption of AS-i (mA)	max. 200
Motor current parameterization available	yes
Starting voltage	0-100%
Starting time	0.1-10s
Deceleration time	0.1-10s
Brake activation	no
Motor protection via thermistor	no
Motor protection via thermal motor model	yes
Switching rate max.	1000/h
Conductor connection power feed-in	Plug connection RST20i5
Connection type AS-i	Plug connection M12
Connection type Sensors	Plug connection M12
Connection type Motor output	Plug connection RST20i5
Degree of protection	IP65
Wall mounting	yes
Mounting orientation	horizontal and vertical
Ambient temperature	-20…+40 °C (>40 °C Derating)
W x H x D (mm)	108 x 96 x 161
Approvals	-

The maintenance switch plugged directly on the power bus



Solution 5:

→ Maintenance switch interconnected with the motor feeder

podisSWITCH F CM 3P1S 25A maintenance switch direct plug-in

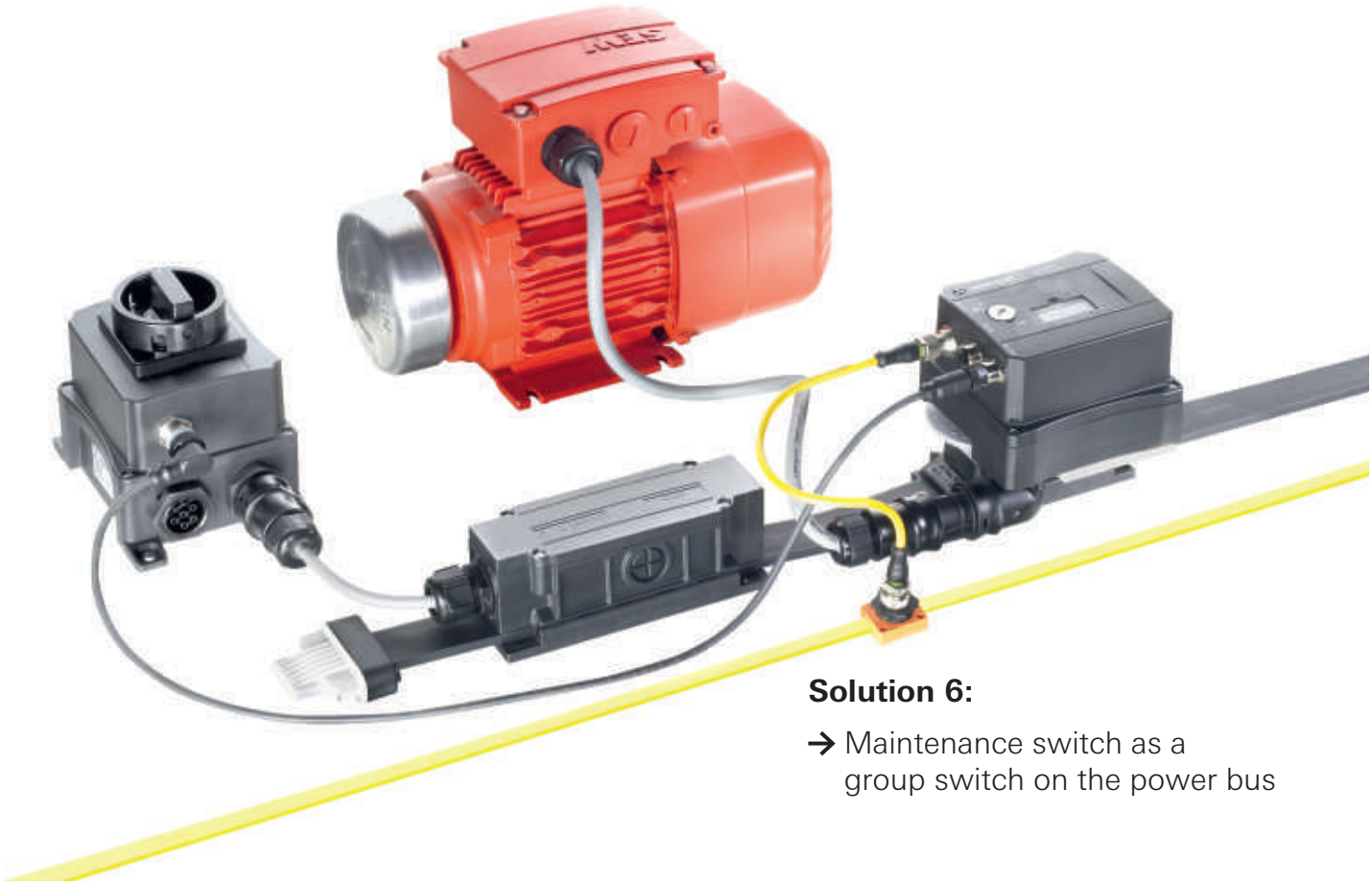
podisSWITCH F CM 3P1S 25 A; podisCON plug with maintenance switch; 400 V AC, 3-pole with additional auxiliary contact; switch position indicator on M12 plug; rated continuous current Iu = 25 A; switching capacity according to AC23A/B = 11 kW / 400 V; according to AC3 = 7.5 kW / 400 V

Figure similar (here with M20 screw connection)

Description	Type	Order No
podisSWITCH	**F CM 3P1S 25A**	83.226.0009.5

Technical data	
Nominal voltage (V)	400
Nominal current (A)	25
Conductor connection power feed-in	Plug connection podiscon
Conductor connection power feed-in	Plug connection RST20i5
Degree of protection	IP65
Wall mounting	yes
Mounting orientation	horizontal and vertical
W x H x D (mm) on FCS 4 7 SI BU	104 x 171 x 132
Approvals	-
Technical data switch	
Operating voltage (V)	400
Rated current AC-23 A (A)	25
Rated power AC-23 A/B (kW)	11
Rated power AC-3 (kW)	7,5
Number of poles	3
Auxiliary contact switch position (M12)	Yes

The maintenance switch, mounted remotely from the power bus



Solution 6:

→ Maintenance switch as a group switch on the power bus

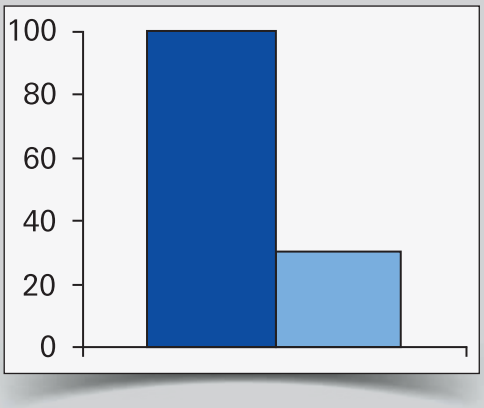
gesis SWITCH P CM 3P1S 20A maintenance switch on the power bus

gesis SWITCH P CM 3P1S 20 A; RST distributor box with maintenance switch; 400 V AC, 3-pole with additional auxiliary contact; switch position indicator on M12 plug; rated continuous current Iu = 20 A; switching capacity according to AC23A/B = 11 kW / 400 V; according to AC3 = 7.5 kW / 400 V

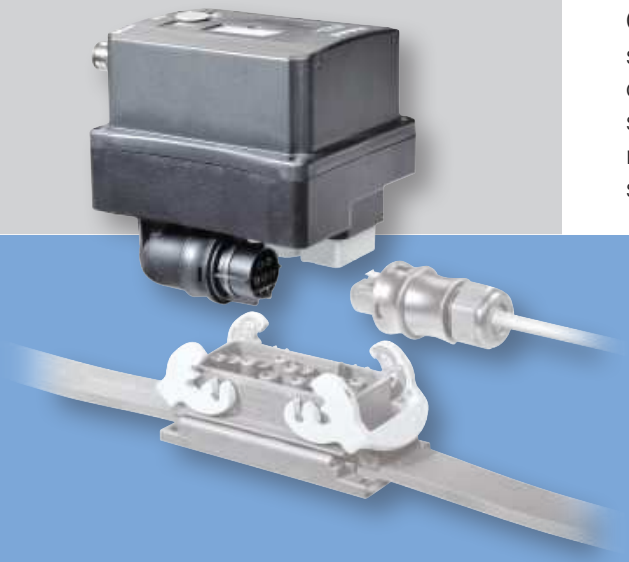
Description	Type	Order No
gesis SWITCH	**P CM 3P1S 20A**	83.236.0009.5
Technical data		
Nominal voltage (V)		400
Nominal current (A)		20
Conductor connection power feed-in		Plug connection RST20i5
Connection type output switched		Plug connection RST20i5
Connection type output power bus unswitched		Plug connection RST20i5
Degree of protection		IP65
Wall mounting		yes
Mounting orientation		horizontal and vertical
W x H x D (mm)		104 x 168 x 130
Approvals		-
Technical data switch		
Operating voltage (V)		400
Rated current AC-23 A (A)		25
Rated power AC-23 A/B (kW)		11
Rated power AC-3 (kW)		7,5
Number of poles		3
Auxiliary contact switch position (M12)		Yes

Reduce costs with podis®

Enormous savings potential (50-80%)



Installation area	**– 50%**
Assembly time	**– 30 bis 70%**
Installation time	**– 50 bis 80%**
Cable distances	**– 40 bis 70%**
Commissioning	**– 50%**
Maintenance	**– 50%**



Saves space
Compact motor starter for direct or reversing start of asynchronous motors up to 1.5 kW (2.01 hp). Cable routing to the rear optimized for installation in wiring ducts or wire mesh cable tray. The modules can be positioned one directly after another, thus saving space in the installation.

Easy assembly
The motor starter is plugged directly onto the power bus in the wiring duct – no additional mounting plate for the motor starter is required.

Fast installation
All drives and sensors are connected via a power or communication bus, installed at any point without stripping of wires or removal of insulation; plug and play connection of pre-assembled wire harnesses to the drive and sensor – finished.

Reduced cable requirements
The decentralized installation means that the total length of cables installed, and the corresponding fire protection requirements, can be reduced by up to 70%.

Easy commissioning
Plug in the motor starter – download parameters – start. Easy connectorized replacement of the modules.

Simplified maintenance
On-site diagnostics via LEDs reduces troubleshooting time. The motor starter can be replaced quickly and error-free through the pluggable design of the modules. For setup or test mode, the motor starter can be replaced by a reversing switch.

Components on the power bus

podis®CON
power bus solutions

PVC 7G2,5 (VDE)
00.705.0503.3

EVA 7G4 (VDE)
00.709.0504.1

XLPE 7AWG12 (UL)
00.729.0504.1

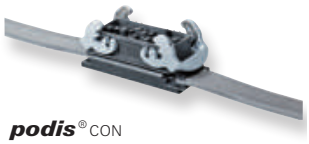
Power bus

Three coded 7-pole power bus cables are available:
PVC for standard applications
EVA for more demanding requirements
XLPE cable with UL1277 approval

This enables 400 V and the 24 V DC auxiliary power or the AS-i bus signals to be optimally distributed in one cable in the field. Connection is made without trimming or stripping via penetration contacts.

podis®CON
connection module
75.018.0051.2

podis®CON connector
75.015.0151.0



podis®CON
pluggable feeder
75.015.5153.1

The basic components

Fixed and pluggable power bus tap modules are available as basic components. A comprehensive range accessories such as bus terminations and tools for optimum handling complete the system.

Pluggable functional components

Both plugs or functional components such as maintenance sockets for light and power current and maintenance switches for repair work can be freely plugged onto the pluggable basic feeder.

podis®CON
Schuko power receptacle
83.315.0001.1

podis®CON
Heavy duty power receptacle
83.315.0002.1

podis®LED 24V DC 5W
LED lamps
83.240.0010.0

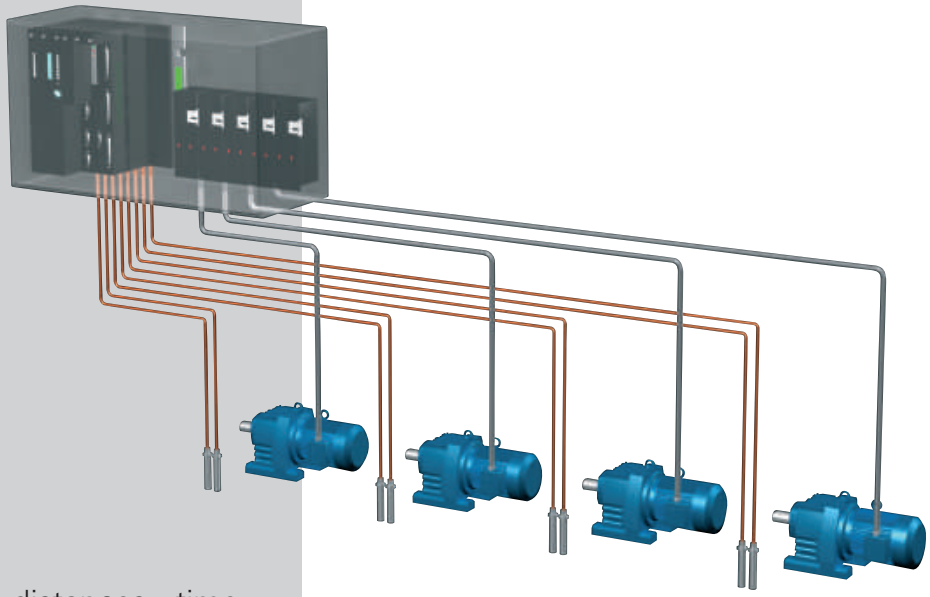
Active function modules

Completing the set of motor starters and field distributors, many active components are available to control SEW MOVIMOT / MOVISWITCH drives, I/O modules with single-phase switches for flaps and valvs. The robust LED luminaire ***podis***®LED for applications in rough industrial environments round out the ***podis***® product portfolio.

For general information, news and our e-catalog, please refer to: www.wieland-electric.com

More technical information is available in our catalog „*podis*® Decentralized automation" Order Nr. 0830.1

Central installation – previously current practice



Central

Long cabling distances, time-consuming installation, difficult upgrading and expansion are all characteristic of central installation.

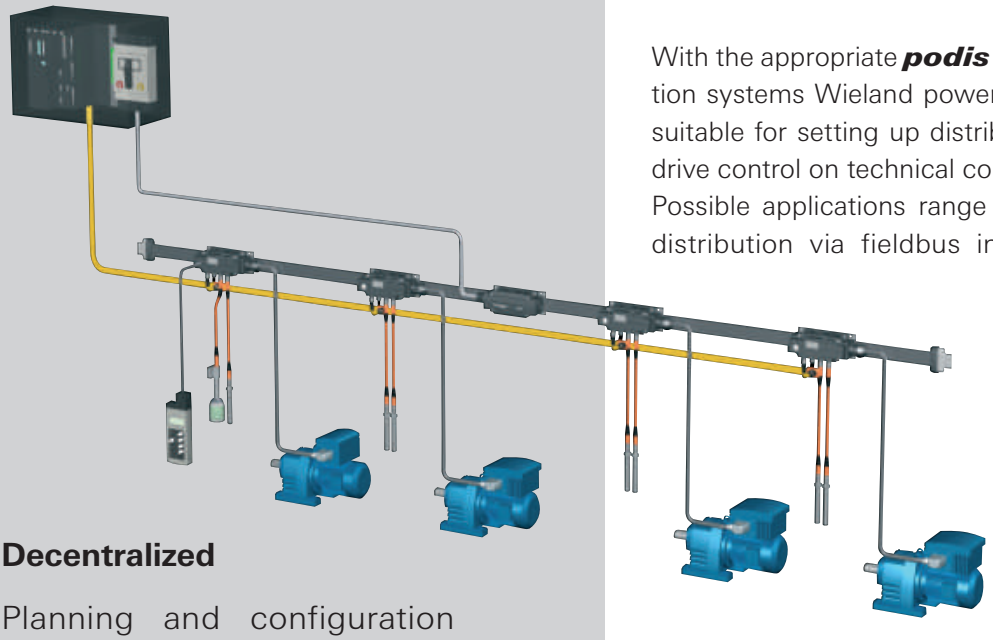
Features of central installation:

- Time-consuming planning and configuration
- Large control cabinets
- Long cabling distances
- Complicated cable trays
- Difficult commissioning
- Costly expansions

Central installation has been state of the art for many decades. It has served its purpose well in industrial automation. Its features include control cabinet fields with controllers, power distribution, motor circuit breakers and motor starters or frequency inverters. Cables connect the control cabinets and the individual drives as well as the sensors in the system or the machine.

In extensive systems this creates full cable trays and requires time-consuming installation. When system parts have to be changed or expanded this creates the need for more control cabinet volume. Cables must be installed retroactively throughout the entire system.

Decentralized installation – the smart solution



Decentralized

Planning and configuration require less work. More space in the control cabinet. Simple installation and expansion.

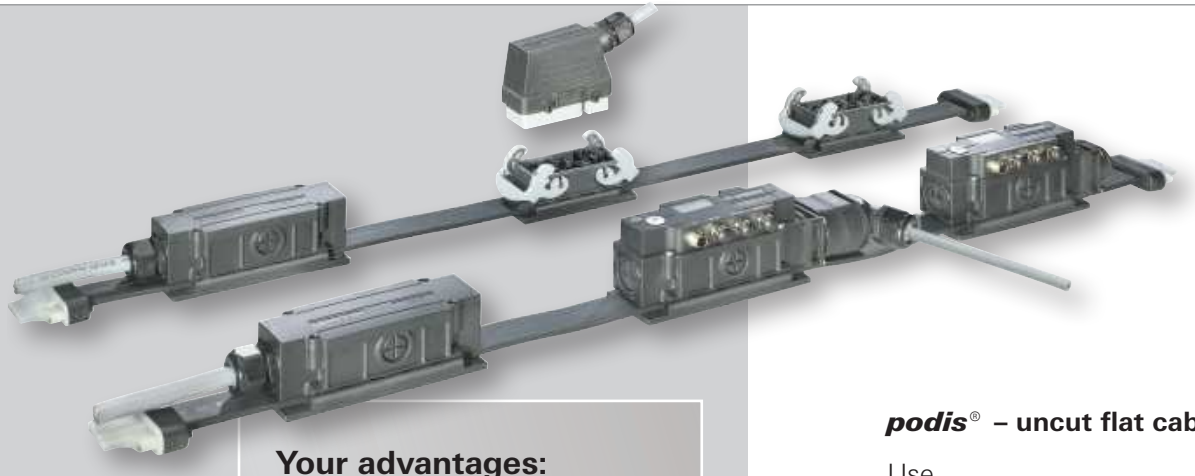
Advantages of decentralized installation:

- Simple configuration
- Short installation times
- Fast commissioning
- Flexible retrofitting
- Easy expansion
- Much less system downtime
- On-site diagnosis
- Maintenance-friendly, plug connection technology
- Optimal maintenance and repair

With the appropriate ***podis®/gesis®*** installation systems Wieland power bus concepts are suitable for setting up distributed solutions for drive control on technical conveyor systems. Possible applications range from pure power-distribution via fieldbus interface to motor starters for switching three-phase asynchronous motors. The connection to a fieldbus is integrated in the field distributor or motor starter and it is possible to connect sensors in addition to the drives.

The compact design and high protection rating (IP65) allow optimal integration even under cramped system conditions. That reduces planning and configuration time and saves space in the control cabinet

The right solution for every application... Two systems with individual advantages



Your advantages:

- No cutting, no stripping
- Quick and easy connection
- Reliable contacts
- Few individual components
- Easy-to-add circuits wherever needed

podis® – uncut flat cable

Use...

- in technical conveyor systems
- for linear system setup
- for widespread structures
- for recurring function-units

Your advantages:

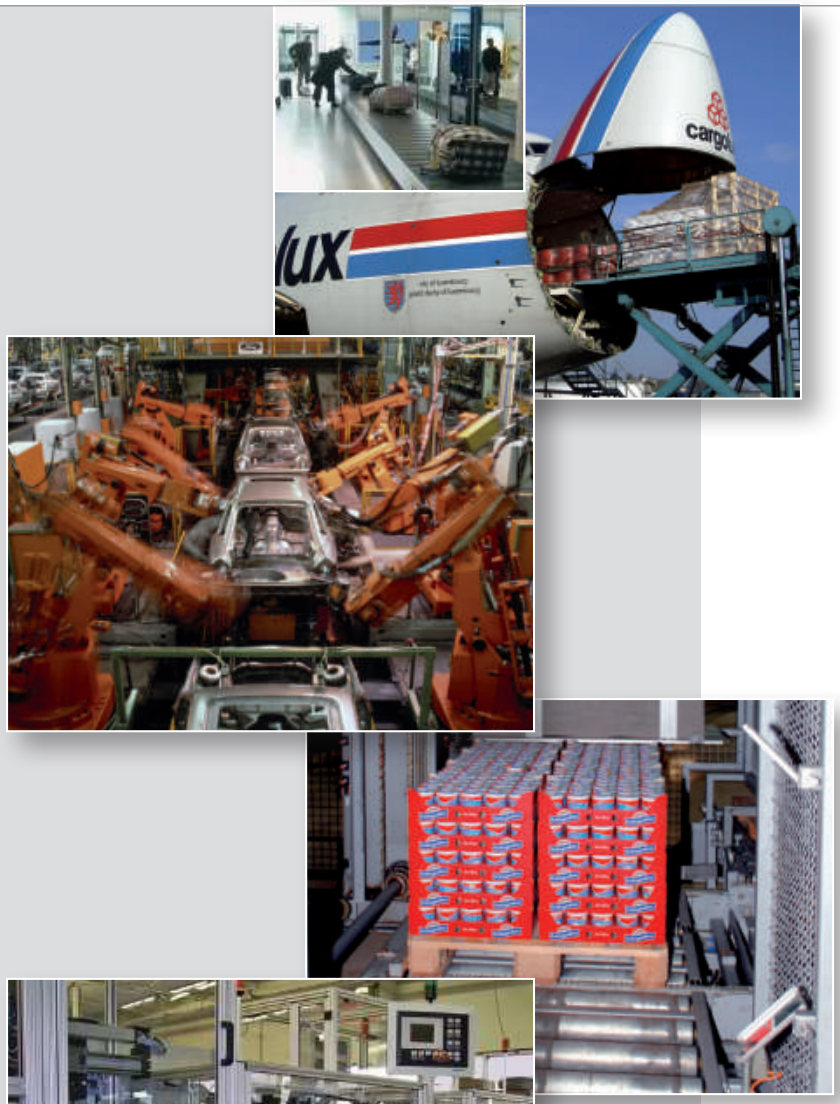
- Plug in, ready, go
- Ideal for modular systems
- Easy setup of network structures
- Few individual components
- Expandable as desired

gesis® – plug-in round cable

Use...

- in technical conveyor systems
- for modular system setup
- for star or network structures
- for difficult cable routing

Application areas for distributed automation



Airport logistics

- Baggage and Cargo
- Conveyor technology

Automotive

- Skid conveyor technology
- Power & Free systems
- Floor conveyor technology
- Pulling chain conveyors
- Pallet conveyor technology

Intra logistics

- Roller conveyors
- Belt conveyors
- Chain conveyors
- Pallet transportation
- Package conveyors

Mechanical engineering

- Packaging machines
- Construction machinery
- Robots
- Prototype construction

Wind energy systems

- Tower lighting
- Maintenance sockets
- Emergency lighting
- Central/distributed UPS

wieland

Headquarters:
Wieland Electric GmbH
Brennerstraße 10 – 14
96052 Bamberg, Germany

Sales Center:
Wieland Electric GmbH
Benzstraße 9
96052 Bamberg, Germany

Phone +49 (951) 9324-0
Fax +49 (951) 9324-198
www.wieland-electric.com
info@wieland-electric.com

Technical Support for Remote Automation Technology:
Phone +49 (951) 9324-995
Fax +49 (951) 9326-991
AT.TS@wieland-electric.com

Our subsidiaries

USA
Wieland Electric Inc.
North American Headquarters
2889 Brighton Road
Oakville, Ontario L6H 6C9
Phone +1 905 8298414
Fax +1 905 829 413
www.wielandinc.com

CANADA
Wieland Electric Inc.
North American Headquarters
2889 Brighton Road
Oakville, Ontario L6H 6C9
Phone +1 905 8298414
Fax +1 905 829 413
www.wieland-electric.ca

GREAT BRITAIN
Wieland Electric Ltd.
Riverside Business Centre,
Walnut Tree Close
GB Guildford/Surrey GU1 4UG
Phone +44 1483 531213
Fax +44 1483 505029
sales.uk@wieland-electric.com

FRANCE
Wieland Electric SARL.
Le Céramê Hall 6
47, avenue des Genottes
CS 48313,
95803 Cergy-Pontoise Cedex
Phone +33 1 30320707
Fax +33 1 30320717
info.adv@wieland-electric.com

SPAIN
Wieland Electric S.L.
C/ Maria Auxiliadora 2 bajos
E-08017 Barcelona
Phone +34 93 2523820
Fax +34 93 2523825
ventas@wieland-electric.com

ITALY
Wieland Electric S.r.l.
Via Edison, 209
I-20019 Settimo Milanese
Phone +39 02 48 916357
Fax +39 02 48 920685
info.italy@wieland-electric.com

POLAND
Wieland Electric Sp. Zo.o.
Św. Antoniego 8
62-080 Swadzim
Phone +48 61 2225400
Fax +48 61 8407166
office@wieland-electric.pl

CHINA
Wieland Electric Trading
Unit 2703 International
Soho City 889 Renmin Road
Huang Pu District
PRC-Shanghai 200010
Phone +86 21 63555833
Fax +86 21 63550090
info-shanghai@wieland-electric.com

DENMARK
Wieland Electric A/S
Vallørækken 26
DK-4600 Køge
Phone +45 70 266635
Fax +45 70 266637
sales.denmark@wieland-electric.com

BELGIUM
ATEM – Wieland Electric NV
Bedrijvenpark De Veert 4
B-2830 Willebroek
Phone +32 3 8661800
Fax +32 3 8661828
info.belgium@wieland-electric.com

Agencies:
You can reach us worldwide in more than 40 countries.
Find the contact adress at:
www.wieland-electric.com

Informational brochures for downloading from our website

For technical details use our eCatalog on our website at https://eshop.wieland-electric.com

0833.1 S 07/13

contacts are green.

Wieland worldwide