

Reactors



Capacitors



Capacitor contactors



HRC fuses



Power factor correction spare parts and accessories

# Component selection table for a nominal voltage 400 V – 50 Hz

De-tuned power factor correction							
De-tuning factor %	Reactive output in kvar	Capacitor Item no.	Filter circuit reactors Item no.	Capacitor contactor Item no.	Cable diameter (mm <sup>2</sup> )	HRC fuse socket Item no.	HRC fuses Item no.
7	2.50	1 x JCP525 / 4.17-D 19.02.275	FKD 2.50 kvar / 7 % 04.01.500	KS 12.5 kvar / K3-18ND10230 01.02.025	4	NH / RSUmB / Gr00 / 3p 05.03.002	NHS10Gr00 05.05.000
7	5.00	1 x JCP525 / 8.33-D 19.02.249	FKD 5.00 kvar / 7 % 04.01.509	KS 12.5 kvar / K3-18ND10230 01.02.025	4	NH / RSUmB / Gr00 / 3p 05.03.002	NHS10Gr00 05.05.000
7	6.25	1 x JCS525 / 10.0-D 19.02.150	FKD 6.25 kvar / 7 % 04.01.510	KS 12.5 kvar / K3-18ND10230 01.02.025	4	NH / RSUmB / Gr00 / 3p 05.03.002	NHS16Gr00 05.05.001
7	10.00	1 x JCP400 / 9.30-D 19.02.219	FKD 10.0 kvar / 7 % 04.01.501	KS 12.5 kvar / K3-18ND10230 01.02.025	10	NH / RSUmB / Gr00 / 3p 05.03.002	NHS25Gr00 05.05.002
7	12.50	1 x JCP400 / 11.7-D 19.02.221	FKD 12.5 kvar / 7 % 04.01.502	KS 12.5 kvar / K3-18ND10230 01.02.025	10	NH / RSUmB / Gr00 / 3p 05.03.002	NHS25Gr00 05.05.002
7	15.00	1 x JCP400 / 9.30-D 19.02.221 1 x JCP525 / 8.30-D 19.02.249	FKD 15 kvar / 7 % 04.01.512	KS 20.0 kvar / K3-24A00230 01.02.026	10	NH / RSUmB / Gr00 / 3p 05.03.002	NHS35Gr00 05.05.003
7	20.00	2 x JCP400 / 9.30-D 19.02.219	FKD 20.0 kvar / 7 % 04.01.503	KS 20.0 kvar / K3-24A00230 01.02.026	10	NH / RSUmB / Gr00 / 3p 05.03.002	NHS50Gr00 05.05.004
7	25.00	2 x JCP400 / 11.7-D 19.02.221	FKD 25.0 kvar / 7 % 04.01.504	KS 25.0 kvar / K3-32A00230 01.02.027	16	NH / RSUmB / Gr00 / 3p 05.03.002	NHS63Gr00 05.05.005
7	30.00	3 x JCP400 / 9.30-D 19.02.219	FKD 30.0 kvar / 7 % 04.01.505	KS 50.0 kvar / K3-62A00230 01.02.029	35	NH / RSUmB / Gr00 / 3p 05.03.002	NHS63Gr00 05.05.005
7	40.00	3 x JCS440 / 15.0-D 19.02.125	FKD 40.0 kvar / 7 % 04.01.506	KS 50.0 kvar / K3-62A00230 01.02.029	35	NH / RSUmB / Gr00 / 3p 05.03.002	NHS100Gr00 05.05.007
7	50.00	4 x JCP400 / 11.7-D 19.0.2221	FKD 50.0 kvar / 7 % 04.01.507	KS 50.0 kvar / K3-62A00230 01.02.029	50	NH / RSUmB / Gr00 / 3p 05.03.002	NHS125Gr00 05.05.008
14	2.50	1 x JCP525 / 4.17-D 19.02.275	FKD 2.50 kvar / 14 % 04.01.525	KS 12.5 kvar / K3-18ND10230 01.02.025	4	NH / RSUmB / Gr00 / 3p 05.03.002	NHS10Gr00 05.05.000
14	5.00	1 x JCP525 / 7.70-D 19.02.202	FKD 5.00 kvar / 14 % 04.01.526	KS 12.5 kvar / K3-18ND10230 01.02.025	4	NH / RSUmB / Gr00 / 3p 05.03.002	NHS10Gr00 05.05.000
14	6.25	1 x JCP480 / 7.20-D 19.02.210	FKD 6.25 kvar / 14 % 04.01.529	KS 12.5 kvar / K3-18ND10230 01.02.025	4	NH / RSUmB / Gr00 / 3p 05.03.002	NHS16Gr00 05.05.001
14	10.00	1 x JCS525 / 15.0-D 19.02.103	FKD 10.0 kvar / 14 % 04.01.528	KS 12.5 kvar / K3-18ND10230 01.02.025	10	NH / RSUmB / Gr00 / 3p 05.03.002	NHS25Gr00 05.05.002
14	12.50	1 x JCS525 / 12.5-D 19.02.180 1 x JCP525 / 5.90-D 19.02.270	FKD 12.5 kvar / 14 % 04.01.530	KS 12.5 kvar / K3-18ND10230 01.02.025	10	NH / RSUmB / Gr00 / 3p 05.03.002	NHS25Gr00 05.05.002
14	15.00	1 x JCS525 / 12.5-D 19.02.180 1 x JCP525 / 10.0-D 19.02.150	FKD 15 kvar / 14 % 04.01.563	KS 20.0 kvar / K3-24A00230 01.02.026	10	NH / RSUmB / Gr00 / 3p 05.03.002	NHS35Gr00 05.05.003
14	20.00	1 x JCS525 / 12.5-D 19.02.180 1 x JCS525 / 15.0-D 19.02.103"	FKD 20.0 kvar / 14 % 04.01.531	KS 25.0 kvar / K3-32A00230 01.02.027	10	NH / RSUmB / Gr00 / 3p 05.03.002	NHS50Gr00 05.05.004
14	25.00	3 x JCS525 / 12.5-D 19.02.180	FKD 25.0 kvar / 14 % 04.01.532	KS 50.0 kvar / K3-62A00230 01.02.029	16	NH / RSUmB / Gr00 / 3p 05.03.002	NHS63Gr00 05.05.005
14	30.00	3 x JCS525 / 15.0-D 19.02.103	FKD 30.0 kvar / 14 % 04.01.561	KS 50.0 kvar / K3-62A00230 01.02.029	35	NH / RSUmB / Gr00 / 3p 05.03.002	NHS63Gr00 05.05.005
14	40.00	1 x JCS525 / 12.5-D 19.02.180 3 x JCS525 / 15.0-D 19.02.103	FKD 40.0 kvar / 14 % 04.01.533	KS 50.0 kvar / K3-62A00230 01.02.029	35	NH / RSUmB / Gr00 / 3p 05.03.002	NHS100Gr00 05.05.007
14	50.00	1 x JCS525 / 12.5-D 19.02.180 4 x JCS525 / 15.0-D 19.02.103	FKD 50.0 kvar / 14 % 04.01.534	KS 50.0 kvar / K3-62A00230 01.02.029	50	NH / RSUmB / Gr00 / 3p 05.03.002	NHS125Gr00 05.05.008

# Component selection table for dynamic PFC

Dynamic power factor correction							
De-tuning factor %	Reactive output in kvar	Capacitor Item no.	Filter circuit reactors Item no.	Thyristor actuator Item no.	Cable diameter (mm <sup>2</sup> )	HRC fuse socket Item no.	HRC fuses Item no.
7	2.50	1 x JCP525 / 4.17-D 19.02.275	FKD 2.50 kvar / 7 % 04.01.500	TSM-LC10THY 01.02.504	4	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/20A/Ultra Quick 05.05.068
7	5.00	1 x JCP525 / 8.33-D 19.02.249	FKD 5.00 kvar / 7 % 04.01.509	TSM-LC10THY 01.02.504	4	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/20A/Ultra Quick 05.05.068
7	6.25	1 x JCS525 / 10.0-D 19.02.150	FKD 6.25 kvar / 7 % 04.01.510	TSM-LC10THY 01.02.504	4	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/20A/Ultra Quick 05.05.068
7	10.00	1 x JCP400 / 9.30-D 19.02.219	FKD 10.0 kvar / 7 % 04.01.501	TSM-LC10THY 01.02.504	10	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/25A/Ultra Quick 05.05.066
7	12.50	1 x JCP400 / 11.7-D 19.02.221	FKD 12.5 kvar / 7 % 04.01.502	TSM-LC10THY 01.02.504	10	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/25A/Ultra Quick 05.05.066
7	15.00	1 x JCP400 / 9.30-D 19.02.221 1 x JCP525 / 8.30-D 19.02.249	FKD 15 kvar / 7 % 04.01.512	TSM-LC25THY 01.02.505	10	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/50A/Ultra Quick 05.05.065
7	20.00	2 x JCP400 / 9.30-D 19.02.219	FKD 20.0 kvar / 7 % 04.01.503	TSM-LC25THY 01.02.505	10	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/50A/Ultra Quick 05.05.065
7	25.00	2 x JCP400 / 11.7-D 19.02.221	FKD 25.0 kvar / 7 % 04.01.504	TSM-LC25THY 01.02.505	16	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/63A/Ultra Quick 05.05.061
7	30.00	3 x JCP400 / 9.30-D 19.02.219	FKD 30.0 kvar / 7 % 04.01.505	TSM-LC50THY 01.02.503	35	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/63A/Ultra Quick 05.05.061
7	40.00	3 x JCS440 / 15.0-D 19.02.125	FKD 40.0 kvar / 7 % 04.01.506	TSM-LC50THY 01.02.503	35	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/100A/Ultra Quick 05.05.064
7	50.00	4 x JCP400 / 11.7-D 19.02.221	FKD 50.0 kvar / 7 % 04.01.507	TSM-LC50THY 01.02.503	50	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/125A/Ultra Quick 05.05.062
14	2.50	1 x JCP525 / 4.17-D 19.02.275	FKD 2.50 kvar / 14 % 04.01.525	TSM-LC10THY 01.02.504	4	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/20A/Ultra Quick 05.05.068
14	5.00	1 x JCP525 / 7.70-D 19.02.202	FKD 5.00 kvar / 14 % 04.01.526	TSM-LC10THY 01.02.504	4	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/20A/Ultra Quick 05.05.068
14	6.25	1 x JCP480 / 7.20-D 19.02.210	FKD 6.25 kvar / 14 % 04.01.529	TSM-LC10THY 01.02.504	4	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/20A/Ultra Quick 05.05.068
14	10.00	1 x JCS525 / 15.0-D 19.02.103	FKD 10.0 kvar / 14 % 04.01.528	TSM-LC10THY 01.02.504	10	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/25A/Ultra Quick 05.05.066
14	12.50	1 x JCS525 / 12.5-D 19.02.180 1 x JCP525 / 5.90-D 19.02.270	FKD 12.5 kvar / 14 % 04.01.530	TSM-LC10THY 01.02.504	10	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/25A/Ultra Quick 05.05.066
14	15.00	1 x JCS525 / 12.5-D 19.02.180 1 x JCP525 / 10.0-D 19.02.150	FKD 15 kvar / 14 % 04.01.563	TSM-LC25THY 01.02.505	10	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/50A/Ultra Quick 05.05.065
14	20.00	1 x JCS525 / 12.5-D 19.02.180 1 x JCS525 / 15.0-D 19.02.103	FKD 20.0 kvar / 14 % 04.01.531	TSM-LC25THY 01.02.505	10	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/50A/Ultra Quick 05.05.065
14	25.00	3 x JCS525 / 12.5-D 19.02.180	FKD 25.0 kvar / 14 % 04.01.532	TSM-LC25THY 01.02.505	16	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/63A/Ultra Quick 05.05.061
14	30.00	3 x JCS525 / 15.0-D 19.02.103	FKD 30.0 kvar / 14 % 04.01.561	TSM-LC50THY 01.02.503	35	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/63A/Ultra Quick 05.05.061
14	40.00	1 x JCS525 / 12.5-D 19.02.180 3 x JCS525 / 15.0-D 19.02.103	FKD 40.0 kvar / 14 % 04.01.533	TSM-LC50THY 01.02.503	35	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/100A/Ultra Quick 05.05.064
14	50.00	1 x JCS525 / 12.5-D 19.02.180 4 x JCS525 / 15.0-D 19.02.103	FKD 50.0 kvar / 14 % 04.01.534	TSM-LC50THY 01.02.503	50	NH / RSUmB / Gr00 / 3p 05.03.002	NH00/125A/Ultra Quick 05.05.062

## PFC-Accessories

### Dynamic power factor correction

Thyristor control modules		
Item	Weight in kg	Item no.
Control module with Prophi® 6T controller (for 6 capacitor stages) MCCB, CT terminals and 2 m connection cable (mounted on the capacitor module)	3	50.10.003
Control module with Prophi® 12T controller (for 12 capacitor stages) MCCB, CT terminals and 2 m connection cable (mounted on the capacitor module)	3	50.10.004

Fixing rails		
Item	Weight in kg	Item no.
Set fixing rail, left / right (for Rittal cabinets MO84)	1	50.00.100
Set fixing rail, left / right (for Rittal cabinets MO86)	1.5	50.00.101

## Accessory – Passive harmonics filter

Control modules	
Item	Item no.
Control module with Prophi® 6R controller, 6 stages (relay outputs) MCCB, CT terminals and 2 m connection cable (mounted on the capacitor module)	50.80.003
Control module with Prophi® 12R controller, 12 stages (relay outputs) MCCB, CT terminals and 2 m connection cable (mounted on the capacitor module)	50.80.004

Fixing rail for slide-in modules in Rittal switch gear cabinets	
Item	Item no.
Set fixing rail, left / right (for Rittal cabinets MO84)	50.00.100
Set fixing rail, left / right (for Rittal cabinets MO86)	50.00.101

Power analyser with Ethernet connection and PQ analysis software		
Item		Item no.
UMG 508	With display, front panel mounting	52.21.001
UMG 604E	DIN rail mounting	52.16.002



See main catalogue chapter 02 "Energy and power quality measurement products" for other variants

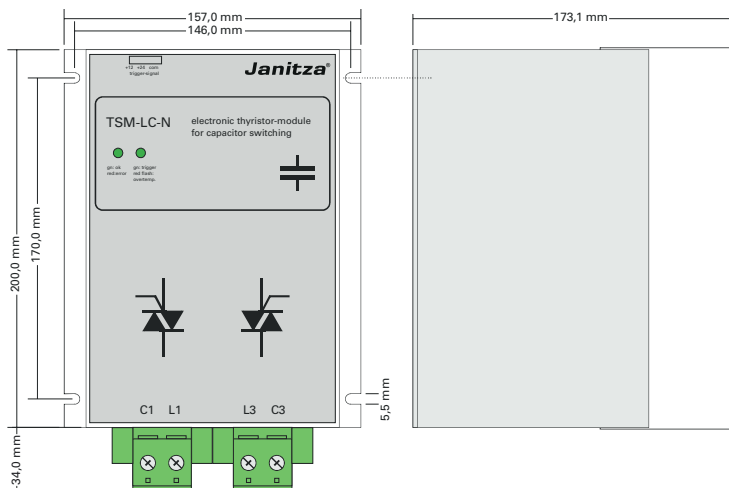
## Electronic circuit breaker (thyristor controller)

### Main features

- Areas of application: dynamic compensation of rapid processes (presses, welding machines, lifts, power plants, wind turbines, etc.)
- Component for developing dynamic compensation systems
- Optimisation of switching behaviour by microprocessor-controlled adaptation to unchoked or choked capacitor branches
- No wearing parts
- Monitoring of voltage, phase, temperature
- Instant switching
- No mains feedback from switching operations (transients)
- No auxiliary voltage required
- Maintenance-free
- Long service life
- No switching noise
- Improved connection technology (connectors)
- Improved temperature management



### Dimension diagrams



### Technical data

Nominal output kvar	Nominal voltage V (50/60 Hz)	Control V DC	Type	Dimensions in mm (W x H x D)	Superfast fuse in A	Weight in kg	Item no.
12,5	400	10 – 24	TSM-LC 10THY (400 V / 12,5 kvar)	162 x 150 x 75	35	1,75	01.02.504
25	400	10 – 24	TSM-LC-N 25THY (400 V / bis 25 kvar)	157 x 200 x 173	63	4,80	01.02.516
50	400	10 – 24	TSM-LC-N 50THY (400 V / bis 50 kvar)	157 x 200 x 173	125	4,80	01.02.515
50 – 85	400 – 690	10 – 24	TSM-LC-N690THY (690 V / bis 50 kvar)	157 x 200 x 190	125	4,80	01.02.514