JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

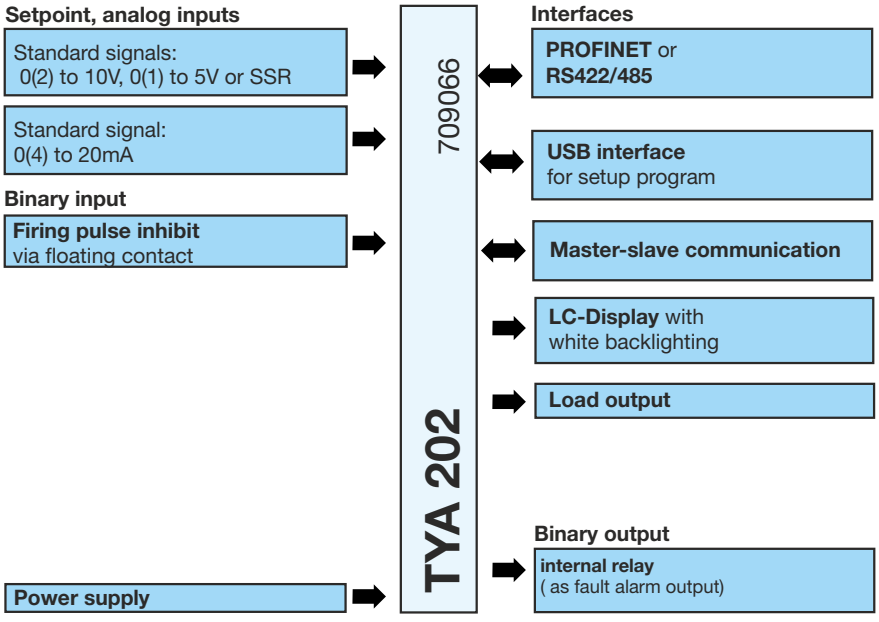
JUMO TYA S202 thyristor power controller

for control of resistive inductive loads in three-phase economy circuits

The JUMO TYA-S20x series is the new cost-optimized power controller series for control of single-phase and three-phase loads. The load is controlled via pulse-group controller. The microprocessor controlled power controller displays all parameters in an LCD display with background lighting. It can be operated used the four keys at the front.
Thyristor power controllers are used where larger resistive and resistive inductive loads have to be switched (e.g. in industrial furnace construction and plastics processing). The thyristor power controller consists of thyristors connected in anti-parallel, the insulated heat sink, and the control electronics.
Thyristor power controllers up to a load current of 50 A can either be clipped to a 35 mm mounting rail or fitted to the wall on a mounting plate.
Devices with a load current greater than 50 A can only be mounted on the wall.
For control of transformer loads, the phase angle of the first half-wave can be cut in order to reduce the inrush current.
All thyristor power controllers are fitted with a semiconductor fuse.
The option of specifying a base load is available.
To avoid high inrush currents, a soft start can be set.
The thyristor power controllers meet the operating conditions of DIN EN 50178.
The device has to be grounded in accordance with the regulations of the responsible energy supply company.

Type 709066/ ...

Block diagram



Special features

- LCD display with info line
- Simple configuration of the device through plain text display in national language
- Setup program for configuration via USB interface
- Transmission of the setup data is possible even without voltage supply to the device (USB port supplies power)
- Close mounting possible
- Network load optimization through dual energy management
- RS422/485 interface or
- PROFIBUS interface for connecting to process control systems
- Soft start function with pulse groups
- All versions feature protection type IP20
- Load monitoring for the detection of partial load failure or load short-circuit "Teach-In"
- Integrated diagnostic systems, e.g. rotating field detection
- UL 508 approval

Approvals/approval marks (see "Technical data")

c UL us LISTED

JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

Technical data

Voltage supply, load current, fan voltage only with 250 A load current

Code	Voltage supply for control electronics = max. mains voltage	Fan specifications Type 709066/X-0X-250...
400	AC 400 V -20 % to +15 %, 48 to 63 Hz	AC 230 V/2x30 VA
460	AC 460 V -20 % to +15 %, 48 to 63 Hz	AC 230 V/2x30 VA
500	AC 500 V -20 % to +15 %, 48 to 63 Hz	AC 230 V/2x30 VA
Load current $I_{L\ rms}$	AC 20, 32, 50, 100, 150, 200, 250 A	
Load type	Resistive and resistive inductive loads	
Power consumption of control sections	Max. 40 VA	

Analog inputs

Control signal	0(4) to 20 mA	R_i = 50 Ω
	0(2) to 10 V	R_i = 25 kΩ
	0(1) to 5 V	R_i = 25 kΩ
Setpoint specification	Via standard signals (current, voltage) or interface	

Digital output

Relay (changeover contact) without contact protection circuit	30,000 switching operations at a switching capacity of AC 230 V / 3 A (1.5 A), 50 Hz, B300 (UL 508)

Thyristor control:	Setpoint specification current input (can carry current up to 25 mA)	Setpoint specification voltage input (surge proof up to max. DC 32 V)	Via interface
Continuous	The power controller provides the power for the load continuously depending on the configured setpoint specification.		Possible
Logic (Solid state relay SSR)	The power controller acts like a switch and switches the load ON and OFF. The switching threshold is always in the middle of the configured current/voltage range At 4 to 20 mA, it is 12 mA; at 0 to 10 V, it is 5 V.		Possible

General specifications

Circuit variants	- Three-phase economy circuit in master slave principle
Operating modes	- Burst-firing operation for resistive or transformer load with soft start
Load types	All resistive loads through to inductive loads are permitted. In the case of transformer loads, the nominal induction of 1.2 tesla must not be exceeded (value is 1.45 T in the case of mains overvoltage).
Special features	- Dual energy management - Soft start with pulse groups
Electrical connection	For type 709066/X -0X-020... Control cables and load leads are connected via screw terminals. From type 709066/X -0X-032... Control cables are connected via screw terminals and load leads via cable lugs DIN 46235 and DIN 46234 or tubular cable lugs.
Operating conditions	The power controller is designed as a built-in device according to EN 50 178, pollution degree 2, overvoltage category Ü III
Electromagnetic compatibility	According to DIN 61326, Interference emission: Class B Interference immunity: to industrial requirements
Protection type	All device types IP20 according to EN 60529
Protection rating	Protection rating I, with isolated control circuitry for connection to SELV circuits
Admissible ambient temperature range	0 to 40 °C with forced air cooling using fan for type 709066/X-0X-250... 0 to 45°C with air self-cooling (expanded temperature range class 3K3 according to EN 60721-3-3). At higher temperatures, use with reduced type current is possible (as of 45°C with type current -2%/°C)
Admissible storage temperature range	-30 to +70 °C (1K5 according to EN 60721-3-1)
Site altitude	≤ 2000 m above MSL

JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

Cooling	- Natural convection up to a load current of 200 A - Above 250 A of load current, forced convection with installed fan - At installation heights over 1000 m, the ampacity of the power controller decreases
Resistance to climatic conditions	Rel. humidity ≤ 85 % annual average, no condensation 3K3 according to EN 60721
Installation position	Vertical
Test voltage	According to EN 50178
Creepage distances	8 mm between supply current circuit and SELV circuits for type 709066/X -0X-020... 12.7 mm between supply current circuit and SELV circuits from type 709066/X -0X-032... SELV = Safety Extra Low Voltage
Housing	Plastic, flammability class UL94 V0, color: cobalt blue RAL 5013
Power loss	The power loss can be calculated using the following empirical formula: $P_v = 2x\ (20\ W + 1.3\ V \times I_{Load}\ A)$
Max. temperature of the heat sink	110 °C
A/D converter resolution	12 bit

Weight

Load current	**20 A**	**32 A**	**50 A**	**100 A**	**150 A**	**200 A**	**250 A**
Weight	Approx. 2.2 kg	Approx. 4.2 kg	Approx. 5.4 kg	Approx. 7.6 kg	Approx. 17 kg	Approx. 19 kg	Approx. 20.4 kg

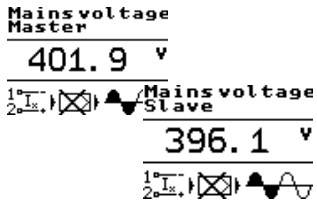
Approvals/approval marks

Approval mark	**Test facility**	**Certificate/certification numbers**	**Inspection basis**	**Valid for type**
c UL us LISTED	Underwriters Laboratories	E223137	UL 508 (Category NRNT), pollution degree 2 C22.2 NO. 14-10 Industrial Control Equipment (Category NRNT7)	709066/X-XX-020-... Load current 20 A
			UL 508 (Category NRNT) C22.2 NO. 14-10 Industrial Control Equipment (Category NRNT7)	709066/X-XX-032... 709066/X-XX-050... 709066/X-XX-100... 709066/X-XX-150... 709066/X-XX-200... 709066/X-XX-250... Load current 32 to 250 A

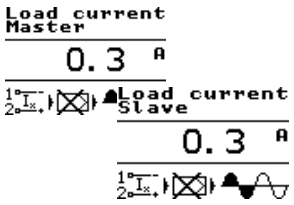
Display and measuring accuracy

All specifications refer to the power controller nominal data.

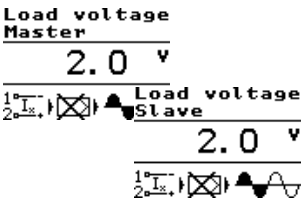
Mains voltage: ±2.5 %



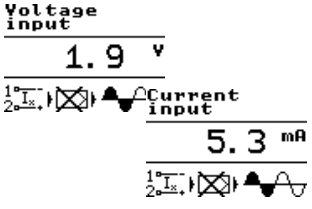
Load current: ±1 %



Load voltage: ±1 %



Analog input
Voltage/current: ±1 %

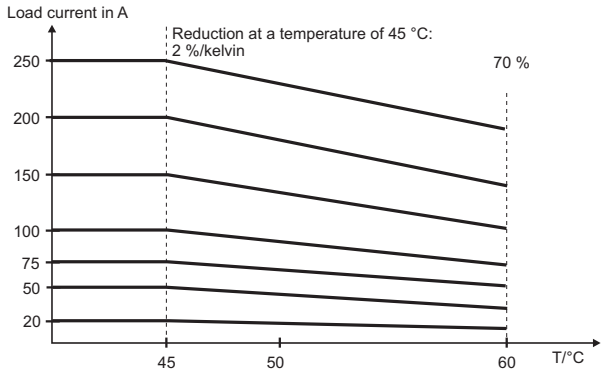


JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

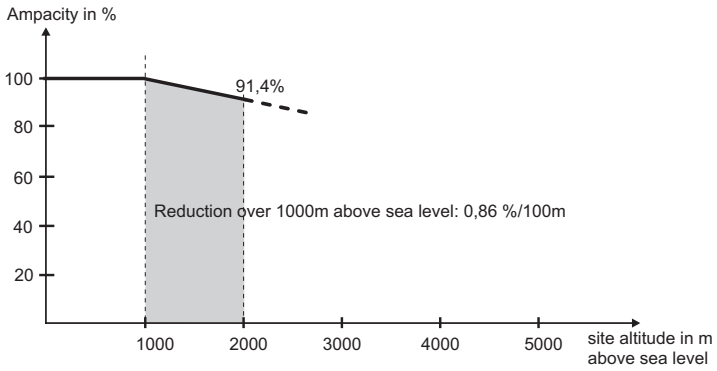
JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

Admissible load current depending on the ambient temperature and the site altitude

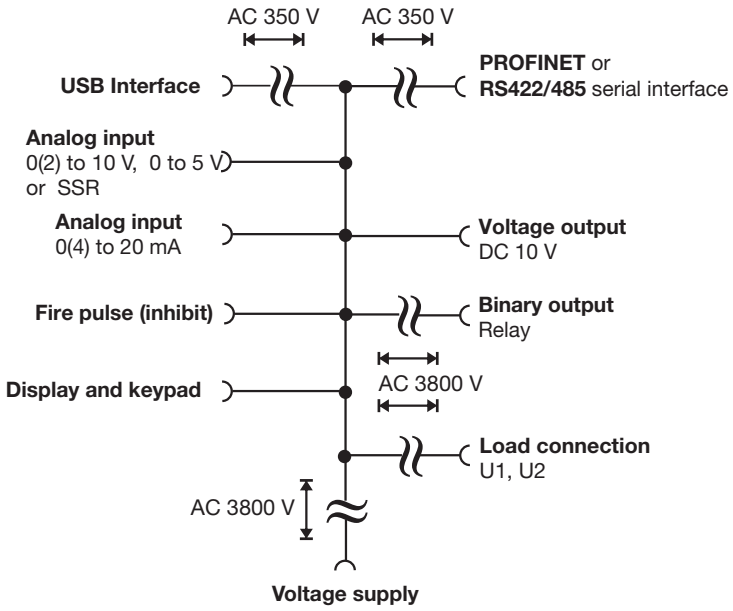


Important information:
If a device temperature exceeds 105°C, the load current is gradually reduced each time the temperature increases by one degree.
At a device temperature of > 115°C, the power controller current is completely switched off.



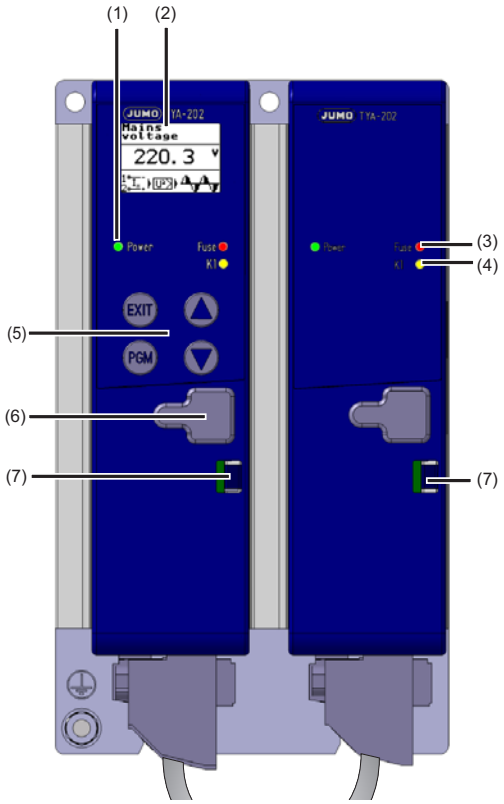
Important information:
The site altitude is ≤ 2000 m above MSL.
In the case of air cooling, it must be noted that the effectiveness of the cooling is reduced as the site altitude increases. As a result, the ampacity of the SCR controller decreases with the stated cooler as the site altitude increases, as shown here in the diagram.

Galvanic isolation



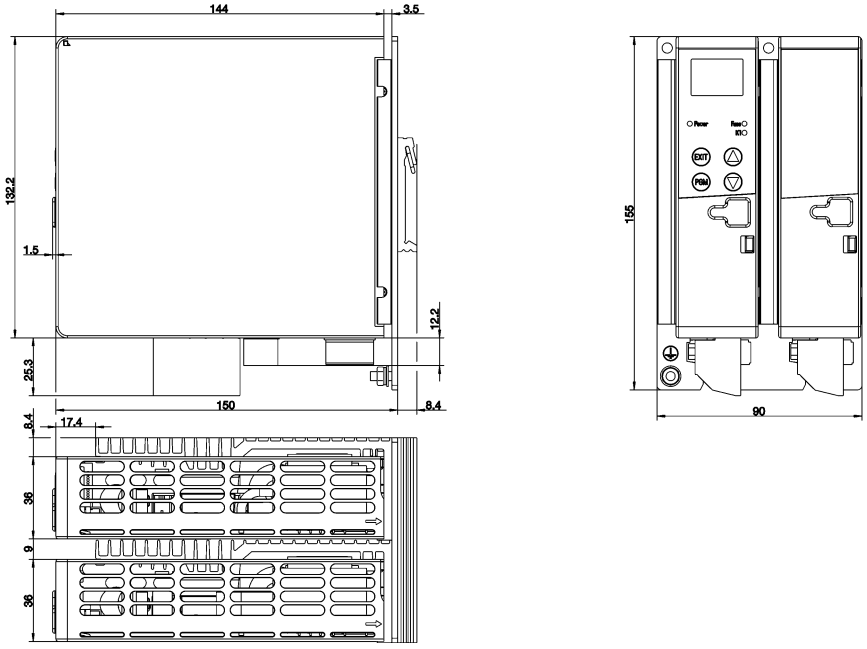
JUMO GmbH & Co. KG
Hausadresse: Moritz-Juchheim-Straße 1, 36039 Fulda, Germany
Lieferadresse: Mackenrodtstraße 14, 36039 Fulda, Germany
Postadresse: 36035 Fulda, Germany
Telefon: +49 661 6003-727
Telefax: +49 661 6003-508
E-Mail: mail@jumo.net
Internet: www.jumo.net

Display, operating, and connection elements

Legend	Comment	Diagram
1	The Power LED (green) is permanently lit when the voltage supply is connected.	
2	LCD display with white background lighting (96 x 64 pixels) (no LCD display on slave device on the right) The information line at the bottom of the display shows the current settings and error messages.	
3	The Fuse LED (red) lights up if the semiconductor fuse is defective	
4	LED K1 (yellow) fault signal output	
5	**Keys:** Increase value / previous parameter Decrease value / next parameter Cancel / back one level Programming / one level deeper (no keys on slave device on the right)	
6	USB setup interface The configuration is made on the left device (master) and automatically transferred to the right device (slave) via the 1:1 patch cable.	
7	Spring clip to release the plastic housing (press toward right)	

Dimensions

Type 709066/X-0X-020-XX-XXX-XX

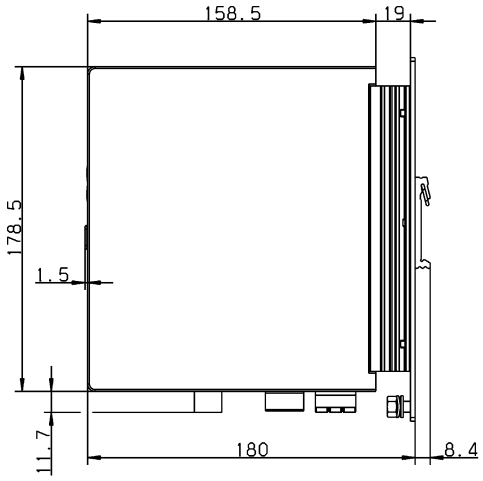


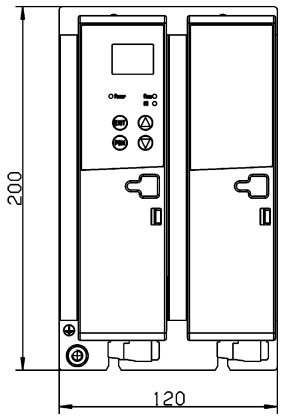
JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

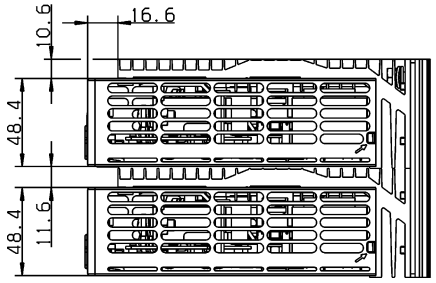
JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

Type 709066/X-0X-032-XX-XXX-XX





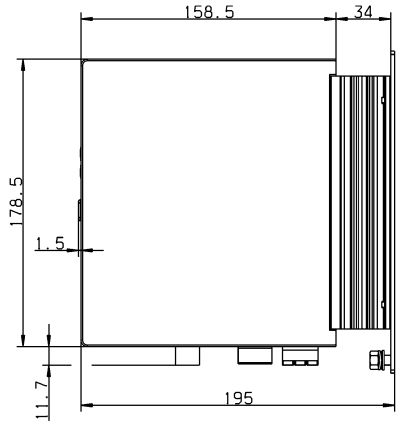


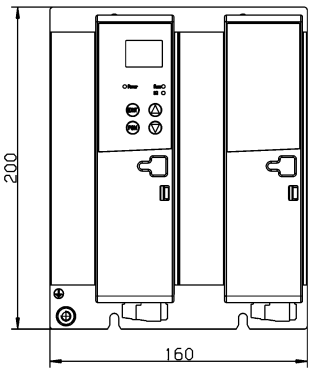
JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

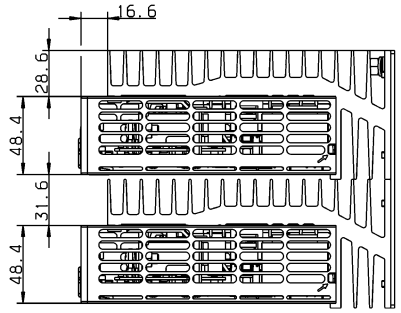
JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

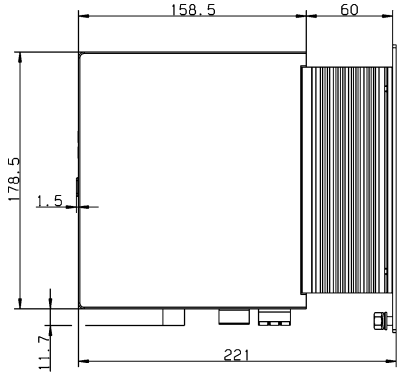
Type 709066/X-0X-050-XX-XXX-XX

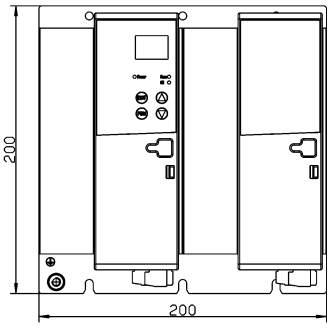


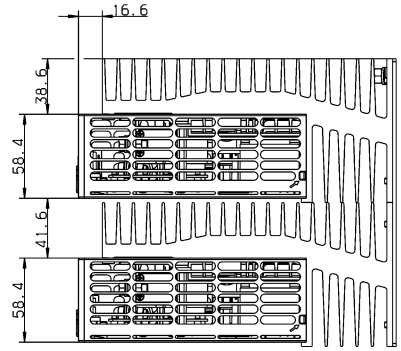




Type 709066/X-0X-100-XX-XXX-XX





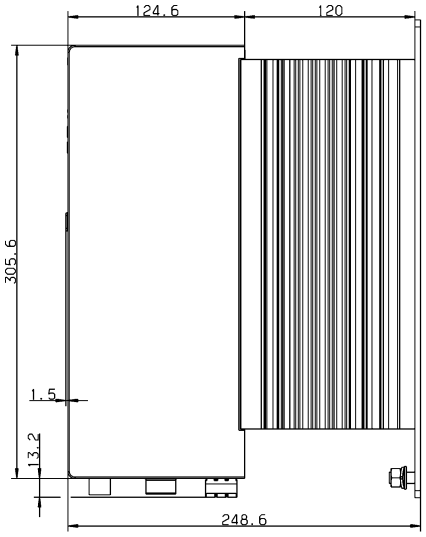


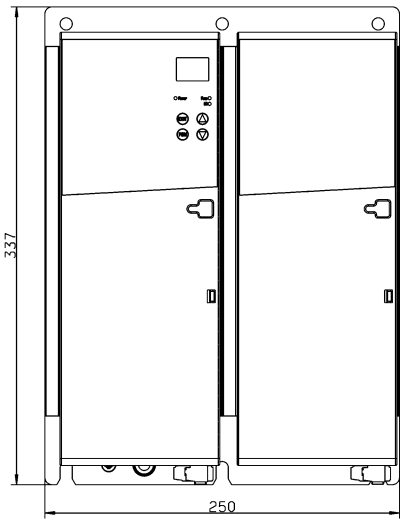
JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

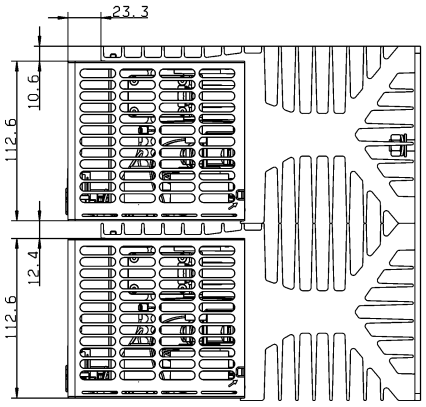
JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

Type 709066/X-0X-150-XX-XXX-XX
Type 709066/X-0X-200-XX-XXX-XX,

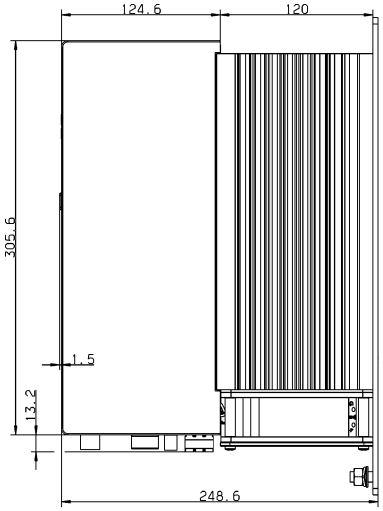


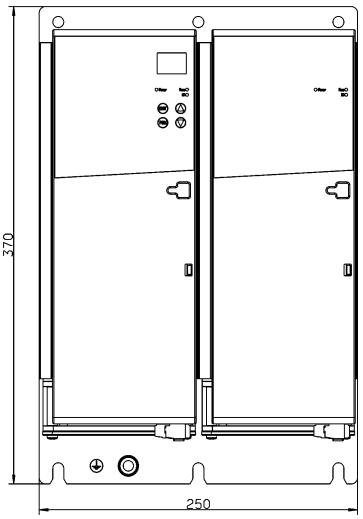


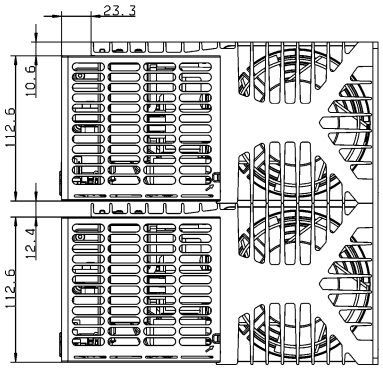


JUMO GmbH & Co. KG
Hausadresse: Moritz-Juchheim-Straße 1, 36039 Fulda, Germany
Lieferadresse: Mackenrodtstraße 14, 36039 Fulda, Germany
Postadresse: 36035 Fulda, Germany
Telefon: +49 661 6003-727
Telefax: +49 661 6003-508
E-Mail: mail@jumo.net
Internet: www.jumo.net

Type 709066/X-0X-250-XX-XXX-XX







Clearances (all types)

- Allow a clearance of 10 cm from the floor.
- Allow a clearance of 15 cm from the ceiling.
- When fitted next to each other, no spacing between the devices is required.

Maximum tightening torques for screw connections

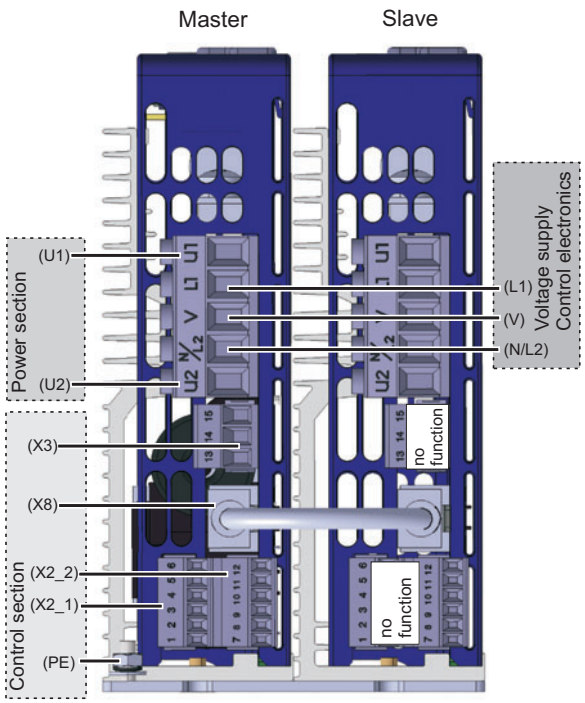
Terminals	Version	Tightening torque
For all types X2_1 number 1 to 6, X2_2 number 7 to 12, and Modbus RS422/485 (terminal 16, 17, 18, 19)	Pluggable screw terminals (slotted screws)	0.25 Nm
X3 number 13, 14, 15	Pluggable screw terminals (slotted screws)	0.5 Nm
Type 709066/X-0X-020... Terminal block U1, U2, N/L2, V, L1 Ground terminal PE:	Pluggable screw terminals (recessed head screws) Threaded pin M4 with nut	0.6 Nm 3 Nm
Type 709066/X-0X-032 and type 709066/X-0X-050... U1, U2: Terminal block N/L2, V, L1 Ground terminal PE:	M6 recessed head screws Pluggable screw terminals (slotted screws) Threaded pin M6 with nut	5 Nm 0.5 Nm 5 Nm
Type 709066/X-0X-100... U1, U2: Terminal block N/L2, V, L1 Ground terminal PE:	Hex-headed screw M6, wrench size 10 mm Pluggable screw terminals (slotted screws) Threaded pin M6 with nut	5 Nm 0.5 Nm 5 Nm
Type 709066/X-0X-150..., 709066/X-0X-200, and type 709066/X-0X-250... U1, U2: Terminal block N/L2, V, L1 Ground terminal PE:	Hex-headed screw M8, wrench size 13 mm Pluggable screw terminals (slotted screws) Threaded pin M8 with nut	12 Nm 0.5 Nm 12 Nm
Type 709066/X-0X-250... X14 number 20, 21	Pluggable screw terminals (slotted screws)	0.5 Nm

JUMO GmbH & Co. KG
Hausadresse: Moritz-Juchheim-Straße 1, 36039 Fulda, Germany
Lieferadresse: Mackenrodtstraße 14, 36039 Fulda, Germany
Postadresse: 36035 Fulda, Germany
Telefon: +49 661 6003-727
Telefax: +49 661 6003-508
E-Mail: mail@jumo.net
Internet: www.jumo.net

Connection diagram

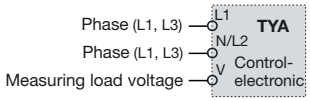
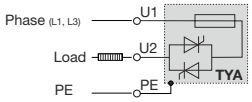
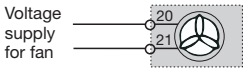
The connection diagram in the data sheet provides preliminary information about the connection options. For the electrical connection, only use the installation instructions or the operating manual. The knowledge and the correct technical execution of the safety information and warnings contained in these documents are mandatory for installation, electrical connection, startup, and for safety during operation.

Type 709066/X-0X-020-XX-XXX-XX

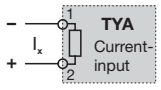


Important information:
Master/slave connection is already plugged per default. The device is already configured such that only the voltage supply and the load need to be configured.

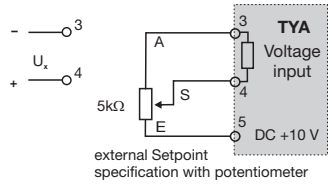
Power section

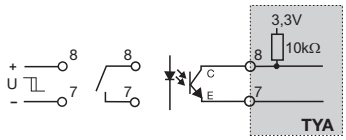
Connection for	Screw terminals	Detail
Voltage supply for control electronics (corresponds to maximum mains voltage of ordered device type)	L1 N/L2 V	
Load connection	U1 U2	
protection conductor	PE	
Fan X14	20, 21 (only for load current of 250 A)	

Control section

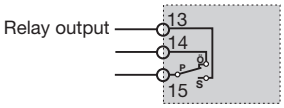
Connection for	screw terminal X2_1	Detail
Setpoint specification for current input	1 2	

JUMO GmbH & Co. KG
Hausadresse: Moritz-Juchheim-Straße 1, 36039 Fulda, Germany
Lieferadresse: Mackenrodtstraße 14, 36039 Fulda, Germany
Postadresse: 36035 Fulda, Germany
Telefon: +49 661 6003-727
Telefax: +49 661 6003-508
E-Mail: mail@jumo.net
Internet: www.jumo.net

Setpoint specification for voltage input (surge proof up to max. DC 32 V)	3 (GND) (for permanent control) 4	
Digital input PLC 0/24 V ON logical "1" = DC +5 to 32 V OFF logical "0" = DC 0 to < 5 V	3 (GND) (for PLC logic signals) 4	
Output DC 10 V fixed voltage	5	
Ground potential	6 (GND)	

Connection for	**screw terminal X2_2**	**Detail**
Firing pulse inhibit ON logical "1" = DC 2 to 32 V OFF logical "0" = DC 0 to 0.8 V	8 (not for PLC logic signals)	
GND	7, 11	Ground potential
The ground terminals X2_2/11 **or** X2_1/6 of the master and slave must be connected to one another.		

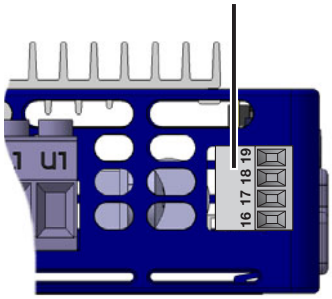
Fault signal output

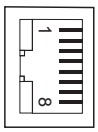
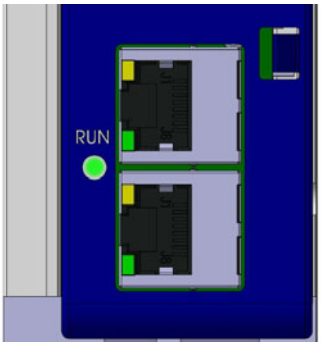
Connection for	**screw terminal X3**	**Detail**
Relay is on Slave2 at load current of 20 A and on Master at 32 to 250 A	13 N/O contact 14 N/C contact 15 Pole	

Master-slave connection

Connection	**RJ 45 socket X8**
for master-slave operation	The 1:1 patch cable (included in scope of delivery) must be plugged in for correct operation.

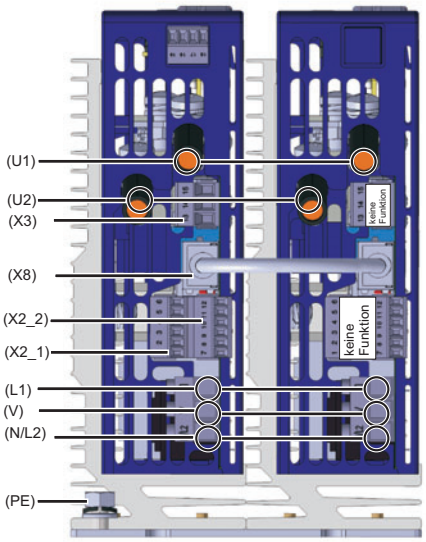
Interfaces (option)

Modbus connection	**RS422**	**RS485**
	TxD (-)	RxD/TxD B(-)
	TxD (+)	RxD/TxD A(+)
	RxD (-)	-
Pluggable screw terminals on the underside of the housing	RxD (+)	-
The shield of the Modbus cables must be routed on ground potential (PE) (RS422/485 Modbus) 		

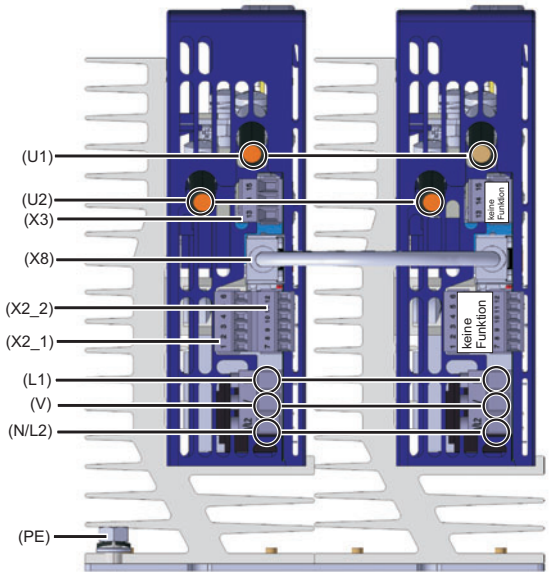
PROFINET		
	1 TX+	Transmission data +
	2 TX-	Transmission data -
	3 RX+	Received data +
	6 RX-	Received data -
2 RJ-45 sockets (on the front) 		

JUMO GmbH & Co. KG
Hausadresse: Moritz-Juchheim-Straße 1, 36039 Fulda, Germany
Lieferadresse: Mackenrodtstraße 14, 36039 Fulda, Germany
Postadresse: 36035 Fulda, Germany
Telefon: +49 661 6003-727
Telefax: +49 661 6003-508
E-Mail: mail@jumo.net
Internet: www.jumo.net

Type 709066/X-0X-032-XX-XXX-XX

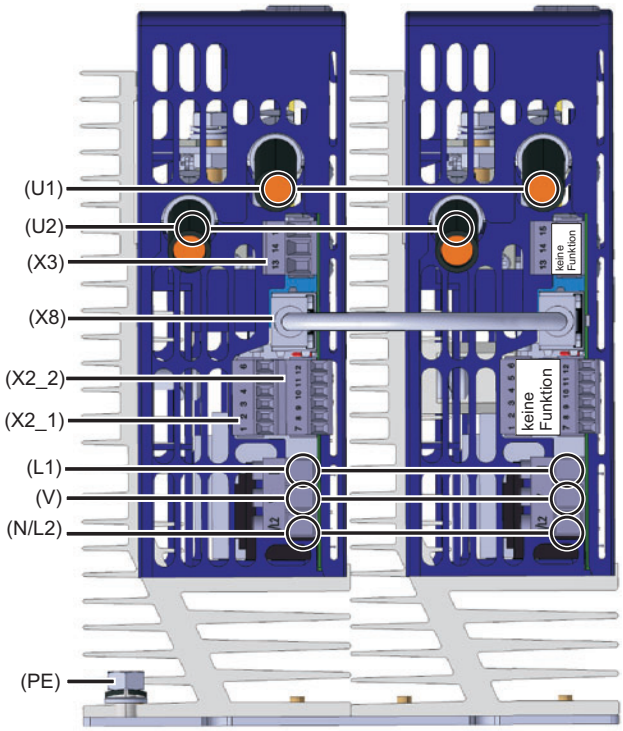


Type 709066/X-0X-050-XX-XXX-XX

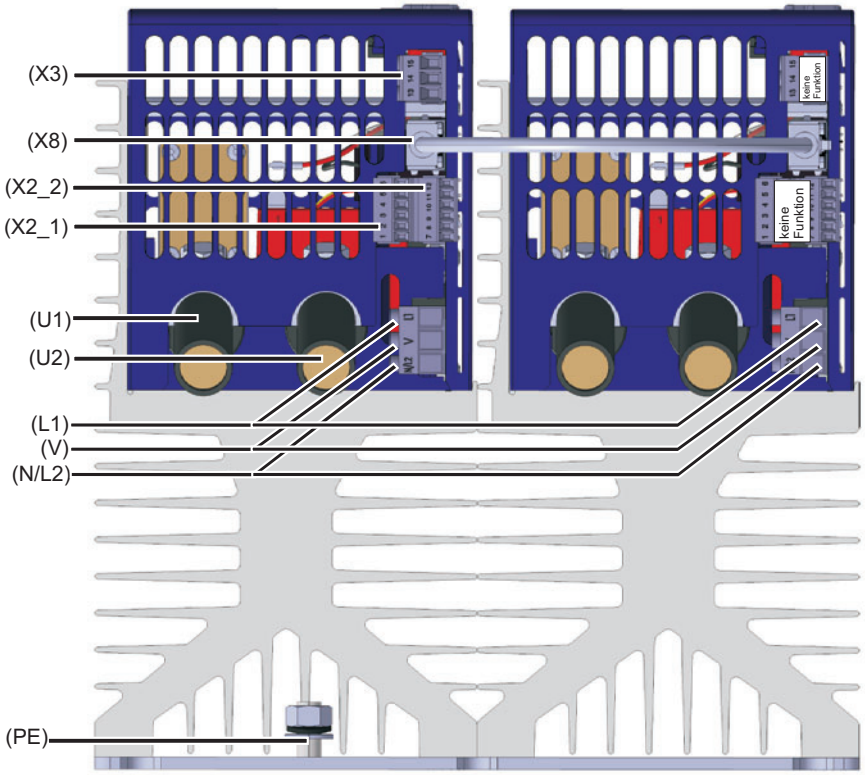


JUMO GmbH & Co. KG
Hausadresse: Moritz-Juchheim-Straße 1, 36039 Fulda, Germany
Lieferadresse: Mackenrodtstraße 14, 36039 Fulda, Germany
Postadresse: 36035 Fulda, Germany
Telefon: +49 661 6003-727
Telefax: +49 661 6003-508
E-Mail: mail@jumo.net
Internet: www.jumo.net

Type 709066/X-0X-100-XX-XXX-XX



Type 709066/X-0X-150-XX-XXX-XX,
Type 709066/X-0X-200-XX-XXX-XX

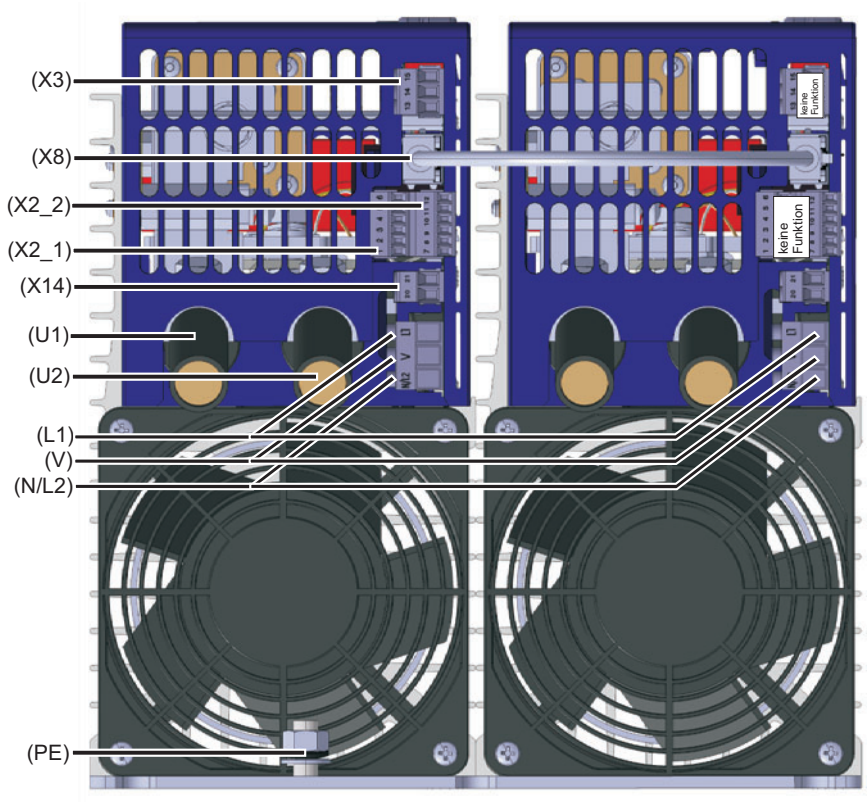


JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

Type 709066/X-0X-250-XX-XXX-XX



Example:
Fan voltage supply with type 709066/X-0X-250-XX-400-XX

Depending on the mains voltage of the power controller, both X14 fan terminals must be supplied with the voltage specified below.
The lead protection must be between **2 A and a maximum of 5 A**.
The fan is temperature-controlled, switches on automatically when the device temperature reaches 85 °C, and remains in operation until the device temperature falls below 70 °C.

Mains voltage of the power controller	Tolerances	**Fan specifications**
Mains voltage AC 400 V	-15 to + 10 %, 48 to 63 Hz	AC 230 V/2x30 VA
Mains voltage AC 460 V		
Mains voltage AC 500 V		

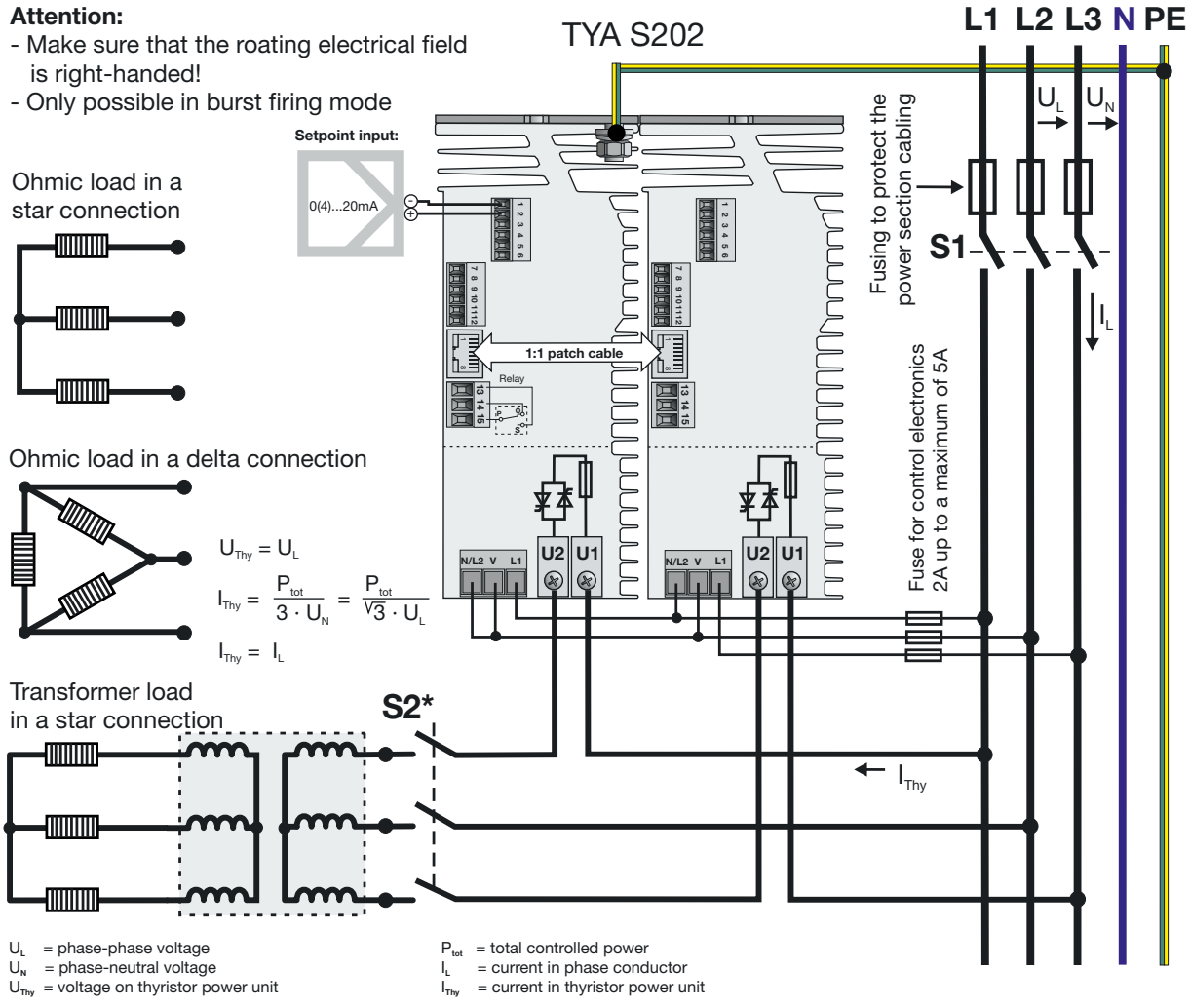
JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

Wiring

Three-phase economy circuit for resistive loads in star-, delta connection or transformer loads (resistive-inductive)



∗see switch on sequence if bus-systems are used

Observe the general switch-on sequence

If a bus system is not used then the switch S2 is omitted. The switch **S1** simultaneously switches on the control section and power section. This is particularly important for the operation of transformer loads and resistance loads with a high temperature coefficient (TC >> 1). This makes sure the necessary load start functions (soft start, current limiting, etc.) are activated accordingly.

Switch-on sequence when using bus systems

When using a bus system, the control section and power section are switched on simultaneously via **S1** and **S2**.
The TYA control section must always remain connected to the mains voltage (e.g. **S1** always closed) in order to maintain the fieldbus communication.
S2 is used to activate the load.
When dealing with transformer loads or loads with a high temperature coefficient (TK >> 1), prior to opening **S2** the power control output must be locked through the inhibit input.
After closing **S2**, the inhibit input must also be reactivated.

Important information:

In the case of power controllers with a load current of 250 A, both **X14 fan terminals of the Master and Slave** must also be supplied with the stated voltage, See “Example: Fan voltage supply with type 709066/X-0X-250-XX-400-XX” on page 14.

JUMO GmbH & Co. KG
Hausadresse: Moritz-Juchheim-Straße 1, 36039 Fulda, Germany
Lieferadresse: Mackenrodtstraße 14, 36039 Fulda, Germany
Postadresse: 36035 Fulda, Germany
Telefon: +49 661 6003-727
Telefax: +49 661 6003-508
E-Mail: mail@jumo.net
Internet: www.jumo.net

Order details

(1) Basic type

709066	TYA S202 Three-phase thyristor power controller in three-phase economy circuit

(2) Version

8	Standard with default settings
9	Customer-specific programming according to specifications

(3) National language of device texts

01	German (default setting)
02	English
03	French
14	Spanish

(4) Load current

020	AC 20 A
032	AC 32 A
050	AC 50 A
100	AC 100 A
150	AC 150 A
200	AC 200 A
250	AC 250 A

(5) Partial load failure monitoring

00	None
01	Partial load failure monitoring

(6) Mains voltage[a]

400	AC 400 V	-20 to +15 %, 48 to 63 Hz
460	AC 460 V	-20 to +15 %, 48 to 63 Hz
500	AC 500 V	-20 to +15 %, 48 to 63 Hz

(7) Interface

00	None
54	RS485/422
63	PROFINET available as of XXXXXX

(1)		(2)		(3)		(4)		(5)		(6)		(7)	
	/		-		-		-		-		-		**Order code**
709066	/	8	-	01	-	100	-	01	-	400	-	00	**Order example**

[a] Mains voltage = Voltage supply for control electronics (always select **phase voltage** L1-L2 from the three-phase supply)

Scope of delivery

1 operating manual
1 thyristor power controller in the version ordered
1:1 patch cable

Accessories

Item	**Part no.**
Setup program 709065 (TYA S201) and 709066 (TYA S202)	00544869
USB cable A-connector B-connector 3 m	00506252
Installation kits:	
Installation kit for DIN-rail 20 A TYA S202	00555172
Installation kit for DIN-rail 32 A TYA S202	00555527
Installation kit for DIN-rail 50 A TYA S202	00600097

JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com

General accessories

Item	Load current $I_{Rated} = I_N$	Part no.
709710/02 semiconductor fuse 40 A / AC 690 V	I_N = 20 A	00513108
709710/02 semiconductor fuse 80 A / AC 690 V	I_N = 32 A	00068011
709710/02 semiconductor fuse 80 A / AC 690 V	I_N = 50 A	00068011
709710/02 semiconductor fuse 160 A / AC 690 V	I_N = 100 A	00081801
709710/02 semiconductor fuse 350 A / AC 690 V	I_N = 150 A	00083318
709710/02 semiconductor fuse 550 A / AC 690 V	I_N = 200 A	00371964
709710/02 semiconductor fuse 550 A / AC 690 V	I_N = 250 A	00371964