

The REO logo is displayed in white text on a blue rectangular background. The letters 'R', 'E', and 'O' are in a bold, sans-serif font. The 'O' is stylized with a square cutout in the center.

REO

The word 'REOTRON' is written in a bold, blue, sans-serif font. It is centered horizontally and positioned in the upper-middle section of the image. The background is a blurred photograph of a mechanical part, likely a drill bit, with a blue light reflecting off its surface.

REOTRON

## Useful facts about REOTRON

The components of the REOTRON portfolio are power control units based on thyristor controllers, switched-mode power supplies or external control technology. The application areas for these products are very diverse, ranging from testing technology to medical technology, laser technology, thermal and chemical production processes and cathodic corrosion protection.

REO's positioning with outstanding competences in the field of both inductive and electronic components is unparalleled and is an absolutely unique selling point and offers the possibility to offer the highest quality and efficiency for the standard portfolio as well as for customer-specific solutions.

The REOTRON SMP switching power supply provides a safe, stable and adjustable power supply for use in process engineering systems and guarantees the highest level of quality. The DC power supplies from the REOTRON SMP series are primary switched switching power supplies with galvanic isolation from the input to the output. The devices can be used as voltage, current or power regulators.

Single-phase thyristor power controllers are predestined for applications in process industries, in particular in thermal plants. The thyristor controllers can work in phase angle control or in periodic group control operating mode and possess an internal voltage, current and power controller.

The three-phase thyristor power controller is used in industrial process engineering and in particular in thermal plants. The thyristor controllers are available as phase angle controllers and with periodic group control and possess an internal voltage, current and power regulators. The output power will therefore remain stable, even in the event of high demands.

MDZ ignition and control devices are designed for the regulation of external power semi-conductors and power converter systems, for example in galvanising. They contain one controller each for current and voltage regulation. In the voltage regulation mode of operation, the output voltage that has been pre-set using the nominal value will be held constant by an internal control circuit.

## Service



### Training

REO AG is your holistic partner in the area of inductive, resistive and electronic components and full solutions. A wide range of training services are also a key aspect of this partnership. These simplify commissioning of new devices and systems and guarantee hassle-free use during the whole product life cycle. [Training sessions at your site or on the premises of REO AG](#) form the basis for this. Our internal training managers instruct your employees in the technology and provide valuable tips on the correct and safe use of REO components. Our training sessions are available for both standard solutions and high-quality individualised components. Multimedia and easy to understand content supplement the training and also permit international deployment.



### Guarantee

Winning quality – extra peace of mind, thanks to the expanded REO manufacturer's guarantee.

We believe in the quality of our own products and are confident of the durability of all components used, which is why we have extended the legal [guarantee from one to two years](#).



### Safety

We offer you devices with the highest possible operational safety. Should any unwanted events occur with any of our products, your professional emergency responder will be available to help you over the telephone free of charge. If the situation or query cannot be resolved over the telephone, you have the opportunity to have the defective device sent back after consultation.



### Repairs

After telephone consultation, and after the defective product has been received, we can even offer you [express repairs](#) if possible. This minimises downtime in the event of a fault and guarantees a swift exchange.



### Hotline

Our REO sales specialists look forward to giving you a helping hand. Contact your REO contact partner or call our hotline to receive further information about our services and the REO portfolio.

# Catalogue overview

REOTRON SMP Primary switched-mode power supplies	P. 5-17
REOTRON MEW 3-phase thyristor power controller	P. 18-20
REOTRON MDW 3-phase thyristor power controller	P. 21-23
REOTRON MDZ Ignition and control unit for external semiconductors	P. 24-26
REOTRON- complete solutions	P. 27





## REOTRON SMP



# REOTRON SMP

Primary switched-mode power supplies

Useful facts	P. 7
REOTRON SMP-ESM	P. 8-10
REOTRON SMP-KMA	P. 11-12
REOTRON SMP-KMB compact module	P. 13-14
REOTRON SMP-SMB cabinet installation module	P. 15-17

## Useful facts about REOTRON SMP

Variable DC power supply made by REO

Current, voltage, power - For many years REO has been concerned with the efficient conversion of energy – using both inductive and electronic means. REOTRON SMP switch-mode power supplies guarantee a safe and stable electric power supply in process engineering plants and stand for highest quality. The REOTRON SMP power supplies are primary switched power supplies with galvanic separation from the input to the output. They can be used as voltage, current or power regulators.

The units and combinations of units shown in the following represent a general offer, on realisable ranges of electrical parameters, as well as housing possibilities and the concrete design of the layout suitable for the application in question will be detailed and developed on request.

### Operation

The unit can be operated from an internal display, external control signals of 0...+10V, 0(4)...20mA or optionally by a fieldbus interface such as Profibus-DP, DeviceNet, EtherCAT, EtherNet/IP, ProfiNet or CAN-BUS protocols.

### Input devices

The device input is designed for connection to a three-phase mains 3 x 400 V, 50/60 Hz. The compliance of EMC standards is guaranteed by an input-sided mains filter.

### Design

The devices have a compact design in a 19 inch rackmount chassis and can be delivered as a installation ready control cabinet version or as a tabletop unit (lab version). The devices are air- or water-cooled.

### Connection

The SMP's are connected via screw terminals and with copper terminal buses at high output currents. Like all REO-products, the REOTRON SMP's are also available as customized versions.

### High range of performance

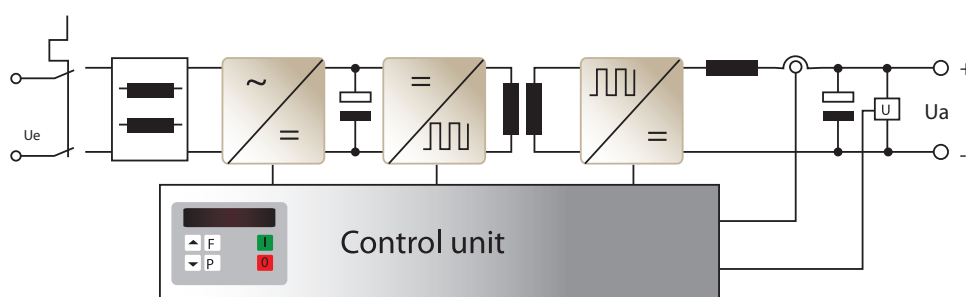
The units can be combined to power supplies with higher ratings by connecting the units in series or parallel.

### Customized solutions

Our in-house production and development of inductive components allow problem-oriented customized solutions of power supplies.

## Advantages

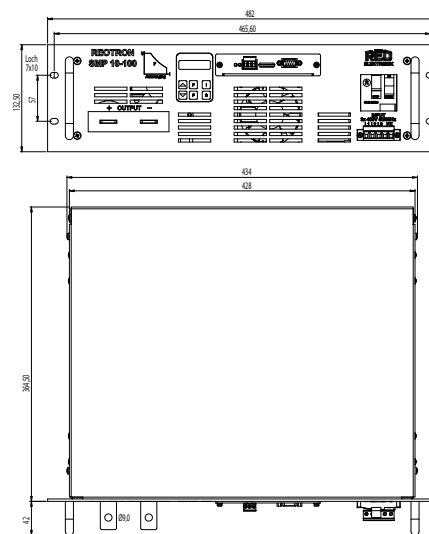
- Very good cos PHI
- Power Factor Correction (KMA-, KMB-Units)
- Compact dimensions
- Series or parallel connection
- Air or water cooled
- Many options of combinations for different requirements with other REO product ranges



# REOTRON SMP-ESM

19" Plug-In module

REOTRON SMP-ESM



Example with 1kW + Profibus-DP

## Technical data

REOTRON SMP-ESM	
Type	REOTRON SMP-ESM Plug-In module
Input voltage	3 x 400 V, +/- 10 %, 50/60 Hz
Ripple p-p	100 mV / 200 mV
Setpoint Input	0...+10 V, DC, 0(4)...20 mA, Potentiometer 10 kOhm, internal control over display
Actual Output	0...+10 V, DC 0(4)...20 mA, internal control over display
Interfaces (optional)	ProfiBus-DP, DeviceNet, CAN-Bus, ProfiNet, EtherNet/IP, EtherCAT
Control accuracy	1% of the nominal value (higher on request)
Rating	24 V, DC or contact
Protection	Cabinet installation IP20
2 x relay status	Changer 250 V, 1A
Efficiency	> 85 %
Cos Φ:	0,95
Operating temperature	0 .. 40 °C
Standards	EN 50178, EN 61000-6-2, EN 61000-6-4

# REOTRON SMP-ESM

19" Plug-In module

REOTRON SMP-ESM				
REO Series	SMP-ESM 25-40	SMP-ESM 25-100	SMP-ESM 25-200	SMP-ESM 25-300
Output Power [W]	0...1000	0...2500	0...5000	0...7500
Output voltage [V]	0...25	0...25	0...25	0...25
Output current [A]	0...40	0...100	0...200	0...300
Dimensions [BxTxHE]	482x406/3HE	482x406/3HE	482x406/3HE	482x406/6HE

REOTRON SMP-ESM					
REO Series	SMP-ESM 50-20	SMP-ESM 50-50	SMP-ESM 50-100	SMP-ESM 50-150	SMP-ESM 50-200
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000
Output voltage [V]	0...50	0...50	0...50	0...50	0...50
Output current [A]	0...20	0...50	0...100	0...150	0...200
Dimensions [BxTxHE]	482x406/3HE	482x406/3HE	482x406/3HE	482x406/6HE	482x406/6HE

REOTRON SMP-ESM					
REO Series	SMP-ESM 80-13	SMP-ESM 80-31	SMP-ESM 80-63	SMP-ESM 80-94	SMP-ESM 80-125
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000
Output voltage [V]	0...80	0...80	0...80	0...80	0...80
Output current [A]	0...13	0...31	0...63	0...94	0...125
Dimensions [BxTxHE]	482x406/3HE	482x406/3HE	482x406/3HE	482x406/6HE	482x406/6HE

REOTRON SMP-ESM					
REO Series	SMP-ESM 150-7	SMP-ESM 150-17	SMP-ESM 150-33	SMP-ESM 150-50	SMP-ESM 150-67
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000
Output voltage [V]	0...150	0...150	0...150	0...150	0...150
Output current [A]	0...7	0...17	0...33	0...50	0...67
Dimensions [BxTxHE]	482x406/3HE	482x406/3HE	482x406/3HE	482x406/6HE	482x406/6HE

# REOTRON SMP-ESM

19" Plug-In module

REOTRON SMP-ESM					
REO Series	SMP-ESM 250-4	SMP-ESM 250-10	SMP-ESM 250-20	SMP-ESM 250-30	SMP-ESM 250-40
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000
Output voltage [V]	0...250	0...250	0...250	0...250	0...250
Output current [A]	0...4	0...10	0...20	0...30	0...40
Dimensions [BxTxHE]	482x406/3HE	482x406/3HE	482x406/3HE	482x406/6HE	482x406/6HE

REOTRON SMP-ESM					
REO Series	SMP-ESM 400-2,5	SMP-ESM 400-6,25	SMP-ESM 400-13	SMP-ESM 400-19	SMP-ESM 400-25
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000
Output voltage [V]	0...400	0...400	0...400	0...400	0...400
Output current [A]	0...2,5	0...6,25	0...13	0...19	0...25
Dimensions [BxTxHE]	482x406/3HE	482x406/3HE	482x406/3HE	482x406/6HE	482x406/6HE

Higher voltages and currents on request.

# REOTRON SMP-KMA

Installation on mounting wall



## Technical data

REOTRON SMP-KMA	
Type	REOTRON SMP-KMA Installation on mounting wall
Input voltage	230 V, +/- 10 %, 50/60 Hz,
Ripple p-p	100 mV / 200 mV
Setpoint Input	0...+10 V, DC, 0(4)...20 mA, Potentiometer 10 kOhm internal control over display
Actual Output	0...+10 V, DC 0(4)...20 mA, internal control over display
Interfaces (optional)	ProfiBus-DP, DeviceNet, CAN-Bus, ProfiNet, EtherNet/IP, EtherCAT
Control accuracy	1% of the nominal value (higher on request)
Rating	24 V, DC or contact
Protection	Cabinet installation IP20
2 x relay status	Changer 250 V, 1A
Efficiency	> 85 %
Cos Φ	0,95
Operating temperature	0 .. 40 °C
Standards	EN 50178, EN 61000-6-2, EN 61000-6-4

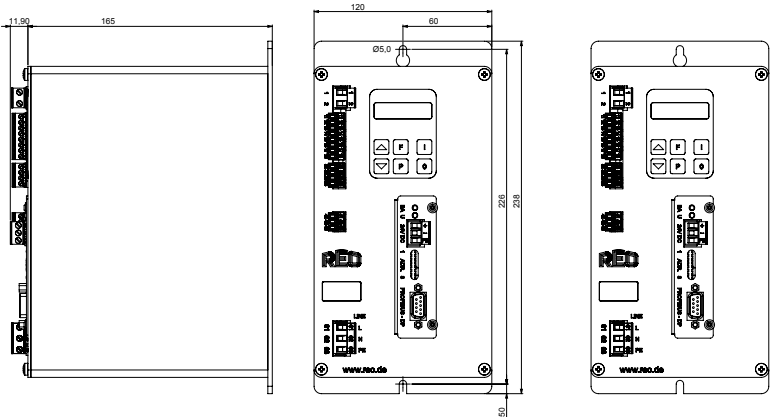
The unit combinations only represent possibilities and not standard units.

# REOTRON SMP-KMA

REOTRON SMP-KMA					
REO Series	SMP-KMA 10-2	SMP-KMA 10-5	SMP-KMA 20-2	SMP-KMA 20-5	SMP-KMA 24-5
Output Power [W]	0...20	0...50	0...40	0...100	0...120
Output voltage [V]	0...10	0...10	0...20	0...20	0...24
Output current [A]	0...2	0...5	0...2	0...5	0...5
Dimensions [WxHxD]	120x238x177 70x238x177	120x238x177 70x238x177	120x238x177 70x238x177	120x238x177	120x238x177

REOTRON SMP-KMA		
REO Series	SMP-KMA 30-2	SMP-KMA 40-2
Output Power [W]	0...60	0...80
Output voltage [V]	0...30	0...40
Output current [A]	0...2	0...2
Dimensions [WxHxD]	120x238x177 70x238x177	120x238x177 70x238x177

Higher voltages and currents on request.



\*The dimensions depend on the supply voltage and the equipment features.  
The unit combinations only represent possibilities and not standard units.



# REOTRON SMP-KMB

## compact module

Installation on mounting wall

REOTRON SMP-KMB compact module



## Technical data

REOTRON SMP-KMB compact module	
Type	REOTRON SMP-KMB compact module
Input voltage	230 V, +/- 10 %, 50/60 Hz,
Ripple p-p	100 mV / 200 mV
Setpoint Input	0...+10 V, DC, 0(4)...20 mA, Potentiometer 10 kOhm internal control over display
Actual Output	0...+10 V, DC 0(4)...20 mA, internal control over display
Interfaces (optional)	ProfiBus-DP, DeviceNet, CAN-Bus, ProfiNet, EtherNet/IP, EtherCAT
Control accuracy	1% of the nominal value (higher on request)
Rating	24 V, DC or contact
Protection	Cabinet installation IP20
2 x relay status	Changer 250 V, 1A
Efficiency	> 85 %
Cos $\Phi$	0,95
Operating temperature	0 ... 40 °C
Standards	EN 50178, EN 61000-6-2, EN 61000-6-4

## REOTRON SMP-KMB Compact module

REOTRON SMP-KMB Compact module		
REO Series	SMP-KMB 10-10	SMP-KMB 10-20
Output Power [W]	0...100	0...200
Output voltage [V]	0...10	0...10
Output current [A]	0...10	0...20
Dimensions [WxHxD]	154x330x217,5	154x330x217,5

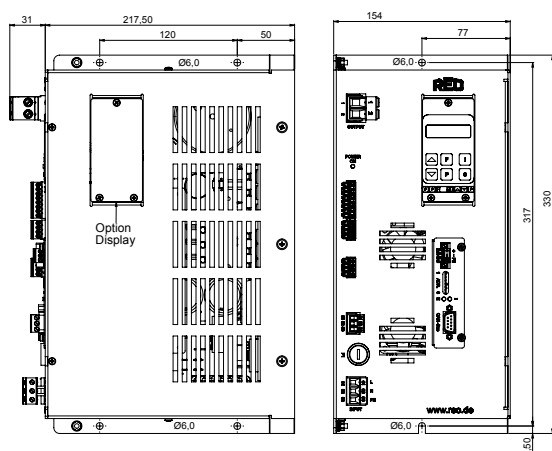
REOTRON SMP-KMB Compact module		
REO Series	SMP-KMB 20-10	SMP-KMB 20-20
Output Power [W]	0...200	0...400
Output voltage [V]	0...20	0...20
Output current [A]	0...10	0...20
Dimensions [WxHxD]	154x330x217,5	154x330x217,5

REOTRON SMP-KMB Compact module				
REO Series	SMP-KMB 30-10	SMP-KMB 30-20	SMP-KMB 40-10	SMP-KMB 40-20
Output Power [W]	0...300	0...600	0...400	0...800
Output voltage [V]	0...30	0...30	0...40	0...40
Output current [A]	0...10	0...20	0...10	0...20
Dimensions [WxHxD]	154x330x217,5	154x330x217,5	154x330x217,5	154x330x217,5

REOTRON SMP-KMB Compact module			
REO Series	SMP-KMB 50-10	SMP-KMB 50-20	SMP-KMB 60-10
Output Power [W]	0...500	0...1000	0...600
Output voltage [V]	0...50	0...50	0...60
Output current [A]	0...10	0...20	0...10
Dimensions [WxHxD]	154x330x217,5	154x330x217,5	154x330x217,5

Higher voltages and currents on request.

Example with 1kW + Profibus-DP interface



# REOTRON SMP-SMB

## Cabinet installation module

Installation on mounting wall

REOTRON SMP-SMB



## Technical data

REOTRON SMP-SMB	
Type	REOTRON SMP-SMB Cabinet installation module
Input voltage:	3x400V, +/- 10 %, 50/60 Hz,
Ripple p-p:	100 mV / 200 mV
Setpoint Input:	0...+10 V, DC, 0(4)...20 mA, Potentiometer 10 kOhm internal control over display
Actual Output:	0...+10 V, DC 0(4)...20 mA, internal control over display
Interfaces (optional)	ProfiBus-DP, DeviceNet, CAN-Bus, ProfiNet, EtherNet/IP, EtherCAT
Control accuracy:	1% of the nominal value (higher on request)
Rating:	24 V, DC or contact
Protection:	Cabinet installation IP20
2 x relay status:	Changer 250 V, 1A
Efficiency:	> 85 %
Cos $\Phi$	0,95
Operating temperature:	0 ... 40 °C
Standards	EN 50178, EN 61000-6-2, EN 61000-6-4

## Dimensions

REOTRON SMP-SMB			
Size	Width	Height	Depth
Small (S)	300	400	230
Medium (M)	330	450	250
Large (L)	400	480	300
Extra large (XL)	600	600	300

The unit combinations only represent possibilities and not standard units.

## REOTRON SMP-SMB

REOTRON SMP-SMB					
REO Series	Small (S)		Medium (M)	Large (L)	Extra large (XL)
	SMP-SMB 25-40	SMP-SMB 25-100	SMP-SMB 25-200	SMP-SMB 25-300	SMP-SMB 25-500
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...12500
Output voltage [V]	0...25	0...25	0...25	0...25	0...25
Output current [A]	0...40	0...100	0...200	0...300	0...500

REOTRON SMP-SMB							
REO Series	Small (S)		Medium (M)	Large (L)		Extra large (XL)	
	SMP-SMB 50-20	SMP-SMB 50-50	SMP-SMB 50-100	SMP-SMB 50-150	SMP-SMB 50-200	SMP-SMB 50-250	SMP-SMB 50-300
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000	0...12500	0...15000
Output voltage [V]	0...50	0...50	0...50	0...50	0...50	0...50	0...50
Output current [A]	0...20	0...50	0...100	0...150	0...200	0...250	0...300

REOTRON SMP-SMB							
REO Series	Small (S)		Medium (M)	Large (L)		Extra large (XL)	
	SMP-SMB 80-13	SMP-SMB 80-31	SMP-SMB 80-63	SMP-SMB 80-94	SMP-SMB 80-125	SMP-SMB 80-156	SMP-SMB 80-188
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000	0...12500	0...15000
Output voltage [V]	0...80	0...80	0...80	0...80	0...80	0...80	0...80
Output current [A]	0...13	0...31	0...63	0...94	0...125	0...156	0...188

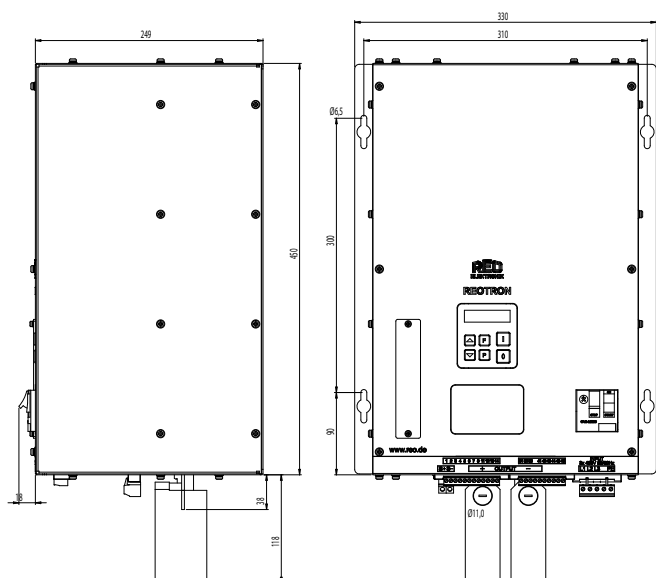
REOTRON SMP-SMB							
REO Series	Small (S)		Medium (M)	Large (L)		Extra large (XL)	
	SMP-SMB 150-7	SMP-SMB 150-17	SMP-SMB 150-33	SMP-SMB 150-50	SMP-SMB 150-67	SMP-SMB 150-83	SMP-SMB 150-100
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000	0...12500	0...15000
Output voltage [V]	0...150	0...150	0...150	0...150	0...150	0...150	0...150
Output current [A]	0...7	0...17	0...33	0...50	0...67	0...83	0...100

REOTRON SMP-SMB							
REO Series	Small (S)		Medium (M)	Large (L)		Extra large (XL)	
	SMP-SMB 250-4	SMP-SMB 250-10	SMP-SMB 250-20	SMP-SMB 250-30	SMP-SMB 250-40	SMP-SMB 250-50	SMP-SMB 250-60
Output Power [W]	0...1000	0...2500	0...5000	0...7500	0...10000	0...12500	0...15000
Output voltage [V]	0...250	0...250	0...250	0...250	0...250	0...250	0...250
Output current [A]	0...4	0...10	0...20	0...30	0...40	0...50	0...60

REOTRON SMP-SMB							
REO Series	Small (S)		Medium (M)	Large (L)		Extra large (XL)	
	SMP-SMB 400-2,5	SMP-SMB 400-6,25	SMP-SMB 400-12,5	SMP-SMB 400-18,75	SMP-SMB 400-25	SMP-SMB 400-31,25	SMP-SMB 400-37,5
Output Power [W]	0...1000	0...2800	0...5200	0...7600	0...10000	0...12800	0...15000
Output voltage [V]	0...400	0...400	0...400	0...400	0...400	0...400	0...400
Output current [A]	0...2,5	0...6,25	0...13	0...19	0...25	0...32	0...37,5

REOTRON SMP-SMB							
REO Series	Small (S)		Medium (M)	Large (L)		Extra large (XL)	
	SMP-SMB 600-2	SMP-SMB 600-4	SMP-SMB 600-8	SMP-SMB 600-13	SMP-SMB 600-17	SMP-SMB 600-21	SMP-SMB 600-25
Output Power [W]	0...1200	0...2400	0...4800	0...7800	0...10200	0...12600	0...15000
Output voltage [V]	0...600	0...600	0...600	0...600	0...600	0...600	0...600
Output current [A]	0...2	0...4	0...8	0...13	0...17	0...21	0...25

Higher voltages and currents on request.







# **1-phase thyristor power controller**



## 1-phase thyristor power controller

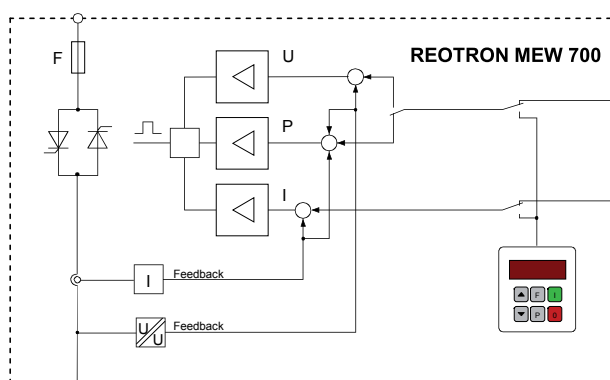
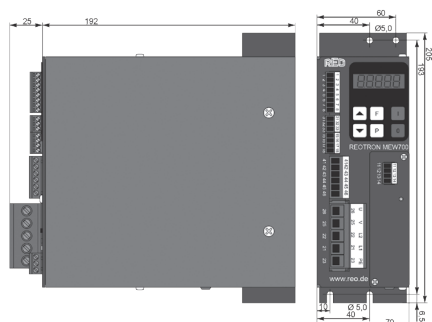
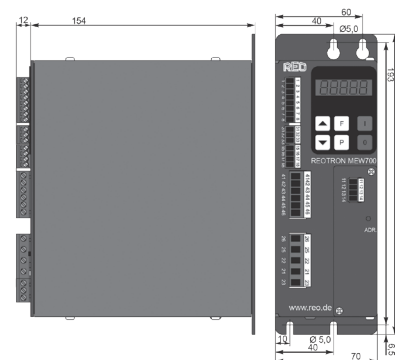
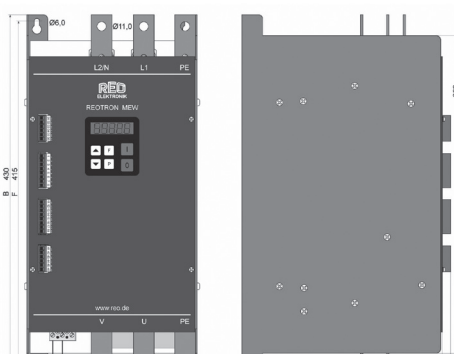
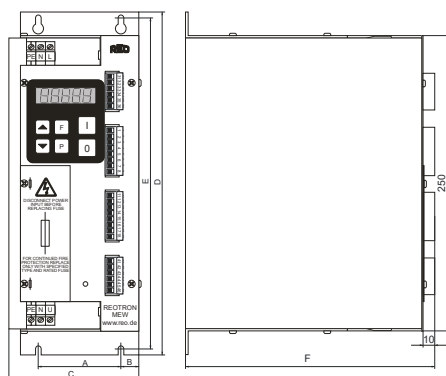
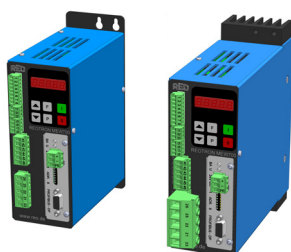
REOTRON MEW thyristor controllers are particularly suitable for industrial process engineering, like thermotechnical applications. The MEW range can operate as phaseangle or in burst-fire mode as standard and are able to function as voltage, current or power regulators ensuring maximum versatility.

REOTRON MEW controllers can be directly connected to the load (e.g. Infrared heating) or can also be used for primary control of transformers for load isolation and allow for operation in more favourable combinations of voltage/current (e.g. resistance heating applications).

Thyristor controllers of our series REOTRON MEW are modern microprocessor controlled devices with integrated measuring equipment. To provide additional functionality, the units provide 0...+10V,DC analog outputs which are proportional to current and voltage. Communication with the devices can be done using conventional analog interfaces (0...10V,DC or 0(4)...20 mA), potentiometer or field bus systems.

The units have a wide variety of user adjustable parameters so that control can be tailored and optimized for your application. The REOTRON MEW range is protected to IP20 and is designed to be integrated into control cabinets. They are air-cooled and above 150A have integral cooling fans.

## REOTRON MEW 700



## Technical Data

1-phase thyristor power controller			
	Input voltage	Output voltage mains -3 V	Output current
REOTRON MEW 700-10	230 V AC, +/- 10% 400 V AC, +/-10 % 50/60 Hz	0...230 V 0...400 V	10 A
REOTRON MEW 700-25			25 A
REOTRON MEW 700-50			50 A
REOTRON MEW 700-80			80 A
REOTRON MEW 700-110			110 A
REOTRON MEW 700-150			150 A
REOTRON MEW 700-200			200 A
REOTRON MEW 700-300			300 A
Load:	Resistive / inductive		
Set-point: Current, voltage, power	0...+10 V, DC 0(4)...20 mA Internal keyboard		
Interface: (optional)	Profibus-DP, CAN-Bus, DeviceNet, EtherCAT, EtherNet/IP, ProfiNet		
Input:	24 V, DC, external contact (potential-free)		
Status update ready; status update power on	Relay, changeover contact; relay, changeover contact		
Display for effective value: Current/voltage	0...+5 V, DC		
Operating temperature	0...+45°C		
Storage/Transport temperature	-10....+70°C		
Protection rating	IP20		

Connection via analog interfaces, potentiometers or field bus systems, phase-angle or burst-fire controllers, measuring of effective values, installation device for control cabinets

Applications: Industrial ovens, Metal- evaporations, Melting Crucibles, Infra-red dryers, Heating equipment

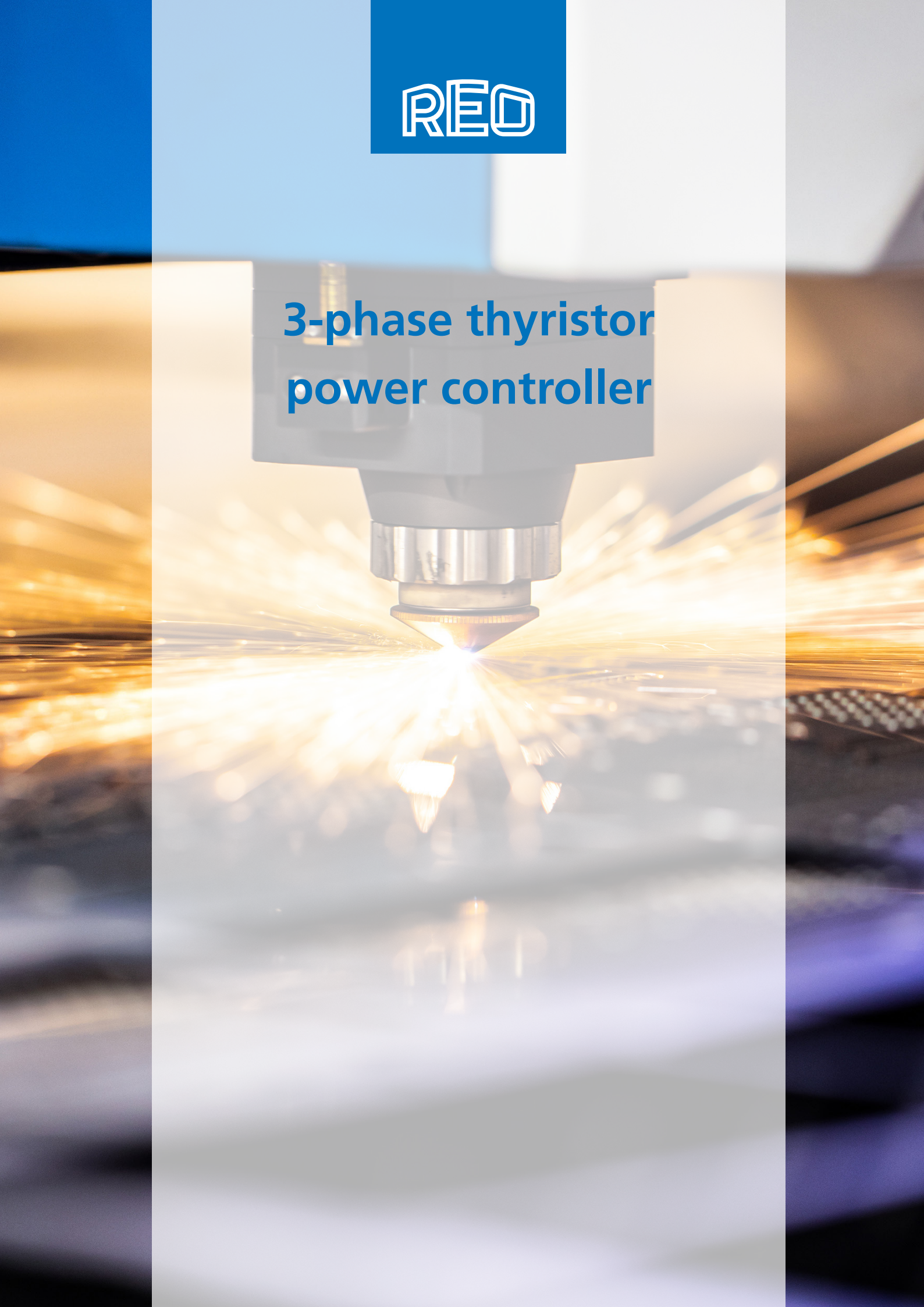
## Dimensions in mm

1-phase thyristor power controller						
Type / mm	A	B	C	D	E	F
MEW 25	70	15	110	290	280	215
MEW 25 with interface	90		130			
MEW 50	70		110			
MEW 50 with interface	90		130			
MEW 80	60	30	1250	320	304	
MEW 80 with interface	90		180			
MEW 110						
MEW 110 with interface						
MEW 200	204	430	250	1802	12	415
MEW 200 with interface						
MEW 300						
MEW 300 with interface						





## **3-phase thyristor power controller**



## 3-phase thyristor power controller

REOTRON MDW thyristor controllers are used in industrial process engineering, especially in applications where accurate regulation of the load is required.

The MDW range can operate as phase-angle or in burst-fire mode as standard and is able to function as voltage, current or power regulators ensuring maximum versatility.

REOTRON MDW controllers can be directly connected to the load (Infrared heating) or can also be used for primary control of transformers for load isolation and allow more favourable combinations for operation of voltage/ current (resistance heating applications).

The REOTRON MDW is a modern microprocessor controlled device with integrated monitoring of voltage and current to ensure that accurate regulation occurs.

Communication with the devices can be done using conventional analog interfaces (0...10V,DC or 0(4)...20 mA), potentiometer or field bus systems like PROFIBUS-DP, CAN-Bus and DeviceNet, EtherNet/IP, ProfiNet and EtherCAT to allow easy integration into new or existing factory control networks. To provide additional functionality the units also provide 0...+10V,DC analog outputs which are proportional to current and voltage. These can easily be interfaced to external measurement and supervisory systems.

The units have a wide variety of user adjustable parameters so that control can be tailored and optimized for the application, for example Current/Voltage Limit and ramp-up and ramp-down times. The REOTRON MDW range is protected to IP20 and is designed to be integrated into control cabinets. They are air-cooled and above 150A have integral cooling fans. In addition to this, the REOTRON MDW-WK are designed for water-cooling and can easily be integrated into new or existing cooling systems.

### 3-phase thyristor power controller

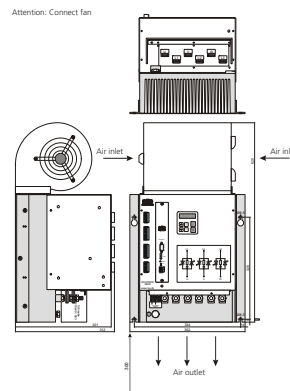
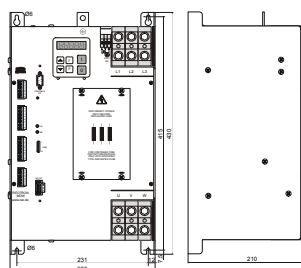
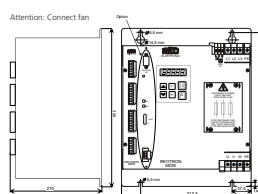
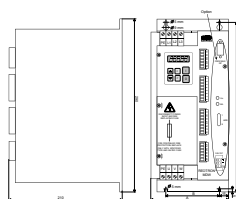


MDW 700,10A / 25A

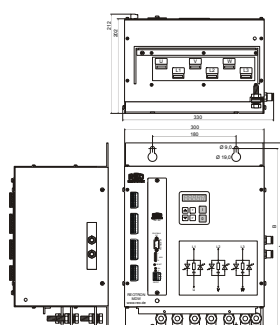
MDW 700 50A / 80A

MDW 700, 110A / 150A / 200A

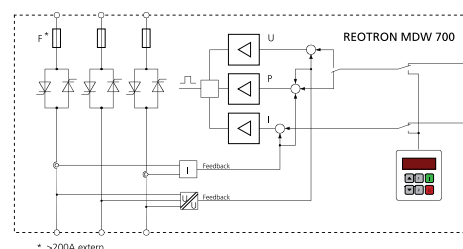
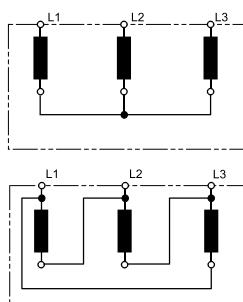
MDW 700, 300A



MDW 700 WK (water-cooled)



Active load circuit



## Technical Data

3-phase thyristor power controller			
Type	Input voltage	Output voltage	Output current
REOTRON MDW 700-10	3 x 400 VAC, +/-10 % 50/60 Hz	3 x 0...400V	3 x 10 A
REOTRON MDW 700-25			3 x 25 A
REOTRON MDW 700-50			3 x 50 A
REOTRON MDW 700-80			3 x 80 A
REOTRON MDW 700-110			3 x 110 A
REOTRON MDW 700-150			3 x 150 A
REOTRON MDW 700-200			3 x 200 A
REOTRON MDW 700-300			3 x 300 A
REOTRON MDW-WK 700-115 *			3 x 115 A
REOTRON MDW-WK 700-160 *			3 x 160 A
REOTRON MDW-WK-700-250 *			3 x 250 A
REOTRON MDW-WK 700-350 *			3 x 350 A
REOTRON MDW-WK 700-450 *			3 x 450 A
<b>Load:</b>	Resistive / inductive		
<b>Set-point: Current, voltage, power</b>	0...+10 V, DC, 0(4)...20 mA Internal keyboard		
<b>Interface: (optional)</b>	Profibus-DP, CAN-Bus, DeviceNet, EtherCAT		
<b>Input:</b>	24 V, DC, external contact, (potential-free)		
<b>Status update ready</b> <b>Status update power on</b>	Relay, changeover contact Relay, changeover contact		
<b>Display for effective value: Current / Voltage</b>	0...+10 V, DC		
<b>Operating temperature</b>	0...+45°C		
<b>Storage / Transport temperature</b>	-10...+70°C		
<b>Protection rating</b>	IP20		

\* with water cooling

phase-angle or burst-fire controllers, measuring of effective values, connection via analog interfaces, potentiometers or field bus systems, air- or water-cooling, installation device for control cabinets

Applications: Industrial ovens, Metal- evaporations, Melting Crucibles, Infra-red dryers, Heating equipment

## Dimensions in mm

3-phase thyristor power controller		
Type / mm	A	B
MDW 10	110	70
MDW 10 with interface	130	90
MDW 25	160	90
MDW 25 with interface	160	90
MDW - WK 115, 160, 250, 350	400	360
MDW - WK 450, 600	550	530





# REOTRON MDZ 2000



## REOTRON MDZ 2000

The range of REOTRON MDZ regulators are microprocessor based units designed to control thyristors in a 6- pulse controlled bridge (B6). The units comprise control and regulating electronics and also firing pulse generation and the pulse output module.

The MDZ 2000 can be used as a current or voltage regulator, whereby output corrections are made relative to the appropriate setpoint input. The actual set point can be derived from an external potentiometer, 0...10 VDC or a 0...20mA / 4...20mA control signal. The standard actual output feedback is +/- 0...40 VDC for the rectifier output voltage and +/- 0...100mA for the current output.

### Function

The MDZ regulating and firing unit has been conceived for the regulation of large power units used in the Cathodic Protection industry. The unit can be configured to control a thyristor bridge on the primary or secondary side of a transformer. Typically in voltage regulation mode the output voltage is held constant, relative to a set point, through the internal regulating circuitry and load or mains input changes therefore have no influence on the output voltage. When the

unit is used as a current regulator, the output current of the unit is compared with the set point and the output adjusted accordingly.

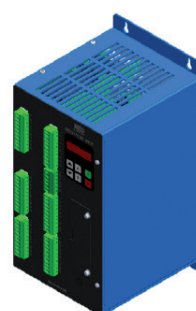
The output voltage can, under these conditions, rise to the maximum permitted. If both set points are used simultaneously, the regulator with the lowest value always has priority. This means, for example, that for a voltage regulator with a secondary current regulation, the voltage control remains in operation providing the selected current value is not exceeded.

If the current limit is reached, then the current regulator has priority. If the unit is used as a pure voltage or current controller, the reference voltage (10 VDC), provided for the other set point inputs, must be bridged to allow the regulator to run at maximum.

## Range of functions

- All 6 pulses in the power control circuit can be used, i.e. for primary control of a transformer
- Set point enable (switch or 24 VDC control signal)
- Impulse enable (switch or 24 VDC control signal)
- Input for over temperature switch
- Set point source from potentiometer, control voltage ...10 VDC or 0...20mA / 4...20mA, DC
- Adjustable start-up and run-down ramps
- Additional over current monitor (adjustable from 100% to 150% of the maximum current)
- Switchable to manual mode without regulator control
- Connection for clockwise or anticlockwise phase rotation (self detection)
- Potential free change over contacts for fault warning

REOTRON MDZ 2000



## Technical data

REOTRON MDZ 2000	
Type	REOTRON MDZ 2000
Mains supply	3x 400 V +6%-10% 50/60 Hz
Firing pulse steps	6
Pulse voltage	ca. 12 V
Pulse current	500 mA
Transformer groups	Dd0, Yy0, Dz0, Dy5, Yd5, Yz5, Dd6, Yy6, Dz6, Dy11, Yd11, Yz11 and primary regulator
Voltage set point	0...10 V, DC / 0...20 mA / 4...20 mA / Poti 10 k $\Omega$
Current set point	0...10 V, DC / 0...20 mA / 4...20 mA / Poti 10 k $\Omega$
Voltage actual value input	+/- 0...40 V (0...10 V, DC optionally)
Current actual value input	+/- 0...100 mV (0...10 V, DC optionally)
Up/Down ramp integrator	0,1...10 Sec adjustable
Voltage regulation	PI - regulator adjustable percentage of P
Current regulation	PI - regulator adjustable percentage of P
Input Impedance voltage actual value Input	56 k $\Omega$
Input Impedance current actual value Input	5,6 $\Omega$
Control signal – pulse enable	12...24 V, DC / 2,5 mA
Control signal – set point inhibit	12...24 V, DC / 2,5 mA
Over temperature input switch	Switch 1 mA
Fault relay	1 changeover contact load 250 V, 1 A
Status relay	1 changeover contact load 250 V, 1 A
Operating ambient temperature	0...45 °C
Dimensions (WxHxD)	140x290x160 mm

## REOTRON complete solutions

### Power supply with SYSTEM

For decades REO has been involved in efficiently converting energy -- both inductively and electronically. Safety, reliability and efficiency: REOTRON SYSTEM unites these characteristics as a complete solution for power supply in the area of process-oriented systems. The highest quality requirements combined with many years of experience in the field of electrical systems and the tried and tested REOTRON technology make it possible to produce--in addition to standard solutions--very specific and individual system solutions. REO offers complete system solutions for power supply based on both a thyristor controller and on a switch-mode power supply.

### Operation

The system is operated via an external control signal 0...10 V, DC or 0(4)...20 mA, or optionally via a field bus interface such as Profibus-DP, CAN-Bus, EtherCAT, DeviceNet, EtherNet/IP or ProfiNet.

### Design

There are various mechanical options for implementing a system solution. Depending on their design and performance, the devices can be installed as 19" rack cases or devices built into the switchboard. Furthermore, there is also the option of realising individual device mounting systems in collaboration with the inhouse engineering workshop. From the connection technology to the current distribution and to the thermal design, the REOTRON components are designed with air or water cooling in consultation with the customer so that the best power supply solution is realised in accordance with the application. The broad position of REO makes it possible to adhere to EMC guidelines through the installation of components from the Power Quality field and thus to offer a complete solution that is ready for connection--a one-stop shopping solution!

## Advantages

- One-stop shopping!
- Specific product solution
- Air and water cooling
- Ready for connection



REO AG  
Brühler Straße 100 · D-42657 Solingen  
Tel.: +49 (0)212 8804 0 · Fax: +49 (0)212 8804 188

E-Mail: [info@reo.de](mailto:info@reo.de)  
Internet: [www.reo.de](http://www.reo.de)



#### **DIVISIONS:**

##### **REO Vibratory Feeding and Power Electronics Division**

Brühler Straße 100 · D-42657 Solingen  
Tel.: +49 (0)212 8804 0 · Fax: +49 (0)212 8804 188  
E-Mail: [info@reo.de](mailto:info@reo.de)

##### **REO Train Technologies Division**

Erasmusstraße 14 · D-10553 Berlin  
Tel.: +49 (0)30 3670236 0 · Fax: +49 (0)30 3670236 10  
E-Mail: [zentrale.berlin@reo.de](mailto:zentrale.berlin@reo.de)

##### **REO Drives Division**

Holzhausener Straße 52 · D-16866 Kyritz  
Tel.: +49 (0)33971 485 0 · Fax: +49 (0)33971 485 90  
E-Mail: [zentrale.kyritz@reo.de](mailto:zentrale.kyritz@reo.de)

##### **REO Medical and Current Transformer Division**

Schuldholzinger Weg 7 · D-84347 Pfarrkirchen  
Tel.: +49 (0)8561 9886 0 · Fax: +49 (0)8561 9886 40  
E-Mail: [zentrale.pfarrkirchen@reo.de](mailto:zentrale.pfarrkirchen@reo.de)

##### **REO Test and PowerQuality Division**

Brühler Straße 100 · D-42657 Solingen  
Tel.: +49 (0)212 8804 0 · Fax: +49 (0)212 8804 188  
E-Mail: [info@reo.de](mailto:info@reo.de)

#### **PRODUCTION + SALES:**

##### **India**

REO GPD INDUCTIVE COMPONENTS PVT. LTD  
E-Mail: [info@reogpd.com](mailto:info@reogpd.com) · Internet: [www.reo-ag.in](http://www.reo-ag.in)

##### **USA**

REO-USA, Inc.  
E-Mail: [info@reo-usa.com](mailto:info@reo-usa.com) · Internet: [www.reo-usa.com](http://www.reo-usa.com)

#### **SALES:**

##### **China**

REO Shanghai Inductive Components Co., Ltd  
E-Mail: [info@reo.cn](mailto:info@reo.cn) · Internet: [www.reo.cn](http://www.reo.cn)

##### **France**

REO VARIAC S.A.R.L.  
E-Mail: [reovariac@reo.fr](mailto:reovariac@reo.fr) · Internet: [www.reo.fr](http://www.reo.fr)

##### **Great Britain**

REO (UK) Ltd.  
E-Mail: [main@reo.co.uk](mailto:main@reo.co.uk) · Internet: [www.reo.co.uk](http://www.reo.co.uk)

##### **Italy**

REO ITALIA S.r.l.  
E-Mail: [info@reoitalia.it](mailto:info@reoitalia.it) · Internet: [www.reoitalia.com](http://www.reoitalia.com)

##### **Poland**

REO CROMA Sp.zo.o  
E-Mail: [croma@croma.com.pl](mailto:croma@croma.com.pl) · Internet: [www.croma.com.pl](http://www.croma.com.pl)

##### **Spain**

REO ESPAÑA 2002 S.A.  
E-Mail: [info@reospain.com](mailto:info@reospain.com) · Internet: [www.reospain.com](http://www.reospain.com)

##### **Switzerland**

REO ELEKTRONIK AG  
E-Mail: [info@reo.ch](mailto:info@reo.ch) · Internet: [www.reo.ch](http://www.reo.ch)

##### **Turkey**

REO TURKEY ELEKTRONIK San. ve Tic. Ltd. Şti.  
E-Mail: [info@reo-turkey.com](mailto:info@reo-turkey.com) · Internet: [www.reo-turkey.com](http://www.reo-turkey.com)

##### **United Arab Emirates**

REO INDUCTIVE COMPONENTS FZCO  
E-Mail: [info@reo-middle-east.com](mailto:info@reo-middle-east.com)  
Internet: [www.reo-middle-east.com](http://www.reo-middle-east.com)