

MICROOPTO MOS 12-28VDC 100kHz MOS 24VDC/12-300VDC 1A MOS 24VDC/8-30VDC 2A

NEW



The MICROOPTO line of solid-state relays provides several options for switching and protecting signals. The line features pluggable cross connections and industrial standard marking options, all in a standard terminal block footprint of 6.1mm.

By using opto-coupler technology, this line of devices will have a very long service life without failure or issues such as switching noise and contact bounce. These units are resistant to shock and vibration and, during operation, do not emit electromagnetic noise or switching related sparks.

- MOS 12-28VDC 100kHz (MICROOPTO 100kHz)
 - Allows switching frequencies up to 100kHz
 - Switching delay time < 3µs
 - Extensive protection circuitry
- MOS 24VDC/12-300VDC 1A (MICROOPTO 300VDC)
 - Wide range load circuit: 12-300VDC 1A
 - Power Boost: 20A / 20 ms, 5A / 1 sec
 - Extensive protection circuitry
- MOS 24VDC/8-30VDC 2A (MICROOPTO ACTOR)
 - Load circuit: 24VDC / 2A, short circuit protected
 - Direct connection of 3-wire actuators
 - Integrated Protective ground connection for easy DIN-rail snap on
 - Fault indication via LED

Canada

Weidmuller, Canada
10 Spy Court
Markham, Ontario L3R 5H6
Telephone: (800) 268-4080
Facsimile: (905) 475-2798
Email: info1@weidmuller.ca
Website: www.weidmuller.ca

Mexico

Weidmuller, Mexico
Blvd. Hermanos Serdán 698
Col. San Rafael Oriente
Puebla, Puebla, Mexico
C.P. 72029
Telephone: 01 222 2686267
Facsimile: 01 222 2686219
Email: clientes@weidmuller.com.mx
Website: www.weidmuller.com.mx

United States

Weidmuller
821 Southlake Blvd.
Richmond, Virginia 23236
Telephone: (800) 849-9343
Facsimile: (804) 379-2593
Email: info@weidmuller.com
Website: www.weidmuller.com

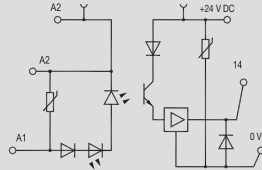
Weidmüller 

MICROOPTO

For high switching frequency up to 100kHz

- Proper load signal up to 100kHz
- Switching delay time < 3µs
- Extensive protection circuitry

MOS 12...28VDC 100 kHz



A special integrated circuit in the opto module **MICROOPTO 100 kHz** ensures that rapidly transmitted signals are isolated from one another and that they can be transferred practically without delay. This allows switching frequencies up to 100 kHz to be achieved.

Comprehensive suppressor circuits safeguard the module against line-borne transients and voltage spikes.

Technical data

Control side	
Rated voltage	12VDC...28VDC
Power rating	0.08...0.3 W
Making voltage	> 70 % U_{Nem}
Dropout voltage	< 12 V
max. input frequency	100 kHz
Status indicator	LED green
Protective circuit	Varistor, reverse polarity protection
Load side	
Solid-state type	Bipolar transistor
Nominal switching voltage	24VDC
Nominal switching current	50 mA
Voltage drop at max. load	≤ 1.5V
Leakage current	< 20 µA>
Short-circuit-proof/Protective circuit	no /varistor, reverse polarity protection
Switch-on delay/Switch-off delay	< 1 µs> / < 3 µs
Continuous current	50 mA
Pulse loading, max. current	0.6A (20 ms)
Load category	LC A
General data	
Ambient temperature (operational)	-20 °C...+60 °C
Storage temperature	-40 °C...+80 °C
UL 94 flammability class	V-0
Humidity	5...95 % RH
	$T_U = 40^{\circ}\text{C}$, no condensation
Approvals	CE; UL
Standards	EN 50178, IEC 62314, UL508
Insulation coordination (EN 50 178)	
Rated voltage	300V
Rated impulse withstand voltage	2.5 kV
Clearance and creepage distances for control side - load side	> 3mm
Surge category	III
Pollution severity	2
Dimensions	
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm
Note	
Screw connection	
	2.5 / 0.5 / 4
	90 x 6.1 x 98

Ordering data

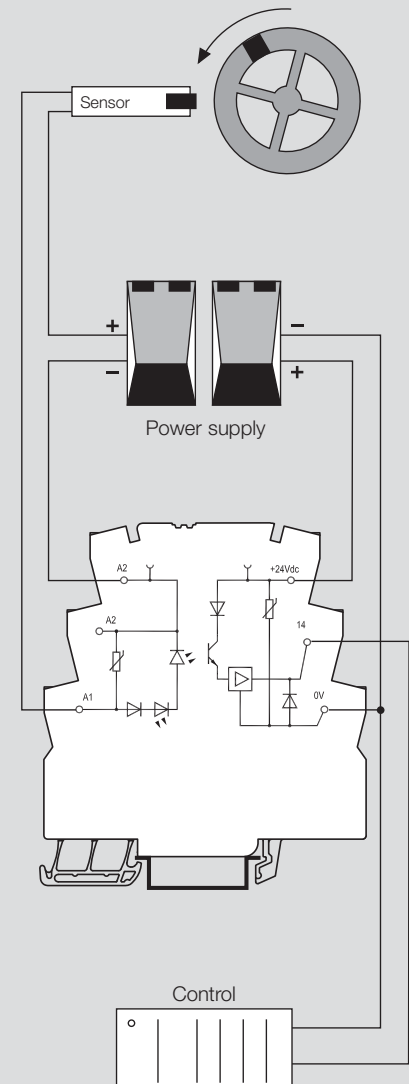
Connection system	Type	Qty.	Part No.
Screw connection	MOS 12-28VDC 100kHz	1	893799000

Note

Accessories

Note

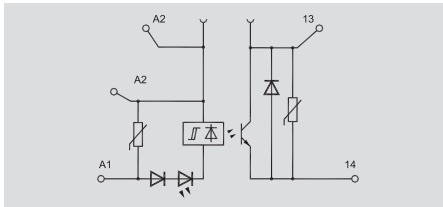
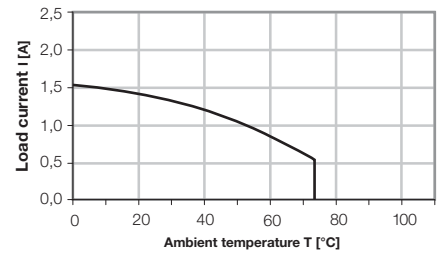
For example rotational speed measurement



For DC loads up to 300VDC and 1A

- Load circuit: 12-300VDC 1A
- Power Boost: 20A / 20 ms, 5A / 1 sec
- Extensive protection circuitry

MOS 12...300VDC 1A



The solid-state relay **MICROOPTO 300VDC** has been developed as a switching amplifier for high inductive loads up to 300VDC and 1A in motor brakes and contactors.

A power boost in the load circuit compensates transient overloads (20A for 20 ms / 5A for 1 s) such as making or breaking spikes. Additional protective circuits protect from higher overloads.

Technical data

Control side

Rated voltage	24VDC ±20 %
Power rating	0.26 W
Making voltage	19.6VDC
Dropout voltage	< 12V
max. input frequency	100 Hz
Status indicator	LED green
Protective circuit	Varistor, reverse polarity protection

24VDC ±20 %
0.26 W
19.6VDC
< 12V
100 Hz
LED green
Varistor, reverse polarity protection

Load side

Solid-state type	MOS-FET
Nominal switching voltage	12...300VDC
Nominal switching current	1A
Voltage drop at max. load	< 1V
Leakage current	< 100 µA>
Short-circuit-proof/Protective circuit	Powerboost 20A / 20 ms, 5A / 1 sec /varistor
Switch-on delay/Switch-off delay	< 0.2 ms / < 0.3 ms
Continuous current	1A
Pulse loading, max. current	27A (10 ms)
Load category	LC A

MOS-FET
12...300VDC
1A
< 1V
< 100 µA>
Powerboost 20A / 20 ms, 5A / 1 sec /varistor
< 0.2 ms / < 0.3 ms
1A
27A (10 ms)
LC A

General data

Ambient temperature (operational)	-20 °C...+60 °C
Storage temperature	-40 °C...+80 °C
UL 94 flammability class	V-0
Humidity	5...95 % RH

-20 °C...+60 °C
-40 °C...+80 °C
V-0
5...95 % RH

Approvals	CE; UL
Standards	EN 50178, IEC 62314, UL508

CE; UL
EN 50178, IEC 62314, UL508

Insulation coordination (EN 50 178)

Rated voltage	300V
Rated impulse withstand voltage	2.5 kV
Clearance and creepage distances for control side - load side	> 3mm
Surge category	III
Pollution severity	2

300V
2.5 kV
> 3mm
III
2

Dimensions

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm

Screw connection

2.5 / 0.5 / 4
90 x 6.1 x 98

Ordering data

Connection system	Screw connection
--------------------------	------------------

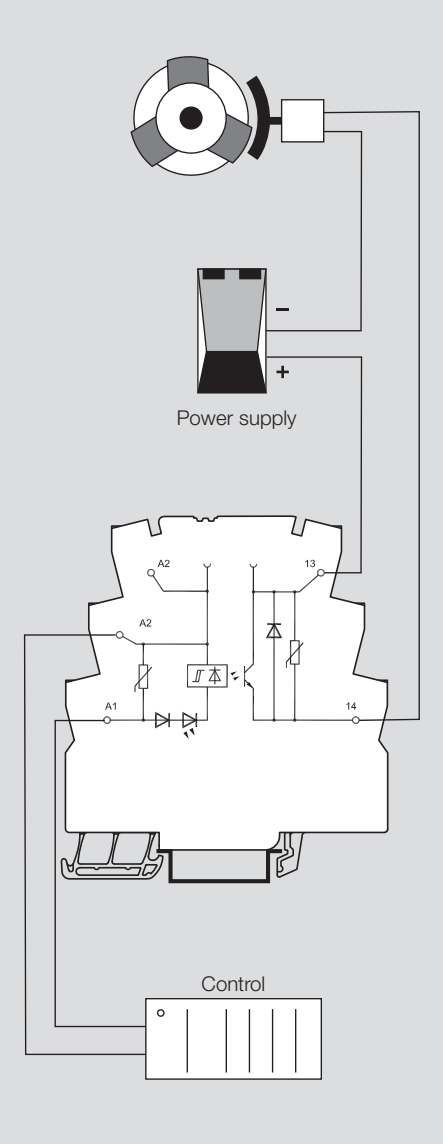
Type	Qty.	Part No.
MOS 24VDC/12-300VDC 1A	1	8937830000

Note

Accessories

Note

Example: motor brake

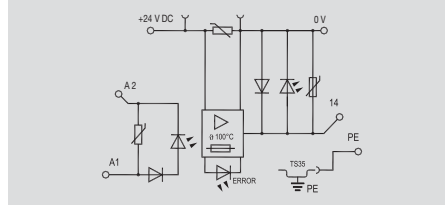
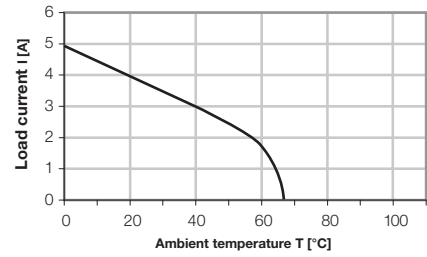


MICROOPTO

For direct connection of actuators up to 24VDC, 2A

- Load circuit: 24VDC / 2A, short circuit protected
- Direct connection of 3-wire actuators
- Integrated Protective ground connection for easy DIN-rail snap on
- Fault indication via LED

MOS 8...30VDC 2A



The solid-state relay **MICROOPTO ACTOR** has been especially designed as a switching amplifier for actuators up to 24VDC and 2A with inductive loads such as solenoid valves and contactors. 3-wire actuators can be connected directly to the module.

This is short-circuit proof and protected against application-related transients and spikes by extensive protective circuitry.

Technical data

Control side	
Rated voltage	24VDC ±20 %
Power rating	0.12 W
Making voltage	> 70 % U _{Nom}
Dropout voltage	< 12V
max. input frequency	100 Hz
Status indicator	Fault indication LED red, status LED green
Protective circuit	Varistor, reverse polarity protection
Load side	
Solid-state type	Intelligent POWER MOS-FET
Nominal switching voltage	8...30VDC
Nominal switching current	2A
Voltage drop at max. load	< 100 mV
Leakage current	< 100 µA
Short-circuit-proof/Protective circuit	yes (12 h) /varistor
Switch-on delay/Switch-off delay	< 0.2 ms> / < 0.5 ms>
Continuous current	2A
Load category	LC A
General data	
Ambient temperature (operational)	-20 °C...+60 °C
Storage temperature	-40 °C...+80 °C
UL 94 flammability class	V-0
Humidity	5...95 % RH
	T _{st} = 40°C, no condensation
Approvals	CE; UL
Standards	EN 50178, IEC 62314, UL508
Insulation coordination (EN 50 178)	
Rated voltage	300V
Rated impulse withstand voltage	2.5 kV
Clearance and creepage distances for control side - load side	> 3mm
Surge category	III
Pollution severity	2
Dimensions	
Clamping range (rating- / min. / max.)	mm ² 2.5 / 0.5 / 4
Length x width x height	mm 90 x 6.1 x 98
Note	
Ordering data	
Connection system	Screw connection
Note	
Accessories	
Note	

Example: pneumatic valve

