

MM 5018

Intrinsically safe
SAFETY SYSTEMS

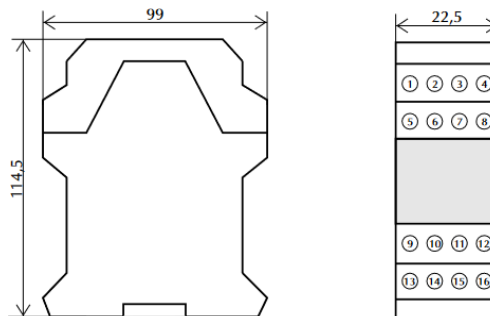


Intrinsically safe relay (switching amplifier)

Dual-channel, output 2x relay contact, line fault detection

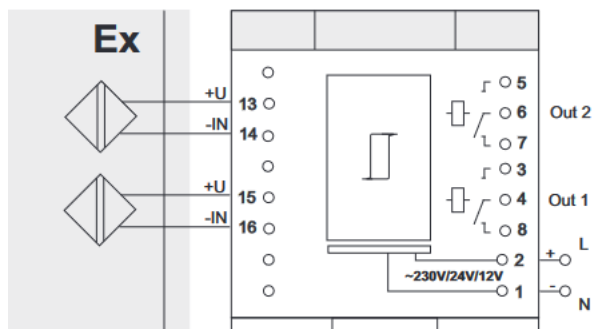
DESCRIPTION:

The MM 5018 amplifiers are two-channel switching amplifiers with relay output, equipped with an LFD circuit for control of the lead loop (interrupt, short circuit), with line fault indication by an LED. The input circuits correspond to DIN 19234 (NAMUR) for the connection of magnetic, inductive or capacitive sensors, variable resistors or voltage-free mechanical contacts. The amplifier output is equipped with two output relays. Connecting the sensor according to the diagram on the side of the product switches the output relay to the operating current sensor mode. If the output relay is requested to be switched on in the sensor's quiescent current mode, it is necessary to provide the corresponding code when ordering (see technical data). The presence of the supply voltage is indicated by a green LED, the activation of the output relay is signaled by a yellow LED. An emergency status is indicated by a red LED



PRODUCT FEATURES

- Two-channel switching amplifier
- intrinsically safe entrance
- input circuit according to DIN 19234 (NAMUR)
- galvanic separation of input and output circuits
- galvanic separation of the supply voltage from the input and output circuits
- Line Damage Indication



CONNECT:

- 3 - switching contact of relay 1
- 4 - center of relay 1
- 5 - switching contact of relay 2
- 6 - center of relay 2
- 13 - + In 1 (input)
- 14 - - In 1 (input)
- 15 - + In 2 (input)
- 16 - - In 2 (input)

MM 5018



Intrinsically safe relay (switching amplifier)

Dual-channel, output 2x relay contact, line
fault detection

Technical parameters

Exemplary marking	MM 5018 AC (230 V)	MM 5018 DC (24 V)	MM 5018 DC (12 V)
Identification code			
Relay in operation mode	5018 230 01 00	5018 024 01 00	5018 012 01 00
Relay in the idle mode	5018 230 00 00	5018 024 00 00	5018 012 00 00
Power			
Supply voltage	196 - 253 V AC	19 - 28 V DC	11 - 15 V DC
Frequency	48 - 52 Hz	N/A	N/A
Power	1.3 VA	1,3 watts	1,3 watts
Galvanic separation	Input from output and power	Input from output and power	Input from output and power
Contacts			
Safe zone output	2x relay switching contact	2x relay switching contact	2x relay switching contact
Rated voltage	230 V AC	230 V AC	230 VADC
Rated current	12 A	12 A	12 A
Rated power	100 VA	100 VA	100 VA
mechanical contact lifespan	10 000 000	10 000 000	10 000 000
Input From Hazardous Zone	NAMUR 19234	NAMUR 19234	NAMUR 19234
Operating parameters			
Voltage	8 V	8 V	8 V
Current	8 mA	8 mA	8 mA
Relay thresholds			
Pull-in Current/Resistance	$I_{in} > 2.1 \text{ mA}$ or $R_{in} < 2 \text{ k}\Omega$	$I_{in} > 2.1 \text{ mA}$ or $R_{in} < 2 \text{ k}\Omega$	$I_{in} > 2.1 \text{ mA}$ or $R_{in} < 2 \text{ k}\Omega$
Pull-out Current/Resistance	$I_{in} < 1.2 \text{ mA}$ or $R_{in} > 10 \text{ k}\Omega$	$I_{in} < 1.2 \text{ mA}$ or $R_{in} > 10 \text{ k}\Omega$	$I_{in} < 1.2 \text{ mA}$ or $R_{in} > 10 \text{ k}\Omega$
Hysteresis	$250 \pm 100 \mu\text{A}$	$250 \pm 100 \mu\text{A}$	$250 \pm 100 \mu\text{A}$
Control Failure Detection (LFD):	YES	YES	YES
LFD Control Input Impedance:	Series: 500 to 1000 Ω , Parallel: 20 to 25k Ω	Series: 500 to 1000 Ω , Parallel: 20 to 25k Ω	Series: 500 to 1000 Ω , Parallel: 20 to 25k Ω
LED indication			
Power Supply	Green	Green	Green
Output Status	Yellow	Yellow	Yellow
Fault	Red	Red	Red
Environmental Class	II 2 G /EEx ia/ IIC, II 1 G /EEx ia/ IIC, I M1 /EEx ia/ I	II 2 G /EEx ia/ IIC, II 1 G /EEx ia/ IIC, I M1 /EEx ia/ I	II 2 G /EEx ia/ IIC, II 1 G /EEx ia/ IIC, I M1 /EEx ia/ I
Housing			
Dimensions	99 mm x 22.5 mm x 114.5 mm (HxWxD)	99 mm x 22.5 mm x 114.5 mm (HxWxD)	99 mm x 22.5 mm x 114.5 mm (HxWxD)
Housing type	16-Contacts	16-Contacts	16-Contacts
Material	polycarbonate/ABS	polycarbonate/ABS	polycarbonate/ABS
Flammability standard	V-0 according to UL94	V-0 according to UL94	V-0 according to UL94
Mount	DIN 35	DIN 35	DIN 35
Connect	Screws/ Contacts	Screws/ Contacts	Screws/ Contacts
Max. Cable diameter	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
IP Rating	IP20	IP20	IP20