

Murrelektronik GmbH
Falkenstraße 3
71570 Oppenweiler
GERMANY

Phone +49 7191 47-0
Fax +49 7191 47-491000
info@murrelektronik.com

Document	Version
Product Data	1.1
Art.-No.	Product designation
9000-41190-0000000	Mico Pro PM

Mico Pro is a modular system consisting of electronic auxiliary current switches and a power module for current monitoring

Special features of the product family:

- System with modular structure
- Innovative bridging concept
See accessories
- Adjustable or fixed tripping current
- Integrated 0-V wiring concept
- Enormous space saving
- Potential distributor for connecting several loads to a Mico Pro channel

- Cascading of two Mico Pro load circuit monitoring one after the other
- Channel-specific or system-integrated control inputs and outputs (Mico Pro flex)
- Channel-specific switching function via CTRL input (Mico Pro flex)
- Quick connection with push-in spring-clamp terminals
- Manual connection and disconnection of channels via buttons
- Operating state memory device

Mico Pro system components:

- 1 **PM module** (power module) or **PS module** (power supply)
Power feeding module for system supply and control options
- 2 **Fix module**
Load circuit monitoring with preset tripping current
- 3 **Flex module**
Load circuit monitoring with adjustable tripping current and channel-specific diagnostics and control options
- 4 **PD module** (power distribution)
Potential distributor
- 5 **Plug-In link**
Continuous jumper for distributing the supply voltage
- 6 **Cover plate**
Left and right

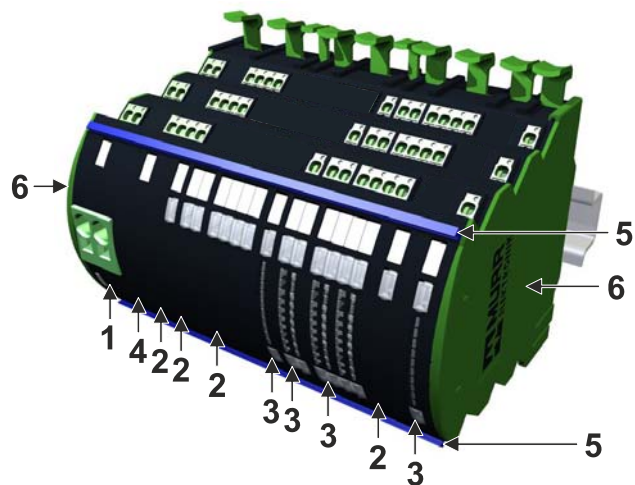


Fig. 0-1: Example of assembly



Planning information, background information and accessories can be found at:
<http://shop.murrelektronik.com>

1 Electrical data

Input		
Operating voltage		12 V $\overline{=}$, 24 V $\overline{=}$
Input voltage range		9 ... 30 V $\overline{=}$
Cut-in/cut-out frequency		0.5 Hz
Total operating current continuous jumper	Plug-In link	40 A
Control input		
CTRL input voltage		Low 0 ... 1 V, High 9 ... 30 V
CTRL control current		High ≤ 6 mA
CTRL signal		1 OFF: "high" 40 \pm 3 ms ON: "high" 20 \pm 3 ms 2 OFF: "high" 400 \pm 3 ms ON: "high" 200 \pm 3 ms 3 OFF: "high" >600 ms ON: "high" CTRL & ON >500 ms
CTRL switching frequency		≤ 10 Hz
CTRL overvoltage protection		Suppressor diode 36 V
Remote switch-on (ON)		Possible
ON input voltage		Low 0 ... 1 V, High 9 ... 30 V
ON control current		High ≤ 6 mA
ON pulse length		ON: "high" 120 ms
ON overvoltage protection		Suppressor diode 36 V
Output		
Parallel connection		Not possible
Total operating current continuous jumper	Plug-in-Link	40 A
Output current		40 A
Control output		
Ohmic resistance terminals "Alarm"	Input voltage 0 V	100 kOhm ± 1 k Ohm
Ohmic resistance terminals "Alarm"	Input voltage ≥ 9 V min. 1 channel in composite off	100 kOhm ± 1 kOhm
Ohmic resistance terminals "Alarm"	Input voltage ≥ 9 V all channel in composite off	35 Ohm ± 15 Ohm
Adjustable voltage terminals "Alarm"		≤ 30 V $\sim/\overline{=}$
Current at terminal "Alarm"		≤ 20 mA
Ohmic resistance terminals "90 %"	Input voltage 0 V	100 kOhm ± 1 k Ohm
Ohmic resistance terminals "90 %"	Input voltage ≥ 9 V min. 1 channel in composite off	100 kOhm ± 1 kOhm
Ohmic resistance terminals "90 %"	Input voltage ≥ 9 V all channel in composite off	35 Ohm ± 15 Ohm
Adjustable voltage terminals "90 %"		≤ 30 V $\sim/\overline{=}$
Current at terminal "90 %"		≤ 20 mA

2 Environmental characteristics

Climatic		
Relative humidity	No condensation	5 ... 85 %
Storage temperature		-40 °C ... +80 °C
Climate class	IEC/EN 60721-3-3	3K3
Surrounding air temperature range		-25 °C ... +55 °C
Installation height	NHN, without any restrictions	-500 ... 2000 m
Installation height	NHN, ≤32 A total operating current	2000 ... 4000 m
Installation height	NHN, ≤24 A total operating current	4000 ... 6000 m
Mechanical		
Vibration test	IEC 60068-2-6 Test Fc; EN 60068-2-6	sin 5 ... 17.8 Hz: 1.6 mm; 17.8 ... 500 Hz: 2.3 g 10x f
Shock test	IEC 60068-2-27 Test Ea; EN 60068-2-27	9000-41190-000000: 1/2 sin 40 g, 11 ms 9000-41190-000001: 1/2 sin 30 g, 11 ms
Shocks caused by rough handling	Drop test	1 m
Electrical safety		
Degree of protection	EN 60529	IP20
Pollution degree		2
Safe separation	External power supply unit	SELV/PELV
Overvoltage category		III
Insulation voltage input-output	Type testing / routine check test	50 V
EMC-interference		
Radio interference field strength housing	EN 61000-6-3	Industrial and residual areas
Conducted emission DC inputs and outputs	EN 61000-6-3	Industrial and residual areas
EMC-immunity		
Fast transients / burst DC inputs and outputs	EN 61000-6-2, EN 61000-4-4	±2 kV / 5 kHz
Fast transients / burst signal connections	EN 61000-6-2, EN 61000-4-4	±2 kV / 5 kHz
Surge voltage DC inputs and outputs	EN 61000-6-2, EN 61000-4-5	±0,5 kV DM
Electrostatic discharge housing	EN 61000-6-2, EN 61000-4-2	Contact ± 4 kV; Air ± 8 kV
Conducted HF DC connections	EN 61000-6-2, EN 61000-4-6	10 VRMS; 1 kHz, 80 % AM Sine
Conducted HF control terminals	EN 61000-6-2, EN 61000-4-6	10 VRMS; 1 kHz, 80 % AM Sine
High-frequency electrical RF fields housing	EN 61000-6-2, EN 61000-4-3	80 MHz ... 1.0 GHz: 10 V/m

3 Protection

Device protection		
Overvoltage protection input		Suppressor diode 36 V
Voltage monitoring		No
Operating voltage protection	EN 61131-1	No
Overload protection		No (only via load circuit monitoring)

4 Mechanical data

Materials		
Flame resistance	EN 60695-2-1	Low flammability
Housing material		Plastic

Mounting data		
Dimension	Depth (D)	114 mm
Dimension	Height with gate valve (H)	130 mm
Dimension	Height without gate valve (H2)	111 mm
Dimension	Width (W), 0.35 mm are inserted into the adjacent module	24.35 mm
Net weight		100 g

