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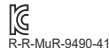
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Document	Version
Product data	1.1

Art.-No.	Product designation
9000-41014-0200067	Mico67 4.2 CL2

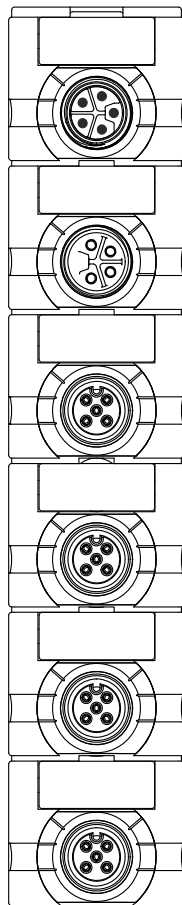
This product has the following characteristics:

- IP67 for all modules and connections
- Simple installation directly to RobotUnits, ITEM and 80/20 aluminum profiles
- Connection per plug-and-play
- 4 outputs NEC Class 2, secured on 2 A



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

1 Electrical data



Power IN

POWER IN Input voltage, M12, L coded

Power OUT

POWER OUT Output voltage, M12, L coded

X1

X1 Output, M12, A coded

X2

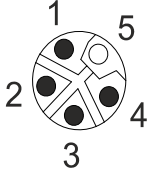
X2 Output, M12, A coded

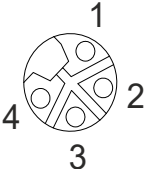
X3

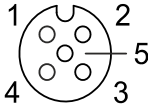
X3 Output, M12, A coded

X4

X4 Output, M12, A coded

4-pole (M12L male)		
	Power IN	
	Pin 1	24 V $\overline{\text{---}}$
	Pin 2	Sensor forwarding 1
	Pin 3	Common
	Pin 4	Sensor forwarding 2
	Pin 5	n.c.

4-pole (M12L female)		
	Power OUT	
	Pin 1	24 V $\overline{\text{---}}$
	Pin 2	Sensor forwarding 1
	Pin 3	Common
	Pin 4	Sensor forwarding 2

5-pole (M12A female)		
	X1, X2, X3, X4	
	Pin 1	24 V $\overline{\text{---}}$
	Pin 2	n.c.
	Pin 3	Common
	Pin 4	n.c.
	Pin 5	n.c.

Cable length		
Power IN		≤30 m
Power OUT		≤30 m
X1 ... X4		≤30 m

Inputs		
Operation voltage		24 V $\overline{\text{---}}$
Input voltage range		18 ... 28 V $\overline{\text{---}}$
Supply current	idle	16 mA
Supply current	24 V	≤16 A
Supply current	Sensor forwarding	≤0,1 A

Outputs X1 ... X4		
Circuit element		Static switch
Module initialization time		10 ms
Parallel connection		Not possible
Disconnecting characteristics accuracy	Current	0 ... +20 %
Nominal output voltage		same as input
Turn-on capacity		4,7 mF
Tripping current	Full load	2 A (+20 %)

Performance record		
Voltage drop	per channel, at 50 % load	0,06 V
Efficiency	at 50 % load	99,7 %

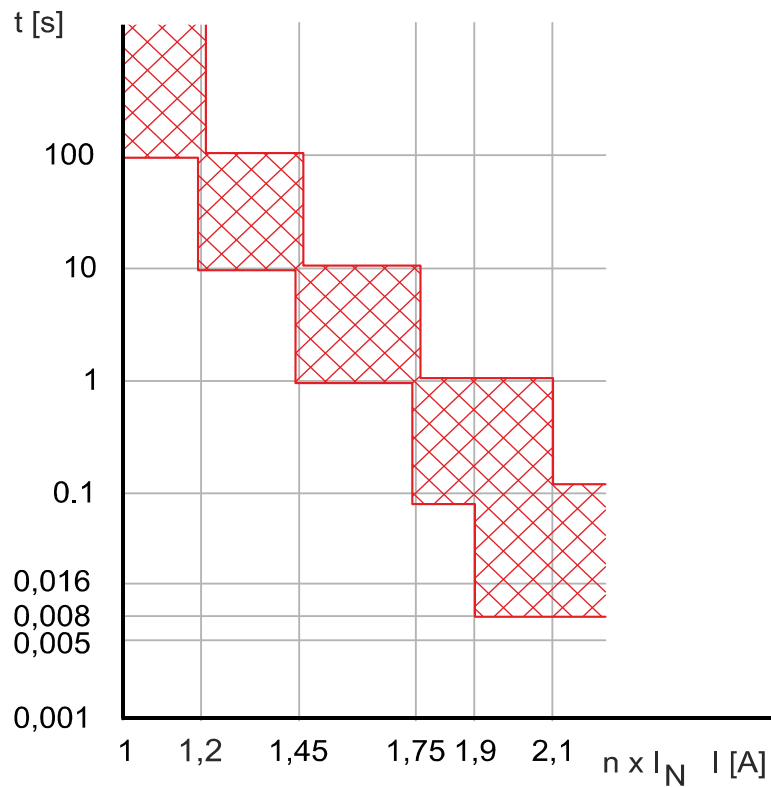


Fig. 1-1: Disconnecting characteristics | Tripping current

The current per channel is internally limited to 18A +/- 33% per channel. If the limitation occurs, the output switches to protection mode. The output is switched on and off several times. If the overload is still present after approx. 300 ms, the channel is switched off permanently.

2 Environmental characteristics

Climatic		
Relative humidity	No condensation	≤95 %
Storage temperature		-25 °C ... +70 °C
Surrounding air temperature range		-25 °C ... +45 °C
Installation height	Above mean sea level	-500 ... 6000 m
Mechanical		
Vibration test	EN 60068-2-6	5 ... 500 Hz; 15g 0,075 mm; XYZ axis
Shock test	EN 60068-2-27	50 g; XYZ axis
Shocks caused by rough handling	Drop test	1 m
Electrical safety		
Degree of protection	EN 60529	IP65 / IP67
Pollution degree		2
Overvoltage category		III
EMC interference		
Generic standards - Emission standard for equipment in residential environments	IEC 61000-6-3	residential, commercial and light-industrial environments
Generic standards - Immunity standard for industrial environments	EN 61000-6-2	Industrial environments

3 Protection







Device protection		
Short circuit protection		Short circuit-proof
Overvoltage protection input		Suppressor diode 36 V
Overvoltage protection output		Suppressor-Diode 36 V
Voltage monitoring		No
Internal fuse		No
Reverse polarity protection		No, just for internal electronic
Short-circuit protection		Yes
Overload protection		See derating

4 Mechanical data

Materials		
Flame resistance	EN 60695-2-1	Low flammability
Housing		PBT UL 94V-0, schwarz
Potting compound	according to UL 94V-0	2 component potting compound
Contact carriers		PA UL 94V-0, black
Contact female		Plastic
O-ring		Silicone
Insulating material group	according to UL 94V-0	Group III
Mounting data		
Dimension	L x W x H	151 x 30 x 35 mm
Weight	Net	158 g

5 Operation


5.1 LED indication

LED display	LED status	Description
 Green	Permanently	Port works normally
 Grün	Flashing at 1Hz	Channel in threshold, Load ≥ 90 % from tripping current
 Red	Permanently	Under voltage detected, Check voltage supply
 Rot	Flashing at 1 Hz	Channel switched off, Overload, short circuit
 Rot	Flashing at 5 Hz	Module defect
 Off		












All channels are in the conductive state when the operating voltage is applied to POWER IN (LEDs light up green). Lower the supply voltage to ≤ 10 V to brought back the switched off channels into the conductive state.

6 Conformity, Approvals

Conformity, Approvals		
ULus	UL61010	
cUL	CSA C22.2 NO. 61010-1-19	
ULus	UL2367 - Addition to Mico Port	
ULus	UL1310 - Addition to NECClass2 Port	
UKCA	EN IEC 61000-6-2: 2019 Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity standard for industrial environments (IEC 61000-6-2:2016) EN 61000-6-3: 2007 + A1:2011 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3:2006 + A1:2010) EN IEC 63000: 2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction hazardous substances (IEC: 2016)	
CE	2014/30/EU & 2011/65/EU	
KC	KN 61000-6-2, KN 61000-6-3	

Hazardous substance (有害物質)							
	Part Name 零件名稱	Lead	Mercury	Cadmium	Hexavalent	Polybrominated	Polybrominated
		(Pb) 鉛	(Hg) 汞	(Cd) 鎘	Chromium (Cr (VI)) 六价铬	biphenyls (PBB) 多溴联苯	diphenyl ethers (PBDE) 多溴联苯醚
	Component part PCB 组件部分 印刷电路板	X	O	O	O	O	O
O: Indicates that the content of the harmful substance in all homogeneous materials of the component part is below the limit defined in GB/T 26572. O: 表明該有害物質在組成部分的所有均質材料的含量低於按GB/ T26572定義的限制。 X: Indicates that the content of the harmful substance in at least one homogeneous material of the component part exceeds the limit defined in GB/T 26572. X: 表示該有害物質在組成部分中的至少一個均質材料的含量超過按GB / T26572定義的限制。							

7 Symbol Description

Symbol	Function / description
	General mandatory sign: Follow the mandatory action specified by the supplementary sign
	Read instruction manual before installation
	Electrotechnical expertise is required
	Mechanical expertise is required
	Do not disconnect under load
	For indoor use only
	Observe country-specific waste disposal regulations
	Maximum installation height
	Warning: Hot surface
	General warning sign: Pay attention to the danger indicated by the supplementary sign
	Warning: Electricity