

Metal bodied limit switch

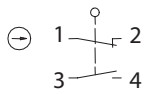
Series MN78

Description **MN78-11 04**

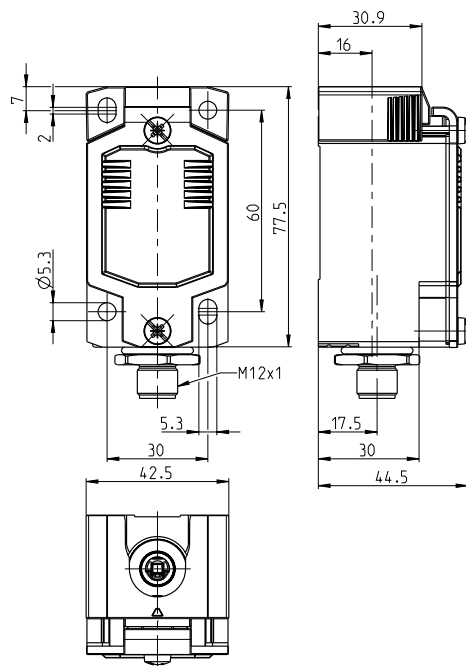
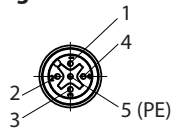
Article number **6087000115**

Enclosure with built-in switches without actuating device


Operating symbol



Plug



Electrical Data

Rated insulation voltage	U_i	63 V
Rated impulse withstand voltage	U_{imp}	1,5 kV
Rated operational voltage	U_e	60 V AC / 24 V DC
Rated supply frequency AC		50 / 60 Hz
Overvoltage category		II acc. EN 60947-1 annex H table H1
Conv. thermal current	I_{the}	3 A
Minimum current		1 mA
Utilization category		AC 15, U_e/I_e 60 V / 3 A; DC 13, U_e/I_e 24 V / 1,5 A
Direct opening action		acc. IEC/EN 60947-5-1, annex K
Short-circuit protective device		Fuse 4 A gG
Rated conditional short-circuit current		400 A
Protection class		I

Mechanical data		
Enclosure		Die-cast aluminium
Cover		Sheet aluminium
Actuating force	F_{bmin} F_{\ominus}	14 N + Force of the actuating device 18 N + Force of the actuating device
Operating temperature		-30 °C ... +75 °C
Storage temperature		-40 °C ... +80 °C
Protection type		IP66 / IP67 acc. EN 60529, Type 4X only with mounted actuating device
Pollution degree (built-in switch)		3
Contact material		silver
Device Class (built-in switch)		Category E (MC3+CC2+SC1) acc. EN 60947-1 annex Q
Contact type		1 N.C. (Form Zb), 1 N.O.
Operating rate	V	$0,06 \text{ m/min} \leq V \leq 30 \text{ m/min}$
Bounce duration		The value depends on the operating rate
Switchover time		The value depends on the operating rate
Switching frequency		$\leq 60 / \text{min.}$
Mechanical life		depending on the operating device up to 30×10^6 operating cycles
Mission time		≤ 20 years
Connection		Plug M12x1, 5-pole, A-coded
Earth bolt		1 x M3,5
Weight		$\approx 0,18 \text{ kg}$
Installation position		operator definable

ID for safety engineering		
B10d N.C.		20×10^6 cycles
B10d N.O.		1×10^6 cycles

Standards		
		DIN EN 60947-5-1
		UL 508 / CSA C22.2 No.14
		DIN EN ISO 13849-1
		DIN EN ISO 13849-2

EU Conformity		
		acc. to directive 2014/35/EU (Low-Voltage-Directive)

Approvals		
		CCC
		cUL _{US}

Notes

The degree of protection specified (IP code) applies only to a properly closed cover and the use of an equivalent connector.
The connector and the cable (fix or flexible mounted) must at least be suitable for the described ambient air temperatures.
The connector must not be connected or disconnected when voltage is applied.
The mechanical life of the connector is 100 connection cycles.

The information on the switching travel can be found in the data sheets of the actuator, as these depend on the actuator used.

Approvals / properties applies only to the fully assembled device.