

- > Magnetically operated solid state switch - round style
- > IO-Link version available
- > Suitable for all cylinder ranges with magnetic piston
- > Switches can be mounted flush in all profile cylinders
- > Reliable switching with a very fast reponse time
- > Particularly suited for use in high levels of vibration
- > LED indicator as standard
- > CE certified
- > UL listed


IO-Link

Technical features
Operation:

M/50/EAP (PNP) open collector output with LED (yellow)
 M/50/EAN (NPN) grounded emitter output with LED (yellow)
 M/50/IOP (PNP) Easy IO-Link open collector output with LED (yellow)

Switching voltage (U_b):

10 ... 30 V d.c.

Switching voltage output:

 U_b - 2 V

Inducted voltage:

0,5 V

Switching current

(see graph overleaf):
 100 mA max.

Switching power:

3,0 W max.

Response time:

< 0,5 ms for EAP switch
 < = 1 ms for IOP switch

Operating frequency:

1 kHz

Protection rating (EN 60529):

IP67 (standard)
 IP68 for type: M/50/EAP/5U

Operating temperature:

-40 ... +80°C (-40 ... 176°F)
 (IP67 & IP68)

Cable type:

PVC 3 x 0,12 (standard)
 PUR 3 x 0,14 (M/50/EAP/5U)

Cable length:

2, 5 and 10 m

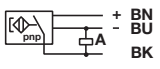
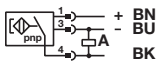
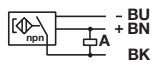
Electromagnetic compatibility according to:

EN 60947-5-2

Materials:

Body: plastic
 Cable: see table below

Technical data - Solid state


Symbol	Voltage (V d.c.)	Current maximum (mA)	Function	IO-Link *2)	Operating temperature (°C)	LED	Protection class	Plug	Cable length (m)	Cable type	Weight (g)	Model
	10 ... 30	100	PNP		-40 ... +80	•	IP67	—	2, 5 or 10	PVC 3 x 0,12	37	M/50/EAP/*V
	10 ... 30	100	PNP	•	-40 ... +80	•	IP67	—	5	PVC 3 x 0,12	37	M/50/IOP/5V
	10 ... 30	100	PNP		-40 ... +80	•	IP68	—	5	PUR 3 x 0,14	37	M/50/EAP/5U
	10 ... 30	100	PNP		-40 ... +80	•	IP67	M8 x 1	0,3	PVC 3 x 0,14	16	M/50/EAP/CP *1)
	10 ... 30	100	PNP	•	-40 ... +80	•	IP67	M8 x 1	0,3	PVC 3 x 0,14	16	M/50/IOP/CP *1)
	10 ... 30	100	PNP		-40 ... +80	•	IP67	M12 x 1	0,3	PVC 3 x 0,14	16	M/50/EAP/CC *1)
	10 ... 30	100	NPN		-40 ... +80	•	IP67	—	2, 5 or 10	PVC 3 x 0,12	37	M/50/EAN/*V
	10 ... 30	100	NPN		-40 ... +80	•	IP67	M8 x 1	0,3	PVC 3 x 0,14	16	M/50/EAN/CP *1)

* Insert cable length; *1) Plug-in connector below; Color code: BK = black, BN = brown, BU = blue

IO-Link function *2)

- Visual installation aid
- Counter
- Temperature diagnostic
- Power LED

IO-Link Switch conforming to IEC 61131-9

Properties and Functionality	Typical magnetically operated switches		M/50/IOP
Operating Mode	Standard	Standard	 IO-Link
Power LED		•	•
LED sensor signal	•	•	•
Normally open (delivery status)	•	•	•
Normally closed		○	•
Delay mode		○	•
Installation aid		•	•
Temperature measurement			•
Detection counter			•

Note: IODD for the M/50/IOP switches available on the IMI Precision Engineering homepage.
<https://www.imi-precision.com/uk/en/technical-support/software>

- included
- manufacture pre-setting required

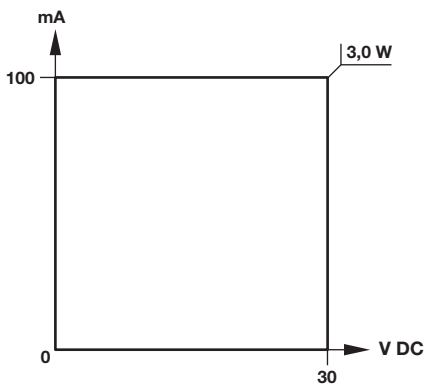
Option selector

M/50/****/****



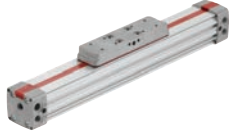



Function	Substitute
PNP	EAP
NPN	EAN
IO-Link	Substitute
PNP	IOP

Cable	Substitute
PVC (Standard)	V
PUR	U
Cable length/plug	Substitute
2 m	2
5 m	5
10 m	10
Cable (0,3 m) with plug M8 x 1	CP
Cable (0,3 m) with plug M12 x 1	CC













Switching current and switching voltage



Cylinder ranges suitable for flush switch mounting

ø 32 ... 125 mm ISO 15552 ISOLine™ Clean Line IVAC Industrie	ø 20 ... 125 mm ISO 21287 Compact Cylinder	ø 16 ... 80 mm LINTRA® Plus	ø 32 ... 125 mm Rotary Cylinder	ø 32 ... 100 mm Cylinder with guiding	ø 10 ... 40 mm Sort stroke unit Slide tables
					
Type	Type	Type	Type	Type	Type
PRA/802000/M	RA/192000/M	M/146000/M	M/162000/M	M/61000/M	M/60100/M
PRA/822000/M		M/146100/M			M/61200/M
PRA/862000/M		M/146200/M			

Mounting brackets for magnetic switches

Cylinder with external tie rods RA/80*000/M, RA/8000/M, KA/8000/M, RM/900/M	Roundline cylinder RM/55401/M	Roundline cylinder KM/55001/M, VSM/55640/N2	Roundline cylinder R./57*00/M	Roundline cylinder < 25 mm stroke RM/8000/M, KM/8000/M RM/28000/M	Roundline cylinder > 25 mm stroke RM/8000/M, KM/8000/M RM/28000/M						
											
Mounting brackets											
											
Cylinder Ø (mm)	Model	Cylinder Ø (mm)	Model	Cylinder Ø (mm)	Model	Cylinder Ø (mm)	Model	Cylinder Ø (mm)	Model	Cylinder Ø (mm)	Model
32 ... 200	QM/27/2/1	32	QM/33/432/22	32	QM/33/432/22	10	QM/33/010/22	10	QM/33/010/22	10	QM/33/010/23
250	QM/27/2/2	40	QM/33/440/22	40	QM/33/440/22	12	QM/33/012/22	12	QM/33/012/22	12	QM/33/016/23
320	QM/27/2/3	50	QM/33/450/22	50	QM/33/450/22	16	QM/33/016/22	16	QM/33/016/22	16	QM/33/016/23
		63	QM/33/463/22	63	QM/33/463/22	20	QM/33/020/22	20	QM/33/020/22	20	QM/33/020/23
		80	QM/33/480/22	80	QM/33/080/22	25	QM/33/025/22	25	QM/33/025/22	25	QM/33/025/23
		100	QM/33/100/22	100	QM/33/100/22	32	QM/33/032/22				
				125	QM/33/125/22	40	QM/33/040/22				
						50	QM/33/050/22				
						63	QM/33/063/22				

Dimensions see relevant cylinder data sheets.

Accessories
Plug-in connector cable with nut

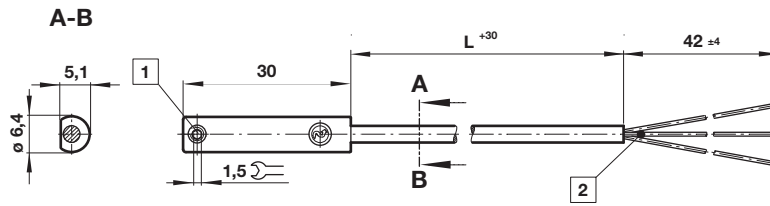

Outer cover	Cable length (m)	Weight (kg)	Connector	Connector
PVC 3 x 0,25	5	0,18	M8 x 1	M/P73001/5*1)
PUR 3 x 0,25	5	0,18	M8 x 1	M/P73002/5*1)
PVC 3 x 0,25	5	0,18	M8 x 1	M/P34615/5*2)
PUR 3 x 0,25	5	0,18	M8 x 1	M/34596/5*2)
PUR 3 x 0,34	5	0,21	M12 x 1	M/P34594/5*1)

*1) Straight connector

*2) 90° Connector

Dimensions

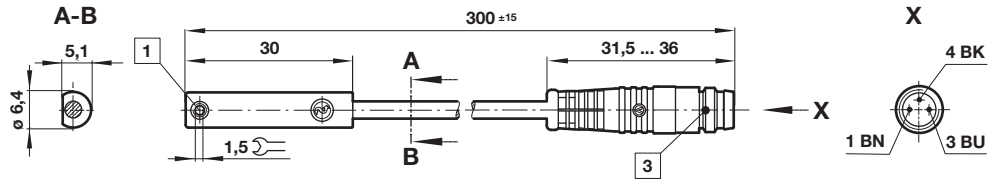
M/50/EAP/*V,
M/50/EAN/*V
M/50/IOP/5V
Cable length L = 2, 5 or 10 m



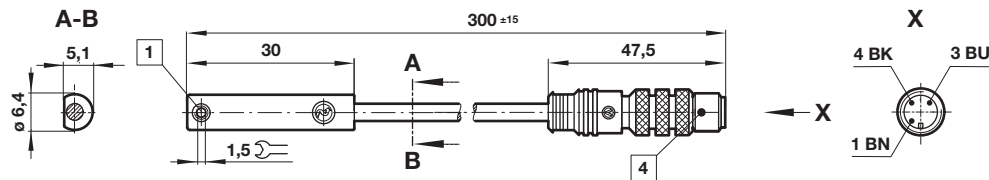
Dimensions in mm
Projection/First angle



M/50/EAP/CP,
M/50/EAN/CP
M/50/IOP/CP



M/50/EAP/CC



- 1 Fixing screw
- 2 Color code: BK = black; BN = brown; BU = blue
- 3 Plug M8 x 1
- 4 Plug M12 x 1

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features/data**«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI Precision Engineering, Norgren GmbH.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.