IMI NORGREN

M/50/EAP, M/50/EAN & M/50/IOP Magnetically operated switch, solid state

- > 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

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 (Ub): 10 ... 30 V d.c. Switching voltage output: Ub - 2 V Inducted voltage: 0,5 V

- > Particularly suited for use in high levels of vibration
- > LED indicator as standard
- > CE certified
- > UL listed

Switching current

Switching power:

Response time:

IP67 (standard)

100 mA max.

4.5 W max.

1 kHz

(see graph overleaf):

< 0,5 ms for EAP switch

< = 1 ms for IOP switch

Operating frequency:

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** Protection rating (EN 60529): according to: EN 60947-5-2

Materials: Body: plastic Cable: see table below

Technical data - Solid state

Symbol	Voltage	Current maximum	Function	IO-Link *2)	Operating temperature	LED	Protection class	Plug	Cable length	Cable type	Weight	Model
	(V d.c.)	(mA)		-)	(°C)		01035		(m)	type	(g)	
(FA) + BN	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
БК	10 30	100	PNP		-40 +80	•	IP68	_	5	PUR 3 x 0,14	37	M/50/EAP/5U
(ra) + BN	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)
− BK	10 30	100	PNP		-40 +80	•	IP67	M12 x 1	0,3	PVC 3 x 0,14	16	M/50/EAP/CC *1)
- BU	10 30	100	NPN		-40 +80	•	IP67	_	2, 5 or 10	PVC 3 x 0,12	37	M/50/EAN/*V
ВК												
[] ³ =) + BU	10 30	100	NPN		-40 +80	•	IP67	M8 x 1	0,3	PVC 3 x 0,14	16	M/50/EAN/CP *1)
<u> </u>												

* 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





5 m

10 m

Cable (0,3 m) with plug M8 x 1

Cable (0,3 m) with plug M12 x 1

IO-Link Switch conforming to IEC 61131-9

Properties and Functionality	Typical magnetically operated switches	M/5	50/IOP
	•		🚷 IO-Link
Operating Mode	Standard	Standard	
Power LED		•	•
LED sensor signal	•	•	•
Normally open (delivery status)	•	•	•
Normally closed		0	•
Delay mode		0	•
Installation aid		•	•
Temperature measurement			•
Detection counter			•

Note: IODD for the M/50/IOP switches available on the IMI Precision Engineering homepage.

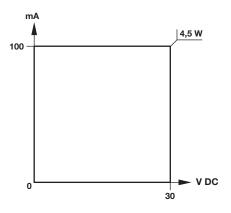
https://www.imi-precision.com/uk/en/technical-support/software

included

O manufacture pre-setting required

Option selector $M/50/\star\star\star/\star\star\star$ Function Substitute Cable Substitute PNP EAP PVC (Standard) v NPN EAN PUR U IO-Link Substitute Cable length/plug Substitute PNP IOP 2 m 2

Switching current and switching voltage



5

10

СР

СС



Botan Linge Compact Cylinder LINTRA* Play Ratar Oylinder Qylinder with guiding Scher berucht Scherberucht Scherberucht	ø 32 125 ISO 15552		ø 20 125 ISO 21287		ø 16 80 m		ø 32 125 i		ø 32 100		ø 10 40 i	
$\begin transformed by transformed $	SOLine™ Clean Line	9		ylinder	LINTRA [®] Pl	us	Rotary Cylir	nder	Cylinder wi	th guiding		
PRV802000/H RA192000/H M/146000/H M/146000/H M/16100/H M/6100/H M/610/H M						a la		0	TILL			
PR4/822000/M M/146100/M M/146200/M M/146200/M Cylinder with external fer ods RA/8000/M, KA/8000/M, RA/8000/M, KA/8000/M, RM/9500/M, KA/8000/M, RM/9500/M, KA/8000/M, RM/9500/M, KA/8000/M, RM/9500/M, KA/8000/M, RM/9500/M, KA/8000/M, RM/9500/M, KA/8000/M, RM/9500/M, KA/8000/M, RM/9500/M,	Туре		Туре		Туре		Туре		Туре		Туре	
N/146200M Cylinder with externs Roundline cylinder KM/55001/M, KA/8000/M, KM/5001/M, KM/5001		/M										
Outline backets for magnetic switches Cylinder with external tie rods RA/80'000/M, RM/55001/M, RM/55001/M, RM/55001/M, RM/55001/M, RM/55001/M, RM/55001/M, RM/55001/M, RM/55001/M, RM/55001/M, RM/25000/M, RM/2500/	PRA/822000/	/M			M/146100/M						M/61200/M	
Cylinder Wirder RA/S0'000/W, RM/S0'200/W, RM/S0'20/W, RM/S0'20/W, RM/S0'20/W, RM/S0'20/W, RM/S0'20/W, RM/S0'UND/W,	PRA/862000/	/M			M/146200/M							
Cylinder 6 (nm) Kodel Cylinder 8 (nm) Kodel Cylinder 8 (nm) Kodel Cylinder 8 (nm) Cylinder 8 (nm)<	Cylinder w tie rods R/ RA/8000/N	vith external A/80*000/M, M, KA/8000/M,	Roundline of	cylinder	Roundline of KM/55001/I	Ń,		ylinder	< 25 mm st RM/8000/M	roke I, KM/8000/M	> 25 mm s RM/8000/I	troke M, KM/8000
Ø Model Ø	Cylinder w tie rods R/ RA/8000/N	vith external A/80*000/M, M, KA/8000/M,	Roundline of	cylinder	Roundline of KM/55001/I	Ń,		cylinder	< 25 mm st RM/8000/M	roke I, KM/8000/M	> 25 mm s RM/8000/I	troke M, KM/8000/
Ø (mm) Model Ø (mm)	Cylinder w tie rods RJ RA/8000/M RM/900/M	vith external A/80*000/M, M, KA/8000/M, I	Roundline of	cylinder	Roundline of KM/55001/I	Ń,		eylinder	< 25 mm st RM/8000/M	roke I, KM/8000/M	> 25 mm s RM/8000/I	troke M, KM/8000/
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63 QM/33/463/22 63 QM/33/463/22 20 QM/33/020/22 25 QM/33/020/22	Cylinder w tie rods R/ RA/8000/M RM/900/M Mounting Mounting Cylinder Ø (mm) 32 200	vith external A/80*000/M, M, KA/8000/M, I Vite A/8000/M, I Vite A/8000/M, I Vite A/8000/M, I Vite A/8000/M, Model	Roundline of RM/55401/I	Model QW/33/432/22	Roundline of KM/55001/I VSM/55640,	M, /N2	R./57*00/M	Model	< 25 mm st RM/8000/M RM/28000/I Store Cylinder Ø (mm)	Model	> 25 mm s RM/8000/I RM/28000/ Cylinder Ø (mm)	troke M, KM/8000/ /M
80 QM/33/480/22 80 QM/33/080/22 25 QM/33/025/22 25 25 26 26 25	Cylinder w tie rods R/ RA/8000/M RM/900/M Mounting Mounting Cylinder Ø (mm) 32 200	vith external A/80*000/M, M, KA/8000/M, I Vite A/8000/M, I Vite A/8000/M, Vite A/	Roundline of RM/55401/I	Model QW/33/432/22	Roundline of KM/55001/I VSM/55640,	M, /N2 Model QM/33/432/22	R./57*00/M	Model QW/33/010/22	< 25 mm st RM/8000/M RM/28000/I Solution Cylinder Ø (mm) 10	roke I, KM/8000/M M Model QM/33/010/22	> 25 mm s RM/8000/I RM/28000/ Cylinder Ø (mm) 10	troke M, KM/8000/ M
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imensions see relevant cylinder data sheets.	Cylinder w tie rods RA RA/8000/M RM/900/M Mounting I Cylinder Ø (mm) 32 200 250	vith external A/80*000/M, M, KA/8000/M, V, KA/8000/M, J brackets brackets brackets brackets 0M/27/2/1 0M/27/2/2	Roundline c RM/55401//	Eylinder Model QM/33/432/22 QM/33/440/22 QM/33/450/22 QM/33/463/22 QM/33/480/22	Roundline of KM/55001/f VSM/55640.	M, /N2 Model QW/33/432/22 QW/33/440/22 QW/33/450/22 QW/33/463/22 QW/33/080/22 QW/33/100/22	R./57*00/M	Model 0M/33/010/22 0M/33/010/22 0M/33/010/22 0M/33/020/22 0M/33/025/22 0M/33/050/22 0M/33/050/22	< 25 mm st RM/8000/M RM/2800/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M	roke , KM/8000/M M M M M M M M M M M M M M M M M M	> 25 mm s RM/8000/I RM/28000/ Cylinder Ø (mm) 10 12 16 20	troke M, KM/8000, M Model QM/33/010/ QM/33/016/ QM/33/020/
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	Cylinder w tie rods RA RA/8000/M RM/900/M Mounting I Cylinder Ø (mm) 32 200 250 320	vith external A/80*000/M, M, KA/8000/M, I vita (Karal) brackets brackets Model 0M/27/2/1 0M/27/2/2 0M/27/2/3	Roundline c RM/55401/I Colored Cylinder Ø (mm) 32 40 50 63 80 100	Eylinder Model QM/33/432/22 QM/33/440/22 QM/33/450/22 QM/33/463/22 QM/33/100/22	Roundline of KM/55001/f VSM/55640.	M, /N2 Model QW/33/432/22 QW/33/440/22 QW/33/450/22 QW/33/463/22 QW/33/080/22 QW/33/100/22	R./57*00/M	Model 0M/33/010/22 0M/33/010/22 0M/33/010/22 0M/33/020/22 0M/33/025/22 0M/33/050/22 0M/33/050/22	< 25 mm st RM/8000/M RM/2800/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M RM/200/M	roke , KM/8000/M M M M M M M M M M M M M M M M M M	> 25 mm s RM/8000/I RM/28000/ Cylinder Ø (mm) 10 12 16 20	troke M, KM/8000, Model QM/33/010, QM/33/016, QM/33/020,

Accessories

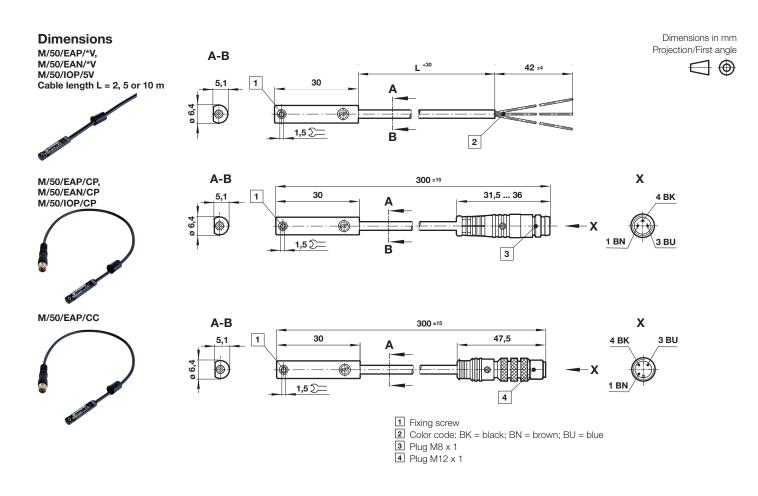
Plug-in connector cable with nut

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

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M/50/EAP, M/50/EAN & M/50/IOP Magnetically operated switch, solid state





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.