

M/50/EXP, M/50/IXP ATEX-magnetically operated switch, solid state

- Magnetically operated switch, solid state - round style
- IO-Link version available
- Suitable for all cylinder ranges with magnetic piston
- Resistant, reliable switching with a very fast response time
- Particularly suited for use in high levels of vibration
- LED indicator
- UL listed



 IO-Link

 LISTED



Technical features

Operation:

PNP (see table)
Output with LED (yellow)
Normally open (standard)

Switching voltage (U_b):

10 ... 30 V d.c.
("supply class 2" acc. to cULus)

Voltage drop at output:

< 2,5 V

Residual current:

< 0,5 mA

Switching current (see graph):

150 mA max. (standard)
100 mA max. (M/50/IXP)

Switching power:

4,5 W max. (standard)
3,0 W max. (M/50/IXP)

Response time:

< 0,1 ms (standard)
< 5 ms (M/50/IXP)

Operating frequency:

1 kHz (standard)
200 Hz (M/50/IXP)

Protection rating (EN 60529):

IP67

Ambient temperature:

-20 ... +50 °C (-4 ... 122 °F)

Responsiveness:

2,8 mT

Hysteresis:

0,5 ... 1,5 mT (standard)
0,2 mT (M/50/IXP)

Repeatability:

< 0,1 mT

Ex-Identification:

II 3G Ex ec IIC T4 Gc X
II 3D Ex tc IIIC T110°C Dc X

Cable type:

PVC 3 x 0,14 mm² (Standard)
PUR 3 x 0,14 mm² (all variants with connector)

Cable length:

5 m

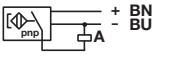
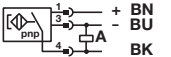
Electromagnetic compatibility

according to:
EN 60947-5-2

Materials:

Housing: plastic
Thread insert: brass
Set screw: stainless steel
Cable: see table below

Technical data - Magnetically operated switch, solid state

Symbol	Voltage (V d.c.)	Current maximum (mA)	Function	IO-Link *1)	Ambient temperature (°C)	LED	Protection class	Connector	Cable length (m)	Cable type	Weight (g)	Model
	10 ... 30	150	PNP		-20 ... +50	•	IP67	---	5	PVC 3 x 0,14	56	M/50/EXP/SV
	10 ... 30	100	PNP / NPN	•	-20 ... +50	•	IP67	---	5	PVC 3 x 0,14	56	M/50/IXP/SV
	10 ... 30	150	PNP		-20 ... +50	•	IP67	M8 x 1	0,3	PUR 3 x 0,14	7	M/50/EXP/CP
	10 ... 30	150	PNP		-20 ... +50	•	IP67	M12 x 1	0,3	PUR 3 x 0,14	16	M/50/EXP/CC

Color code: see page 4

*1) IO-Link functionality: see next page

IO-Link Switch conforming to IEC 61131-9

Properties and Functionality	M/50/EXP	M/50/IXP	
Operating Mode	Standard	Standard	
Power LED		•	•
LED sensor signal	•	•	•
Normally open (delivery status)	•	•	•
Normally closed		O	•
Delay mode		O	•
Installation aid		•	•
Temperature measurement			•
Detection counter			•
Teach functionality			•
Responsiveness adjustment			•

Note: IODD for the M/50/IXP switches available on the Norgren homepage.
<https://www.norgren.com/uk/en/technical-support/software>
• = included
O = optional (manufacture pre-setting required)

Option selector

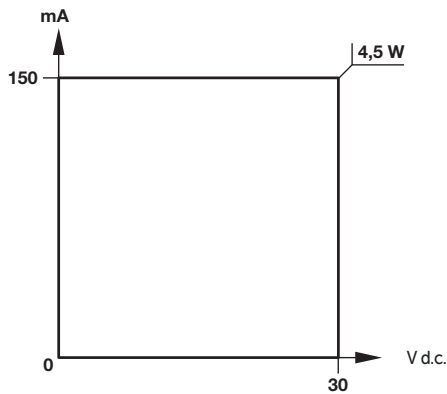
Function	Substitute
PNP	EXP
IO-Link	Substitute
PNP / NPN	IXP

M/50/★★★★★★★★

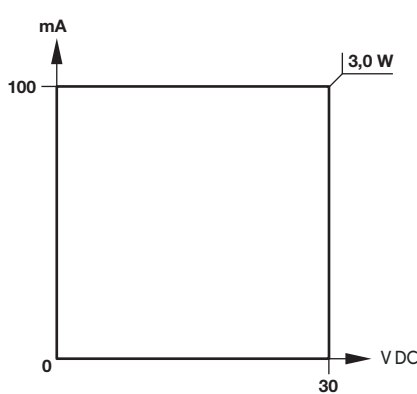
Cable	Substitute
PVC (Standard)	V
Cable with connector	-
Cable length/connector	Substitute
5 m	5
Cable (0,3 m) with connector M8 x 1	CP
Cable (0,3 m) with connector M12 x 1	CC

Switching current and switching voltage

M/50/EXP



M/50/IXP

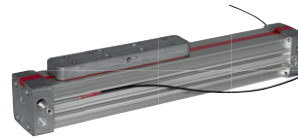


Cylinder ranges suitable for flush switch mounting

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



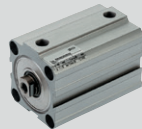
Type	Type	Type
PRA/802000/M/EX	RA/192000/M/EX	M/146000/M/EX
PRA/822000/M/EX		M/146100/M/EX
PRA/862000/M/EX		M/146200/M/EX

Mounting brackets for magnetic switches

Cylinder with external tie rods
RA/802000/M/EX,
RA/8000/M/EX,
KA/802000/M/EX

Compact Cylinder
RM/92000/M/EX

Roundline cylinder
> 50 mm stroke
R./57200/M/EX,
RM/8000/M/EX,
KM/8000/M/EX



Mounting brackets



Cylinder Ø (mm)	Model	Cylinder Ø (mm)	Model	Cylinder Ø (mm)	Model
32 ... 200	QM/27/2/1	12 ... 100	M/P72487B	10	QM/33/010/22
250	QM/27/2/2			12	QM/33/012/22
320	QM/27/2/3			16	QM/33/016/22
				20	QM/33/020/22
				25	QM/33/025/22
				32	QM/33/032/22
				40	QM/33/040/22
				50	QM/33/050/22
				63	QM/33/063/22

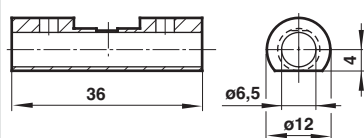
Dimensions see relevant cylinder data sheets.

Protection unit
ATEX



Model

M/P73668

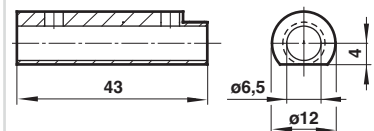


Protection unit
ATEX



Model

M/P73673

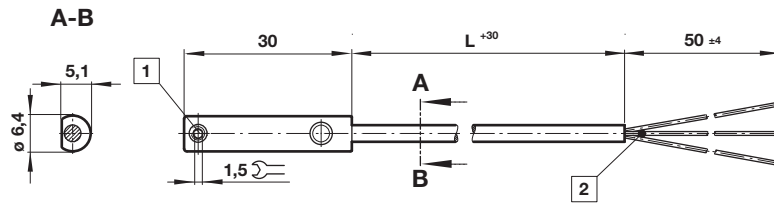


Protection of magnetic switch

1. Install the switch in a way that ensures to protect the switch against mechanical damage, shock or impact from any direction.
2. For an open installation of a magnetic switch onto a cylinder barrel with external tie rods or round cylinders, an additional protection element for the magnetic switch and his cable has to be installed with the mounting element. For the protection element of the housing a separate order for M/73668 or M/P73676 is required.

Dimensions

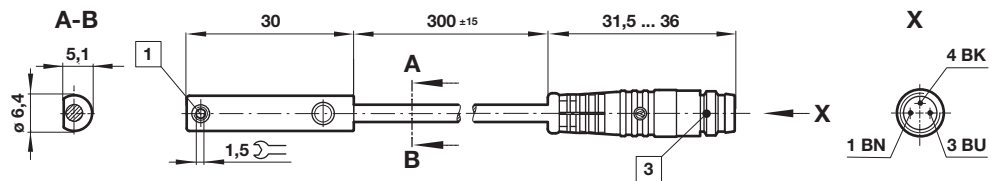
M/50/EXP/5V
M/50/IXP/5V
Cable length L = 2, 5 or 10 m



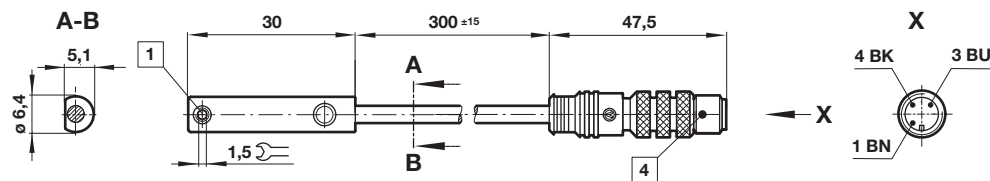
Dimensions in mm
Projection/First angle



M/50/EXP/CP



M/50/EXP/CC



- 1 Fixing screw
- 2 Color code: BK = black (output); BN = brown (+); BU = blue (-)
- 3 Connector M8 x 1; 1 BN = +; 3 BU = -; 4 BK = output
- 4 Connector M12 x 1; 1 BN = +; 3 BU = -; 4 BK = output

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 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.