MAGNETIC PROXIMITY SWITCHES

series **IM**

Protection		Zone			
Gas	1-2	II2G	Ex d IIC T6÷T5 Gb
Dusts	21-22	II2D	Ex tb IIIC T85°C÷T100°C Db

Degree of Protection	
	IP66

Amb. Temp.				
Standard	-20°C	+40°C
Extended	-50°C	+80°C

Entries Threading	
	NPT ANSI B1.20

Material	
	Stainless Steel AISI 316

Painting	
	N.A.

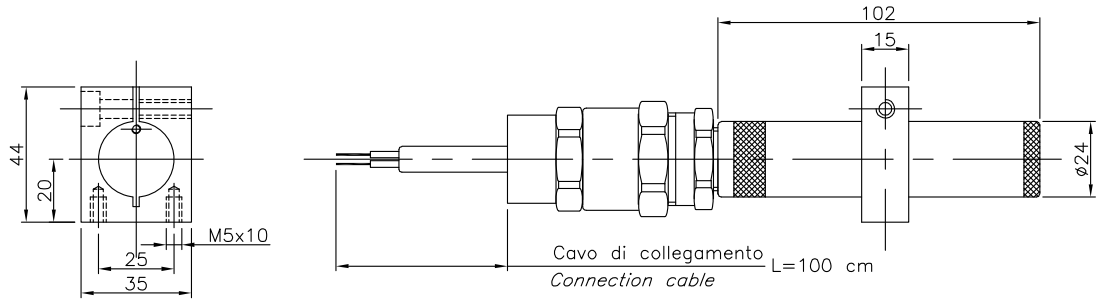
Standards and Certificates	
	Directive 2014/34/EU (ATEX)
	EN 60079-0 • EN 60079-1 EN 60079-31
CE	BVI 13 ATEX 0085X
IECEx	IEC 60079-0 • IEC 60079-1 IEC 60079-31
	IECEx EPS 13.0037X

- Ideal for any contactless control.
- Peculiar for applications in critical environments dominated by the presence of oils, greases, liquids, dusts, etc.
- Indispensable to detect and/or count any items passing by at remarkable speed.
- Not subject to any mechanical wear and thus, compared to traditional switches, a longer operating life is guaranteed.
- The switch actuated by a permanent magnet series MG (see page D30).
- Fixing bracket in Stainless Steel AISI 316L.
- Cable gland with female bushing 1/2" NPT ANSI B1.20 and 1 m cable included.
- Available version provided with junction box (SX 14 see page B3) and sealing nipple.

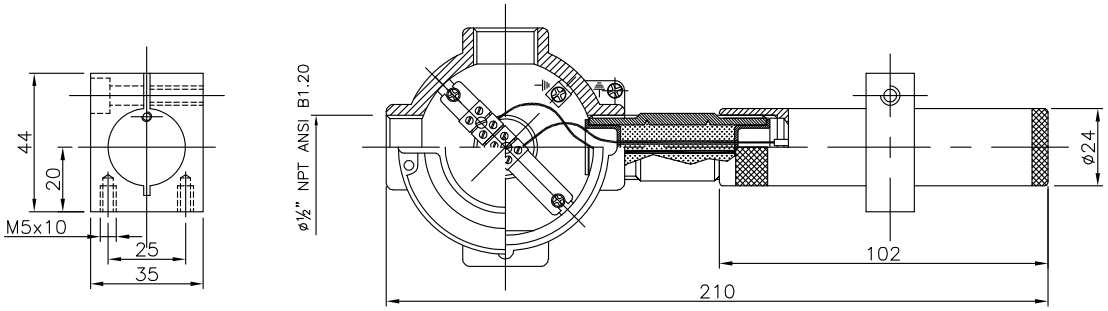
Options

- Bistable contact (Available only with 1NO contact).
- Cable gland with female bushing M20x1,5.
- Stainless steel AISI 316L cable gland.
- Cable with length other than standard.
- Junction box and sealing nipple in Stainless Steel.

IM..



IM..S..



NOTES

To read the installation and maintenance instructions is reccommended.

The temperature class T6/T85°C considers an Ambient Temperature (A.T.) extended up to +60°C, whereas class T5/T100°C considers an A.T. extended up to +80°C.

Contact	Scheme	Box	Weight (g)
1 switchin		Stainless steel	370
1 Normally open		Stainless steel	370

Order COding

Example: IM/U

Type	Material (cable gland)	Junction Box	Contact	Threading
IM	.. = Nikel Plated Brass I = Stainless Steel	SX 14 = presence .. = absence	U = Monostable deviation AB = Bistable deviation	.. = NPT (N) M = metric (M)

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Contact elements Technical Data:

- Contact type: Switching (NO)
- Contatti material: Rhodium
- Max switching power: 40 VA
- Max switching voltage: 250 VDC - 220 VAC
- Max current peak: 1 A
- Contact resistance: 0.075 Ω
- Contact vibration time: 0.3 ms
- Switching frequency: 100 Hz
- Switching hysteresis: ~5 mm
- Set point accuracy: 0.01 mm
- Axial vibration resistance: 100 gr
- Contact mechanical life: 10^8 operations
- Storage temperature: -10°C ÷ +80°C
- Connecting cable: 2x0.75 mm² ÷ 3x0.75 mm²

D

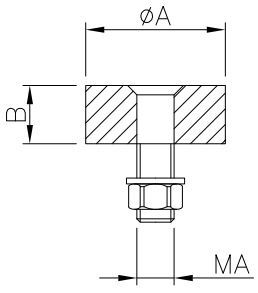
Instructions

- The enclosure shall neither be distorted nor subjected to shocks since the contact element may be damaged.
- Magnetic proximity switches are sensitive to high current loads.
- As the elasticity of the contact shells is minimum a small welding effect can cause the bonding of the contact blades.
- The opening of the contacts is very fast so that, by switching off inductive loads such as coils of relays, solenoid valves, electromagnets, etc.. high voltages are determined by self-induction.To prevent the sticking of contacts the allowed max. electrical values (power, voltage and current peak) must never be exceeded.
  Pay attention to the insertion current peak. The charging currents of the capacitors must be limited by appropriate pre-resistors (i.e. incandescent lamps insertion demands 3-4 times the nominal current value; consequently contacts rated for 100 W can pilot incandescent lamps lower than 25 W).
- The control of inductive loads (relays, solenoid valves, etc.) makes essential the spark suppression by inserting in parallel:
  - in d.c. a diode
  - in a.c.. an RC circuit (resistence + capacitor)
- For the switching contacts the color code is as follows:
  - brown-black: contact NO;
  - brown-blue: contact NC.

PERMANENT MAGNETS

series **MG**

- Used to operate the magnetic proximity switches series IM...
- Available in three different sizes.



PERMANENT MAGNETS					
Code	**A**	**B**	**MA**	**Actuation Distance**	**Weight (g)**
MG1	23	7	M3x15	3 ÷ 7	15
MG2	23	11	M4x20	5 ÷ 12	20
MG3	35	17	M5x22	12 ÷ 25	60

Instructions

- Permanent magnets must be mounted by countersunk screws in not-magnetic materials such as brass, aluminum, stainless steel or plastic.
- Larger switch control distance is reached when the permanent magnet is directly fixed to an iron support.
- Embedding the permanent magnet in a mass of iron causes a short circuit of the magnetic field; there should be a distance of the iron surface of 1-3 millimeters.
  This type of mounting significantly reduces the operating distance of magnetic switch.
- The permanent magnets featuring north polarity have red protection cap whereas it is blue for south polarity The protection caps are made of polyamide.