

FINE CONTROLS (UK) LTD



Fine Controls have been supplying process controls & instrumentation equipment since 1994, & now serves an ever expanding customer base, both in the UK & globally.

We offer a full range of valve & instrumentation products & services, with our product range representing leading technologies & brands:

Flow: Flow Meters & Transmitters, Flow Switches, Flow Control Valves & Batch Control Systems

Temperature: Temperature Probes & Thermowells, Temperature transmitters, Temperature Regulators & Temperature Displays

Level: Level Transmitters & Switches

Pressure: Pressure Gauges & Transmitters, Precision & High Pressure Regulators & I-P Converters, Volume boosters.

Precision Pneumatics: Pressure Regulators, I-P Converters, Volume Boosters, Vacuum Regulators

Valves: Solenoid & Pneumatic Valves, Control Valves & Positioners, Actuated Ball, Globe or Diaphragm Valves & Isolation Valves

Services: Repair, Calibration, Panel Build, System Design & Commissioning

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Fine Controls (UK) LTD, Bassendale Road, Croft Business Park,
Bromborough, Wirral, CH62 3QL UK
Tel: 0151 343 9966
Email: sales@finecontrols.com

BM / TB proximity switches

The SOLDO BM and TB Series Proximity Switches, provides a compact design and a cost saving solution for remote valve position feedback in both linear and rotary applications, as well as general purpose feedback in explosive atmosphere or subsea environments.

The rugged design and ease installation system, provide maximum application versatility.

TB series is the conjunction of a BM bolt switch with an aluminum or stainless steel junction box, to allow a direct local wire connection.

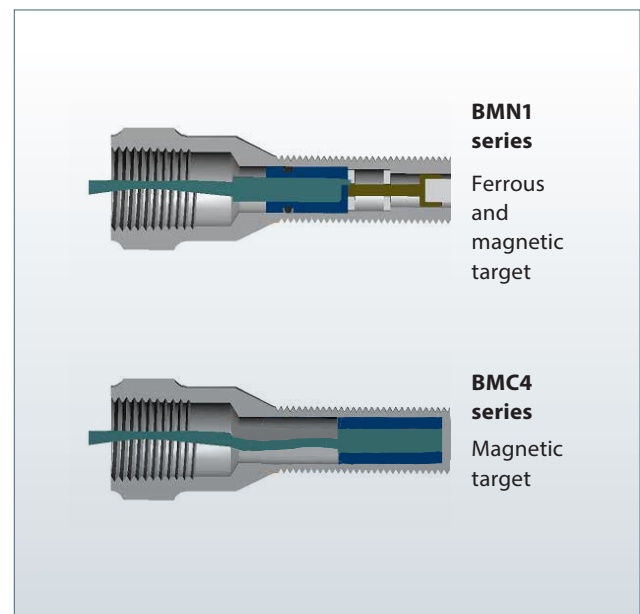
BM switch utilize industrial standard 5/8-18 UNF or M16x1.5 threads and each switch is provided with two heavy-duty jam nuts. BM switches can be mounted with standard brackets or customized ones to suit specific applications.

TB series uses the same BM head mounting pattern with the availability of a junction box screw bottom mounting system.



Unique Design Features

- Compact position indication on linear valve
- Adaptable solution to multiple applications
- 316 stainless steel rugged BM enclosure
- 450 mm of flying leads on the BM series for wiring purposes
- Junction box feature on the TB series
- 316 stainless steel or aluminum junction box on the TB series
- Magnetic or ferrous sensing target capabilities (see the switch options for more info)



Product Specification

Certifications

ATEX, IECEX, EAC, INMETRO

Ex II 2GD
 Ex d IIC T6/T5/T4 Gb
 Ex tb IIIC T80°C/T95°C/T115°C Db
 Ta = -40 °C ≤ Ta ≤ 105 °C

SIL rating:
 up to SIL 3 approval on request

UL: only available on BMC4.

Class I, Division 1 and 2, Groups A, B, C and D
 Class II, Division 1 Groups E, F and G
 Class II Division 2, Groups F and G

Protection rating

BM: IP66 / 68
 TB: IP67 / 68

Cable Entry Options

Standard – Single cable entry
 - M20 x 1,5
 - 1/2" NPT

Switch Selection:

NOVA V3 N1

To be chosen with following requirements:

- Hermetically sealed proximity switch
- High power loop:
 Rating up to 5A @ 250 VAC - 5A @ 28 VDC
- Temperature range: -50 to +105 °C

Ferrous and Magnetic target

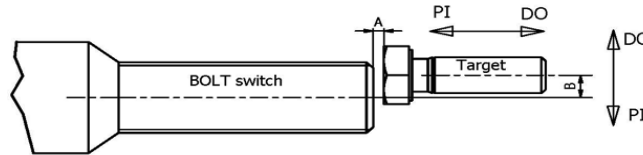
REED C4

- Hermetically sealed proximity reed switch
- Inert gas contact chamber
- Rating up to 1A @ 24 VDC
- Temperature range: -60 to +105 °C

Magnetic target

Dimensional Data

SENSING DISTANCE CHART



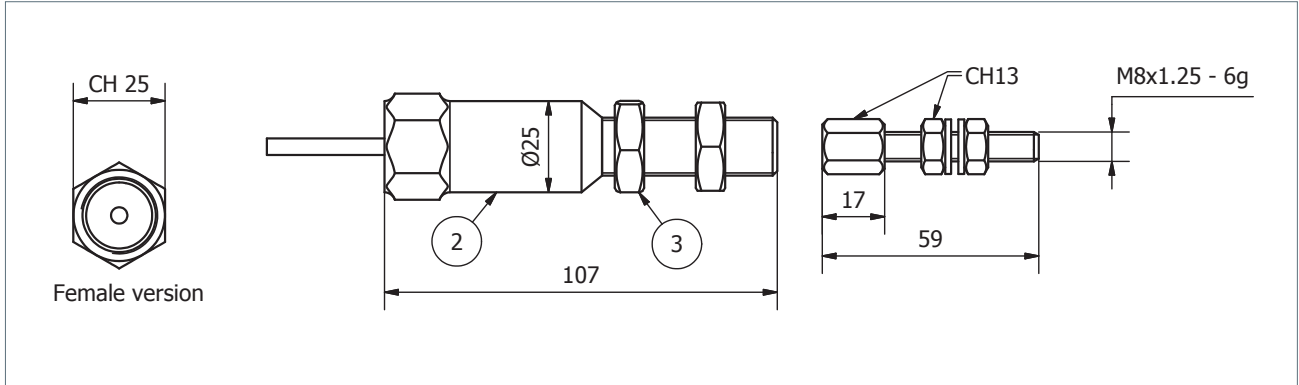
SPECIFICATIONS							
SENSING DISTANCE	Switch	Direction A [Values in mm]		Direction B [Values in mm]			
				Target distance: 2 mm		Target distance: 1 mm	
		BMN1	PI : Max 2	DO : 6	PI : 3	DO : 12	PI : 7
BMC4	PI : 3,6	DO : 6	PI : 4	DO : 5	PI : 4,5	DO : 7	
FREQUENCY RANGE	BMN1	Max 30 Hz					
	BMC4	Max 100 Hz					
RESPONSE TIME	BMN1	Single operation < 2ms		Operation in frequency (10÷30 Hz) < 1 ms			
	BMC4	2 ms					

Notes:

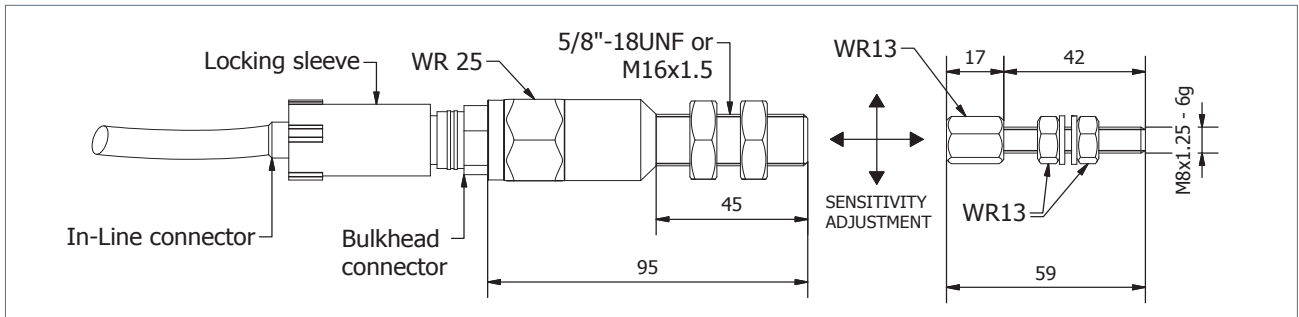
- PI: Is the point where the switch first operates.
- DO: Is the point where the switch is released.
- PI & DO values refers to the distance between the 2 axis of BOLT switch and target.
- Target distance refers to the distance between the 2 opposite faces of BOLT switch and target.
- For BMN1 switch the maximum operating distance is 2 mm using a properly size ferrous target.
- This distance may be increased using a magnetic target (optional).
- BMC4 switch is supplied with its standard magnetic target.
- Optional magnetic target to increase the sensing range of the switch are available. For any kind of request please contact SOLD0.

Dimensional Data

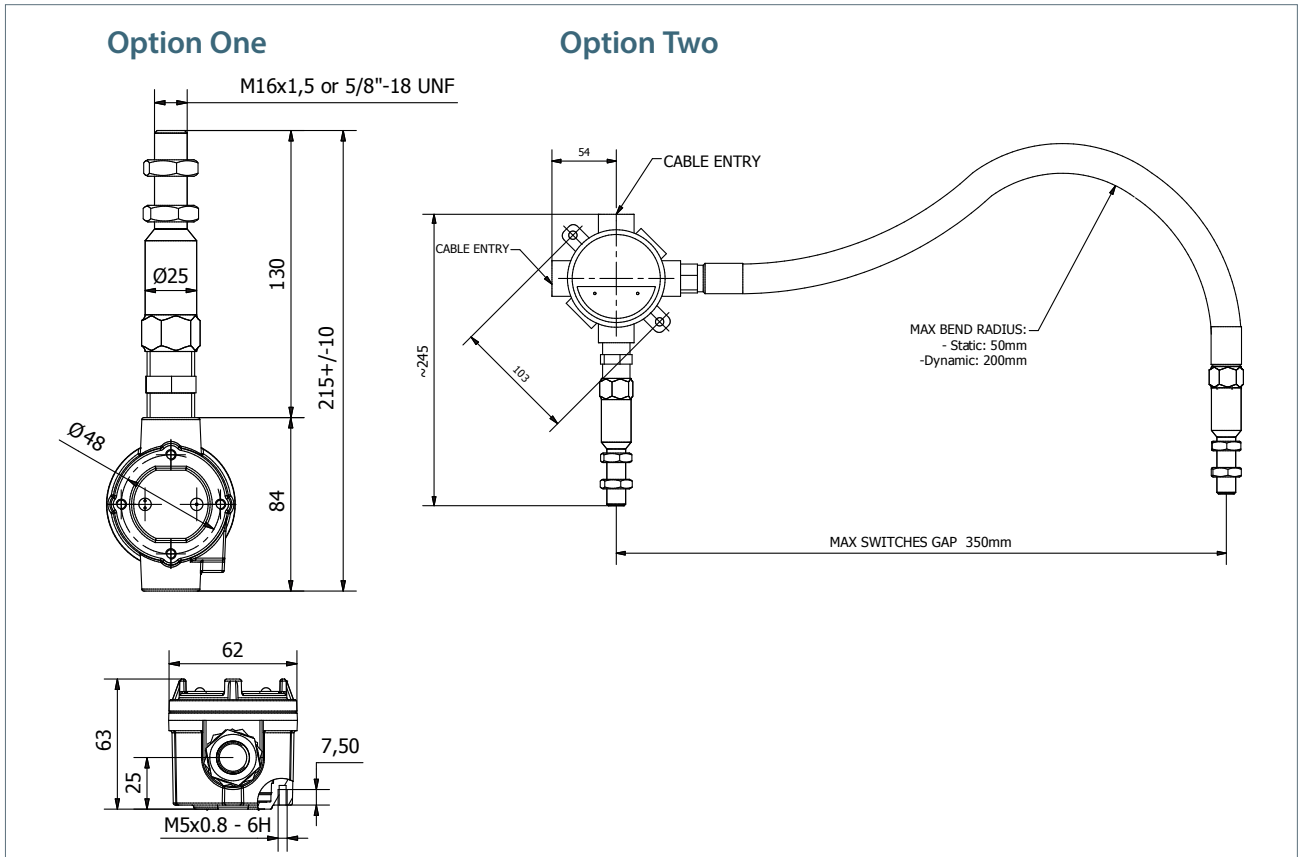
BM DIMENSIONAL DRAWING



BM SUBSEA DIMENSIONAL DRAWING

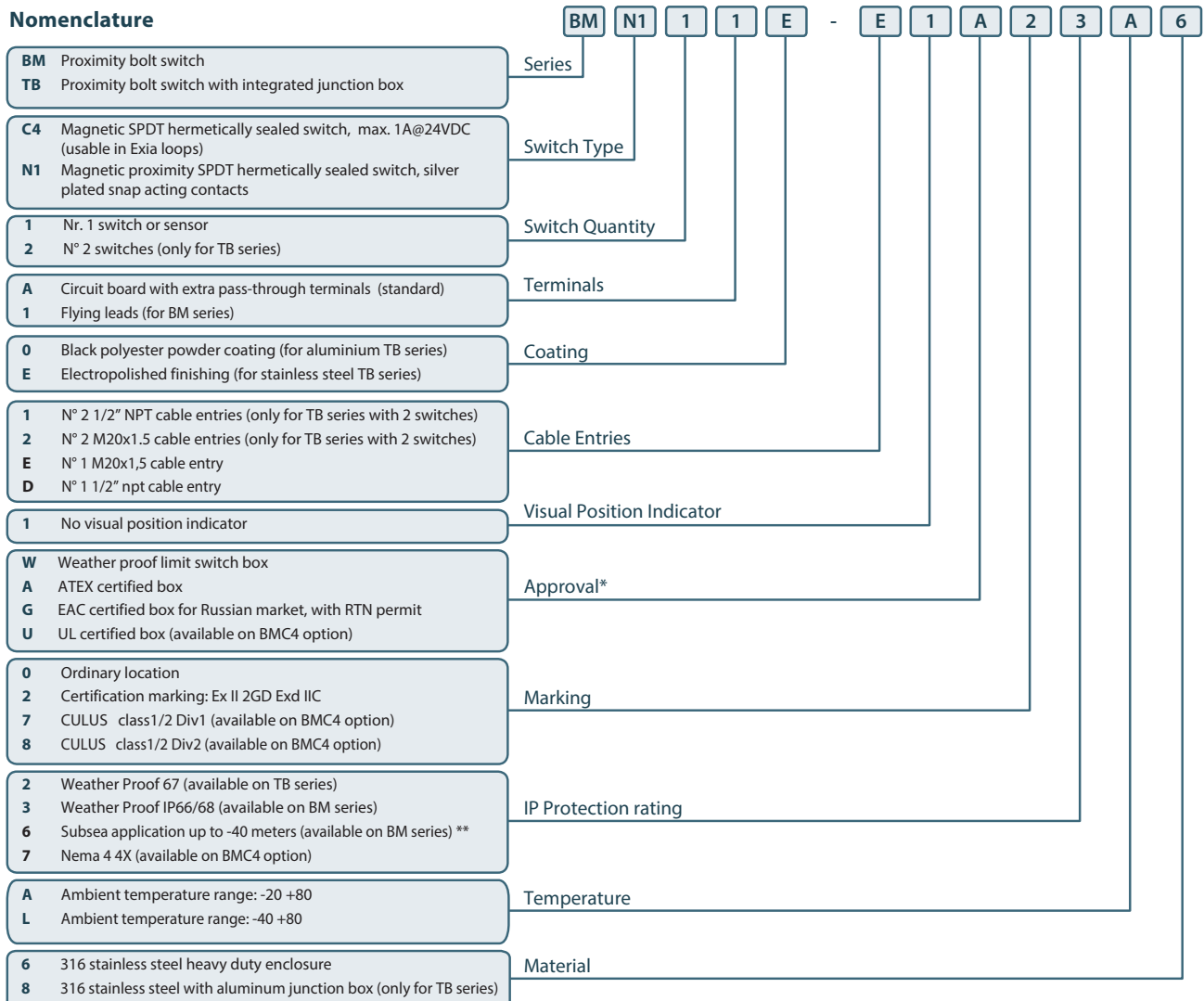


TB DIMENSIONAL DRAWING



Product Ordering Matrix

Nomenclature



* SIL2 and SIL3 available on request

** SubSea cable with fast connector with standard length as follow: 5, 20, 40 mt



www.soldo.net

Europe

Soldo SRL
60, Via Monte Baldo 25015
Desenzano Del Garda
Brescia, Italy

Tel: +39 030 9991309
Fax: +39 030 91419779
Email: sales@soldo.net

USA

Soldo USA LLC
3920 Westpoint Blvd.
Winston-Salem
NC 27103

Tel: +1 (336) 659 3400
Fax: +1 (336) 659 9323
Email: sales@soldousa.com

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