

SF - SS - SB limit switch box series

Limit switch box designed for safe and hazardous areas, provides a visual and electrical remote position feedback on automated valves.

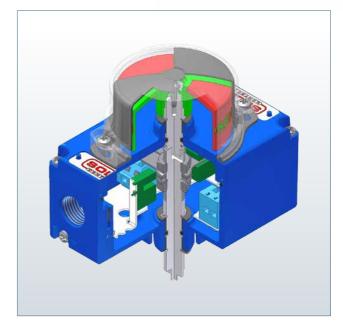
Available in either die cast aluminum or 316 stainless steel, with different lid choices, from the same enclosure material, for a complete metallic device, to the transparent polycarbonate cover or to a flat lid without visual indication. Designed for weather proof applications, it can also matches the Ex ia IIC T6 standards with the integral intrinsically safe certification, covering both enclosure and electrical components inside.

The Soldo multi-application limit switch box solution, covering from industrial automation to food and beverage, from chemical to maritime, from oil and gas, both on-shore and off-shore, to petrochemical industries.

Features

- Twin shaft design, ensuring a complete sealed device. The shaft is split in two parts, each fitted and sealed into the body and cover for the best weather insulation even during opening operation
- Suitable for artic application, down to -50 °C
- Two cable entries, either metric or imperial
- Enhanced corrosion resistance thanks to the thick polyester powder coating on aluminum housings
- 316 stainless steel housing for maximum protection in hostile and corrosive environments
- Easy wiring through the terminal PCB board
- NOVA V3[™] switch option ensures extreme durability and high power switching capabilities
- 4-20 mA position transmitter options
- ASI communication protocol board
- Captive bolts on the screwed lid





Linking the Process with the Control Room

Product Specification

Technical Data:

Materials

- Die-cast aluminum body and cover with polyester powder coating (SF series)
- AISI 316 Stainless steel body and cover with electropolished finishing (SS series)
- Die-cast aluminum body with polyester powder coating, transparent polycarbonate cover (SB series)
- Stainless steel fasteners and shafts

Approvals

ATEX, IECEx, EAC, CCOE

Ex II 2GD Ex ia IIC T4/T5/T6

Ex ia IIIC T44°C......T108°C Db IP6* (SF,SS series) Ex ia IIIB T44°C......T108°C Db IP6* (SB series) Ta: -60 °C \leq Ta \leq 100 °C

UL: Class I Division 2 Groups A, B, C, D Class II Division 2 Groups F, G

SIL certificate: Up to SIL 3 certified by TÜV

Protection rating: IP 66 / 67

Cable entries options:

Two cable entry M20 or 1/2" NPT

Temperature:

-20 °C +80 °C as standard temperature range (depending on switch selection)

-60 °C +105 °C available on request

Twin shaft design features

- The shaft is split in two parts; both parts fitted and sealed respectively on body and cover
- During opening and closing the grease remains in place ensuring a safe and smooth operation
- Self lubricant bushing on both sides aligning shafts and hedging in o-rings
- The indicator is hardly connected to the upper shaft, avoiding any matching and aligning issue

Soldo switch and sensors options:

NOVA V3[™] N1

- Proximity hermetically sealed snap acting SPDT switch
- High power loop: rating up to 5A @ 250 VAC 5A @ 28 VDC
- Temperature range -50 °C , +95 °C

NOVA V3[™] N3 (usable for Exia protection)

- Proximity hermetically sealed snap acting SPDT switch
- rating up to 1A @ 250VAC 1A @ 30VDC (Exia rating max: 0,1A @ 30VDC)
- Temperature range -50 °C , +95 °C

NOVA V3[™] N4

- Proximity hermetically sealed snap acting DPDT switch
- High power loop: rating up to 5A @ 250 VAC 5A @ 28 VDC
- Temperature range -50 °C , +95 °C

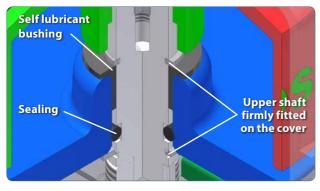
REED C4 (usable for Exia protection)

- Proximity hermetically sealed reed SPDT switch
- Inert gas contact chamber
- Rating up to 1A @ 24 VDC (Exia rating max: 0,1A @ 30 VDC)
- Temperature range -60 °C , +100 °C

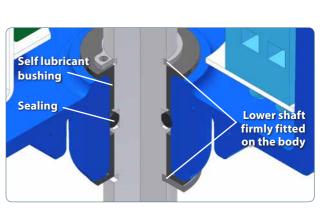
REED C8 (usable for Exia protection)

- Proximity hermetically sealed reed DPDT switch
- Inert gas contact chamber
- Rating up to 1A @ 24 VDC (Exia rating max: 0,1A @ 30 VDC)
- Temperature range -60 °C , +100 °C

More options available on request.



Upper shaft











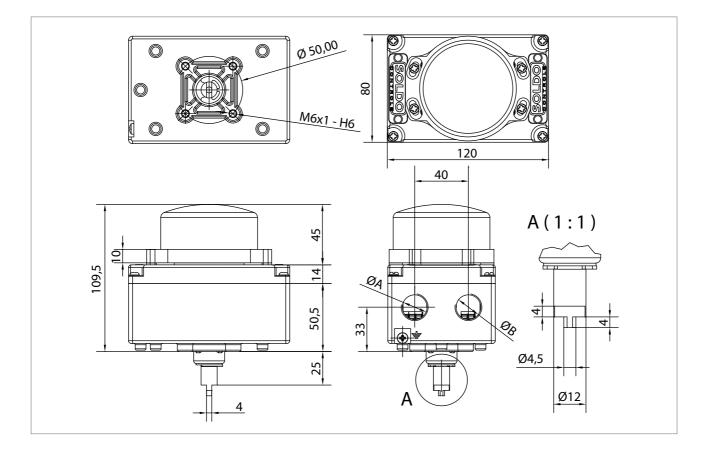




Product Ordering Matrix

lom	enclature	SB N1 2 0 0 - 1 1 X 1 1 A
SB SF SS	Aluminum body with polycarbonate cover Aluminum enclosure 316 stainless steel enclosure	Box
01 03 1F C4	SPDT el.mech. switch silver plated contacts SPDT el.mech. switch gold plated contacts (for Exia cert) DPDT el.mech. switch silver plated contacts SPDT magnetic hermetically sealed reed switch, rating max.	
C8 N1 N3	0,1A @ 120 VAC, 1A @ 24 VDC (for Exia cert, low temp) DPDT magnetic hermetically sealed reed switch, rating max. 0,1A @ 120 VAC, 1A @ 24 VDC (for Exia cert, low temp) SPDT magnetic hermetically sealed silver plated snap acting contacts, max 5A @ 28 VDC, 250 VAC	Switch
50 52 53 70 73	Inductive proximity NAMUR sensor SJ3,5-N 2 wire NC logic (for Exia cert) Inductive proximity NAMUR sensor SJ3,5-SN 2 wire NC logic (for Exia cert, safety funct. low temp) Inductive proximity NAMUR sensor SJ3,5-S1N 2 wire NO logic (for Exia cert, safety funct.) Inductive proximity NAMUR sensor NJ2-V3-N 2 wire NC logic (for Exia cert) Inductive proximity sensor model NBB2-V3-E2, 3 wire PNP NO, 10-30 VDC, 0-100 mA	
TO HO 2	4-20mA position transmitter, 12-30 VDC 4-20mA HART position transmitter Atex Ex ia IIC T6 / T4 certified 8-30 VDC N°2 switches	Switch Quantity
3) 2 3	N°3 switches Standard pcb board with extra terminal poles Standard pcb board with extra terminal poles blue poles Stainless steel plate with cage clamp blue terminals (for switches code: 60, 62, 63)	Terminals
) =	Black powder coating Blue powder coating Electro polished finishing (on SS series)	Coating
2	N°2 cable entries ¹ /2" NPT N°2 cable entries M20 x 1,5	Cable Entries
	3D plastic visual position indicator red and green No visual position indicator 3D stainless steel position indicator	Visual Position Indicator
W X D G J U * SIL	Weather proof ATEX and IECEx certified box ATEX and IECEx certified box with SIL2 approval ATEX and IECEx certified box with SIL3 approval EAC certification for russian market CCOE certification for Indian market UL certified box 2 / SIL3 options available on request	Approval
0 1 8	Ordinary location Certification marking: Ex II 2GD Exia IIC cULus Class 1/2 Div 2 (with switches code: C4, C8, N1, N3)	Marking
1 2 7	Weather proof IP66 / IP67 Weather proof IP67 Nema 4 and 4X	IP Protection rating Temperature Material
A L P	Ambient temperature range: -20 °C + 80 °C Ambient temperature range: -40 °C + 80 °C Ambient temperature range: -55 °C + 80 °C (Switch code: C4)	 Die-cast aluminum heavy duty body and polycarbonate cover (on SB series) Die-cast aluminum heavy duty body and cover (on SF series) 316 stainless steel heavy duty enclosure (on SS series)

Dimensional Data



Cable entry dimensions

Code	Entry A	Entry B
1	¹ /2" NPT	¹ /2" NPT
2	M20 x 1,5	M20 x 1,5



www.soldo.net

Europe Soldo SRL 60, Via Monte Baldo 25015 Desenzano Del Garda Brescia, Italy Tel: +39 030 9991309 Fax: +39 030 91419779

 Fax:
 +39 030 91419779

 Email:
 sales@soldo.net

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USA

Soldo USA LLC 3920 Westpoint Blvd. Winston-Salem NC 27103 Tel: +1 (336) 659 3

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

PUB109-007-00 Issue Date 11/14