



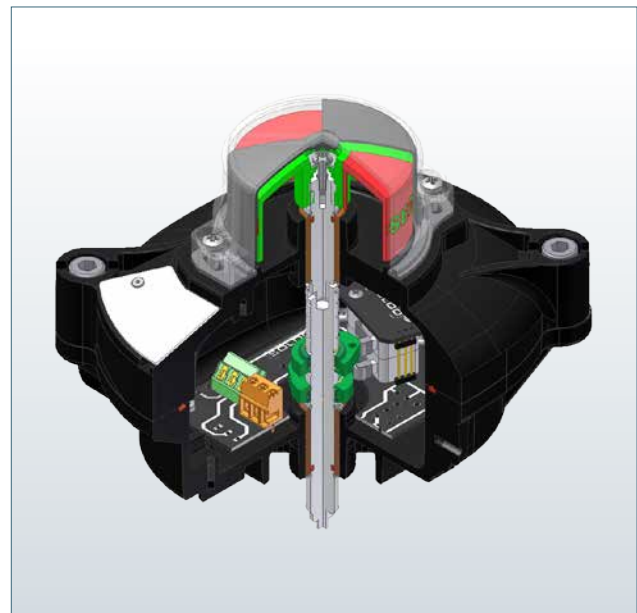
SX - SH limit switch box series

Heavy-duty limit switch boxes, designed for hazardous areas, provide a visual and electrical remote position feedback on automated valves.

The SX matches the Exd IIB T6 standards. The SH is our solution reaching Exd IIB + H2 T6 requirements. SX and SH, thanks to spare pass through terminals, the three cable entries either metric or imperial and different visual position indications, provide a highly customizable solution meeting a wide range of applications. These include, but are not limited to, oil and gas (both on-shore and off-shore) and 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
- Enhanced flexibility of electrical feedbacks options
- Up to three cable entries available in different sizes
- 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
- 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
- Stainless steel fasteners and shafts

Approvals:

ATEX, IECEx, EAC, CCOE, INMETRO

Ex II 2GD Ex d IIB T4/T5/T6 Gb (SX series)

Ex II 2GD Ex d IIB + H2 T4/T5/T6 Gb (SH series)

Ex tb IIIC T135/T100/T85°C Db

Ta: -20 °C ≤ Ta ≤ 105 °C / 75 °C / 60 °C

UL:

Class I Division 1 Groups C, D Division 2 Groups A, B, C, D

Class II Division 1 Groups E, F, G Division 2 Groups F, G

SIL certificate:

Up to SIL 3 certified by TÜV

Protection rating:

IP 66 / 67

Cable entries options:

Up to three cable entries for metric and imperial sizes

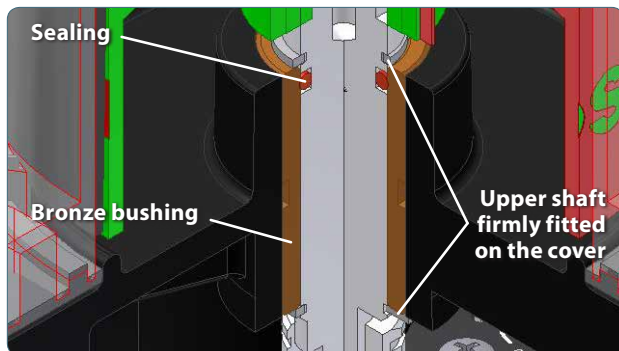
Temperature:

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

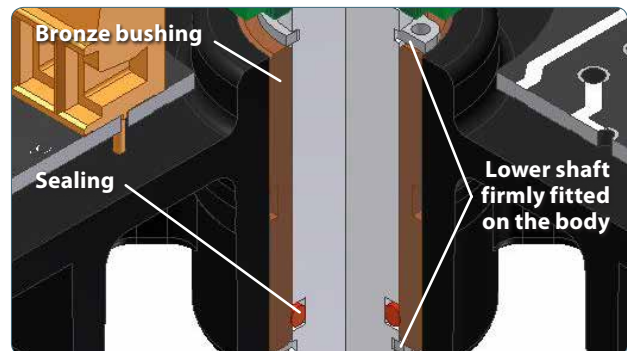
-40 °C +105 °C available on request

Twin shaft design features

- The shaft is split into 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
- The interior electrical components are completely protected against atmosphere environments



Upper shaft



Lower shaft

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

- Proximity hermetically sealed snap acting SPDT switch
- High power loop: rating up to 1A @ 250 VAC - 1A @ 30 VDC
- 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

- Proximity hermetically sealed reed SPDT switch
- Inert gas contact chamber
- Rating up to 1A @ 24 VDC
- Temperature range -60 °C , +100 °C



REED C8

- Proximity hermetically sealed reed DPDT switch
- Inert gas contact chamber
- Rating up to 1A @ 24 VDC
- Temperature range -60 °C , +100 °C



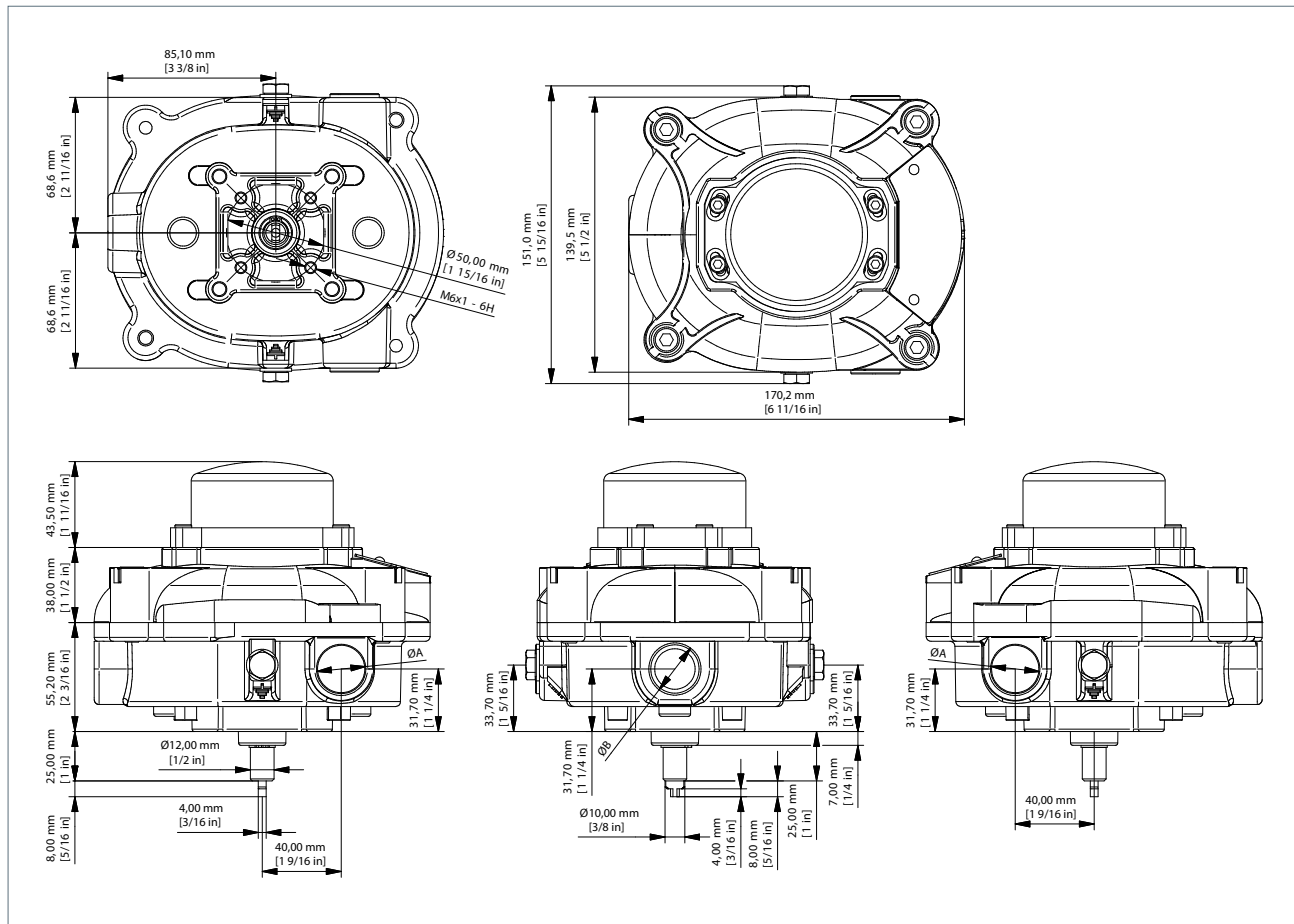
More options available on request.

Product Ordering Matrix

Nomenclature

		SX	N1	2	0	0	-	1	1	X	3	2	A	4
SX Exd IIB applications SH Exd IIB+H2 applications	Box													
01 SPDT elec.mech. switch silver plated contacts 1F DPDT elec.mech. switch silver plated contacts C4 SPDT magnetic hermetically sealed reed switch, rating max. 0,1A @ 120 VAC, 1A @ 24 VDC C8 DPDT magnetic hermetically sealed reed switch, rating max. 0,1A @ 120 VAC, 1A @ 24 VDC N1 SPDT magnetic hermetically sealed silver plated snap acting contacts, max 5A @ 28 VDC, 250 VAC N4 DPDT magnetic hermetically sealed silver plated snap acting contacts, max 5A @ 28 VDC, 250 VAC 32 inductive proximity sensor model NBN4-12GM40-Z0 2 wire, 5-60 VDC 2-100 mA 73 inductive proximity sensor model NBB2-V3-E2, 3 wire PNP NO, 10-30 VDC, 0-100 mA T0 4-20 mA position transmitter, 12-30 VDC H0 4-20 mA HART position transmitter Atex EEx ia IIC T6 / T4 certified 8-30 VDC P0 Partial Stroke Test device with magnetic key	Switch													
2 N°2 switches 4 N°4 switches (on Exd IIB certification)	Switch Quantity													
0 Standard pcb board with 3 extra terminal poles D Stainless steel board with cage clamp terminals A Stainless steel plate with screw type terminals	Terminals													
0 Black powder coating Aluminium Aluminium	Coating													
1 N°2 cable entries 1/2" NPT 2 N°2 cable entries M20x1,5 X N°3 cable entries 1/2" NPT L N°3 cable entries M20x1,5	Cable Entries													
0 3D plastic visual position indicator red and green T 3D stainless steel position indicator	Visual Position Indicator													
X ATEX and IECEx certified box D ATEX and IECEx certified box with SIL2 approval E ATEX and IECEx certified box with SIL3 approval G EAC certification for Russian market I INMETRO certification for Brazilian market N NEPSI certification for Chinese market J CCOE certification for Indian market U UL certified box W Weather proof * SIL2 / SIL3 options available on request	Approval													
0 Ordinary location 3 Certification marking: Ex II 2GD Exd IIB 4 Certification marking: Ex II 2GD Exd IIB + H2 7 cULus Class1/2 Div1 8 cULus Class1/2 Div2 (with switches code: C4, C8, N1, N3)	Marking													
2 Weather proof IP67 7 Nema 4 and 4X	IP Protection rating													
1 Weather proof IP 66/67 2 Weather proof IP67 7 Nema 4 and 4X	Temperature													
3 Die cromated aluminum heavy duty body and cover	Material													

Dimensional Data



Cable entry dimensions

Code	Entry A+A	Entry B
1	n.2 1/2" NPT	-
2	n.2 M20 x 1,5	-
X	n.2 1/2" NPT	n.1 1/2" NPT
L	n.2 M20 x 1,5	n.1 M20 x 1,5



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