



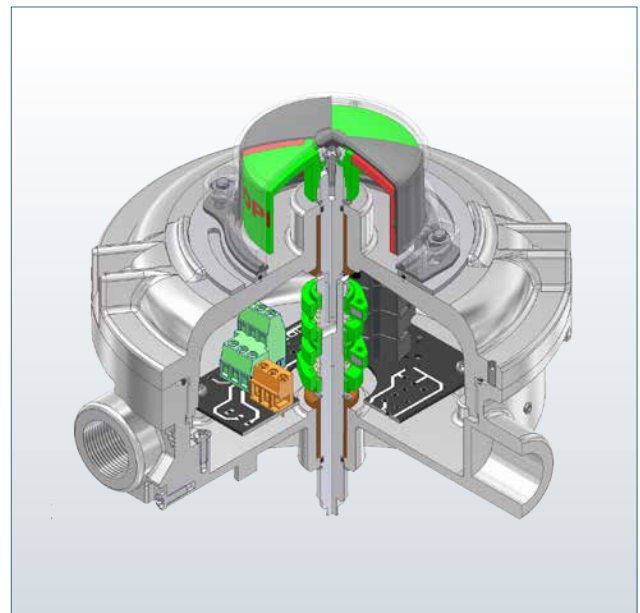
## SY - SW limit switch box series

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

Available in either copper free aluminum or 316 stainless steel, the explosionproof enclosure matches Exd IIC T6 standards. The SY - SW limit switch box series, thanks to its large inner volume, is able to host up to 6 switches and spare pass through terminals. The availability of four cable entries, either metric or imperial, 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 into two parts, each fitted and sealed into the body and cover for the best weather insulation even during opening operation
- Suitable for arctic application, down to -60 °C
- Enhanced flexibility of electrical feedback options
- Up to four cable entries available in different sizes
- Enhanced corrosion resistance thanks to copper free aluminum body and cover with polyester powder coating
- 316 stainless steel housing for extremely 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
- Single tool opening design, allowing the operator to unscrew the lid by hand after removing the lock
- Partial stroke test device option



*Linking the Process  
with the Control Room*

# Product Specification

## Technical Data:

### Materials

- Copper free aluminum body and cover with polyester powder coating
- AISI 316 Stainless steel body and cover with electro-polished finishing
- Stainless steel fasteners and shafts

### Approvals:

ATEX, IECEx, EAC, CCOE, INMETRO, NEPSI

Ex II 2GD Ex d IIC T4/T5/T6 Gb

Ex tb IIIC T140/T110/T110°C Db

Ta: -60 °C ≤ Ta ≤ 105 °C / 80 °C / 60 °C

### UL:

Class I Division 1 Groups B,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 / 68 up to 10 meters for 48 hours

### Cable entries options:

Up to four cable entries for metric and imperial sizes

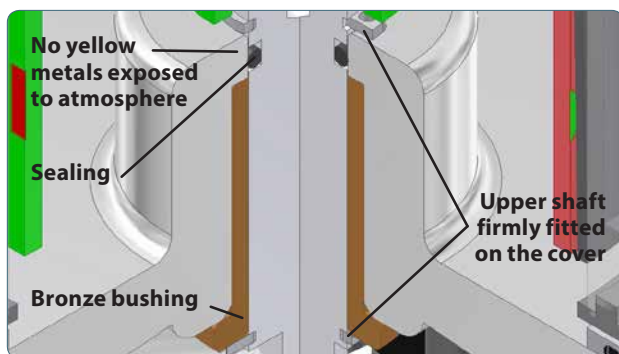
### Temperature:

-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 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

### 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

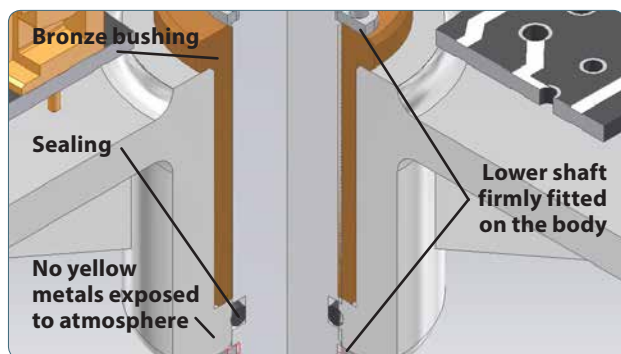
**REED C4**

- 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

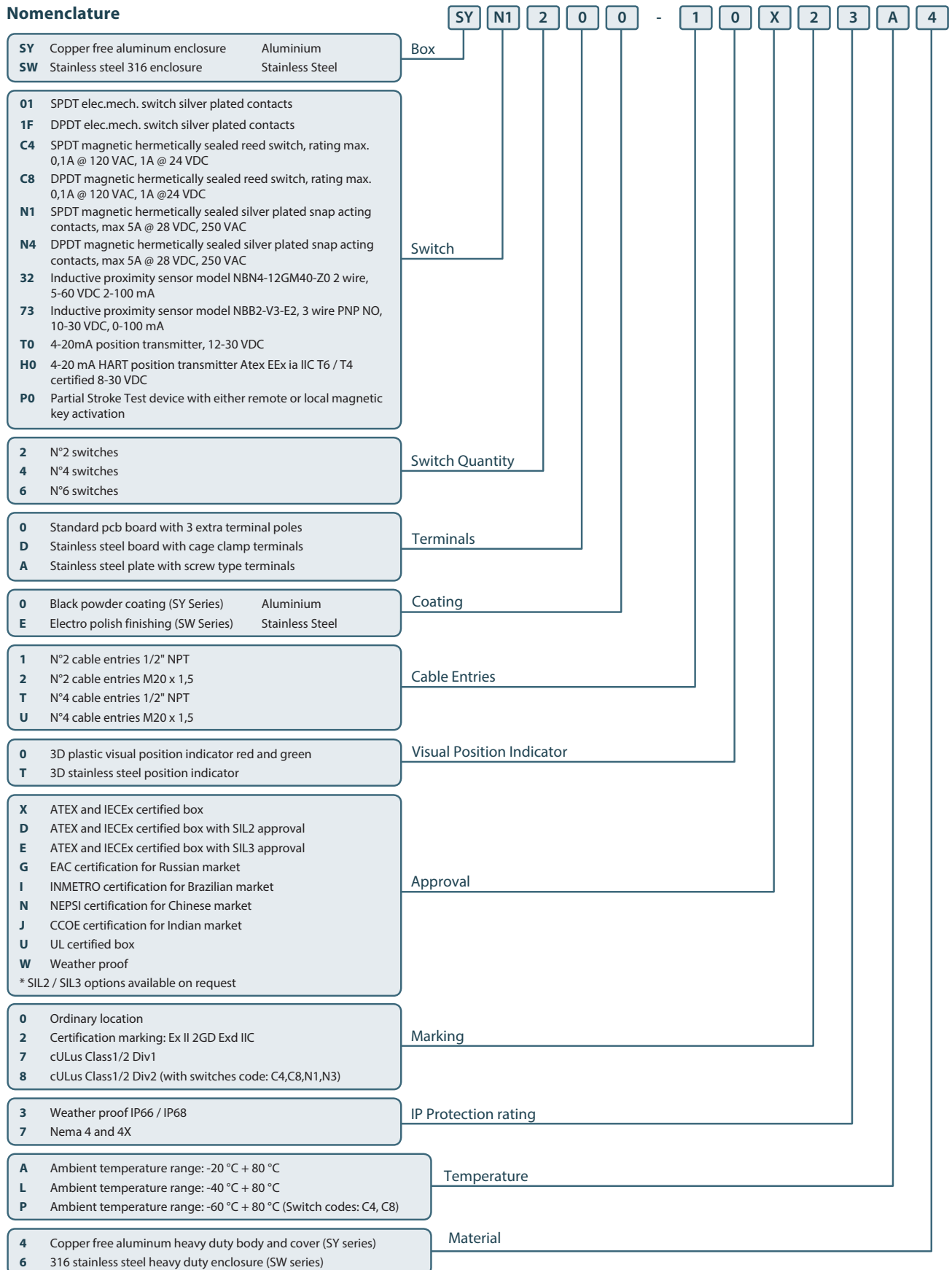
More options available on request.



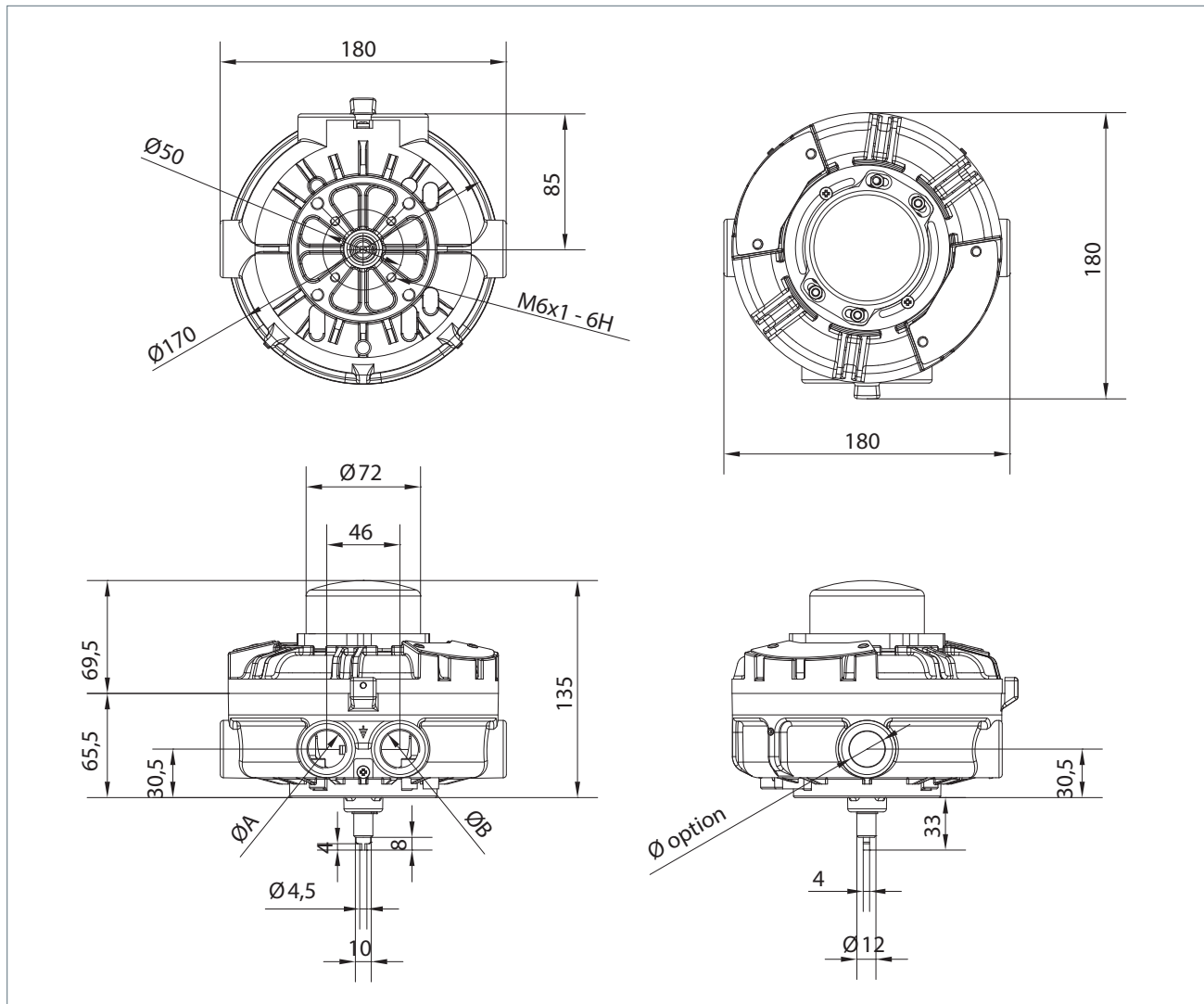
Lower shaft

# Product Ordering Matrix

## Nomenclature



## 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 |
| 7    | 3/4" NPT  | 3/4" NPT  |
| 8    | M25 x 1,5 | M25 x 1,5 |



[www.soldo.net](http://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](mailto: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](mailto:sales@soldousa.com)

PUB109-011-00  
Issue Date 11/14

As part of a process of on-going product development, Soldo reserves the right to amend and change specifications without prior notice. Published data may be subject to change. For the very latest version release, visit our website at [www.soldo.net](http://www.soldo.net)

The name Soldo® is a registered trademark. Soldo recognizes all registered trademarks. Published and produced in the UK by Soldo. POWSH114

