SK - SQ limit switch box series

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

Available in either die cast aluminum or 316L stainless steel, the explosionproof enclosure matches the Exd IIIC T6 standards. The SK - SQ switch box series offer a ready to mount solution thanks to the integrated Namur mounting kit.

The ideal compact solution for 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
• Suitable for arctic application, down to -55 °C
• Integrated mounting kit for Namur actuators
• Two cable entries, either metric or imperial
• Enhanced corrosion resistance due to the thick polyester powder coating on aluminum housings
• 316 L stainless steel housing for the 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
• Concentric flame path design providing a self-centering system aligning shafts for a precise engagement
• Captive bolts on the screwed lid
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
Ex II 2GD Ex d IIC T4/T5/T6 Gb
Ex tb IIIC T135/T100/T85°C Db
Ta: -55 °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 / 67
IP 66 / 68 up to 15 meters for 100 hours

Cable entries options:
Two cable entry M20 or 1/2" NPT

Temperature:
-20 °C +80 °C as standard temperature range
(depending on switch selection)
-55 °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
• 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

More options available on request.
### Product Ordering Matrix

#### Nomenclature

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK</td>
<td>Die-cast aluminum enclosure</td>
</tr>
<tr>
<td>SQ</td>
<td>316L stainless steel enclosure</td>
</tr>
<tr>
<td>01</td>
<td>SPDT el.mech. switch silver plated contacts</td>
</tr>
<tr>
<td>03</td>
<td>SPDT el.mech. switch gold plated contacts</td>
</tr>
<tr>
<td>1F</td>
<td>DPDT el.mech. switch silver plated contacts</td>
</tr>
<tr>
<td>C4</td>
<td>SPDT magnetic hermetically sealed reed switch, rating max. 0,1A @ 120 VAC, 1A @ 24 VDC</td>
</tr>
<tr>
<td>N1</td>
<td>SPDT magnetic hermetically sealed silver plated snap acting contacts, max 5A @ 28 VDC, 250 VAC</td>
</tr>
<tr>
<td>N3</td>
<td>SPDT magnetic hermetically sealed gold plated snap acting contacts, max 1A @ 30 VDC, 250 VAC</td>
</tr>
<tr>
<td>N4</td>
<td>DPDT magnetic hermetically sealed silver plated snap acting contacts, max 5A @ 28 VDC, 250 VAC</td>
</tr>
<tr>
<td>73</td>
<td>Inductive proximity sensor model N882-V3-E2, 3 wire PNP NO, 10-30 VDC, 0-100 mA</td>
</tr>
</tbody>
</table>

#### Nomenclature Details

- **Switches**
- **Terminals**
- **Coating**
- **Cable Entries**
- **Visual Position Indicator**
- **Approval**
- **Marking**
- **IP Protection Rating**
- **Temperature**
- **Material**

#### Sample Product Code

- **Box**: SK N1 2 0 0 - 1 1 X 2 1 A 3

#### Example

- **Switch Quantity**: 2
- **Terminals**: N°2 switches
- **Coating**: Black powder coating (SK Series)
- **Cable Entries**: N°2 cable entries ½" NPT
- **Visual Position Indicator**: 3D plastic visual position indicator red and green
- **Approval**: ATEX and IECEx certified box
- **Marking**: Ordinary location
- **IP Protection Rating**: Weather proof
- **Temperature**: Ambient temperature range: -20 °C + 80 °C
- **Material**: 316L Stainless steel heavy duty enclosure (on SQ series)
Dimensional Data

Cable entry dimensions

<table>
<thead>
<tr>
<th>Code</th>
<th>Entry A</th>
<th>Entry B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/2&quot; NPT</td>
<td>1/2&quot; NPT</td>
</tr>
<tr>
<td>2</td>
<td>M20 x 1.5</td>
<td>M20 x 1.5</td>
</tr>
</tbody>
</table>

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