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

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

Compact limit switch box, designed not only for the industrial market, but for indoor applications in hazardous areas.

Available in either glass reinforced resin or nickel plated aluminum, with flat lid or 3D indicator.

The SP is a corrosion resistant device, able to satisfy the needing in water treatment and desalination plants, both SP and SM, can also match the Ex ia IIC T6 standards with the integral intrinsically safe certification, covering enclosure and electrical components inside.

With these devices, we are providing a ready to mount solution, thanks to the integrated Namur mounting kit.

Features

• Glass reinforced resin enclosure with transparent polycarbonate lid, ensuring a device totally unaffected by corrosion, in salty and humid atmosphere.
• One cable entry as standard, for the SP series, and two cable entries, for the SM, either metrics or imperial.
• Enhanced strength on the composite enclosure, with a thick molding and durable threaded cable entries.
• Easy wiring through the terminal PCB board
• NOVA V3™ switch option ensures extreme durability and high power switching capabilities
• ASI communication protocol board
• Integrated mounting kit for Namur actuators
Product Specification

Technical Data:
Materials
• Glass reinforced resin body with transparent polycarbonate cover (SP series)
• Nickel plated aluminum body with transparent polycarbonate cover (SM series)
• Stainless steel fasteners

Approvals
ATEX, EAC
Ex II 2GD Ex ia IIC T4/T5/T6
Ex ia IIIB T44°C……T108°C Db IP6*
Ta: -15 °C ≤ Ta ≤ 80 °C
SIL certificate:
Up to SIL 2 certified by TÜV

Protection rating:
IP 65

Cable entries options:
One cable entry M20 or 1/2” NPT (SP standard)
Two cable entry M20 or 1/2” NPT (SM)

Temperature:
-15 °C +80 °C as standard temperature range (depending on switch selection)

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 @ 30 VDC
  (Exia rating max: 0,1A @ 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 (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

More options available on request.
## Product Ordering Matrix

<table>
<thead>
<tr>
<th>Nomenclature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SP</strong></td>
<td>Glass reinforced plastic body with polycarbonate cover</td>
</tr>
<tr>
<td><strong>SM</strong></td>
<td>Aluminum body with polycarbonate cover</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 (for Exia cert)</td>
</tr>
<tr>
<td>1F</td>
<td>DPDT el.mech. switch silver plated contacts</td>
</tr>
<tr>
<td><strong>C4</strong></td>
<td>SPDT magnetic hermetically sealed reed switch, rating max. 0,1A @ 120 VAC, 1A @ 24 VDC (for Exia cert, low temp)</td>
</tr>
<tr>
<td><strong>N1</strong></td>
<td>SPDT magnetic hermetically sealed silver plated snap acting contacts, max 5A @ 28 VDC, 250 VAC</td>
</tr>
<tr>
<td><strong>N3</strong></td>
<td>SPDT magnetic hermetically sealed gold plated snap acting contacts, max 1A @ 30 VDC, 250 VAC (for Exia cert)</td>
</tr>
<tr>
<td>70</td>
<td>Inductive proximity NAMUR sensor NJ2-V3-N 2 wire NC logic (for Exia cert)</td>
</tr>
<tr>
<td>73</td>
<td>Inductive proximity sensor model NBB2-V3-E2, 3 wire PNP NO, 10-30 VDC, 0-100 mA</td>
</tr>
<tr>
<td><strong>A1</strong></td>
<td>ASI protocol board, two switches for digital inputs, one output for solenoid valve control</td>
</tr>
<tr>
<td>2</td>
<td>N’2 switches</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>Standard pcb board</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td>Standard pcb board with blue poles for Exia certification</td>
</tr>
<tr>
<td><strong>0</strong></td>
<td>Black plastic enclosure (on SP series)</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>Nickel plated aluminum body (on SM series)</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>N’1 cable entries 1/2” NPT (standard on SP series)</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>N’1 cable entries M20 x 1,5 (standard on SP series)</td>
</tr>
<tr>
<td>1</td>
<td>N’2 cable entries 1/2” NPT</td>
</tr>
<tr>
<td>2</td>
<td>N’2 cable entries M20 x 1,5</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>3D visual position indicator black and yellow</td>
</tr>
<tr>
<td><strong>Z</strong></td>
<td>Flat visual position indicator black and yellow</td>
</tr>
<tr>
<td><strong>W</strong></td>
<td>Weather proof</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>ATEX certified box</td>
</tr>
<tr>
<td><strong>G</strong></td>
<td>EAC certification for russian market</td>
</tr>
<tr>
<td>0</td>
<td>Ordinary location</td>
</tr>
<tr>
<td>1</td>
<td>Certification marking: Ex II 2GD Exia IIC</td>
</tr>
<tr>
<td><strong>0</strong></td>
<td>Weather proof IP65</td>
</tr>
<tr>
<td>7</td>
<td>Nema 4 and 4X</td>
</tr>
<tr>
<td><strong>R</strong></td>
<td>Ambient temperature range: -15 + 80 °C</td>
</tr>
<tr>
<td><strong>1</strong></td>
<td>Glass reinforced plastic body and polycarbonate cover (on SP series)</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Nickel plated aluminum body and polycarbonate cover (on SM series)</td>
</tr>
</tbody>
</table>

### Linking the Process with the Control Room
Dimensional Data

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

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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

www.soldo.net