EAO – the expert partner for Human Machine Interfaces – has launched a new compact stop switch with an ultra-low, less than 19 mm back panel depth. The new Series 51 Stop Switch utilises a mono block design with an integrated switching element to set a new space-saving standard for industry. The mono block design minimises the back panel depth and offers an extremely rugged construction that protects the switch from damage caused by heavy-handed use, or operator abuse. The ground-breaking design has been tested beyond 100,000 actuations, so it’s a genuine fit-and-forget product.

Main features
- Back panel depth of only 18.8 mm, with solder terminal version S16
- Choice of connection methods: solder, plug-in or PCB mount
- Visible actuation status
- Attractive and ergonomic design
- Protected to IP65 from the front

Mounting
16 mm Ø mounting hole

Typical applications
This compact, cost effective switch is suitable for equipment that requires a reliable, rugged and attractive stop switch for non-hazardous applications including:
- Medical diagnostic equipment
- Hand held terminals
- Machine and process controls
- Instrumentation
- Supermarket check-outs
- Disabled lifts

Switching system
- Switching element with solder connection
  - Self-cleaning, double-break snap-action switching system
  - 1 NC contact and 1 NO contact per switching element
  - Available with up to two switching elements (2 NC contact and 2 NO contact)
- Switching element with 2.8 mm plug-in/solder connection
  - Self-cleaning, double-break snap-action switching system
  - (1 NC contact and 1 NO contact)
- Low signal level switching element with 2.0 mm plug-in, solder or PCB mount connection.
  - Single-break momentary contact switch system. Two contacts per switching element with a combination of NC and NO contacts

Material
Actuator housing: Polyamide (PA66), Thermoplastic elastomer (TPE)
Lens: Polyamide (PA6)
Actuator: Polybutylene Terephthalate (PBT)
Label: R-640 polyester

Switching element
Solder connection: Polyamide (PA 6.6)
Plug-in/solder connection: Dialyl Phthalate (DAP), Polyamide (PA), Polysulfone (PSU)
Plug-in/solder/PCB connection: Polysulfone (PSU)

Contact material
Snap action solder connection: gold-plated silver
Snap action plug-in/solder connection: gold-plated silver
Low level plug-in/solder/PCB connection: gold-plated
**Mechanical properties**

- **Connections**
  - Solder or solder/plug connection, 2.8 x 0.5 mm
  - Universal connection
    - with 2.0 x 0.5 mm plug-in/solder
    - and PCB connection
  - Actuating force: 4 ... 6 N (depending on the switching element)
  - Mechanical lifetime: 100,000 switching cycles

**Electrical properties**

- **Solder element:**
  - min. 5 VAC/DC, 1 mA
  - max. 250 VAC/DC, 5 A
- **Plug-in/solder element:**
  - min. 5 VAC/DC, 1 mA
  - max. 250 VAC/DC, 5 A
- **Plug-in/solder/PCB element:**
  - min. 100 μV/10 μA
  - max. 42 VAC/DC, 100 mA

**Environmental conditions**

- **Temperature:**
  - Storage temperature: –40°C ... +85°C
  - Operating temperature: –25°C ... +55°C
- **Degree of front protection:** IP65
- **Approvals:** UL/CSA pending, CB, ENEC (EN 61058-1)
- **Declaration of conformity:** CE

**Versions**

**Solder connection**

**Plug-in/solder connection**

**Plug-in/solder/PCB connection**

**Wiring Diagrams**

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<td><img src="image1.png" alt="Diagram 1" /></td>
<td><img src="image2.png" alt="Diagram 2" /></td>
<td><img src="image3.png" alt="Diagram 3" /></td>
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**Drilling pattern**

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3D product drawings are available in a range of formats to download from our website www.eao.com