



PRESSURE MEASUREMENT
Electrical Contact - Micro Switch Type
Type R3: Stainless steel case with brass internals
Type R4: Stainless steel case with stainless steel internals

Data Sheet P EC MICRO3-4

Service Intended

Suitable for media such as air, water, oil & gases that do not attack copper alloy or stainless steel parts or will obstruct the pressure system. Typical applications will be for the control and regulation of industrial processes where switching of electrical circuits are required. Externally adjustable, single or double contacts, attached to the movement of a SA Gauge pressure gauge make the gauge suitable to activate or deactivate electrical devices. Contact can make or break in an upward or downward pressure cycle.

Case Details

Nominal Dia: 100, 160mm S/Steel 304

Bezel

S/Steel rolled ring type - tamper proof. S/Steel 304

Pressure Connection

Material: Type R3: Brass. Type R4: S/Steel 316
 Sizes: 1/4", 3/8" & 1/2" in BSP or NPT
 Position: See "Mounting Configurations".

Mounting Flange

Material S/Steel 304 See "Mounting Configurations".

Pressure Ranges

600kPa.... 250MPa (also bar, psi, etc.)
 Not suitable for ranges below 600kPa

Pressure Element

Material: Type R3: Cu-alloy. Type R4: S/Steel 316

Pointer

Gauge Pointer: Black
 Single Contact Pointer: Red
 Double Contact Pointer: Green and red

Dial - Aluminium, white with black lettering.

Window - Plexiglass / polycarbonate.

Weather Protection - IP 54.

Accuracy Class - Class 1

Working Pressure

Steady: Full scale value
 Fluctuating: 90% of full scale value
 Short Period: 130% of full scale value
For pulsating pressure, the use of an inlet restrictor is recommended.

Operating Temperature - Ambient: -20 °C to + 60 °C
 Medium: +70 °C (soldered tube): + 100 °C (brazed / tig welded tube)
For live steam use, a syphon tube is recommended.

Optional Extras - Calibration Certificate

Customized scale plates (customer logo, red line, etc)
 Special Dials, other than standard (dual scale, bar, psi),
 Colour Coding of dial, Blow out disc, Diaphragm seals fitted



ELECTRICAL CONTACT SPECIFICATIONS

Movements with Built-on Micro Switches

Pressure gauge movements with built-on micro switches are a combination of movement and miniature, lever operated micro switch/es. These micro switches are characterised by a relatively high switching performance, high precision at the switching point and a long service life. The micro switches are one pole chargers, closing or opening electric circuits at the set limit values depending on the direction of movement. Contact can be made or broken in upwards or downwards pressure cycles.

Application

Pointer movements with a micro switch should be use where high switching performances are required. The actuating force required to change the contact makes this type of electrical contact gauge unsuitable for pressure ranges below 600kPa. Allow 2-5 % of measuring range to accommodate the resistance force required to break the micro switch contact.

Setting

The set value is normally set with the help of a square socket adjusting key. The value is set through a hole in the window by inserting the key and turning of the adjusting axle to the desired set value. The hole should be closed after setting, with a rubber plug.

Electrical Rating

Maximum Voltage: 250V
 Maximum Current: 5A (resistive load) max
 5A (inductive load, cos. φ>0.75) max

SWITCH FUNCTIONS

Single Contact

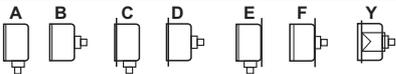
Contact makes or breaks when pointer reaches the set point in clockwise or anti-clockwise direction, depending on wiring configuration.

Double Contact

1st contact breaks and 2nd contact makes when pointer reaches set point or alternatively 1st contact makes and 2nd contact breaks when the pointer reaches the set point in clockwise or anti-clockwise direction, depending on wiring configuration.

Both contacts can also be set to make or break when the pointer reaches the set point in clockwise or anti-clockwise direction, depending on wiring configuration.

MOUNTING CONFIGURATIONS



- | | |
|---|---|
| A: Bottom connection, no flange | E: Bottom connection, rear flange |
| B: Rear connection, no flange | F: Rear connection, rear flange |
| C: Bottom connection, front flange | Y: Rear con. narrow front ring (clamp mtg) |
| D: Rear connection, front flange | |