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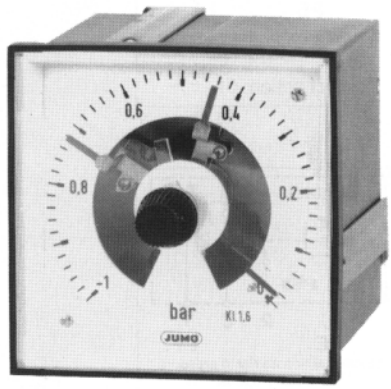
JUMO

MEASUREMENT AND CONTROL

Contact pressure gauges Type 4 QR-96



General description

Contact pressure gauges Type 4 QR-96 for flush panel mounting are used for monitoring the pressure of liquids and gases provided they are not highly viscous or crystallising and do not attack copper alloys.

Applications include:
mechanical plant and apparatus, hydraulic and pneumatic systems, pumps and compressors etc.

Type designation

4 QR-96 . -02-3

4 — Product range pressure measurement

QR-96 — square format, contact pressure gauge for flush panel mounting

Contact action

-01 — 1 contact opening on pressure rise

-02 — 1 contact closing on pressure rise

-03 — 1 contact opening on pressure rise, 1 contact closing on pressure rise

-04 — 2 contacts closing on pressure rise

-05 — 2 contacts opening on pressure rise

-13 — 1 contact closing on pressure rise, 1 contact opening on pressure rise

Contact mode

-3 — electro-mechanical slow-break contact as single-pole closing contact (used only in conjunction with contact protection relay to Data Sheet 61.020)

-6 — electro-mechanical slow-break contact as single-pole closing contact with magnetic snap-action (used only in conjunction with contact protection relay to Data Sheet 61.020)

-7 — non-contacting inductive pointer sensor (Kontex system), protection EX IG 5 (only when used in conjunction with miniature transistor relay, see Data sheet 99.041)

Extra Codes

/01 Restrictor in pressure duct

/34 Setpoint adjustment by screwdriver after removing cap

/74 Bourdon spring brazed

Ranges

0 bar to	1 bar
0 bar to	1.6 bar
0 bar to	2.5 bar
0 bar to	4 bar
0 bar to	6 bar
0 bar to	10 bar
0 bar to	16 bar
0 bar to	25 bar
0 bar to	40 bar
0 bar to	60 bar
0 bar to	100 bar
0 bar to	160 bar
0 bar to	250 bar
0 bar to	400 bar
0 bar to	600 bar
– 1 bar to	0.6 bar
– 1 bar to	1.5 bar
– 1 bar to	3 bar
– 1 bar to	5 bar
– 1 bar to	9 bar
– 1 bar to	15 bar

Ordering example

JUMO Contact pressure gauge
Type 4 QR-96 . -02-3
Range 0 – 10 bar

Technical data

Case
Steel, zinc plated

Mounting
2 brackets, steel zinc plated, with wing nut

Bezel
plastic, black

Dial
white, black figuring

Pressure connection
rear entry, excentric, ½" male to DIN 16 288

Sensing unit
up to 40 bar:
Bourdon tube, brass
60 bar and above:
multiturn Bourdon tube, st. steel, Mat.Ref. 1.4571, brazed

Setpoint adjustment
by rotary knob
(Code TS 34 by screwdriver after removing cap)

Switch rating
Contact 3: slow-break
Voltage: 250 V max.
Rating: 18 W (d.c.), 30 VA (a.c.)
50 mA, p.f. = 1

Contact 6: magnetic snap action
Voltage: 250 V max.
Rating: 30 W (d.c.), 50 VA (a.c.)
250 mA, p.f. = 1

Contact 7: inductive contact to NAMUR and DIN 19 234

Switching differential
1 % of span with contacts 3 and 7;
approx. 3 – 6 % of span with contact 6

Switching point accuracy
± 0.5 % of span
referred to switch-off point on rising pressure

Indication accuracy
Class 1.0
(Class 1.6 on ranges 1.6 bar and below)

Electrical connection
through Pg 9 cable gland with 600 mm long connecting cable

Operating range
steady pressure ¾ f.s.d.
fluctuating pressure ⅔ f.s.d.

Permitted medium and ambient temperature
– 20 to + 50 %

Protection
front IP 53

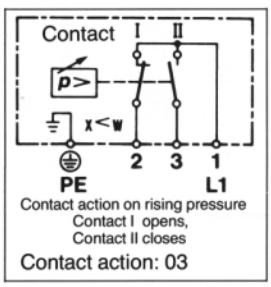
Connection diagrams

Contact action on rising pressure
Contact I opens

Contact action: 01

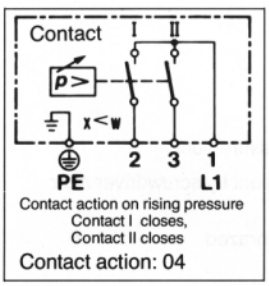
Contact action on rising pressure
Contact I closes

Contact action: 02



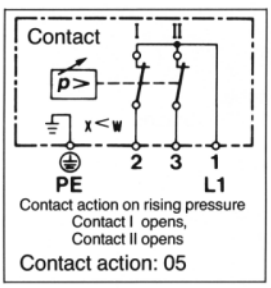
Contact action on rising pressure
Contact I opens,
Contact II closes

Contact action: 03



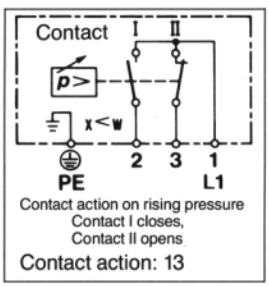
Contact action on rising pressure
Contact I closes,
Contact II closes

Contact action: 04



Contact action on rising pressure
Contact I opens,
Contact II opens

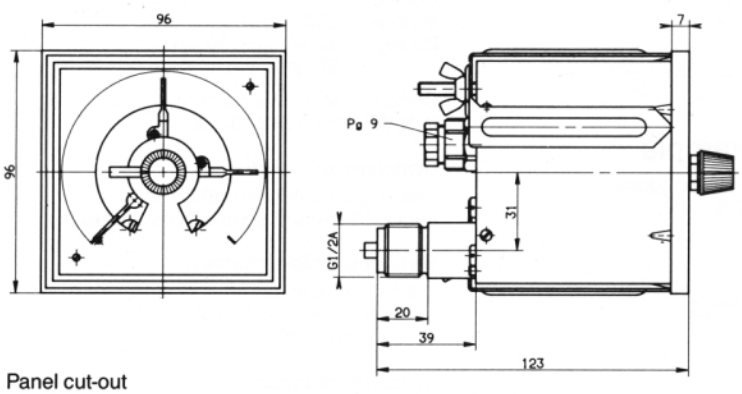
Contact action: 05



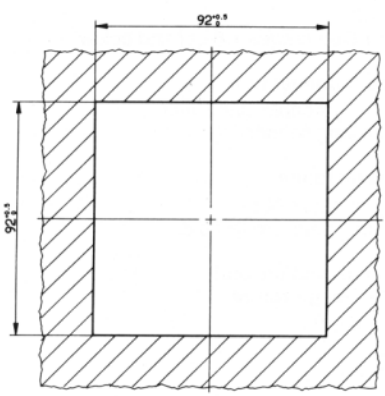
Contact action on rising pressure
Contact I closes,
Contact II opens

Contact action: 13

Dimensions



Panel cut-out



mmmm	inch
7	0.28
20	0.79
31	1.22
39	1.54
$92^{+0.5}$	$3.62^{+0.02}$
96	3.78
123	4.84