



Electric Alarm Contacts

4 1/2" Indicating Pressure Switches

Magnetically Assisted Contact • Type CP 3000

Accessories, Electric

CP 3000 Magnetically Assisted Contacts 4 1/2" Gauges

The WIKA indicating pressure switches combine local pressure indication with alarm and control capabilities into a single economical, reliable and compact system. Superior to conventional gauge and switch connections, WIKA indicating pressure switches are extremely reliable, have low hysteresis, resist corrosion and have easy set point adjustments. Ideally suited for alarm and control functions on hydraulic, pneumatic and general industrial machinery and equipment as well as on process industry installations, including chemical, petrochemical plants, oil refineries, electric power plants, pulp and paper mills and wastewater treatment plants.

CP 3000 Magnetically Assisted Contacts feature one or two magnetically assisted mechanical contacts. The contact assembly includes a built-in Triac switching amplifier which minimizes contact wear and allows load switching to 65 VA. In this design, an adjustable contact is coupled to the gauge pointer through a special adaptor. As the contact approaches the set pointer, the magnetic force of a small permanent magnet attached to the set pointer assists in closing and holding the contacts in place. This avoids arcing and reduces contact wear. The switching amplifier further reduces potential wear by its ability to switch large load currents with small control current. Technical specifications are listed in Table 1. These switches are designed for alternating current (for DC consult WIKA).



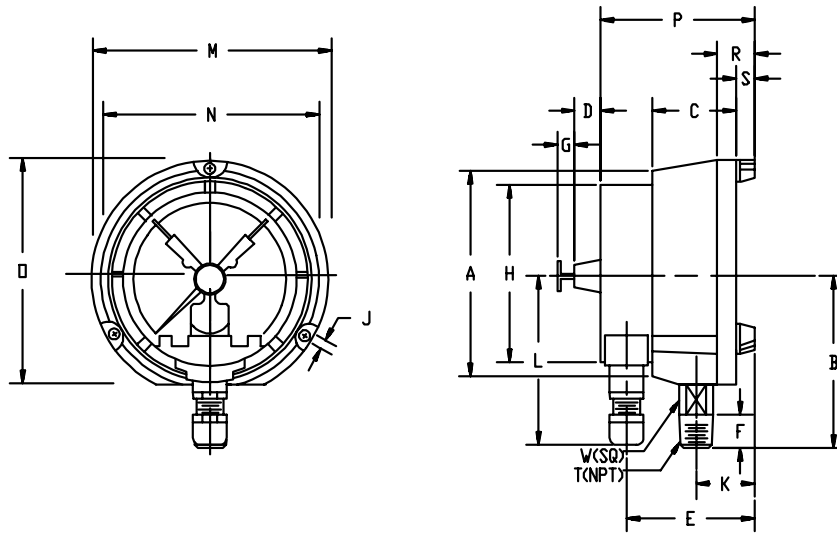
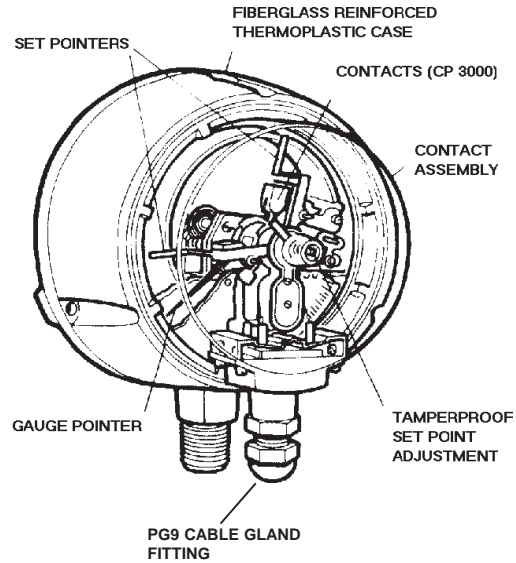
Indicating Pressure Switch Ordering Information

Specify: switch type; contact or sensor (e.g. CP3000 o

- Wetted parts material
- Pressure range and connection size
- Dry or liquid filled case
- Control/switching unit (Table 2)
- Contact arrangement (e.g. normally closed-normally open) Table 3 (see price sheet for example).

Features and Benefits

- Continuous local indication of pressure.
- Accurate indication of actual and set point pressure.
- Easy, precise and tamper resistant set point adjustment over the entire scale.
- Excellent reliability and repeatability due to negligible contact wear.
- Small deadband (typically 1% to 3%)
- Set point ranges include VAC 30" Hg, compound to 200 psi and pressures to 20,000 psi.
- Compact design for minimal space requirement.
- Corrosion and impact resistant housing.
- Reduced installation cost due to elimination of pressure manifold and shut off valve needed for separate pressure connection.
- High installation flexibility through ability to retrofit WIKA series 4 1/2" gauges in the field without removal from service.
- Minimal stocking requirements through use of the same contact assembly for all pressure ranges.
- Available with wetted parts of brass, stainless steel or Monel[®] for most process media.
- Suitable for use with diaphragm seals for corrosive, viscous or high temperature media.



Supplied with PG9 Electrical cable gland

| Indicating Pressure Switches | KEY | A* | B* | C | D | E | F* | G | H | J | K | |
|------------------------------|-----|------|------|------|------|-------|------|------|------|-------|------|------|
| | | mm | 129 | 103 | 69.5 | 12.7 | 98.5 | 19.0 | 14.0 | 102.6 | 5.60 | 38.0 |
| | | in | 4.50 | 4.06 | 2.74 | 0.50 | 3.87 | 0.75 | 0.55 | 4.04 | 0.22 | 1.50 |
| | KEY | L | M | N | O | P | R | S | T | W | | |
| | mm | 98.0 | 148 | 137 | 141 | 113.6 | 25.0 | 12.5 | -- | 22 | | |
| | in | 3.85 | 5.83 | 5.39 | 5.55 | 4.47 | 0.98 | 0.49 | 1/2" | 0.87 | | |

A* Nominal Size

B* Gauges with 1/4"NPT connection - dimension changes to 97mm/3.81in.

F* Gauges with 1/4"NPT connection - dimension changes to 13mm/.51in.

TABLE 1

| CONTACT TYPE | MAGNETIC CP3000 |
|-------------------------------|--------------------------------|
| Control Unit # | (Built in Triac) |
| Indicating Pressure Range | 0/60 to 0/20,000 psi |
| Set Point Pressure Range | 30-20,000 psi |
| Momentary Pressure | 130% |
| Indicating Accuracy | ±3.0% FS |
| Operating Voltage | 110 VAC/60 Hz |
| Contact Rating | 24-220 VAC, 65 VA ¹ |
| Switching Frequency (Max) | --- |
| Control Circuit | |
| Voltage | --- |
| Current | min 30 mA |
| Switching Point | --- |
| Control Wire Resistance (Max) | --- |
| Allowable Ext. Inductance | --- |
| Allowable Ext. Capacitance | --- |
| Ambient Temperature Range | -10° to 140°F |

TABLE 2

| CONTACT TYPE | CONTROL SYSTEM | AREA OF INSTALLATION | NUMBER OF CONTACTS |
|-----------------------|-----------------------|-----------------------------|---------------------------|
| Magnetically Assisted | Standard | Non-Hazardous | 1 |
| Magnetically Assisted | Standard | Non-Hazardous | 2 |

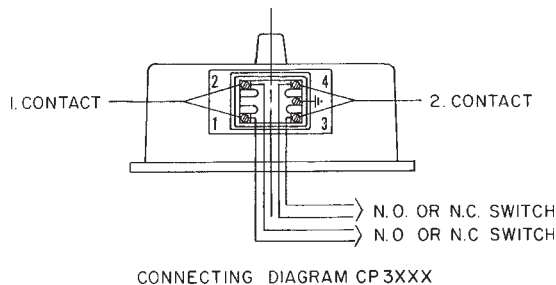
TABLE 3

| Contact Arrangement | |
|----------------------------|--------------------|
| Function | Type Number |
| N.O. | 828.1 |
| N.C. | 828.2 |
| N.O., N.O. | 828.11 |
| N.O., N.C. | 828.12 |
| N.C., N.O. | 828.21 |
| N.C., N.C. | 828.22 |

Installation Instructions for Contact Adaptor Unit CP3000

1. Remove the threaded ring and window from the process gauge using a threaded ring remover tool (available from the factory).
2. Remove the terminal cover from the CP Unit by unscrewing the four screws.
3. Check if the CP Unit will be operated as a dry or liquid-filled version. For liquid-filled versions it is necessary to replace the front o-ring (p/n 564354) with a new one.
4. Before assembling the contact adaptor to the gauge note the following: The contact adaptor housing has an extended locking tab at the 6 o'clock position, which must be engaged with the alignment slot in the dial. If the dial does not have this alignment slot, then the locking tab of the housing must be removed.
5. Check mechanical and electrical function of the contacts by moving the engagement lever manually. See reverse side for tips on setting the magnets for magnetic-type contacts (CP3000).
6. Assemble the contact adaptor to the gauge by carefully engaging the contact lever fork over the pointer at the pointer zero position. Then rotate the adaptor housing clockwise until the locking tab engages the dial slot.
7. Assemble the threaded ring over the adaptor and tighten to 140 inch/pounds (16Nm).
8. Assemble terminal cover with cable gland over cable. Make electrical connections in accordance with the applicable wiring diagram for CP3000 (see below).

Typical Wiring Diagram



Ordering Information:

State computer part number (if available) / model number / size / range / connection size and location / options required.

Specifications given in this price list represent the state of engineering at the time of printing.
Modifications may take place and the specified materials may change without prior notice



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