

Technical Datasheet



Electric Contact for Pressure and Temperature Gauges EC Series



Key Features

- Applicable to 100 & 150 mm gauges
- Degree of protection IP55 or filled
- Snap action or inductive type
- Intrinsically Safe Certified version for use in hazardous area
- Suitable for any range of pressure gauge from 0 to 600mbar.
- They can be applied to **Pressure, Differential; Pressure** and **Gas Filled Temperature gauges**



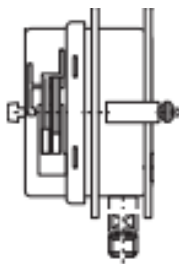
Series Overview

The CE type of contacts are suitable when a simple alarm signal needs to be added to the local mechanical indication.

The contacts can be mounted over the dial, protected by a methacrylate hood applied to a standard gauge case, or behind the dial (standard configuration), inside a higher protective higher case.

In both versions, the contact is adjustable from the front with a removable key. Differential pressure gauges DG, are supplied as standard with a hood. High case available is only upon request.

with hood



with high case



Other products

Other accessories we can offer:

- Overrange protectors
- Manifolds
- Thermowells



Product applications

The CP range is suitable for OEM manufacturers of :

- Burners & Furnaces
- Water treatment systems
- Chemical & Petrochemical applications
- Filtration systems

The choice of models available ensures suitability for use in:

- Corrosive atmospheres
- Resistant to chemical attack
- Hazardous areas

How can we help you?

Delta Mobrey offers fast, efficient and knowledgeable support when and where you need it. Please visit our website at www.delta-mobrey.com to find your local support centre or call us on:

+44 (0) 1252 729140

Magnetic Contacts **Snap-Action, type CM/CS**

These are contacts mechanically actuated by the pointer. The set point is adjustable from the front, on the whole scale, of the gauge. When the instrument pointer clashes with the set limit value, the contact elements, touch each other, causing the switch to open or close the circuit.

With double type contacts, this occurs at two values.

These contacts includes a permanent magnet fixed near the contact. This magnet speeds up both opening and closure, independently from the instrument pointer rotation speed, minimizing the reflection.

The magnetic attraction drastically reduces the effects of vibrations.

Intensity of attraction can be adjusted in factory according to the customer's need.

Technical Specification

Application:	Applicable to Gauges series GG, SG, GE, DG
Switching action:	Single or double contacts in single or separate circuits
Adjusting lock:	Fixed key installed as standard. Removable key on request
Action and selection:	See table below
Window material:	High case version: Methacrylate disk or Laminated Safety disc 6mm thickness. Methacrylate hood for version with contacts above the dial
Contacts materials:	Golden silver alloy as standard covering most of the industrial application Gold alloy or platinum alloy as special version
High case enclosure material:	Enclosure case and ring in AISI 304 stainless steel with bayonet bezel
Effect of magnet on switching:	Interference in advance closure or delayed opening, between 2 and 4% fsv, (depends by pointer speed). Instrument is supplied settling the deviation at 3%
Contacts rating:	See table
Electric connection:	DIN Connector with cable gland PG9 or cable gland M20x1.5
Ambient temperature limits:	-20 / + 60 °C

CONTACT RATING				
Voltage	Direct Current	Control Category	Alternating Current	Control Category
230 V	100 mA	DC 12	120 mA	AC 12
	55 mA	DC 13	65 mA	AC 14
110 V	200 mA	DC 12	240 mA	AC 12
	100mA	DC 13	130 mA	AC 14
50 V	300 mA	DC 12	450 mA	AC 12
	1260 mA	DC 13	200 mA	AC 14
24 V	400 mA	DC 12	600 mA	AC 12
	200 mA	DC 13	250 mA	AC 14
NO/NC contacts: Maximum Load = 30 W / 50VA Maximum Thermal Current : 0.7A NO/C/NC contacts (supplied without magnets) Maximum Load = 10W / 18 VA Maximum Thermal Current : 0.4 A				

See page 4 and 5 for the selection of the wiring and function

Inductive Contacts **Intrinsically Safe type CI**

These contact functions like electric switches, but the switching action is activated by a proximity switch SJ2-N type, covered by certificate PTB 99 ATEX 2219 X for use in Hazardous Areas.

The set point is adjustable from the front on the whole scale of the gauge. The instrument pointer drives a metal flag in or outside the control head. As long as the metal flag is in the control head, a low control current of <1mA flows and the initiator is at low impedance. Whenever the metal flag is outside the control head, a high control current of >3mA flows and the initiator is at high impedance.

The signal is then converted into an on/off signal by a remotely mounted Safety Barrier and relay (not included).

Upon reversal of the operation mode from operating current to rest current, the types of description must be changed accordingly.

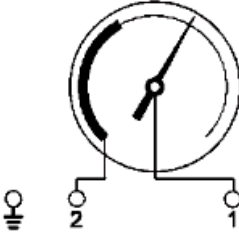
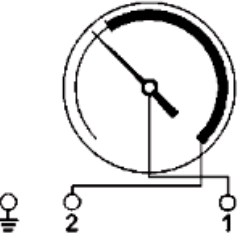
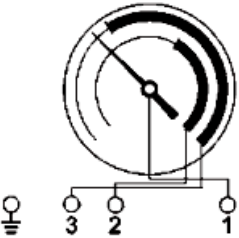
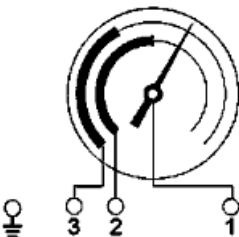
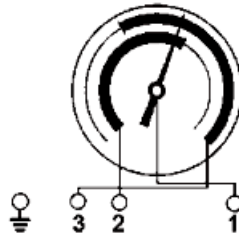
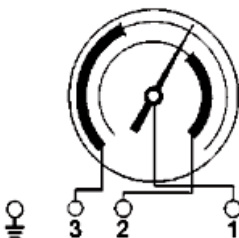
The instrument will be ATEX construction and 2 related documents will be supplied: the ATEX Declaration of Conformity of the gauge and the Intrinsically Safe Certificate of the inductive contact.

Technical Specification

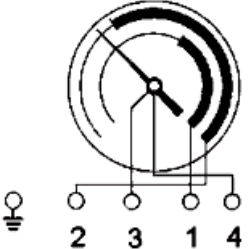
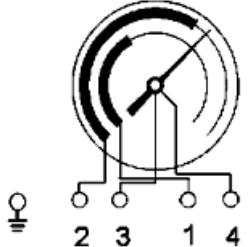
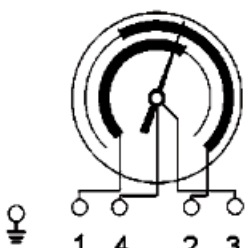
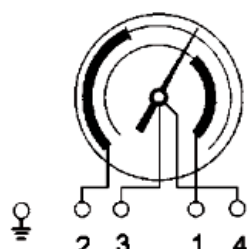
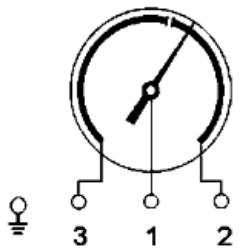
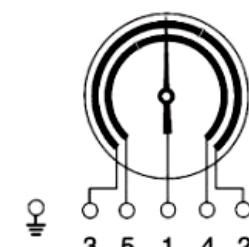
Application:	Applicable to Gauges series GG, SG, GE, DG
Switching action:	Single or double contacts.
Adjusting lock:	Fixed key installed as standard. Removable key on request.
Action and selection:	See table below
Window material:	High case version: Methacrylate disk or Laminated Safety disc 6mm thickness. Methacrylate hood for version with contacts above the dial
Contacts materials:	Golden silver alloy as standard covering most of the industrial application. Gold alloy or platinum alloy as special version
High case enclosure material:	Enclosure case and ring in AISI 304 stainless steel with bayonet bezel
Effect of magnet on switching:	Interference in advance closure or delayed opening, between 2 and 4% fsv, (depends by pointer speed). Instrument is supplied settling the deviation at 3%
Power Supply:	8 Vdc
Electric connection::	DIN Connector with cable gland PG9 or cable gland M20x1.5
Ambient temperature limits:	-20 / + 60 °C

See page 6 for wiring and function

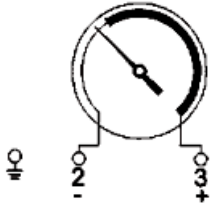
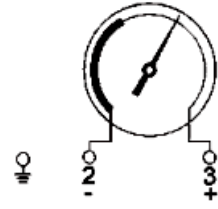
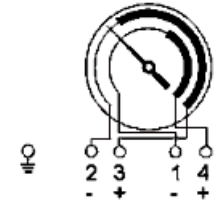
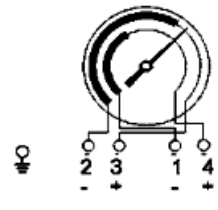
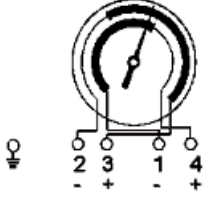
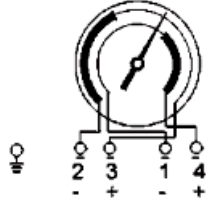
WIRING MAGNETIC 1 OR 2 CONTACT, SINGLE CIRCUIT

WIIRING SCHEME	TYPE	The instrument pointer moves clockwise and when it reaches the set point.....	After the interference
	CM01	....Makes the contact	....circuit is closed
	CM02	....Breaks the contact	....circuit is open
	CM11	....makes the 1st contact....makes the 2nd contact	....1st circuit is closed....2nd circuit is closed
	CM22	....breaks the 1st contact....breaks the 2nd contact	....1st circuit is open....2nd circuit is open
	CM12	....makes the 1st contact....breaks the 2nd contact	....1st circuit is closed....2nd circuit is open
	CM21	....breaks the 1st contact....makes the 2nd contact	....1st circuit is open....2nd circuit is closed

WIRING MAGNETIC 2 CONTACT, SEPARATE CIRCUIT & SPDT

WIIRING SCHEME	TYPE	The instrument pointer moves clockwise and when it reaches the set point.....	After the interference
	CS11	<p>....makes the 1st contact....makes the 2nd contact</p>	<p>....1st circuit is closed....2nd circuit is closed</p>
	CSS22	<p>....breaks the 1st contact....breaks the 2nd contact</p>	<p>....1st circuit is open....2nd circuit is open</p>
	CS12	<p>....makes the 1st contact....breaks the 2nd contact</p>	<p>....1st circuit is closed....2nd circuit is open</p>
	CS21	<p>....breaks the 1st contact....makes the 2nd contact</p>	<p>....1st circuit is open....2nd circuit is closed</p>
	CM03	<p>....makes and in the same time breaks the contacts</p>	SPDT
	CM33	<p>....makes and in the same time breaks the 1st contacts....makes and in the same time breaks the 2nd contacts</p>	DPDT

WIRING INDUCTIVE CONTACTS

WIIRING SCHEME	TYPE	The instrument pointer moves clockwise and when it reaches the set point....	After the interference
	CII01	....Out of the control head	....circuit is closed
	CI02	....into the control head	....circuit is open
	CI11	..1st contact out of the control head ..2nd contact out of the control head	....1st circuit is closed....2nd circuit is closed
	CI22	..1st contact into the control head ..2nd contact into the control head	....1st circuit is open....2nd circuit is open
	CI12	..1st contact out of the control head ..2nd contact into the control head	....1st circuit is closed....2nd circuit is open
	CI21	..1st contact into the control head ..2nd contact out of the control head	....1st circuit is open....2nd circuit is closed

“+” = brown ; “-” = blue

Dimensions

Pressure and temperature gauges GG, GE, SG (only direct bottom conn.)			
Direct mount gauge, with bottom connection		Flush mount with 3 holes fixing	
High case	Hood	High Case	Hood
Flush mount with clamp			
High case		Hood	
Surface mounting with 3 holes fixing		Direct mount gauge with back connection	
High case	Hood	High case	Hood
Differential Pressure gauges DG			
Direct and surface mount			

Electric Contacts for

In the interest of development and improvement Delta Mobrey Ltd, reserves the right to amend, without notice, details contained in this publication. No legal liability will be accepted by Delta Mobrey Ltd for any errors, omissions or amendments.

Delta Mobrey Limited

Hudson House, Albany Park Camberley, Surrey GU16 7PL, UK.

T+44 (0)1252 729140 F+44 (0)1252 729168 E sales@delta-mobrey.com W www.delta-mobrey.com

