Limit Switch Contact Assemblies

Inductive

Model **I**

This data sheet contains important details of the available make/break operations and electrical connections of inductive limit switch contact assemblies. Detailed information about operation method and application of all our limit switch contact assemblies are given in our **general information leaflet 9000.**
For pressure gauges with built-in limit switch contact assemblies special data sheets with dimensional drawings and details of the ordering codes can be found under the different catalogue headings, ending on number ..**9**0, ..**9**1 or ..1**9**.1

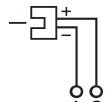
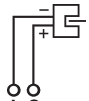
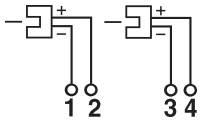
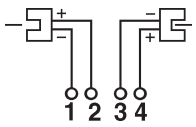
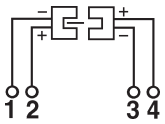
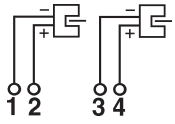
Make/Break Operations

The available make/break operations of single and double contacts are shown in the table below.

Code letter I = Inductive limit switch

Code no. 1 = making contact, closes when the set point is passed by in clockwise direction (i.e. opens counterclockwise)

Code no. 2 = breaking contact, opens when the set point is passed by in the clockwise direction (i.e. closescounterclockwise)

Circuit Diagram	Make/Break Operation With Pointer Moving Clockwise	Type
Contact assembly with one contact:		
	breaking [1]	**I 2**
	making [2]	**I 1**
Contact assembly with double contacts:		
	1st and 2nd contacts both breaking [1]	**I 22**
	1st contact breaking [1] 2nd contact making [2]	**I 21**
	1st contact making [2] 2nd contact breaking [1]	**I 12**
	1st and 2nd contacts both making [2]	**I 11**

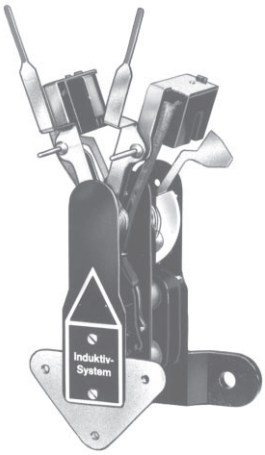
[1] **breaking contact:** The vane is moved into the control head when the pointer moves in the clockwise direction. There is only a small current (≤ 1 mA), the slot sensor becomes high ohms, the relay in the output unit shut off on working current principle.

[2] **making contact:** The vane is moved out of the control head when pointer moves in the clockwise direction. There is again normal current (≥ 3 mA), the slot sensor becomes low ohms, the relay in the output unit closes on working current principle.

Circuit diagrams of three and four contacts are available upon request. Make/break operations must be stated for clockwise pointer movement, e.g.:

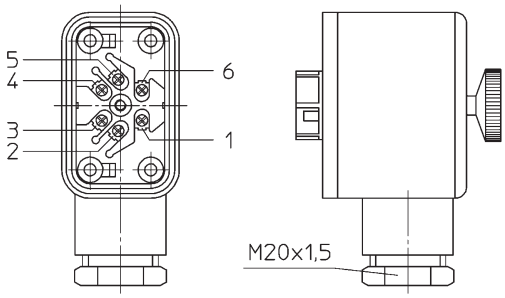
1st contact: breaking
2nd contact: breaking
3rd contact: making

It is not possible for all the set pointers to be set one above the other. Therefore you should always state where the set points are.



Adjustment
The set points are adjustable from outside. The material of the adjustment depends on pressure gauges model and version:
– Cast into the acrylic glass window, or
– Nickel plated brass, built into the window; removable key;

Electrical Connections
Terminal box, mounted on the case. For the precise location of this box see data sheets of the individual pressure gauge models. The terminals in the connecting box are also numbered as shown in the circuit diagrams. A ground terminal is provided.



CE-Marking
According to EN 60947-5-2, EN 60947-5-6

Special Options

- 4-fold inductive limit switch upon request (restrictions because of the required front-to-back case size)
- 2 limits with fixed distance (e.g. distance 3 ∢°)
- Double inductive limit switch nom. size 160 (6") as "interval switches" for low torques, e.g. for test gauges (accuracy class .6)
  The actuator vane is here fastened to the instrument pointer. If using the especially for this limit-switch developed output unit WE../Ex-JR it is guarantied that after the actuator vane has passed the limit and the switching operation took place, the switching function will maintain even if the set limit values are exeeded. The actuator vane can pass the set point, pass the slot and re-enter the slot again on its the way back without any change of switching behaviour. Even a power failure cannot cause any change in the switching behaviour. When the power is supplied again, the latest switching position will be likewise restored.
- Adjustment device with non removable key nickel plated brass; Adjustment device stainless steel with removable or non-removeable key upon request
- Safety slotted version SN; if used together with an intrinsically safe output unit it may be applied for a self-controlled control system (intrinsincally safe circuit). If there is a failure, either in the slot sensor or in the output unit, the output signal will turn to "0". This construction is TÜV approved for the safety requirements of important control systems. The electrical data fulfill the standards of EN 60947-5-6 respectively NAMUR.
- Safety slotted version S1N, with reversed direction of action

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