

Indicating Pressure Switches

Inductive / Proximity / NAMUR Contacts



MODEL : IPSN

Inductive contacts may be used for almost all industrial applications, due to their proximity type of switching, their switching accuracy and their long service life. Inductive contacts are given special preference for oil filled measuring instruments and in areas chemical, petrochemical Industries, power plants, mining, Ships and nuclear plants.

Features

- Combination of indication and switching
- Completely fail-safe switching, even in explosion hazardous areas
- Switch setting between 10% & 90% of the range externally
- Weatherproof or Flameproof Versions
- Available with Diaphragm Seals of various Materials & Designs



Operating Principle

Inductive contacts work in a "non-contact" way. They are equipped with electrical distance sensors (proximity sensors) in accordance with EN 60947-5-2. The proximity sensor (NAMUR) is having slot design. An electromagnetic field is concentrated between two axially opposed coils. The switch operates when the aluminium control vane (flag) moved by the actual value pointer (main pointer which indicates the Gauges reading on Dial) enters into the slot between the two coils of the control head. The control head is supplied with a DC voltage. When the flag enters the slot in the control head, it increases its internal resistance, which subsequently cause change in the current which acts as the input signal for the switching amplifier of the control unit.

The default settings of contacts shall be as follows:

Case-1: NO (Normally Open) - Contact makes when the Gauge Pointer approaches the set point in clockwise direction.

(i.e., Flag leaves control head)

Case-2: NC (Normally Closed) - Contact breaks when the Gauge Pointer approaches the set point in a clockwise direction.

(i.e., Flag enters control head)

Specifications

Ranges

Ref Standards	EN-837 / EN 60947-5-2 (NAMUR)	Gauge	bar, kg/cm ²	Least count			
Dial	100 mm/150 mm, Aluminium, white background, black markings	Compound	(-)1 to 1.5	0.05			
Case	SS304 / SS316 with bayonet bezel (Weatherproof)						
Protection	Weatherproof to IP-68 as per IS / IEC:60529						
	Flameproof to Gas Groups IIA/ IIB & IIC as per IEC:60079-1						
	Exd IIC T6, Atex Certified & Weather proof to IP-66 as per IS/ IEC: 60529						
	Weatherproof / Flame proof Junction Box in Die Cast Aluminium						
Electrical Connection	Weatherproof / Flame proof Junction Box in Die Cast Aluminium				Pressure	0 to 1	0.02
Window	Safety glass with adjusting Knob						
Bourdon	SS316, SS316 Ti, SS316L, Monel						
Socket	22 mm Square in SS316, SS316L, SS316 Ti, Monel						
Movement	SS304 / Ss316						
Connection	1/2" NPT (M) as standard (other optional)						
Range	Refer Table						
Accuracy	±1% FSD for indication & switching						
Over range	As per EN 837						
Blow out disc	Provided						
Zero reset	Provided (Micrometer Pointer)	Gauge	0 to 1.6	0.05			
Temperature suitability	Ambient (-)20°C to 60°C, Media 100°C						
Temperature Effect	Within ±0.4% FSD/10°C, when temperature changes from reference temperature of 20°C (as per EN-837 standard)						
	Inductive Contacts, Single or Double, adjustable between 10% & 90% of the Range						
Contact	Nominal Voltage, 8.32 V DC				('C' shaped Bourdon)	0 to 4	0.05
	Operating Voltage, 5 to 25 V DC						
	Coil type	0 to 6	0.10				
	Bourdon	0 to 10	0.20				
	Bourdon	0 to 16	5.0				
	Bourdon	0 to 25	0.50				
	Bourdon	0 to 40	1.0				
	Bourdon	0 to 60	1.0				
	Bourdon	0 to 100	2.0				
	Bourdon	0 to 160	5.0				
	Bourdon	0 to 250	5.0				
	Bourdon	0 to 400	10.0				
	Bourdon	0 to 600	10.0				
	Bourdon	0 to 800	20.0				
	Bourdon	0 to 1000	20.0				
	Bourdon	0 to 1600	50.0				

The parameters mentioned here are the standard specifications / values generally used for most of the process applications. Any other specification not appearing here also can be provided as per customer requirement. For higher temperature services above 100°C, we recommend to provide suitable cooling arrangement (Syphon, Cooling Tower, Impulse Tubing, Diaphragm Seal etc.)

For range other than above please contact our design dept.

MODEL



BASIC MODEL CODE
IPSN Indicating Pr. Switch (NAMUR)

MOUNTING
V Bottom Entry, Local Mounting
S Bottom Entry, Surface Mounting
Y Bottom Entry, 2" Pipe Mounting
C Back Entry, Local Mounting
P Back Entry, Flush Panel Mounting

DIAL SIZE
100 100 mm **150** 150 mm

CASE
S4S SS 304
S6S SS 316

BOURDON
S6S SS 316
S6L SS 316L
S6T SS 316Ti
MN4 Monel

SOCKET
S6S SS 316
S6L SS 316L
S6T SS 316Ti
MN4 Monel

MOVEMENT
S4S SS 304
S6S SS 316

CONNECTION							
Conn	Code	Size	Code	Type	Code	Male/ Female	Code
Thread	T	1/4"	06	NPS	NS	Male	M
		3/8"	10	NPT	NT	Female	F
		1/2"	15	BSP	BP		
		3/4"	20	BSPT	BT		
		1"	25	JIS-PF	PF		
		M20	M20	JIS-PT	PT		
				Gas	GS		
				R	RR		
				Rp	RP		
				Pitch 1.5	C		

e.g. For 1/2"NPT(M), Code: **T15NTM**
 For M20x1.5 (F), Code: **TM20CF**

OPTION
1NR NAMUR Switch, single
2NR NAMUR Switch, double
FAB Flame Proof Case - IIA/IIB
F2C Flame Proof Case - IIC
FAT Flame Proof Case - IIC (ATEX)
BGS Built In Gauge Saver
BOB Blow out disc at back
BSN Built In Snubber
CLB Colour Band
CEM CE marking
DUS Dual Scale
NAC NACE
OXY O2 Cleaning
OR5 150% FSD Over range
VCP Vacuum Protection
CSU Chemical Seal
ACC Accessory
XXX Other (Specify)

UNIT
KSC kg/cm2(g)
BAR bar(g)
PSI psi(g)
KPA kPa(g)
MPA MPa(g)
MBR mbar(g)
MMW mm WC(g)
CMW cm WC(g)
MWC m WC(g)
INW inch WC(g)
MMH mm Hg(g)
CMH cm Hg(g)
INH inch Hg(g)
XXX Other (Please specify)

RANGE
 Please select from Table

Sample model Code: **IPSN-V-150-S4S-S6S-S6S-S4S-T15NTM-(0-10)-BAR-1NR**