# **Indicating Pressure Switches**

**MODEL**: **IPSH** (Dry Case)

LFIPSH (Liquid Filled Case)

### **Features**

- Combination of indication and switching
- Choice of electrical contacts and microswitch
- One or two contacts available
- Switch setting throughout the range externally
- High repeatability and low hysteresis
- Weatherproof or Flameproof housing
- Mil connector provided optionally.



#### **Specifications** Ranges

Dial	100mm / 150mm, aluminium, white background, black markings	Gauge	bar, kg/cm2	Least count	
Case	SS 304 / SS 316 with bayonet bezel (Weatherproof)	Compound	(-)1 to 3	0.10	
Protection	Die Cast Aluminium (Flameproof) Weatherproof to IP - 68 (IS:13947 part I / IEC:60529) Flameproof to IIA, IIB (equivalent to NEC Cl. 1, Div. 2, Gr. C & D)		(-) 1 to 5 (-)1 to 9 (-)1 to 15	0.10 0.20 0.50	
Window	Safety glass		(-)1 to 24	0.50	
Bourdon Socket	SS316, SS316 Ti, SS316L, Monel 22 mm Square in SS316, SS316L, SS316 Ti, Monel		(-)1 to 39	1.0	
Movement	Brass / SS304 / SS316	Pressure	0 to 4	0.10	
Connection	1/2" NPT (M) as standard (other optional)	Gauge	0 to 6	0.10	
Range	Upto 1600 kg /cm2 with minimum span of 4 kg/cm2	('C' shaped	0 to 10	0.20	
_	as shown in the Table	Bourdon)	0 to 16	0.50	
Accuracy	$\pm$ 1% FSD for indication $\pm$ 2% FSD for switching		0 to 25	0.50	
Over range	As per EN 837		0 to 40	1.0	
Blow out disc	Provided (Missonator Painter)		0 to 60	1.0	
Zero reset Temperature suitability	Provided (Micrometer Pointer) Ambient (-)20°C to 60°C, Media 100°C	Pressure	0 to 100	2.0	
Temperature Effect	Within $\pm 0.4\%$ FSD/10°C, when temperature changes from	Gauge	0 to 160	5.0	
	reference temperature of 20°C (as per EN-837 standard)	Coil type	0 to 250	5.0	
Contacts	1SPST, single, normally open, closing on rise in pressure or	Bourdon	0 to 400	10.0	
	vice versa, rated 30VA @ 230V AC		0 to 600	10.0	
	2 SPST, two contacts, independently adjustable, one normally		0 to 800	20.0	
	open, other normally closed or both normally open or both		0 to 1000	20.0	
	normally closed, rated 30VA @ 230V AC		0 to 1600	50.0	
	1SPDT, single microswitch, adjustable over entire range,	For range other than above please contact our design dept			

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#### **Benefits of Microswitch type** over Electrical Contact assembly

■ Microswitch is rated 5 amp @ 230 VAC (3A @ 28 VDC). Hence use of relay is not required

AC, separately mounted.

rated 5 amp @ 230V AC (3A @ 28 VDC)

2SPDT. double microswitch, independently adjustable over entire range, rated 5 amp @ 230V AC (3A @ 28 VDC)

Relay for the contact assembly to suit 5 amp @ 230V

- Microswitch offered as a combination of movement and switch is procured from Internationally reputed vendor.
- Microswitch assembly provides better switching accuracy and repeatability
- Compact design.

Optional

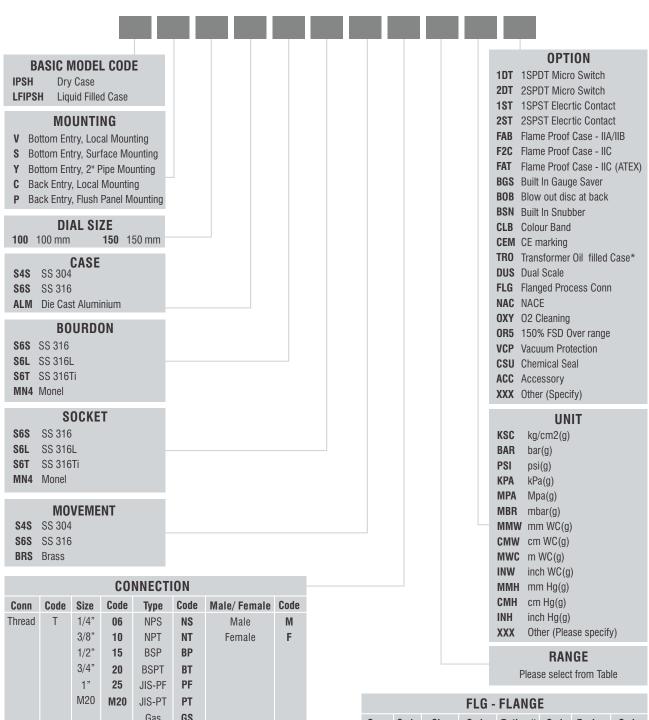
#### **Notes**

- 1) Electrical contact assembly is not offered in flameproof version.
- 2) Flameproof version available only in Die cast aluminium case.
- Flameproof version available with bottom entry surface mounting only
- Pressure switch can also be offered with chemical seal in weatherproof and flameproof cases.
- Surface mounted flameproof housing with chemical seal pressure gauge is available with capillary.
- 6) Blow out disc not applicable for flameproof case

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.)

# **Ordering Information**

#### **MODEL**



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

FLG - FLANGE							
Conn	Code	Size	Code	Rating#	Code	Facing	Code
Flange	F	1/2"	15	150	Α	RF	RF
		3/4"	20	300	В	FF	FF
		1"	25	600	C	RTJ	RJ
		1-1/2"	40	900	D	LT	LT
		2"	50	1500	E	LG	LG
		3"	80	2500	F		

e.g. For 40 NB 300# RF flange, Model Code: F40BRF

\*Case filling in Weatherproof SS Case only

# **Indicating Pressure Switches**

**Inductive / Proximity / NAMUR Contacts** 

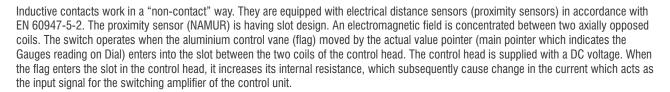
### **MODEL: IPSN**

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**



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

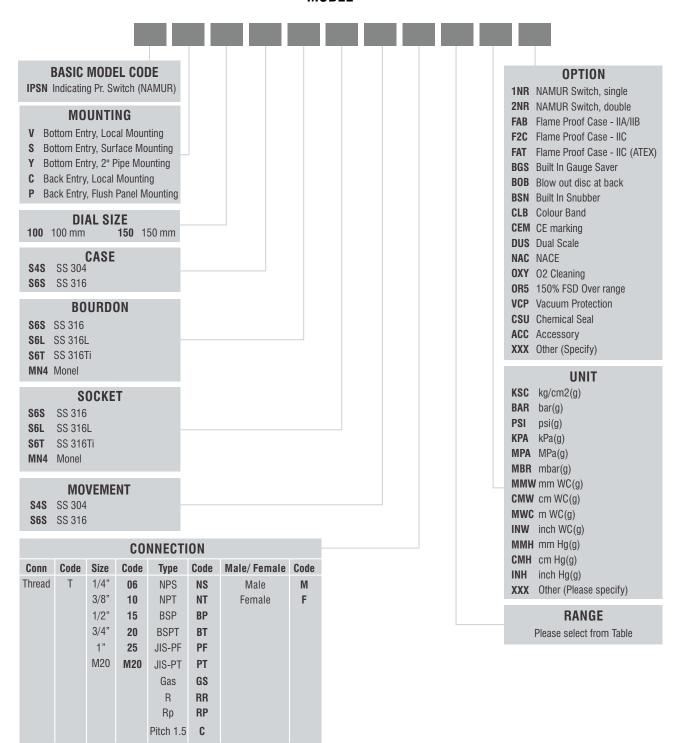
Ref Standards	EN-837 / EN 60947-5-2 (NAMUR)	Gauge	bar, kg/cm2	Least count
Dial	100 mm/150 mm, Aluminium, white background, black markings	Compound	(-)1 to 1.5	0.05
Case	SS304 / SS316 with bayonet bezel (Weatherproof)	·	(-)1 to 3	0.10
Protection	Weatherproof to IP-68 as per IS / IEC:60529		(-) 1 to 5	0.10
	Flameproof to Gas Groups IIA/ IIB & IIC as per IEC:60079-1		(-)1 to 9	0.20
	Exd IIC T6, Atex Certified & Weather proof to IP-66 as per IS/ IEC: 60529		(-)1 to 15	0.50
<b>Electrical Connection</b>	Weatherproof / Flame proof Junction Box in Die Cast Aluminium		(-)1 to 24	0.50
Window	Safety glass with adjusting Knob		(-)1 to 39	1.0
Bourdon	SS316, SS316 Ti, SS316L, Monel	Pressure	0 to 1	0.02
Socket	22 mm Square in SS316, SS316L, SS316 Ti, Monel	Gauge	0 to 1.6	0.05
Movement	SS304 / Ss316	('C' shaped	0 to 2.5	0.05
Connection	1/2" NPT (M) as standard (other optional)	Bourdon)	0 to 4	0.10
Range	Refer Table	200.00,	0 to 6	0.10
Accuracy	±1% FSD for indication & switching		0 to 10	0.20
Over range	As per EN 837		0 to 16	0.50
Blow out disc	Provided		0 to 25	0.50
Zero reset	Provided (Micrometer Pointer)		0 to 40	1.0
Temperature suitability Temperature Effect	Ambient (-)20°C to 60°C, Media 100°C Within ±0.4% FSD/10°C, when temperature changes from		0 to 60	1.0
iemperature enect	reference temperature of 20°C (as per EN-837 standard)		0 to 100	2.0
Contact	Inductive Contacts, Single or Double, adjustable between 10%		0 to 160	5.0
oomaat	& 90% of the Range	Gauge	0 to 250	5.0
	Nominal Voltage, 8.32 V DC	Coil type	0 to 400	10.0
	Operating Voltage, 5 to 25 V DC	Bourdon	0 to 400	10.0
		Dourdon	0 to 800	20.0
The parameters martished	here are the standard enceifications / values generally used for most of		0 to 1000	20.0
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For range other than above please contact our design dept.

# **Ordering Information**

#### **MODEL**



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