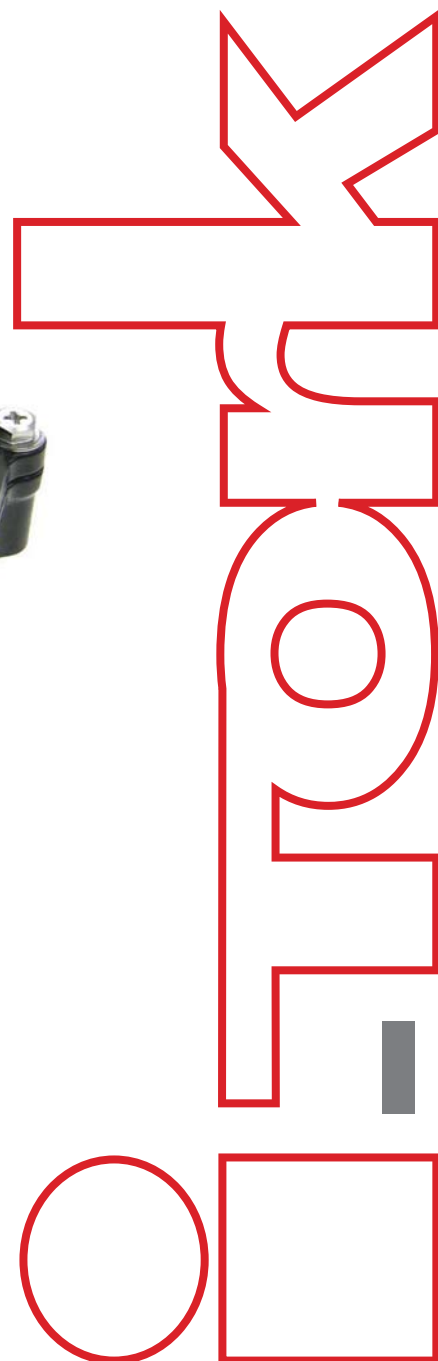


# ITS Series Position Monitoring Switch



*First in Automation...*





ITS series position monitoring switch boxes are primarily a rotary position indication device designed to integrate valve and NAMUR rotary pneumatic actuator with a variety of mounting options, internal switches or sensors and configurations.

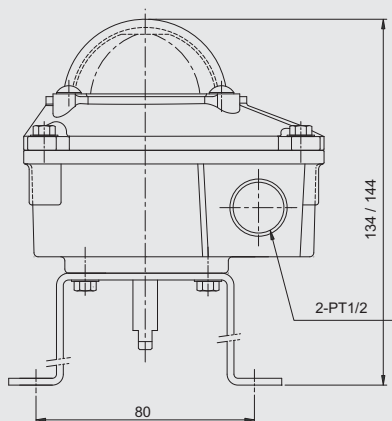
### ITS 100 series

ITS 100 series are specially designed suitable for small size pneumatic actuator and valves to reduce installation space, but provides high performance by equipping a variety of switches and sensors.

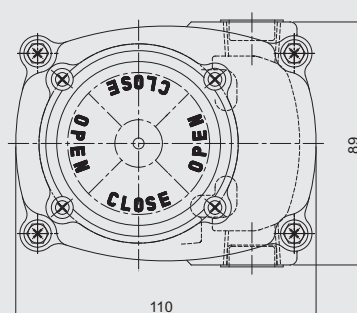
SPECIFICATION	Standard	Option
<b>Enclosure</b>	Weather proof IP67, O-ring sealed	
<b>Outside coating</b>	Epoxy-Polyester inside and outside against corrosion	Nylon Coating Special color Coating
<b>Ambient temperature</b>	-20°C~+80°C	
<b>Cable entries</b>	2 - PT1/2, other standard threads	(NPT1/2, PF1/2, M20x1.5 and PG13.5)
<b>Terminal block</b>	8 nos of terminal strips (6 for switches, 2 for solenoid valve power)	
<b>Position indicator</b>	Dome type 0°~90°	Others(3 way L-port, T-port)
<b>Mounting bracket</b>	Stainless steel acc. to VDI/VDE3845, NAMUR, SS1, SS2 as standard	SS3, MT1 as option
<b>Switches(Sensors)</b>	2-SPDT mechanical switch(Form C) as standard	Proximity sensors(P & F, Autonics), Others

## DIMENSION

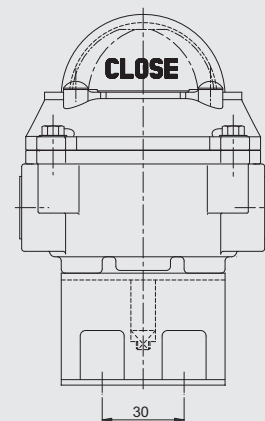
### ITS 100 series



Front view



Top view



Side view

# Explosion Proof position monitoring switches



Rigid and compact design constructed from aluminum alloy die-casting capable of operating even in arduous conditions

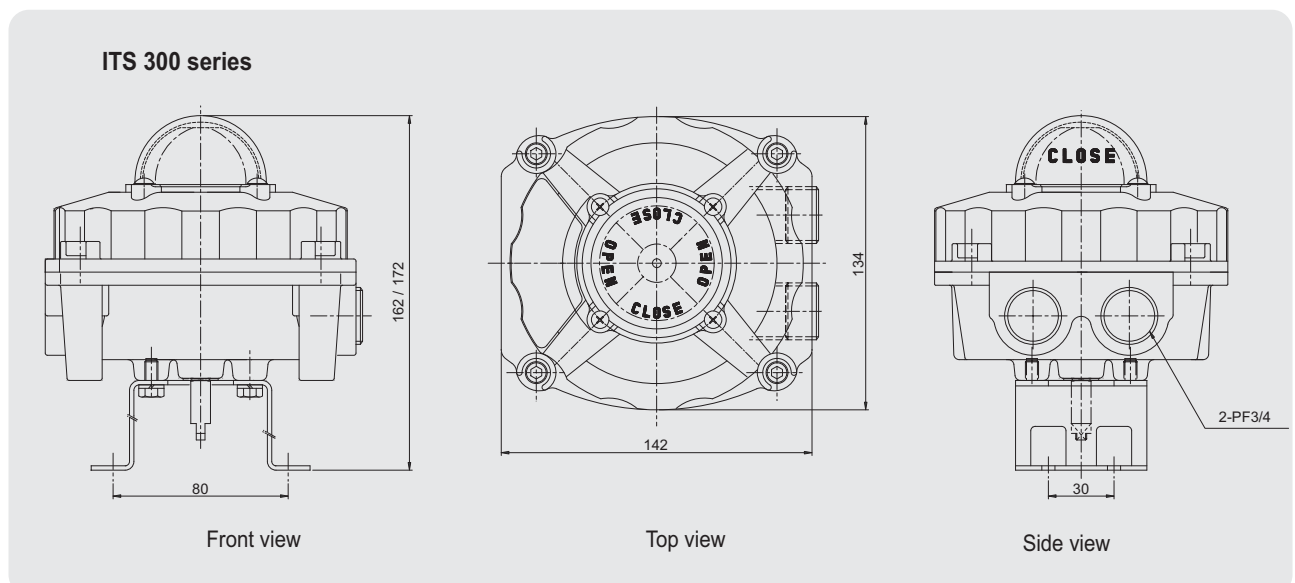
## ITS 300 series

ITS 300 series are designed suitable for valve and actuators in hazardous area application, having compact but robust construction conforms to IEC60079-0:2007, IEC60079-1:2007, EN60079-0:2006 and EN60079-1:2007, also suitable in Zone 1 and 2, and ingress protection IP67 Standard aluminum housing provides reliable explosion proof performance.



SPECIFICATION	Standard	Option
<b>Enclosure</b>	Explosion proof Ex d IIC T6 Gb, IP67, O-ring sealed	IP 68
<b>Outside coating</b>	Epoxy-Polyester outside against corrosion	Nylon Coating Special color Coating
<b>Ambient temperature</b>	-20°C~+80°C (Explosion proof type: -20°C~+60°C)	Higher(~100°C) and lower (-40°C~) temperature
<b>Cable entries</b>	2 - PF3/4, other standard threads	(NPT3/4, M20x1.5, M25x1.5)
<b>Terminal block</b>	8 nos of terminal strips (6 for switches, 2 for solenoid valve power)	
<b>Position indicator</b>	Dome type 0°~90°	Others(3 way L-port, T-port)
<b>Mounting bracket</b>	Stainless steel acc. to VDI/VDE3845 NAMUR, SS1, SS2 as standard	SS3, MT1 as option
<b>Switches(Sensors)</b>	2-SPDT mechanical switch(Form C)	DPDT Switches Proximity sensors(P & F, Autonics) Magnetic sensors Position transmitter (output 0~1Kohm, 4-20mA DC)

## DIMENSION



## Special Material position monitoring switches



Dome position indicator constructed from high impact resistance poly-carbonate material which offers instant visual recognition of valve or actuator position up to 50 meters distance.

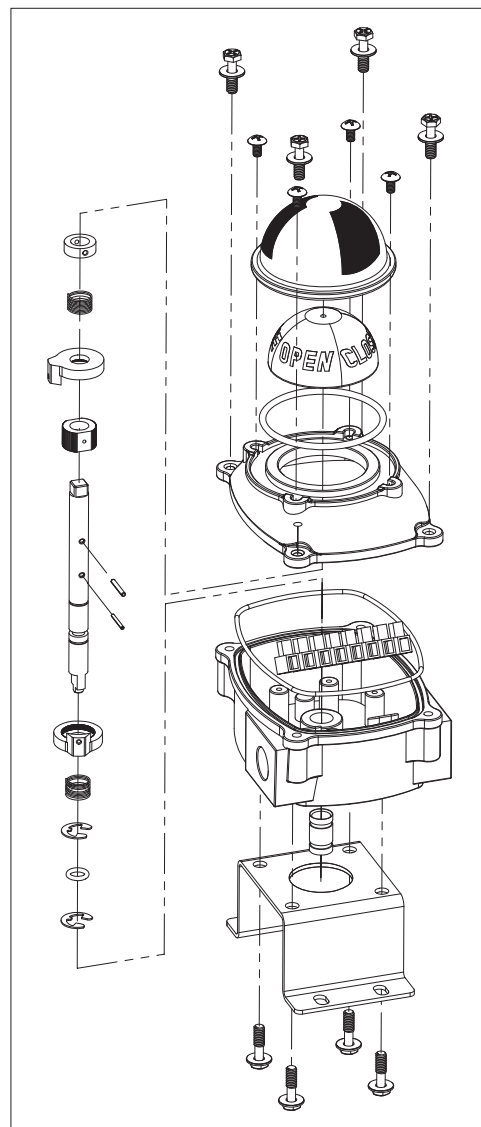


### ITS 500 series

Special stainless steel housing(316L or Duplex) provide very high protection performance against extremely corrosive environmental condition. Suitable for off-shore application. Other specification is same with ITS 300 series except for enclosure & coating.

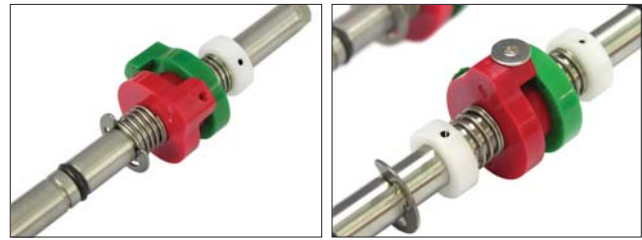
### CONSTRUCTION MATERIAL

<b>Housing</b>	Low copper aluminum die-casting
<b>Coating</b>	Epoxy-Polyester inside/outside(100 series) Chromated /Epoxy-Polyester(300 series) No painting on stainless steel housing
<b>Sealing</b>	NBR O-rings on each interface (Dome indicator, Lower/Upper housing, Shaft)
<b>Cams</b>	Poly-carbonate
<b>Bushings</b>	Bronze
<b>Shaft</b>	AISI303 Stainless steel
<b>Earth Lug</b>	Stainless steel
<b>Bolts</b>	All in stainless steel
<b>Mounting bracket</b>	Plate steel(ST series) Stainless steel(SS series and MT1)



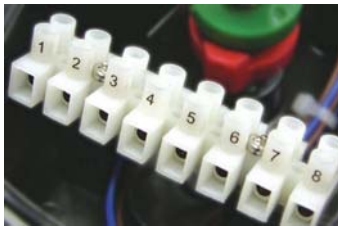
**Easy set cam**

Easy and precise cam set without setting tool  
Red cam for close, Green cam for open



Standard Cam

Cam with Sensing Target



**Terminal block and strips**

Socket type terminal strip with screws  
Max. 2.5mm<sup>2</sup>, 26A at 30°C(approved by UL, CSA)

**Visual position indicator**

Directly engaged with driving shaft to provide continuous position  
High strength, Chemical resistance and transparent poly-carbonate  
High visibility and reliability  
Red for close, Yellow for open (Red for close, Green for open as option)



Standard



L-port

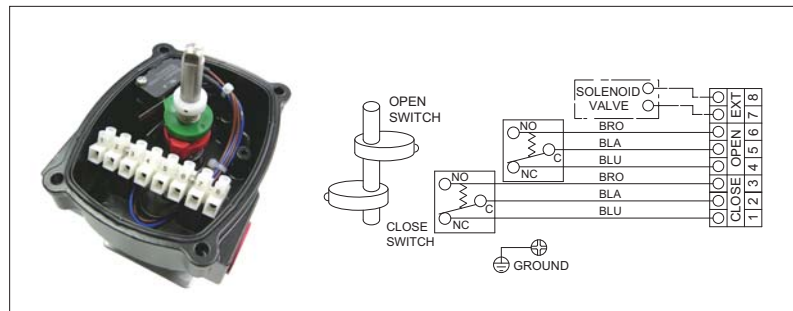


T-port

**Mechanical switches**

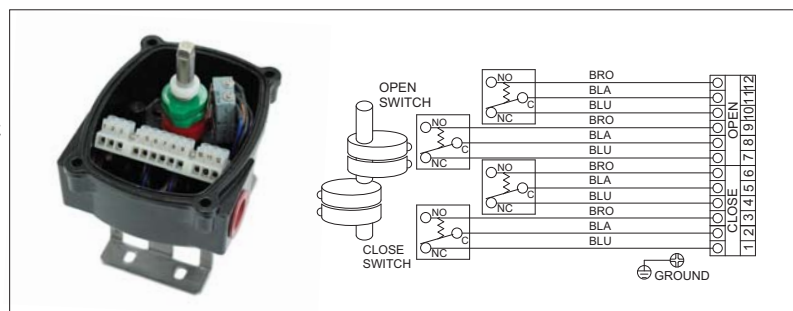
**2-SPDT switches**

Rating : 16A 1/2HP 125/250V AC,  
0.6A 125V DC  
0.3A 250V DC  
approved by UL, CSA



**4-SPDT switches**

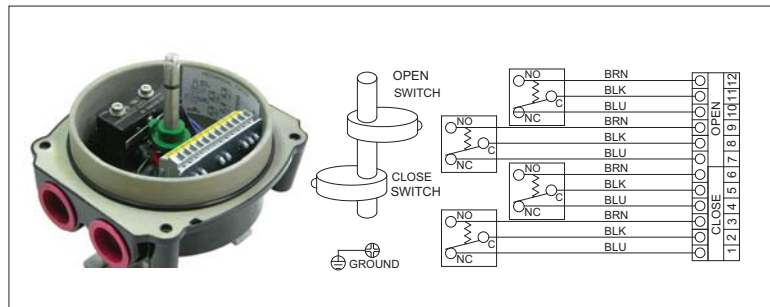
Rating : 5A 125 V AC LT130  
0.6A 125V DC to 16A 250V AC  
approved by UL, CSA





## Mechanical DPDT switches

Rating : 10A 125 or 250V AC  
 2A 480V AC  
 1/8HP 125V AC  
 0.25HP 250V AC  
 0.5A 125V DC  
 0.25A 250V DC  
 approved by UL, CSA

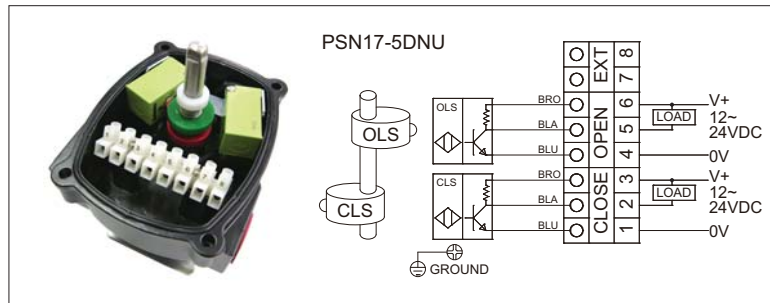


## Proximity Sensors

### Autonics sensors

**PSN17-5DNU**  
**PSN17-5DPU**

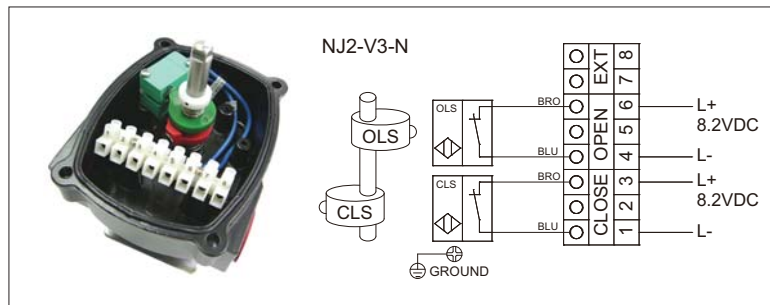
Voltage rating : 10~30V DC  
 Sensing distance : 5mm  
 Ambient temperature : -25°C ~+70°C



### P & F sensors

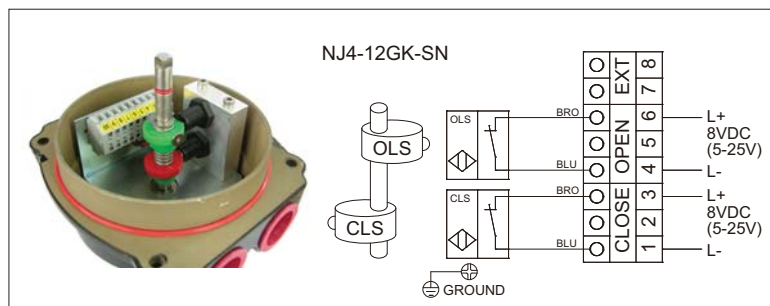
**NJ2-V3-N(Intrinsic safe, two wire)**

Voltage rating : 8V DC  
 Sensing distance : 2mm  
 Ambient temperature : -25°C ~+100°C



**NJ4-12GK-SN**

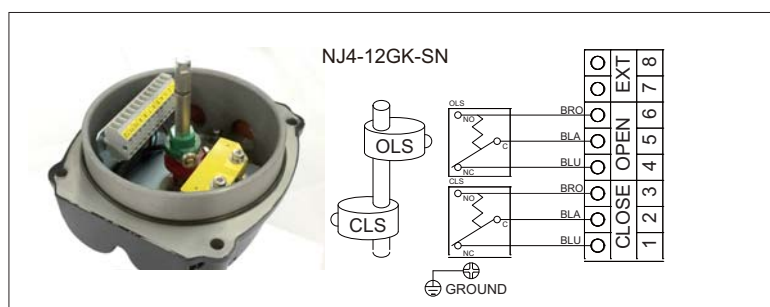
Voltage rating : 8V DC  
 Sensing distance : 4mm  
 Ambient temperature : -50°C ~+100°C



### Monas I-sensors

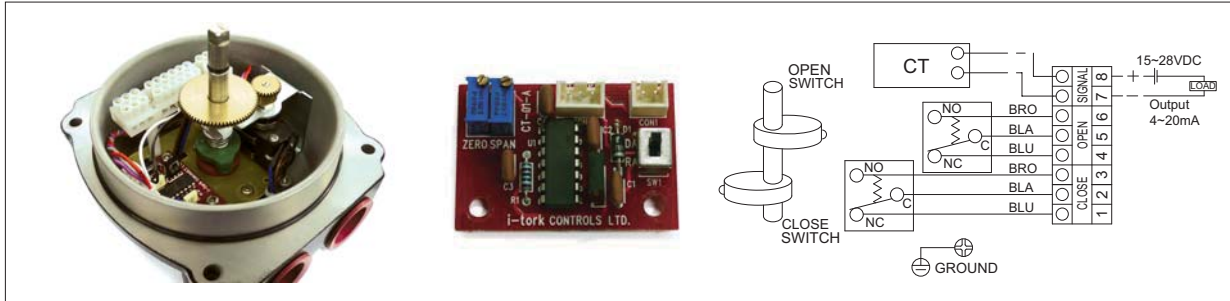
**SPDT. Form C (Normally Open)**

Contacts : Tungsten  
 Sensing distance : 2mm  
 Rating : 3 amps/24 V AC  
 2 amps/24 V DC  
 0.5 amps/240 V AC



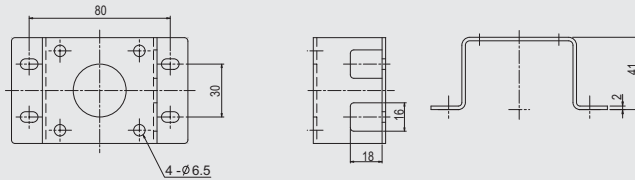
## Position transmitter

Providing 4-20mA DC(or 0~1Kohm) output signal as feedback, 15~28VDC loop power(24V DC input power)  
 Load impedance : 0~600 Ohm, Max output : 35mA DC  
 Adjustment : Zero and span

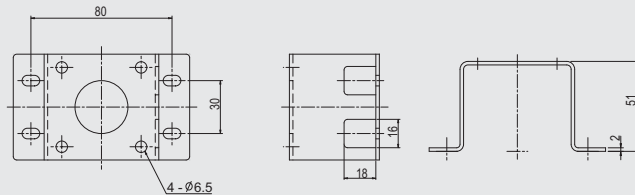


## Mounting bracket(Acc. to VDI/VDE3845)

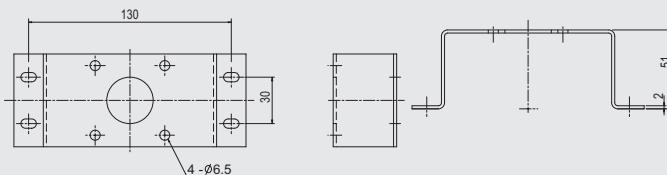
SS1



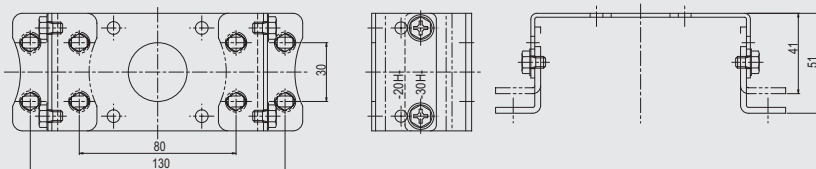
SS2



SS3



MT1



Standard bracket provided together with switch box(included)

SS1 30 x 80 x 20(H)

SS2 30 x 80 x 30(H)

Optional bracket provided with extra cost

SS3 30 x 130 x 30(H)

MT1 30 x 80 x 20(H), 30 x 80 x 30(H)

30 x 130 x 20(H), 30 x 130 x 30(H)

Others as option

**Model number Legend**

ITS	1	0	0
	1: Weather proof	0: Mechanical switches	0 : 2 - SPDT
	3: Explosion proof		1 : 3 - SPDT
	5: Special material housing (316L, Duplex)		2 : 4 - SPDT
			3 : 2 - SPST
		1 : Proximity sensors	4 : 2 - DPDT
			5 : 2 - SPDT + output(0~1Kohm)
			6 : 2 - SPDT + output(4-20mA)
			0 : Autonics (PSN17-5DNU-NPN etc)
			1 : P & F (NJ2-V3-N)
			M: Monas I-sensor
			S: Other type sensors

- Model numbers in Green are applicable to ITS100, 300 and 500 series
- Model numbers in Red are applicable to ITS300 and 500 series



Website : <http://www.i-tork.com>

Technical details are subject to change without prior notification, without our responsibility.