Compact Pressure Switch Series ZSE1 (For vacuum) ISE1 (For positive pressure)



Can be integrated with ZM vacuum system.

Quick response

10mS

High accuracy

± 3% F.S. (Full Span)

Adjustable hysteresis

1 to 10% of set pressure

Easy and simple wiring

Connector style

Compact Pressure Switch ZSE1/ISE1

How to Order



ZSE1/ISE1 Specifications

Model		ZSE1	ISE1L	ISE1			
Operating pressure range		-101kPa to 0	0 to 100kPa	0 to 1MPa			
Max. pressure		200	1MPa				
Temperature characteristics		± 3% F.S.					
Power supply		12 to 24V DC (Ripple ±10% or less)					
Current consumption		17mA or less at 24V DC 2 output: 25mA or less at 24V DC					
Port size		01: R(PT)1/8, M5 X 0.8 T1: NPTF1/8, M5 X 0.8 00: ZM ejector mounted style					
Operating temperature range		0 to 60°C (No condensation)					
Lead wire	Grommet	Grommet oil resistant vinyl cabtire code -14, -15, -55: ø3.4, 0.2 mm ² - 16, -17, -18, -19: ø3.5, 0.14 mm					
	Plug connector	Heat resistant electrical wire ø1.55, 0.31 mm ²					

*There is no influence on switch even if 0.5MPa of vacuum pressure is supplied instantly to the switch in vacuum use.

Output Specifications

Model	-14	-15	-16	-17	-18	–19	-55
Output method	NPN Open Collector 30V, 80mA						
Hysteresis	1 to 10% of set press. (Variable)		3% F.S. or less (Fixed)		1 to 10% of set prss. (Variable)		1-10% of set press.
Analog output	None 1				1 te	5 5 V	None
Number of outputs	1		2		1		
Indicator light	ON: when output is ON (Red)		ON: when output is ON(OUT1: Red, OUT2: Green)		ON: when output is C		DN (Red)
Trimmer adjustment	3 revolutions	200	3 revolutions	200	3 revolutions	20	00



How to Set Pressure

•Rotate SET potentiometer (trimmer) clockwise to increase (high vacuum pressure) the ON point. Do not apply excessive force when adjusting the trimmer with a screwdriver.

^I_ZSE1-□□-14, -15, -18, -19

Switches with variable hysteresis can be adjusted by means of the HYS potentiometer in the range 1 to 10% of the ON set point.
Adjust ON setting, adjust hysteresis, and then re-adjust ON setting for best results.



^IzSE1-□□-16, -17

•For swich type "-16" or "-17", rotating SET1 will adjust ON setting for OUT1 (Black lead wire, Red LED) and SET2 will adjust ON setting for OUT2 (White lead wire, Green LED).



•Set the possible min. pressure for adsorption in case of the use for adsorption confirmation. If setting the pressure lower than that, switch becomes ON in case that adsorption is not completely done. If setting the pressure higher than that, switch does not become ON though absorbing workpieces in good matter.



Observe the following precautions for setting the vacuum pressure: Use your fingertips to gently turn the screwdriver. Do not use a screwdriver with a large grip or with a tip that does not fit into the trimmer groove.

How to Use Connector

q**Connection**

•When assembling the connector to the switch housing, push the connector straight onto the pins until the lever locks into the housing slot.

•When removing the connector from the switch housing, push the lever down to unlock it from the slot and then withdraw the connector straight off of the pin.



wPress bonding socket to lead wire.

Strip the end of the lead wire 3.2 to 3.7mm long. Put wire into socket taking care to prevent the lead wire insulation from entering the core wire pressure bonding area.

Press bond using press-bonding tool (Part No. DXTI70-75-1.)

Core wire Press-bonding area Socket



eAssembly of socket to connector. •Assembling

Push socket into hole in connector until the hook of the socket locks into the connector. (The socket hook will spring open inside the connector) Gently pull lead wire back to confirm that socket is locked in position. •Disassembling

When disassembling socket from connector, push the hook of the socket down with a small dia. instrument. Pull socket out by means of the lead wire. If the socket is to be re-used, bend hook of the socket out to its original position before re-assembling.



Hysteresis

Hysteresis is the pressure difference between the ON and the OFF pressure of the output signal. The set pressure is the pressure selected to switch from OFF to ON condition.



Internal Circuit and Wiring



Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalogue, and refer to p.3.0-7 to 3.0-9 for precautions on every series.



Dimensions



PS□

ZSE□ ISE□

PS

ISA

IS□

ZSM

PF

IF□