

# High Precision, 2-colour Display Digital Pressure Switch



## Series **ZSE30/ISE30**

### Features

- Integrated air pressure or vacuum sensor.
- Clear dual colour LED display.
- Digital PNP or NPN output or analogue 1-5 volt or 4-20mA.
- Can be panel mounted.
- Choice of mounting brackets also available.
- Removable connection cable for easy installation.
- Threaded or one-touch fitting pressure connections.
- Hysteresis or window comparator output modes.
- Auto preset, NO/NC switching and display zero functions.
- Front panel keys can be locked.
- Can display metric or imperial units.



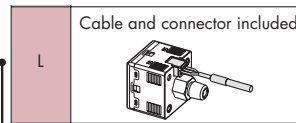
### How to Order

For positive pressure

ISE30 - 01 - 25 - L

For vacuum/low pressure

ZSE30 - 01 - 25 - L



#### Piping specifications

01	R 1/8 (With M5 female thread)	
C4H	ø4 One-touch fitting	Straight type 
C6H	ø6 One-touch fitting	
C4L	ø4 One-touch fitting	Elbow type 
C6L	ø6 One-touch fitting	

#### Output specifications

25	NPN output
65	PNP output
26	1 to 5 V output
28	4 to 20 mA output

#### Accessories

ZS-27-B	Bracket 
ZS-27-C	Panel mount 
ZS-27-D	Panel mount adapter + Front protective cover 
ZS-27-A	Spare lead wire 



### Specifications

	ZSE30 (Vacuum/Low pressure)	ISE30 (Positive pressure)															
Rated pressure range	-100.0 to 100.0 kPa	0.000 to 1.000 MPa															
Regulating pressure range	-101.0 to 101.0 kPa	-0.100 to 1.000 MPa															
Proof pressure	500 kPa	1.5 MPa															
Min. regulating unit	0.2 kPa	0.001 MPa															
Fluid	Air, Inert gas, Non-flammable gas																
Power supply voltage	12 to 24 VDC, Ripple (p-p) 10% or less (With power supply polarity protection)																
Current consumption	45 mA or less (at no load)																
Switch output <sup>Note 1)</sup>	NPN or PNP open collector output: 1 output																
<table border="1"> <tr> <td>Max. load current</td> <td colspan="2">80 mA</td> </tr> <tr> <td>Max. applied voltage</td> <td colspan="2">30 V (With NPN output)</td> </tr> <tr> <td>Residual voltage</td> <td colspan="2">1 V or less (With load current of 80 mA)</td> </tr> <tr> <td>Response time</td> <td colspan="2">2.5 ms or less (Response time selections with anti-chattering function: 20, 160, 640, 1280 ms)</td> </tr> <tr> <td>Short circuit protection</td> <td colspan="2">Yes</td> </tr> </table>	Max. load current	80 mA		Max. applied voltage	30 V (With NPN output)		Residual voltage	1 V or less (With load current of 80 mA)		Response time	2.5 ms or less (Response time selections with anti-chattering function: 20, 160, 640, 1280 ms)		Short circuit protection	Yes			
	Max. load current	80 mA															
	Max. applied voltage	30 V (With NPN output)															
	Residual voltage	1 V or less (With load current of 80 mA)															
	Response time	2.5 ms or less (Response time selections with anti-chattering function: 20, 160, 640, 1280 ms)															
Short circuit protection	Yes																
Repeatability	±0.2% F.S. ±2 digit or less	±0.2% F.S. ±1 digit or less															
Analog output	Voltage output <sup>Note 2)</sup>	Output voltage: 1 to 5 V ±2.5% F.S. or less (With rated pressure range) Linearity: ±1% F.S. or less, Output impedance: Approx. 1 kΩ															
	Current output <sup>Note 3)</sup>	Output current: 4 to 20 mA ±2.5% F.S. or less (With rated pressure range) Linearity: ±1% F.S. or less Maximum load impedance: 300 Ω with power supply voltage of 12 V; 600 Ω with power supply voltage of 24 V Minimum load impedance: 50 Ω															
Hysteresis	Hysteresis mode	Adjustable (can be set from 0)															
	Window comparator mode																
Display	3 1/2 digit, 7-segment indicator, 2-color display (Red and green) Sampling cycle: 5 times/s																
Display accuracy	±2% F.S. ±2 digit (at 25°C ambient temperature)	±2% F.S. ±1 digit (at 25°C ambient temperature)															
Indicator light	Light up when output is ON (Green)																
Temperature characteristics	±2% F.S. or less (based on 25°C)																
Environmental resistance	Enclosure	IP40															
	Operating temperature range	Operating: 0 to 50°C, Stored: -10 to 60°C (No freezing or condensation)															
	Operating humidity range	Operating and stored: 35 to 85% RH (No condensation)															
	Withstand voltage	1000 VAC for 1 min. between live parts and enclosure															
	Insulation resistance	50 MΩ or more between live parts and enclosure (at 500 VDC)															
	Vibration resistance	10 to 150 Hz, 1.5 mm or 20 m/s <sup>2</sup> amplitude in X, Y, Z directions for 2 hours each															
Impact resistance	100 m/s <sup>2</sup> in X, Y, Z directions 3 times each																
Standard	Compliant with CE Marking and UL (CSA) standards																

Note 1) When switch output is selected, analogue output is not available.

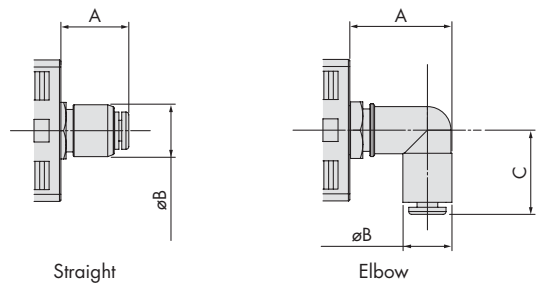
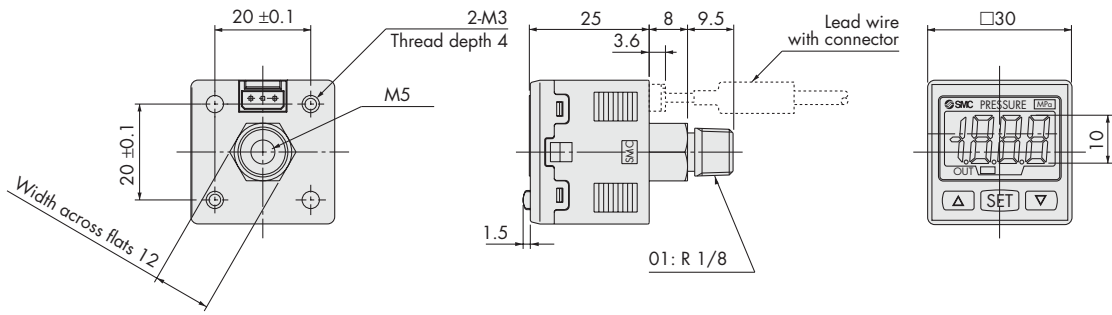
Note 2) When voltage output is selected, a simultaneous selection of switch output and current output is not available.

Note 3) When current output is selected, a simultaneous selection of switch output and voltage output is not available.

### Piping Specifications

Part	O1	C4H	C6H	C4L	C6L
Port size	R 1/8 M5	—	—	—	—
	One-touch fitting Straight type	—	∅4 mm	∅6 mm	—
	One-touch fitting Elbow type	—	—	—	∅4 mm ∅6 mm
Wetted part material	Sensor pressure receiving area: Silicon, Piping port: C3602 (Electroless nickel plated), O-ring: HNBR				
Weight	With lead wire with connector (2 m)	81 g	O-ring: NBR		O-ring: NBR, fitting: PBT
	Without lead wire with connector	43 g	76 g	78 g	40 g

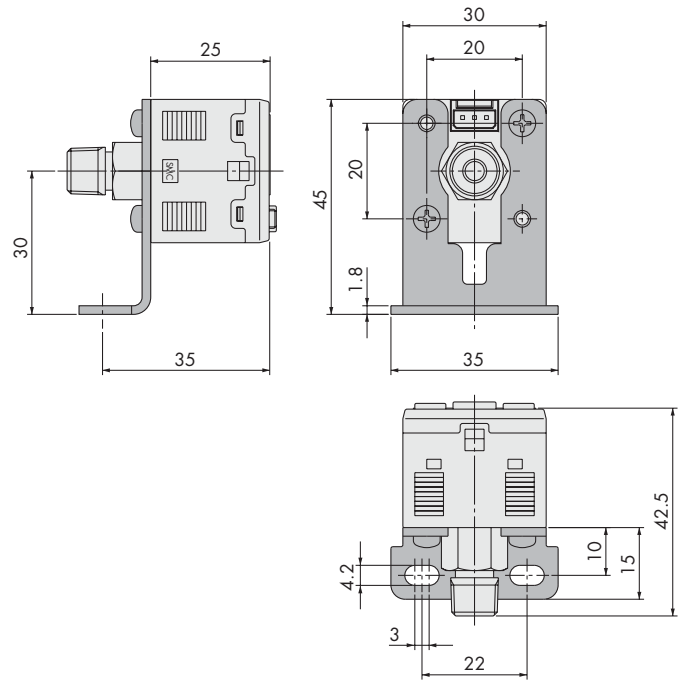
**Dimensions**



One-touch fitting size	Straight		Elbow		
	A	B	A	B	C
ø4			20	10.4	18
ø6	14.4	11.2	22.4	12.8	20

With One-touch fitting

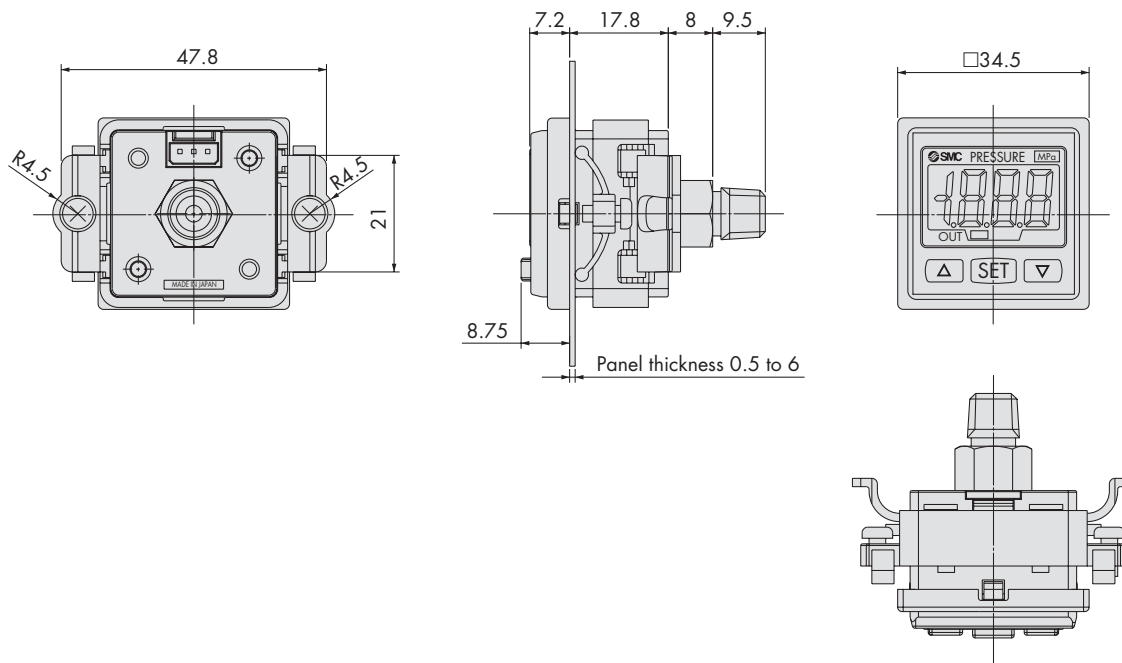
With bracket



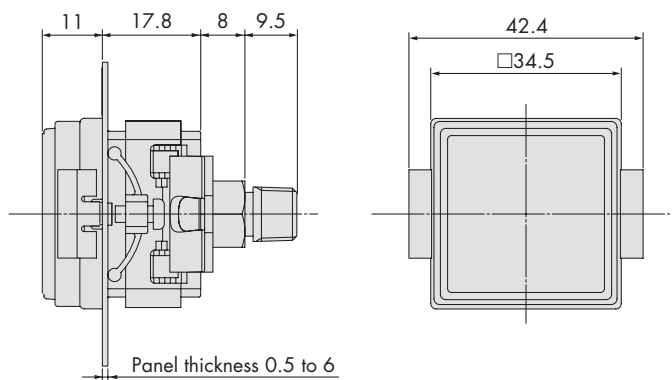
Sensors, Switches

Dimensions

Panel mount



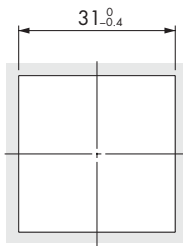
Panel mount adapter + Front protective cover



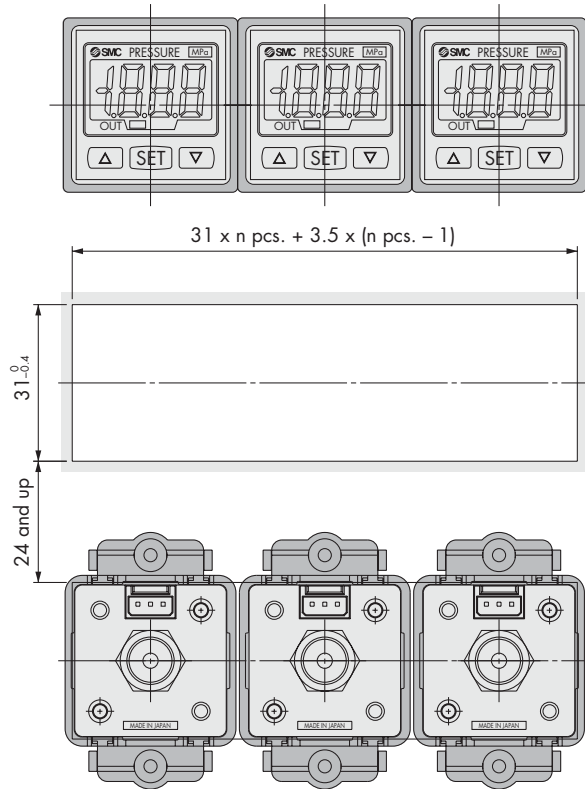
Dimensions

Panel fitting dimension

1-pc. mounting



Multiple (2 pcs. or more) horizontal mounting



Multiple (2 pcs. or more) vertical mounting

