

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.



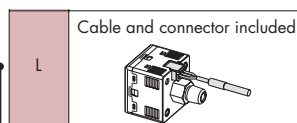
How to Order

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 ^{Note 1)}		NPN or PNP open collector output: 1 output	
	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 ^{Note 2)}	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 ^{Note 3)}	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 ² amplitude in X, Y, Z directions for 2 hours each	
	Impact resistance	100 m/s ² 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.

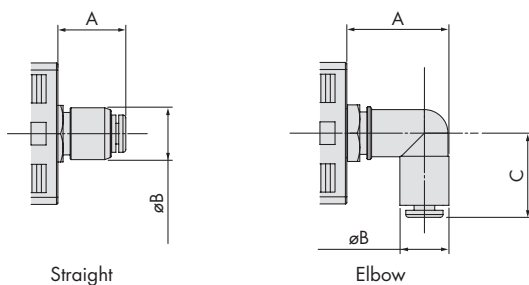
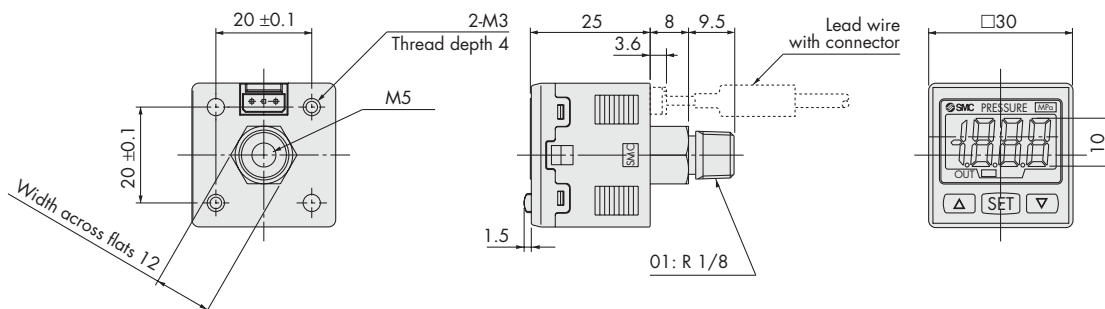
Note 2) When voltage output is selected, a simultaneous selection of switch output and current output is not available.

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

Piping Specifications

Part	01	C4H	C6H	C4L	C6L
Port size	R 1/8 M5	—	—	—	—
One-touch fitting	Straight type	—	—	—	—
	Elbow type	—	—	—	—
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	76 g	78 g	—
	Without lead wire with connector	43 g	38 g	40 g	—

Dimensions

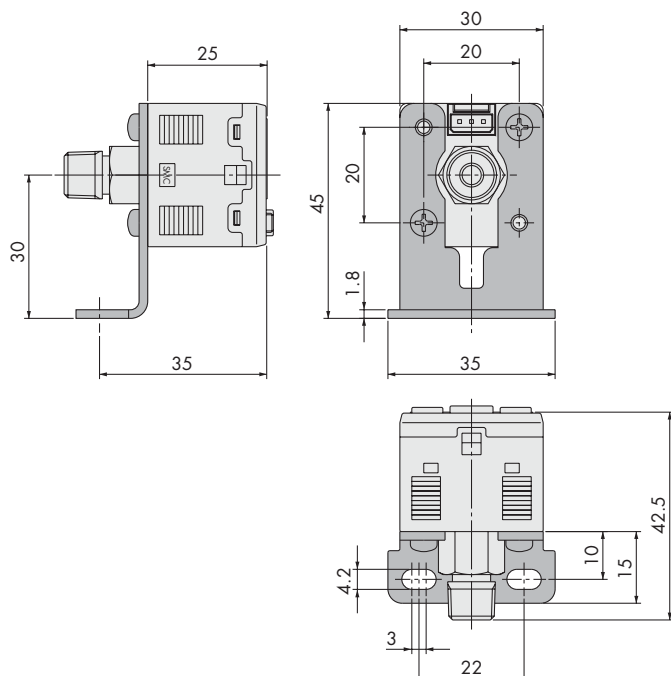


With One-touch fitting

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

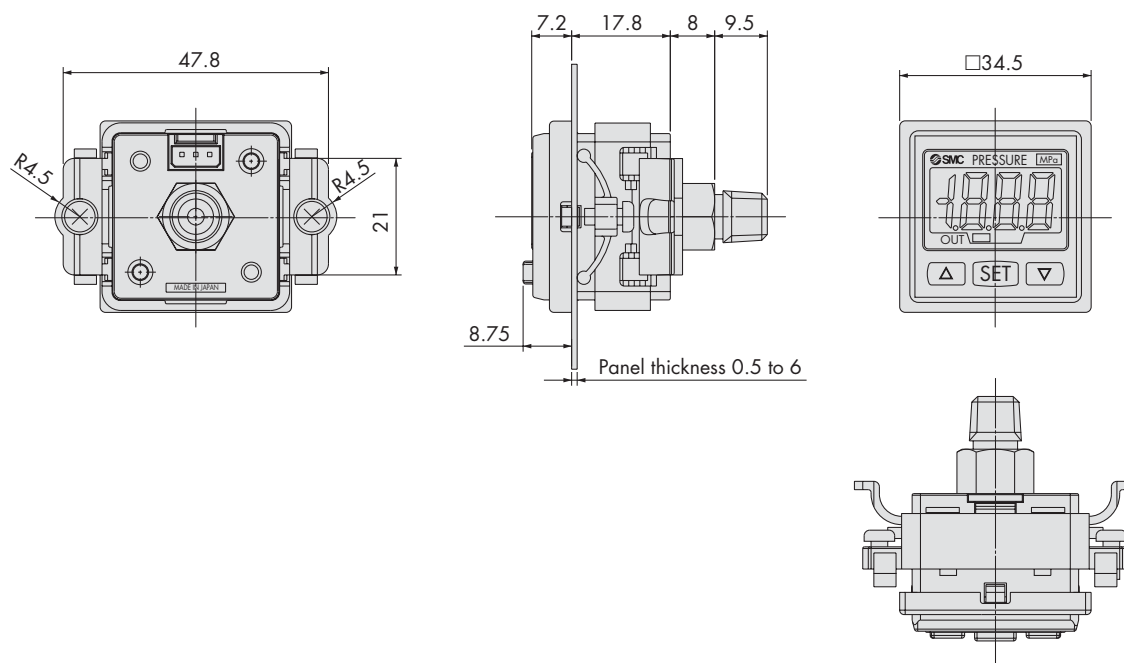
(mm)

With bracket

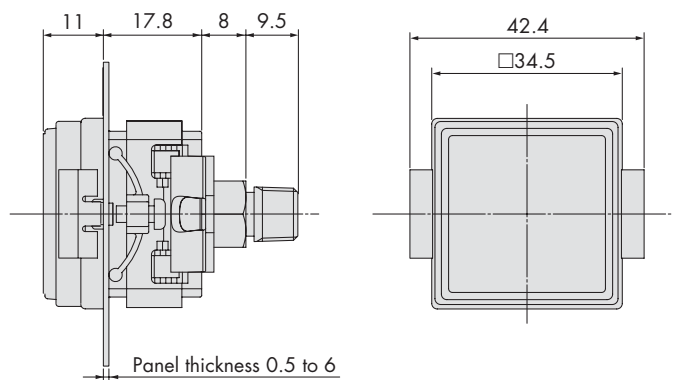


Dimensions

Panel mount



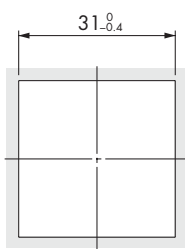
Panel mount adapter + Front protective cover



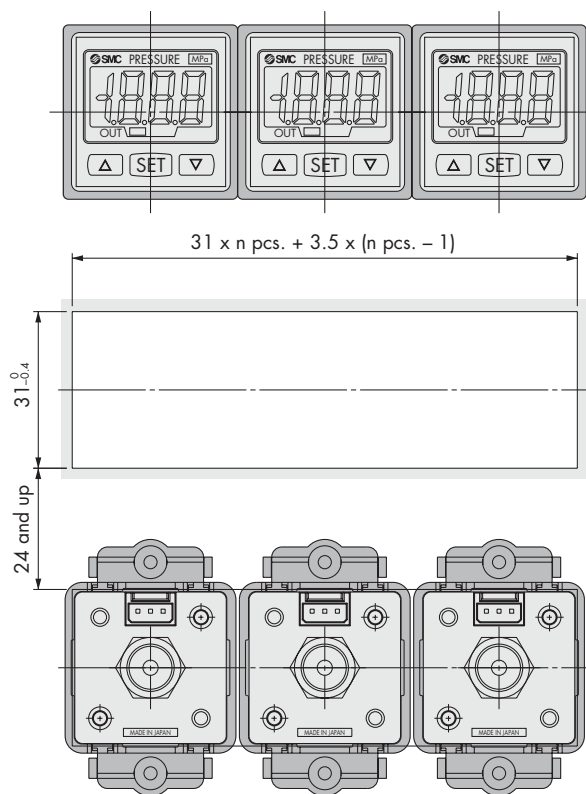
Dimensions

Panel fitting dimension

1-pc. mounting



Multiple (2 pcs. or more) horizontal mounting



Multiple (2 pcs. or more) vertical mounting

