

High Precision Digital Pressure Switch

Series **ZSE40/ISE40**

Features

- ➔ Integrated air pressure or vacuum sensor, IP65 construction for damp/dirty areas.
- ➔ Dedicated model for compound pressure (vacuum to low positive pressure).
- ➔ Two independently programmable outputs, hysteresis or window comparator operation.
- ➔ Can be panel or wall mounted plus choice of mounting brackets available.
- ➔ Digital or digital + analogue outputs.
- ➔ Autoshift input for remote recalibration, auto preset, NO/NC switching and display zero functions.
- ➔ Fast response times, adjustable down to 2.5mS.
- ➔ Threaded or one-touch fitting pressure connections.
- ➔ Can display metric or imperial units.



How to Order

For positive pressure

ISE40 — 01 — 22 L

For vacuum/compound pressure

ZSE40 — 01 — 22 L

Set pressure range

Nil	10.0 to -101.3 kPa	For vacuum pressure
F	-100.0 to 100.0 kPa	For compound pressure

Piping specifications

<p>01: R 1/8 (With M5 female threads)</p> <p>Reverse pressure two directions</p> <p>* C4: With ø4 One-touch fitting * C6: With ø6 One-touch fitting</p> <p>Wall mount</p>	<p>W1: 1/8</p> <p>* M5: M5 (Female threads)</p> <p>Wall mount</p>
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* Option

Lead wire length

L	3 m
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Accessories

Nil	None
ZS-24-A	Bracket A
ZS-24-B	Bracket B
ZS-22-A	Panel mount
ZS-24-C	Panel mount + Front protective cover

Input/Output specifications

22	NPN open collector 2 outputs + analog output
30 *	NPN open collector 2 outputs + auto shift input
62 *	PNP open collector 2 outputs + analog output
70 *	PNP open collector 2 outputs + auto shift input

* Option

Note

When equipped with auto shift function, the following ranges can be set.

Set pressure range	Setting range
-100.0 to 100.0 kPa	-100.0 to 100.0 kPa
10.0 to -101.3 kPa	-101.3 to 101.3 kPa
-0.1 to 1.000 MPa	-1.000 to 1.000 MPa

Specifications

		ZSE40F (Compound pressure)	ZSE40 (Vacuum pressure)	ISE40 (Positive pressure)
Rated pressure range		−100.0 to 100.0 kPa	0.0 to −101.3 kPa	0.000 to 1.000 MPa
Operating pressure range/Set pressure range		−100.0 to 100.0 kPa	10.0 to −101.3 kPa	−0.100 to 1.000 MPa
Withstand pressure		500 kPa		1.5 MPa
Set pressure resolution	kPa	0.1		—
	MPa	—		0.001
	kgf/cm ²	0.001		0.01
	bar	0.001		0.01
	psi	0.02	0.01	0.1
	mmHg	1		—
	InHg	0.1		—
Applicable fluid		Air, Non-corrosive/Non-flammable gas		
Power supply voltage		12 to 24 VDC ±10%, Ripple (p-p) 10% or less		
Current consumption		55 mA or less		
Switch output		NPN or PNP 2 outputs	Max. load current : 80 mA Max. applied voltage: 30 VDC (With NPN output) Residual voltage : 1 V or less (With 80 mA load current)	
Repeatability		±0.2% F.S. ±1digit or less		
Hysteresis	Hysteresis mode	Variable		
	Window comparator mode	Fixed (3 digits) ^{Note4)}		
Response time (With anti-chattering function)		2.5 ms or less (With anti-chattering function: 24 ms, 192 ms and 768 ms selections)		
Output short circuit protection		Yes		
Display		3 1/2 digit LED display (Sampling cycle: 5 times/sec.)		
Display accuracy		±2% F.S. ±1 digit or less (at ambient temperature of 25 ±3 C)		
Indicator light		Green LED (OUT1: Lights when ON), Red LED (OUT2: Lights when ON)		
Analogue output ^{Note 1)}		Output voltage: 1 to 5 V ±5% F.S. or less (in rated pressure range) Linearity: ±1% F.S. or less Output impedance: Approx. 1 kΩ	Output voltage: 1 to 5 V ±2.5% F.S. or less (in rated pressure range) Linearity: ±1% F.S. or less Output impedance: Approx. 1 kΩ	
Auto shift input ^{Note 2)}		No-voltage input (Reed or solid state), input 5 ms or more		
Environmental resistance	Enclosure	IP65		
	Ambient temperature range	Operating: 0 to 50°C, Stored: −10 to 60°C (No condensation or freezing)		
	Ambient humidity range	Operating/Stored: 35 to 85% RH (No condensation)		
	Withstand voltage	1000 VAC for 1 min. between lead wires and body		
	Insulation resistance	50 MΩ or more (at 500 VDC) between lead wires and body		
Temperature characteristics		In a temperature range of 0 to 50°C, ±2% F.S. or less of pressure measured at 25°C		
Port size		01: R 1/8, M5 WF1:G 1/8 C4: With ø4 One-touch fitting, C6: With ø6 One-touch fitting, M5: M5 female threads		
Lead wire		5-wire oil resistant heavy-duty cord (0.15 mm ²)		
Weight		01 approx. 60 g, C4/C6/M5 types approx. 92 g (Each including 0.6 m lead wires)		

Note 1) Note 2) For ZSE40 (F)/ISE40-□-22

Note 2) For ZSE40 (F)/ISE40-□-38

Note 3) For ZSE40F (compound pressure) with "psi" indication, this is 0.03 to 0.04 psi.

Note 4) For ZSE40F (compound pressure) with "psi" indication, zero clear is in the range of ±0.01 psi.

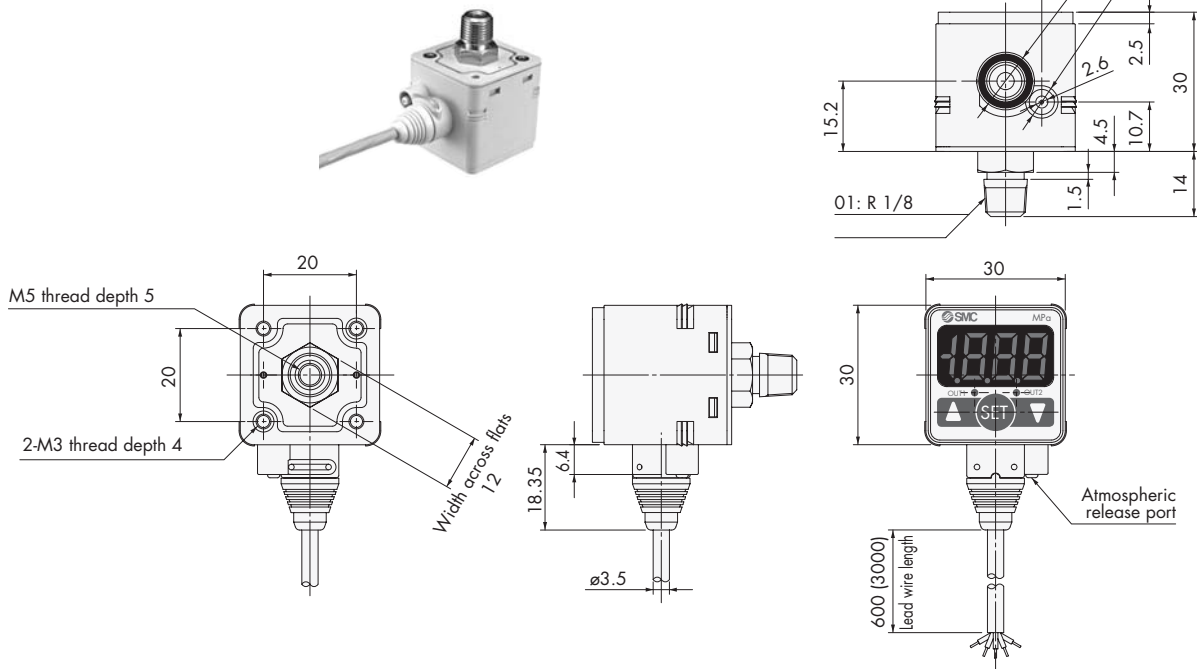
Note)

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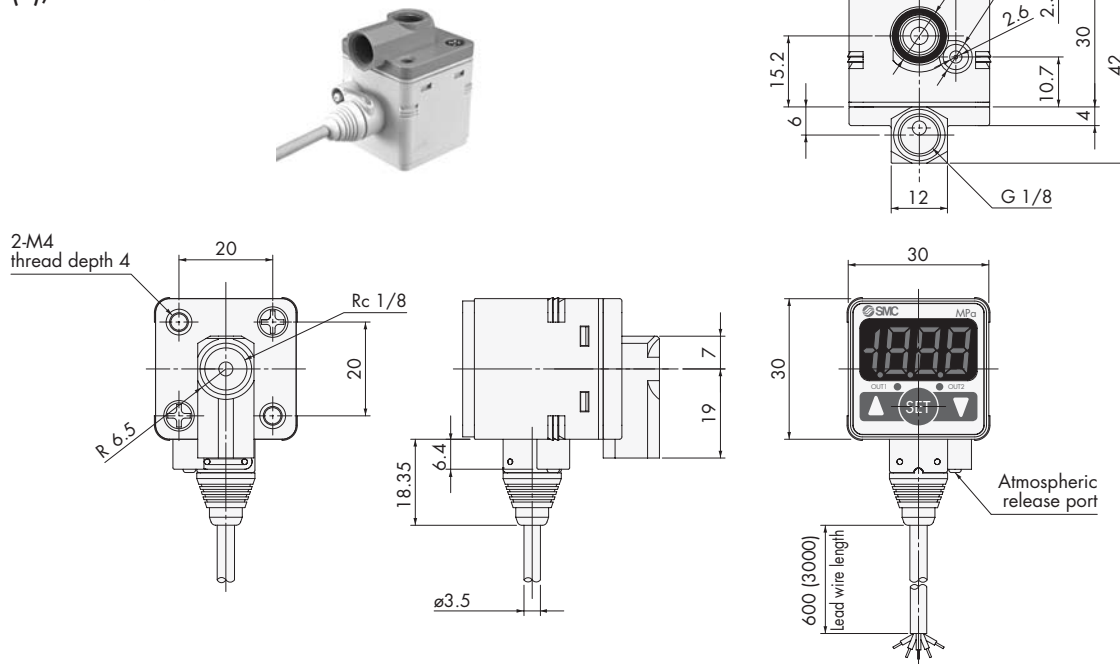
Dimensions

ZSE40(F)/ISE40-01



* For splash proof use (IP65), insert an air tube into the atmospheric release port.

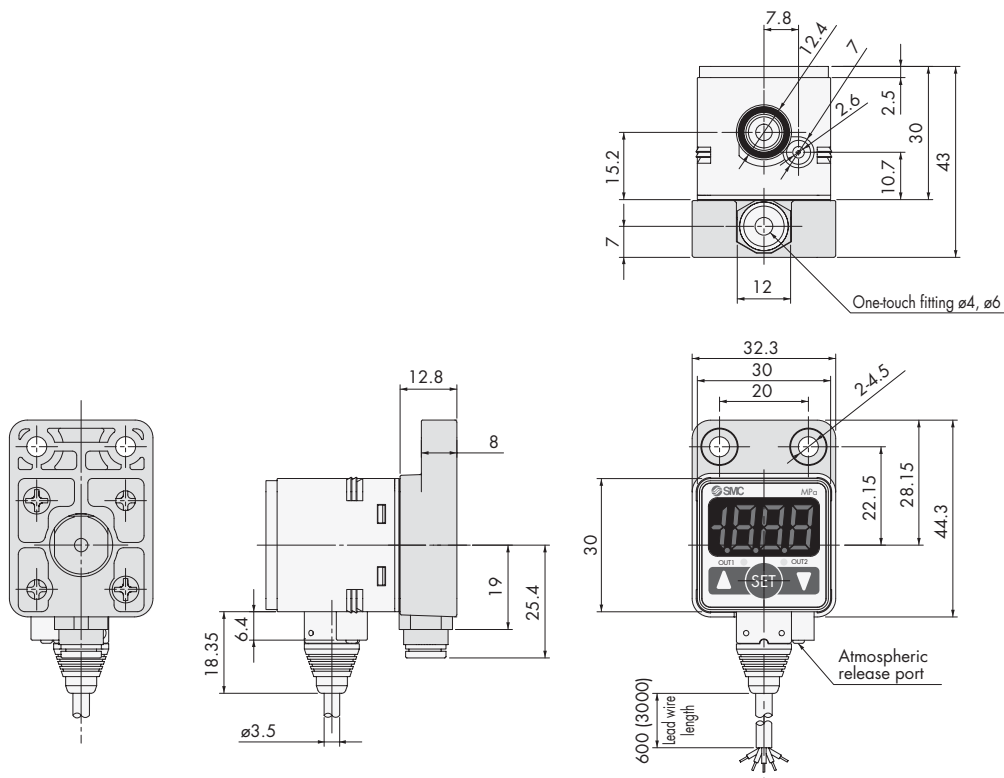
ZSE40(F)/ISE40-WF1



* For splash proof use (IP65), insert an air tube into the atmospheric release port.

Dimensions

ZSE40(F)/ISE40—
C4
C6
M5



* For splash proof use (IP65), insert an air tube into the atmospheric release port.

For-M5

