

ZSE30A(F)/ISE30A Series

Refer to pages 11 and 12 for Pressure Switch Precautions. For details about the Specific Product Precautions, refer to the Operation Manual on the SMC website, <http://www.smcworld.com>

Specifications

Model		ZSE30A (Vacuum pressure)	ZSE30AF (Compound pressure)	ISE30A (Positive pressure)
Rated pressure range		0.0 to -101.0 kPa	-100.0 to 100.0 kPa	-0.100 to 1.000 MPa
Display/Set pressure range		10.0 to -105.0 kPa	-105.0 to 105.0 kPa	-0.105 to 1.050 MPa
Withstand pressure		500 kPa	500 kPa	1.5 MPa
Display/Minimum unit setting		0.1 kPa	0.1 kPa	0.001 MPa
Applicable fluid		Air, Non-corrosive gas, Non-flammable gas		
Power supply voltage		12 to 24 VDC $\pm 10\%$, Ripple (p-p) 10% or less (with power supply polarity protection)		
Current consumption		40 mA or less		
Switch output		NPN or PNP open collector 1 output, NPN or PNP open collector 2 outputs		
	Maximum load current	80 mA		
	Maximum applied voltage	28 V (at NPN output)		
	Residual voltage	1 V or less (with load current of 80 mA)		
	Response time	2.5 ms or less (with anti-chattering function: 20, 100, 500, 1000, 2000 ms)		
	Short circuit protection	Yes		
Repeatability		$\pm 0.2\%$ F.S. ± 1 digit		
Hysteresis	Hysteresis mode			
	Window comparator mode	Variable (0 or above) <small>Note 1)</small>		
Analog output	<small>Note 2)</small> Voltage output	1 to 5V $\pm 2.5\%$ F.S.		0.6 to 5 V $\pm 2.5\%$ F.S.
	Linearity	$\pm 1\%$ F.S.		
	Output impedance	Approx. 1 k Ω		
	<small>Note 3)</small> Current output	4 to 20 mA $\pm 2.5\%$ F.S.		2.4 to 20 mA $\pm 2.5\%$ F.S.
	Linearity	$\pm 1\%$ F.S.		
	Load impedance	Maximum load impedance: Power supply voltage 12 V: 300 Ω , Power supply voltage 24 V: 600 Ω Minimum load impedance: 50 Ω		
Display		4-digit, 7-segment, 2-color LCD (Red/Green)		
Display accuracy		$\pm 2\%$ F.S. ± 1 digit (Ambient temperature of 25 $\pm 3^{\circ}\text{C}$)		
Indicator light		Lights up when switch output is turned ON. OUT1: Green, OUT2: Red		
Environment	Enclosure	IP40		
	Operating temperature range	Operating: 0 to 50 $^{\circ}\text{C}$, Stored: -10 to 60 $^{\circ}\text{C}$ (No freezing or condensation)		
	Operating humidity range	Operating/Stored: 35 to 85% RH (No condensation)		
	Withstand voltage	1000 VAC for 1 minute between terminals and housing		
	Insulation resistance	50 M Ω or more (500 VDC measured via megohmmeter) between terminals and housing		
Temperature characteristics		$\pm 2\%$ F.S. (25 $^{\circ}\text{C}$ reference)		
Lead wire with connector		Oilproof heavy-duty vinyl cable, 3 cores $\phi 3.5$, 2 m 4 cores Conductor area: 0.15 mm 2 (AWG26), Insulator O.D.: 1.0 mm		
Standards		CE, UL/CSA (E216656), RoHS		

Note 1) If applied pressure fluctuates near the set value, set the hysteresis above the fluctuation range to prevent chattering.

Note 2) When analog voltage output is selected, analog current output cannot be used together.

Note 3) When analog current output is selected, analog voltage output cannot be used together.

Piping Specifications

Model	01	N01	C4H	C6H	N7H	C4L	C6L	N7L
Port size	R1/8 M5 x 0.8	NPT1/8 M5 x 0.8	—	—	—	—	—	—
One-touch fitting, Straight type	—	—	$\phi 4$ mm $\phi 5/32$ inch	$\phi 6$ mm	$\phi 1/4$ inch	—	—	—
One-touch fitting, Elbow type	—	—	—	—	—	$\phi 4$ mm $\phi 5/32$ inch	$\phi 6$ mm	$\phi 1/4$ inch
Wetted parts material	Sensor pressure receiving area: Silicon							
Piping port	C3602 (electroless nickel plating) O-ring: HNBR		PBT, POM, Stainless steel 304, C3604 (electroless nickel plating) O-ring: NBR					
Weight	Including lead wire with connector (3 cores, 2 m)	81 g	70 g	71 g	73 g	75 g	73 g	75 g
	Including lead wire with connector (4 cores, 2 m)	85 g	74 g	75 g	77 g	79 g	77 g	79 g
	Excluding lead wire with connector	43 g	32 g	33 g	35 g	37 g	35 g	37 g

Option/Part No.

When optional parts are required separately, use the following part numbers to place an order.

Part no.	Option	Note	Part no.	Option	Note
ZS-38-A1	Bracket A	Mounting screw (with 2 pcs. of M3 x 5L)	ZS-38-4G	Lead wire with connector (with connector cover)	4 cores, for 2 outputs, 2 m
ZS-38-A2	Bracket B	Mounting screw (with 2 pcs. of M3 x 5L)	ZS-38-5L	Lead wire with a connector for copying	3 cores, copy function, 1 m
ZS-38-A3	Bracket C	Mounting screw (with 2 pcs. of M3 x 5L)	ZS-38-U	Lead wire unit with a connector for copying	Copy function (up to 10 slaves)
ZS-27-C	Panel mount adapter	Mounting screw (with 2 pcs. of M3 x 8L)	ZS-38-C4H	One-touch fittings $\phi 4$ mm straight	O-ring, one-touch clip included
ZS-27-D	Panel mount adapter + Front protection cover	Mounting screw (with 2 pcs. of M3 x 8L)	ZS-38-C6H	One-touch fittings $\phi 6$ mm straight	O-ring, one-touch clip included
ZS-27-01	Front protection cover		ZS-38-N7H	One-touch fittings $\phi 1/4$ inch straight	O-ring, one-touch clip included
ZS-38-3L	Lead wire with connector	3 cores, for 1 output, 2 m	ZS-38-C4L	One-touch fittings $\phi 4$ mm elbow	O-ring, one-touch clip included
ZS-38-4L	Lead wire with connector	4 cores, for 2 outputs, 2 m	ZS-38-C6L	One-touch fittings $\phi 6$ mm elbow	O-ring, one-touch clip included
ZS-38-3G	Lead wire with connector (with connector cover)	3 cores, for 1 output, 2 m	ZS-38-N7L	One-touch fittings $\phi 1/4$ inch elbow	O-ring, one-touch clip included