### 思顿·森萨 SZSD

Industrial Pressure Transducer



#### **FEATURES**

- Heavy Industrial CE Approval •
- 10 V/m EMI Protection
- **Reverse Polarity Protection on Input** •
- Short Circuit Protection on Output •
- Up to ±0.1% Accuracy •

**STANDARD RANGES** 

- Up to ±0.5% Total Error Band •
- **Compact Outline** •
- -40°C ... +125°C Operating Temperature
- -10°C ... 70°C Compensated Temperature

# U5300 Series

#### **SPECIFICATIONS**

- Superior Accuracy and Total Error Band
- Compact
- Variety of Pressure Ports and Electrical Configurations •
- **Optional damper** •
- CE Compliant and Weatherproof •
- Gage,Compound
- **Excellent Stability**

#### **APPLICATIONS**

- Military/Aerospace Test Stands
- Automotive Test Stands
- **Calibration Equipment** •
- **High Accuracy Applications** •
- Stationary Motor Fuel Control •
- High End Industrial Machinery

Range (psi)	Range (Bar)	Gage	Seal	Absolute	Compound
010	00.7	•	•	•	•
015	01	•	•	•	•
030	01.5	•	•	•	•
050	03.5	•	•	•	•
0100	07	•	•	•	•
0150	010	•	•	•	•
0300	020	•	•	•	•
0500	035	•	•	•	•
01000	070	•	•	•	•

Note: Intermediate ranges available upon request. For "•S" ,plesae confirm with factory.

#### Force | Pressure | Temperature | LVDT | Switch



#### **PERFORMANCE SPECIFICATIONS**

Ambient Tempe	erature <sup>,</sup> 25°C (unles	s otherwise s	(necified)
Ambient rempt	rature. 25 C (unies	5 Otherwise 5	pecifica)

PARAMETERS	MIN	ТҮР	MAX	UNIT	NOTES
Accuracy (combined non linearity, hysteresis, and repeatability)	-0.25	±0.2	0.25	%F.S. BFSL	@ 25°C
Zero Error	-0.5	±0.25	0.5		@ 25°C
Full Scale Error	-0.5	±0.25	0.5		@ 25°C
Isolation (Body to any Lead)	100			MΩ	@ 100VDC
Pressure Cycles	1X107			0~FS Cycles	
Proof Pressure	2X			Rated	
Burst Pressure	3X			Rated	
Long Term Stability (1 year)	-0.1		0.1	%F.S	
Total Error Band	-1	±1.0	1	%F.S	Over compensated temp range
Compensated Temperature	-10		70	°C	
Operating Temperature	-40		125	°C	Except cable 105°C max
Storage Temperature	-40		125	°C	Except cable 105°C max
Load Resistance (RL)	RL > 100k			Ω	Voltage Output
Load Resistance (RL)	<supply td="" volta<=""><td>ge -9V) / 0.02A</td><td></td><td>Ω</td><td>Current Output</td></supply>	ge -9V) / 0.02A		Ω	Current Output
Current Consumption			10	mA	Voltage Output
Rise Time (10% to 90%)	<2ms (Voltage	e Output); <3ms	s (Current Outp	ut); Without Snu	bber
Pressure Port Material	316L Stainles	s steel			
Shock	50g, 11msec l	Half Sine Shock	k per MIL-STD-2	202G, Method 2	13B, Condition A
Vibration	±20g, MIL-ST	D-810C, Proced	dure 514.2-2, C	urve L	

Notes: For custom configurations, please consult factory.

Pressure range under 0...70bar, customer to ensure venting through mating connector.

Compensated Temperature: The temperature range over which the product will produce an output proportional to pressure within the specifiedperformance limits.

Operating Temperature: The temperature range over which the product will produce an output proportional to pressure but may not remain within the specified performance limits.

Storage Temperature: The temperature range over which the product can be stored safely in occasions without pressure applied or power nput and remains rated performance. Beyond this temperature range may cause permanent damage to the product. All configurations are built with supply voltage reverse and output short-circuit protections.

**CE Compliance (just for reference)** EN 55022 Emissions Class A & B IEC 61000-4-2 Electrostatic Discharge Immunity (8kV contact/15kV air) IEC 61000-4-3 Radiated, Radio-Frequency Electromagnetic Field Immunity (10V/m, 80M-1GHz) IEC 61000-4-4 Electrical Fast Transient Immunity (1kV) IEC 61000-4-5 Surge Immunity (V+ to V-: ±2KV/42Ω; L to Case: ±1KV/12Ω; V- to V0: ±1KV/42Ω) IEC 61000-4-6 Immunity to Conducted Disturbances Induced by Radio Frequency Fields (150K~80MHz, 10V level for voltage output models, 3V level for current output model) IEC 61000-4-9 Pulse Magnetic Field Immunity (100A/m peak) For all CE compliance tests, max allowed output deviation ±1.5 %F.S. (Just Factory Testing)

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#### U5300 Series Industrial Pressure Transducer

### **DIMENSIONS** [mm]







CODE	CONNECTION TYPE	DIM C (MAX)
1	Cable 1m	1.97 [50.0]
4	M12	1.85 [47.9]
5	FORM A	1.93 [49.0]
6	FORM C	1.97 [50.0]

CODE	PRESSURE PORT TYPE						
CODE	PORT	DIM A	DIM B				
1	G1/4 JIS B2351	0.472 [12.00]	0.3 [8.0]				
2	M20 x 1.5 mm ISO 6149-2	0.661 [16.8]	0.3 [8.0]				
3	1/4-18 NPT	0.600 [15.24]	0.3 [8.0]				
4	7/16-20UNF FEMALE SAE J513 STRAIGHT THREAD WITH INTEGRAL VALVE DEPRESSOR	0.687[17.5]	0.3 [8.0]				
5	M14 x 1.5 mm ISO 6149-2	0.433 [11.0]	0.3 [8.0]				
6	1/8-27 NPT	0.390 [9.91]	0.3 [8.0]				
7	M12 x 1.5 mm ISO 6149-2	0.433 [11.0]	0.3 [8.0]				
8	M10 x 1.0 mm ISO 6149-2	0.374 [9.5]	0.3 [8.0]				
9	G1/4 DIN 3852 FORM E GASKET DIN3869-14 NBR	0.512 [13.00]	0.3 [8.0]				

#### WEATHERPROOF

	WEATHER-PROOF RATING							
CODE	CONNECTION TYPE	IP CODE						
1	Cable	IP67						
4	M12	IP67						
5	FORM A	IP65						
6	FORM C	IP65/IP67						

Note: Waterproof rating of pressure transmitter with vent is IP65.

#### **OUTPUTS**

CODE	OUTPUT SIGNAL	SUPPLY VOLTAGE		
1	0.5 - 4.5V	5 ± 0.25V		
	RATIOMETRIC	PROTECTED to 16V		
2	1 - 5V	8 - 36V		
3	4 - 20mA	9 - 36V		
4	0 - 5V	8 - 36V		
5	0 - 10V	13 - 36V		
6	1 - 6V	8 - 36V		
7	0.5 - 4.5V	7.5- 36V		

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#### WIRING

Current Output Wiring							
CONNECTION	+SUPPLY	-SUPPLY	NC.PINS	P REF VENT			
M12	1	2	3,4				
FORM A	1	2	3,4	Hole Through Connector			
FORM C	1	2	3,4				
Cable	RED	BLACK		Hole Through Housing			

Voltage Output Wiring								
CONNECTION	P REF VENT							
M12	1	3	2	4				
FORM A	1	3	2	4	Hole Through Connector			
FORM C	1	3	2	4				
Cable	RED	WHITE (GREEN)	BLACK	-	Hole Through Housing			

#### **CONNECTION TYPES**

CONNECTION TYPES								
CONNECTION	DESCRIPTION	MATING HOUSING P/N	MATING TERMINAL PIN					
M12	BINDER SERIES 713, 09 3431 77 04 OR EQUIV	4-POS FEMALE CONNECTOR	-					
FORM A	OMAL ARB03S or ARB03R	OMAL AHB6733 3+PE	-					
FORM C	INDUSTRIAL STANDARD 8.0MM	HTP AHB6733 3+PE	-					
Cable	4-WIRE,22 AWG, UNSHIELDED,PVC,105°C	-	-					

Notes: Transmitter of gage pressure type requires vent to atmosphere on the pressure reference side.

This is accomplished via cable from the transmitter (the end of the cable should be terminated to clean and dry area) or through

the customer mating connector/cable assembly which has internal vent path.

#### **ORDERING INFORMATION**

U53	3	4	-	1	0	1	9	-	500P	G
Model	Output	Connection	-	Port Material	Snubber	Label	Pressure Port	-	Pressure Range	Pressure Type
U53	1= 0.5-4.5V RATIOMETRIC 2= 1-5V 3= 4-20mA 4= 0-5V 5= 0-10V 6= 1-6V 7= 0.5-4.5V X= Customer Special	1= Cable 4= M12 5= FORM A 6= FORM C X= Customer Special		1= 304Screw+ 316LDiaphgram X= Customer Special	0= No Snubber 1= With Snubber	0= No Label (OEM) 1= Adhesive Label 2= Laser Marking	1= G1/4 JIS B2351 2= M20 x 1.5 3= 1/4-18 NPT 4= 7/16-20UNF FEMALE SAE 5= M14 x 1.5 6= 1/8-27 NPT 7= M12 x 1.5 8= M10 x 1.0 9= G1/4 DIN 3852 A= G3/8 JIS B2351 X= Customer Special		0500psi B= Bar M= Mpa P= PSI K= Kpa	A= Absolute G= Gauge C= Compound

Note: For shielded cable or other connector requirements, please consult the factory.