LIS Intrinsically Safe Transmitter

Description & Features:

- Approved for intrinsically-safe applications in Class 1/Div. 1 hazardous areas
- Rugged stainless steel construction with ceramic sensor
- Available ranges include in/Hg up to 8,700 psi
- Wide range of mechanical and electrical connections
- 0.5% FSO accuracy
- NEMA 4X and 6P / IP65, IP67 and IP68
- Approved for outdoor use
- Customizable
- 1 year warranty

Applications:

- Appropriate for all hazardous areas where an intrinsically safe rating is required, including oil & gas and chemical installations

Specifications	
Output Signal	Standard 2-wire: 4-20 mA / Vs = 8-32 Vdc I.S. protection: Vs = 14-28 Vdc Optional 3-wire: 0-20 mA / Vs = 14-30 Vdc 0-10 V / Vs = 14-30 Vdc
Accuracy	±0.5% FSO IEC 60770
Permissible Load	Current 2-wire: Rmax = [(Vs - Vs min) / 0.02] Ohm Current 3-wire: Rmax = 500 Ohm Voltage 3-wire: Rmin = 10 kOhm
Influence Effects	Supply: 0.05% FSO / 10 V Load: 0.05% FSO / kOhm
Response Time	≤10 ms
Thermal Error	≤±0.2% FSO / 10K In compensated range: -13°F to 185°F (-25°C to 85°C)
Permissible Temperatures	Medium: -40°F to 257°F (-40°C to 125°C) Electronics environment: -13°F to 185°F (-25°C to 85°C) Storage: -40°F to 212°F (-40°C to 100°C)
Short-circuit Protection	Permanent
Reverse Polarity Protection	No damage. No function.
Electromagnetic Protection	Emission and immunity according to EN 61326
I.S. Protection	Class 1, Div. 1, Groups A, B, C & D
Stability	Vibration: 10 g RMS (25 to 2,000 Hz) Shock: 500 g / 1 ms
Pollution Degree	4, electrical equipment for outdoor use
Housing	316L SS
Pressure Port	316L SS
Wetted Parts	Seals: P_N < 1,450 psi: FKM70. Others available. P_N > 1,450 psi: FKM90. Others available. Diaphragm: Ceramic Al_2O_3 96%

Weight	140 g
Current Consumption	Current: 25 mA max Voltage: 7 mA max
Operating Life	>100 x 10^6 cycles
Connecting Cables	Cable capacitance: Signal line/shield and signal line/signal line: 160 pF/m Cable inductance: Signal line/shield and signal line/signal line: 1 µH/m

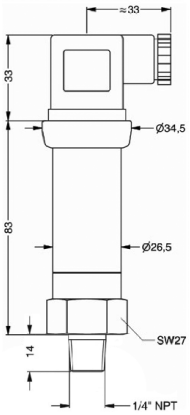
Order Codes

Range	Over-pressure	Burst Pressure	Code
30" Hg Vac	58 psi	102 psi	LIS382
0/15 psi	29 psi	58 psi	LIS383
0/20 psi	58 psi	73 psi	LIS384
0/35 psi	58 psi	73 psi	LIS385
0/60 psi	145 psi	174 psi	LIS386
0/85 psi	145 psi	174 psi	LIS387
0/145 psi	290 psi	363 psi	LIS388
0/230 psi	580 psi	725 psi	LIS389
0/360 psi	580 psi	725 psi	LIS390
0/580 psi	1,450 psi	1,740 psi	LIS391
0/870 psi	1,450 psi	1,740 psi	LIS392
0/1,500 psi	2,901 psi	3,626 psi	LIS393
0/2,300 psi	5,802 psi	7,252 psi	LIS394
0/3,600 psi	5,802 psi	7,252 psi	LIS395
0/5,800 psi	8,702 psi	9,427 psi	LIS396
0/8,700 psi	11,603 psi	12,763 psi	LIS397

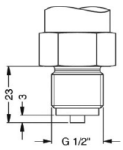
Note: Intrinsically safe approval only applies to 4-20mA output signal

Mechanical Connection

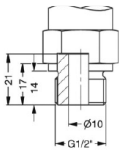
Standard



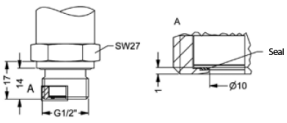
Optional



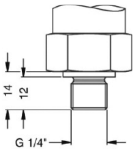
G1/2" EN 837



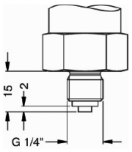
G1/2" open port



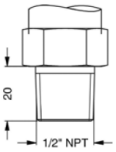
G1/2" semi-flush DIN 3852 ; M20x1.5 [1]
(up to 363 psi; nominal pressure abs, on request)



G1/4" DIN 3852



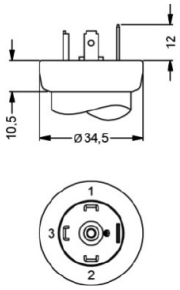
G1/4" EN 837



1/2" NPT

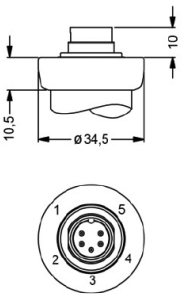
Electrical Connection

Standard

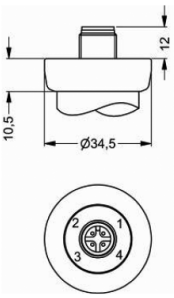


ISO 4400
(IP 65)

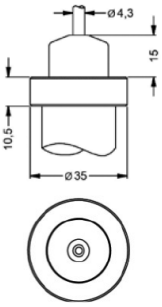
Optional



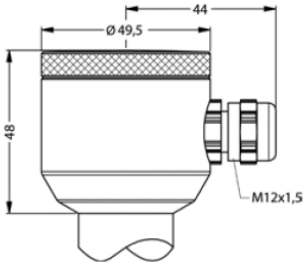
Binder Series 723 5 -pin
(IP 67)



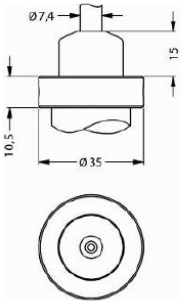
M12x1 4 -pin
(IP 67)



cable outlet with PVC cable
(IP 67) [2]



compact field housing
(IP 67)



cable outlet,
cable with ventilation tube
(IP 68) [3]

Pin Configuration						
Electrical Connection		ISO 4400	Binder 723 (5-pin)	M12x1 (4-pin)	Field Housing	Cable Colours (DIN 47100)
2-wire system	Supply + Supply -	1 2	3 4	1 2	IN + IN -	White Brown
	Ground	Ground pin	5	4	⏚	Yellow/green (shield)
3-wire system	Supply + Supply - Signal +	1 2 3	3 4 1	1 2 3	IN + IN - OUT +	White Brown Green
	Ground	Ground pin	5	4	⏚	Yellow/green (shield)

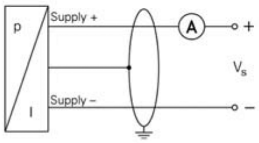
Note: Measurements are in mm

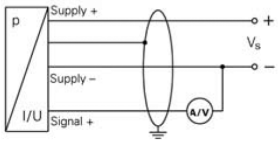
[1] Possible for nominal pressure ranges ≤ 360 psi
[2] Standard: 2m PVC cable without ventilation tube. Optional: Cable with ventilation tube
[3] Different cable types/lengths available

Wiring Diagram

Standard

2-wire-system (current)



Optional

3-wire-system (current / voltage)