



## 650 SERIES

- Ranges from 0 psig to 100 psig through 0 psig to 8,000 psig
- Current and voltage outputs available
- Stainless steel wetted parts
- CE compliant to suppress RFI, EMI and ESD

### APPLICATIONS

- Hydraulics & pneumatics
- Mobile hydraulics
- Pumps & compressors
- Refrigeration controls
- Transportation

### SPECIFICATIONS

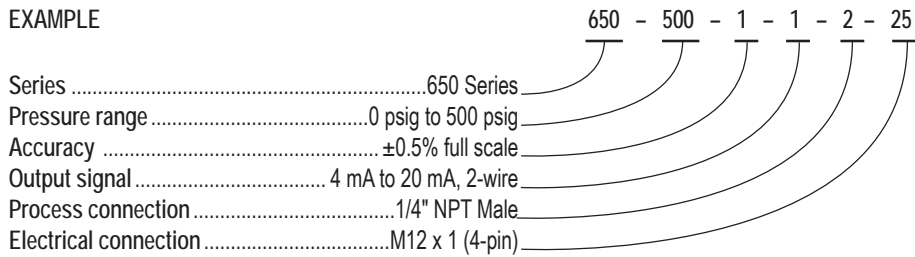
Output signals	4 mA to 20 mA 2-wire, or 1 Vdc to 5 Vdc 3-wire
Pressure ranges	0 psig to 100 psig through 0 psig to 8,000 psig
Accuracy	±0.50% full scale (BFSL) (Includes the effects of non-linearity, hysteresis, non-repeatability, zero point and full scale errors)
Stability	±0.2% full scale for 1 year, non-accumulating
Response time	< 5 ms (between 10% and 90% full scale); restrictor port I.D. to dampen pulsations
Pressure cycle limit	150 Hz
Durability	> 100,000,000 full scale cycles
Temperature ranges	Compensated 32 °F to 176 °F (0 °C to 80 °C) Zero effect ±0.008% full scale/ °F Span effect ±0.008% full scale/ °F Media -40 °F to 257 °F (-40 °C to 125 °C) Ambient -40 °F to 212 °F (-40 °C to 100 °C) Storage -40 °F to 248 °F (-40 °C to 120 °C)
Power requirement*	8 Vdc to 36 Vdc (4 mA to 20 mA, 2-wire, 0 Vdc to 5 Vdc, 3-wire, 1 Vdc to 5 Vdc, 3-wire, 0.5 Vdc to 4.5 Vdc, 3-wire) 14 Vdc to 36 Vdc (0 Vdc to 10 Vdc, 3-wire) 5 Vdc ± 10% (0.5 Vdc to 4.5 Vdc ratiometric, 3-wire)
Load limitations	≤ (VPower-10)/0.020 amp for 4 mA to 20 mA output ≤ 5,000 Ω for 1 Vdc to 5 Vdc output ≤ 10,000 Ω for 0 Vdc to 10 Vdc output ≤ 4,500 Ω for 0.5 Vdc to 4.5 Vdc output
Proof pressure	2 times full scale
Burst pressure	8 times full scale for ranges 0 psi to 100 psi through 0 psi to 1,500 psi 4 times full scale for ranges 0 psi to 2,000 psi through 0 psi to 8,000 psi
Measuring element	17-4PH stainless steel
Connection	316 stainless steel
Housing material	PBT - fiber reinforced plastic
Environmental rating	IP67 for M12x1 (4-pin) electrical connection and Metri-Pack connection; IP69K (steam jet cleaning) for cable connection
Electromagnetic rating	CE compliant to EMC norm EN 61326:1997/A1:1998 RFI, EMI and ESD protection
Electrical protection	Reverse polarity, over-voltage and short circuit protection
Shock	500 g's according to IEC 60068-2-27
Vibration	20 g's according to IEC 60068-2-6
Weight	Approximately 2.5 oz.

\* Unregulated

ORDERING INFORMATION						
SERIES	650					
PRESSURE RANGES	100 0 psig to 100 psig	300 0 psig to 300 psig	600 0 psig to 600 psig	1500 0 psig to 1,500 psig	5000 0 psig to 5,000 psig	
	150 0 psig to 150 psig	400 0 psig to 400 psig	750 0 psig to 750 psig	2000 0 psig to 2,000 psig	8000 0 psig to 8,000 psig	
	200 0 psig to 200 psig	500 0 psig to 500 psig	1000 0 psig to 1,000 psig	3000 0 psig to 3,000 psig		
	psig = gauge pressure    Other ranges available on request					
ACCURACY	1 ±0.5% full scale (BFSL)					
OUTPUT SIGNALS	1 4 mA to 20 mA, 2-wire	3 1 Vdc to 5 Vdc, 3-wire	5 0 Vdc to 10 Vdc, 3-wire	13 0.5 Vdc to 4.5 Vdc ratiometric, 3-wire		
PROCESS CONNECTIONS	2 1/4" NPT male	24 7/16-20 2B Schrader	45 SAE J1926-3:7/16-20			
	10 G1/4B male	35 7/16-20 SAE with 45° flare				
ELECTRICAL CONNECTIONS	25 M12 x 1 (4-pin)	36 18" Integral cable IP67	45 AMP Superseal 1.5			
	34 Metri-Pack 150 series	39 18" Integral cable IP69K	46 Deutsch (3-pin) DT04-3P			

Please consult your local NOSHOK Distributor or NOSHOK, Inc. for minimum quantity requirements and delivery information.

**EXAMPLE**



**2-WIRE WIRING**

Wiring	Cable	M12	Metri-Pack	AMP Superseal	Deutsch DT04-3P
+ Supply	Brown	1	B	3	A
+ Output	Black	3	A	1	B

**3-WIRE WIRING**

Wiring	Cable	M12	Metri-Pack	AMP Superseal	Deutsch DT04-3P
+ Supply	Brown	1	B	3	A
Common	Green	3	A	1	B
+ Output	White	4	C	2	C