

	DATA SHEET	Page 1 of 3	Document ST 5-1848-0 Edition A Date 29/03/2021	
DESCRIPTION	TECHNICAL SPECIFICATION FOR SINGLE LEVEL PRESSURE SWITCHES TYPE 5-1848-0			
1 CONSTRUCTION FEATURES 1.1 BODY IN ANODIZED ALUMINIUM (BLUE) 1.2 BASIS IN STAINLESS STEEL 1.3 SINGLE LEVEL INTERVENTION WITH EXCHANGE CONTACTS 2 APPLICATION FIELD 2.1 GAS PRESSURE MONITORING 3 TECHNICAL FEATURES 3.1 ENVIRONMENT 3.1.1 PROTECTION CLASS IP 42 3.1.2 OPERATING TEMPERATURE: -25°C ÷ +85°C 3.1.3 STORAGE TEMPERATURE: -40°C ÷ +85°C 3.1.4 SALT MIST RESISTANCE: 96 h in salt mist according to ASTM - B117 3.1.5 ROHS AND REACH COMPLIANT 3.2 PRESSURE (all values are expressed in relative bar) 3.2.1 CALIBRATION RANGE (according to model): 0,5 ÷ 5 bar 3.2.2 OPERATING PRESSURE LIMIT FOR $p_n \leq 1,5$ bar 3 bar 3.2.3 OPERATING PRESSURE LIMIT FOR $p_n \leq 3$ bar 6 bar 3.2.4 OPERATING PRESSURE LIMIT FOR $p_n \leq 5$ bar 10 bar 3.2.5 MECHANICAL RESISTENCE LIMIT: 30 bar 3.2.6 ADMITTABLE TRANSIENT (MAX 20 ms) x $p_n \leq 1,5$ bar: 5 bar x 20 cycles 3.2.7 ADMITTABLE TRANSIENT (MAX 20 ms) x $p_n \leq 3$ bar: 8 bar x 20 cycles 3.2.8 ADMITTABLE TRANSIENT (MAX 20 ms) x $p_n \leq 5$ bar: 12 bar x 20 cycles 3.3 PRECISION (all values are expressed in relative bar) 3.3.1 MAX HYSTERESIS IN SWITCHING BETWEEN RISE AND DESCENT 0.35 bar 3.3.2 TOLERANCE OF LEVEL INTERVENTION AT 20°C FOR $P_n \leq 1,5$: ± 0,07 bar 3.3.3 TOLERANCE OF LEVEL INTERVENTION AT 20°C FOR $P_n \leq 3$: ± 0,15 bar 3.3.4 TOLERANCE OF LEVEL INTERVENTION AT 20°C FOR $P_n \leq 5$: ± 0,20 bar 3.3.5 MAX LEVELS DERIVATION AT -25°C FOR $P_n \leq 1,5$: ± 0,07 bar				
A	Modified code extensions due to pressure range expansion.	R. Corradi	C. Ongis	13/07/2017
EDITION	DESCRIPTION	WRITTEN	APPROVED	DATE

- 3.3.6 MAX LEVELS DERIVATION AT -25°C FOR $P_n \leq 3$: $\pm 0,15$ bar
3.3.7 MAX LEVELS DERIVATION AT -25°C FOR $P_n \leq 5$: $\pm 0,20$ bar
3.3.8 MAX LEVELS DERIVATION AT +70°C FOR $P_n \leq 1,5$: $\pm 0,10$ bar
3.3.9 MAX LEVELS DERIVATION AT +70°C FOR $P_n \leq 3$: $\pm 0,15$ bar
3.3.10 MAX LEVELS DERIVATION AT +70°C FOR $P_n \leq 5$: $\pm 0,20$ bar
3.3.11 MAX REPEATIBILITY AFTER ONE OR MORE TESTS FOR $P_n \leq 1,5$: $\pm 0,07$ bar
3.3.12 MAX REPEATIBILITY AFTER ONE OR MORE TESTS FOR $P_n \leq 3$: $\pm 0,10$ bar
3.3.13 MAX REPEATIBILITY AFTER ONE OR MORE TESTS FOR $P_n \leq 5$: $\pm 0,15$ bar

3.4 PRESSURE SEALING (all values are expressed in relative bar)

- 3.4.1 MAX ADMITTED HELIUM LEAKAGE: 2×10^{-6} mbar x l/sec
3.4.2 RESISTANCE IN VACUUM FOR 1 HOUR: 10^{-3} bar

3.5 INSTALLATION

- 3.5.1 MAX ADMITTABLE COUPLING TORQUE 50 Nm

4 ELECTRICAL FEATURES

4.1 MICRO SWITCH FEATURES

- 4.1.1 MICRO SWITCH PANASONIC: AVL3805613
4.1.2 SWITCH CONTACT SPDT
4.1.3 CONTACT MATERIAL GOLD PLATED CONTACTS
4.1.4 CONTACT RESISTANCE 50 mΩ max
4.1.5 MINIMUM CURRENT/VOLTAGE 1mA/5Vdc
4.1.6 MAXIMUM CURRENT/VOLTAGE 100mA/30Vdc
4.1.7 ELECTRICAL CONNECTION MALE FAST-ON 0.110 INCH

4.2 INSULATION

- 4.2.1 INSULATION TENSION TO GROUND 50 Hz: 2 Kv x 1'
4.2.2 INSULATION TENSION BETWEEN MICRO SWITCHES 50 Hz: 2 Kv x 1'
4.2.3 INSULATION TENSION TO GROUND IMPULSE: 5 Kv x 1.2/50 μs
4.2.4 INSULATION TENSION BETWEEN MICRO SWITCHES IMPULSE: 5 Kv x 1.2/50 μs
4.2.5 INSULATION TENSION BETWEEN CONTACTS (C - NO): 1 Kv x 1'
4.2.6 INSULATION TENSION BETWEEN CONTACTS (C - NO) IMPULSE: 2.5 Kv x 1.2/50 μs

4.3 BREAKING POWER ACCORDING TO IEC 60947.5.1

- 4.3.1 THE VALUES INDICATED MUST BE GUARANTEED FOR 100 CYCLES

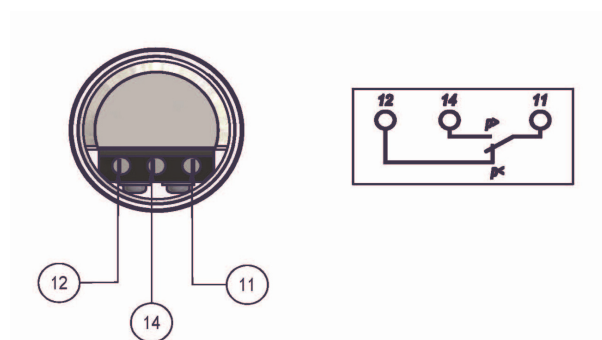
NOMINAL TENSION	RESISTIVE LOAD $\cos \phi 1$
125V AC	0.1A
250V AC	0.1A
30V DC	0.1A

5 IDENTIFICATION

5.1 THE SCHEME BELOW SHOWS THE RATING FEATURES OF EVERY DIFFERENT MODEL
THE SWITCHING VALUES MUST BE INTENDED IN THE PRESSURE RISING PHASE

CODE	EXT. REF	RATING L1	TOLERANCE L1
5-1848-0-A		0,3 bar	± 0,07 bar
5-1848-0-B		0,45 bar	± 0,07 bar
5-1848-0-C		0,6 bar	± 0,07 bar
5-1848-0-D		1 bar	± 0,07 bar
5-1848-0-E		2 bar	± 0,15 bar
5-1848-0-F		3 bar	± 0,15 bar
5-1848-0-G		5 bar	± 0,15 bar

6 CIRCUIT DIAGRAM



7 OVERALL DIMENSIONS

