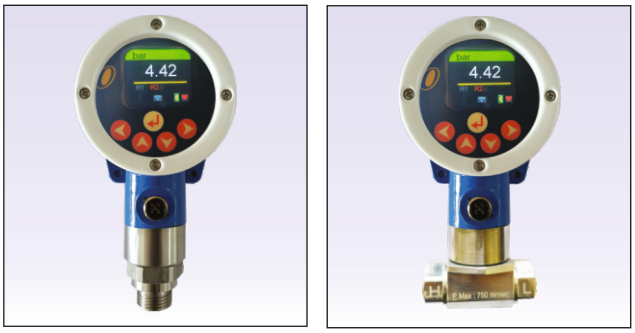
Bellatrix Series Electronic Pressure Switch



Introduction:

The Bellatrix Series — smart, rugged, and engineered for precision pressure control.

The Bellatrix Series of electronic pressure switches are designed for modern industrial environments where accuracy, reliability, and seamless integration with automation systems are critical. Built for OEMs, system integrators, and plant operators, Bellatrix combines high-resolution electronic sensing, configurable switching logic, and flexible output options in a compact, field-ready device.

Designed to replace conventional mechanical switches with a smarter alternative, the Bellatrix Series delivers stable and repeatable switching performance across demanding applications such as compressors, hydraulics, pneumatics, machine tools, pumps, and process skids. With an intuitive digital interface and support for modern industrial communication standards, Bellatrix simplifies commissioning, reduces wiring complexity, and enables condition monitoring and diagnostics at the device level.

Specifications:

Output :Digital O/p - 02, Analog O/p – 01
Process connection : ¼" BSPF
(other options available)
Sensing element : Ceramic / SS
P max and Proof pressure :1.5 x rated pressure
Vacuum resistance : -1 bar
Type of pressure : Gauge / Absolute / Differential

Electrical data
Operating voltage : 18 – 30 VDC
Current consumption : <35 mA at 24V
Min. insulation resistance : 100MΩ (500 VDC)
Protection class : III
Reverse polarity protection : Yes
Integrated watch dog : Yes

Operating conditions
Ambient temp. : (-)25°c ~ 80°c
Storage temp. : (-)40°c ~ 80°c
Media temp. : (-)25°c ~ 80°c

Response times
Response time (ms) : < 3
Delay time programmable : 0 ~ 50 ds, dr (s)
Max response time analog o/p (ms) : 3
Damping process value dAP (s) : 0…4
Damping for the analog o/p (s) : 0…4

Mechanical data
Min pressure cycles : 10 thousand

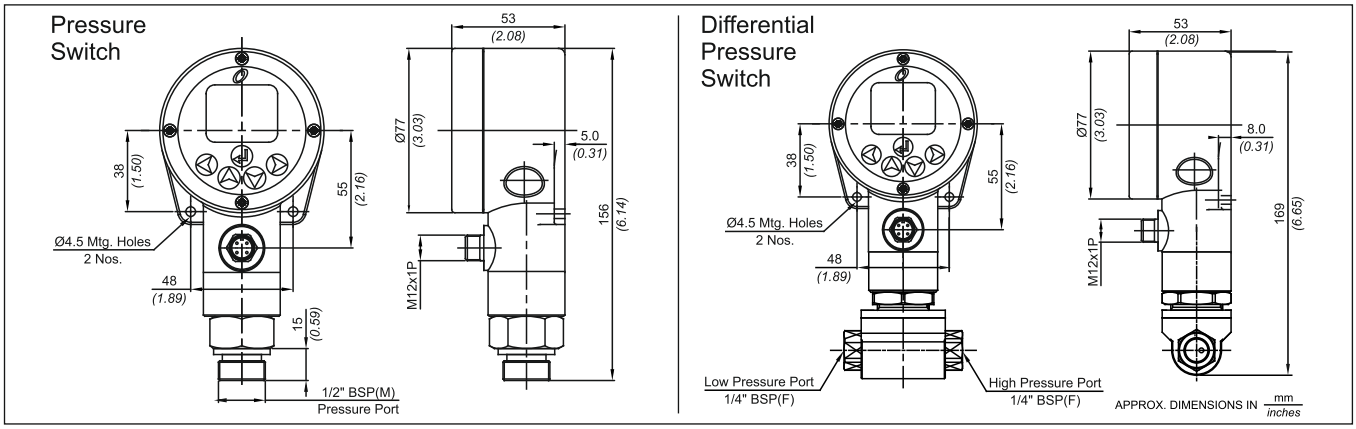
Display : LCD graphical colour display (06 Digit)

Electrical connection
Connector : M12 x 1 (4 pin / 5 pin plug connector)

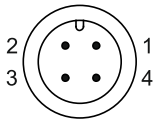
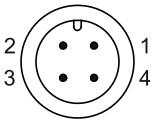
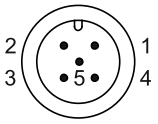
Outputs
Electrical design :PNP/NPN
O/p function : NO/NC (parameterisable)
Max volt. drop switching o/p DC : 2.5 V
Permanent current rating of switching o/p DC :
50 mA for each o/p
Switching frequency DC : <500 Hz
Short circuit protection : Yes
Type of circuit protection :Pulsed
Overload protection :Yes
Current o/p : 4-20 mA
Scanning rate : 2 ms
Voltage o/p : 0-10 VDC
Rating : max 10 mA
Adjustment range : 25% ~ 100% FSR

Accuracy / deviations
Switch point accuracy : < ± 0.5 (% of span)
Repeatability :< ± 0.1 (% of span)
Characteristics deviation :< ± 0.25 (BFSL)/
< ± 0.5 (LS)
BFSL – Best fit straight line
LS – Limit value setting
Hysteresis deviation : < ± 0.25 (% of span)
Long term stability : < ± 0.5 (% of span)
per 06 months
Temp. coefficient zero point :0.2 [(-)25°c ~ 80°c]
(% of span/10k)
Temp. coefficient span : 0.2 [(-)25°c ~ 80°c]
(% of span/10k)

Installation Drawing:



Electrical Connections:

Pins	M12 x 1 (4 pin male connector)	M12 x 1 (4 pin male connector)	M12 x 1 (5 pin male connector)
	 For Electrical Output 'E0'	 For Electrical Output 'E1'	 For Electrical Output 'E2'
1	U+	U+	U+
2	S+	SP2	SP2
3	U-	U-	U-
4	NA	SP1	SP1
5	NA	NA	S+

Legend :

U+ = Positive power supply terminal

U- = Negative power supply terminal (GND)

SP1 = Switching output terminal 1 (Digital)

SP2 = Switching output terminal 2 (Digital)

S+ = Positive output terminal 1 (Analog)

Note: Please refer Group 6 from 'How to order table' below for 'Electrical Outputs'

Range code table (Scale - bar):

Pressure range:

Code	H01	H07	H10	H15	H25	H4T	H1H	H2H	H4H	H6H
*Range	0 ~ 1	0 ~ 7	0 ~ 10	0 ~ 15	0 ~ 25	0 ~ 40	0 ~ 100	0 ~ 200	0 ~ 400	0 ~ 600

How to order:

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
Non std allocation	**Model**	**Version + Enclosure type**	**Device + Pressure type**	**Pressure Range**	**Electrical Output**	**Communi-cation Options**	**Pressure Port and Sensor Type**
☐ A prefix "N" is used in the model code in case of any non standard options / accessories that are provided with this product	**BX** = Pressure transmitter with colour display (6 digit)	**01** = polycarbonate enclosure **03 =** SS enclosure (type 1) **04 =** SS enclosure (type 2) Contact sales office for details about options 03/04	**PG** = Gauge pressure **PA** = Absolute pressure **PD** = Differential pressure **PC** = Compound pressure	*Please select a range from the range code table above	**E2** = 4-20 mA + 02 switching o/p Please refer Elecrical Connection table above	**#0** = no communication **1** = IoT #Available only with option 01 from Gr. 3	**For PG & PA** **P001** = 1/2" BSPM **P002** = 1/2" NPTM **P005** = Triclover **P006** = 1/2" BSPM flush diaphragm **For PD** **D001** = ¼" BSPF **D002 =** ¼" NPTF **D003** = ¼" BSPF (Board mount bidirectional)
Approx. Weight : PG/PA = 500gm. PD = 700gm.							

*Actual pressure range will differ as per option selected from Group 4, in How to Order Table above.

Note : Please contact sales office for a feature to display any unit other than 'bar'; and pressure ports other than mentiond in group 8 above.

Note : *As efforts are being made constantly to improve the design and method of manufacture, the product being supplied may differ in detail from illustration and data printed in this document. Please check our website for the updated information and contact our sales office for the specifications while ordering the product.*

ISO 9001:2015

Certificate No.: **FM 72815**

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