

Series BMS



BMS is a bubbling system for level detection based on the measurement of hydrostatic pressure caused by the liquid contained in the tank. The working principle is founded on the measure of the pressure value needed to maintain a constant and regular air flow through a pipe probe open in the bottom and submerged into the liquid. At any level variation of the liquid in the tank corresponds a variation of the hydrostatic pressure applied on the air outgoing from the probe pipe; these pressure variations are precisely detected by the 27M P/I converter and converted into a standard 4÷20 mA electric signal. PR3 regulator keeps constant bubbling air flow at any level value, assuring high precision measurement.

TECHNICAL FEATURES 27M P/I CONVERTER

- Supply 12÷30 Vdc
- Output 4÷20 mA 2 wire system
- Input signals min 0÷1 mH₂O, max 0÷6 bar
- Overpressure 3 times FS
- Total Accuracy $\pm 0,25$ % FS (*)
- Temperature zero drift $< \pm 0,025$ % FS/°C (-10÷60° C)(*)
- Span thermal drift $< \pm 0,02$ % FS/°C (*)
- Operating temperature range: -40÷85° C
- Electrical connection: extractable terminal or DIN 43650 connector
- Body and housing material: anodized duralumin and brass
- ATEX EEx ia approval

Notes (*):

Unless otherwise stated, performance specifications are given at maximum span. Accuracy and drifts are given for instruments with integral sensor and diaphragm; they may vary according to sensor type and execution

NOTICE

Instruments are delivered already calibrated and tested. It is possible to make recalibration or maintenance checks, adjusting the 4 mA output signal (zero) of the converter by means of trimmers.

SYSTEM COMPONENTS

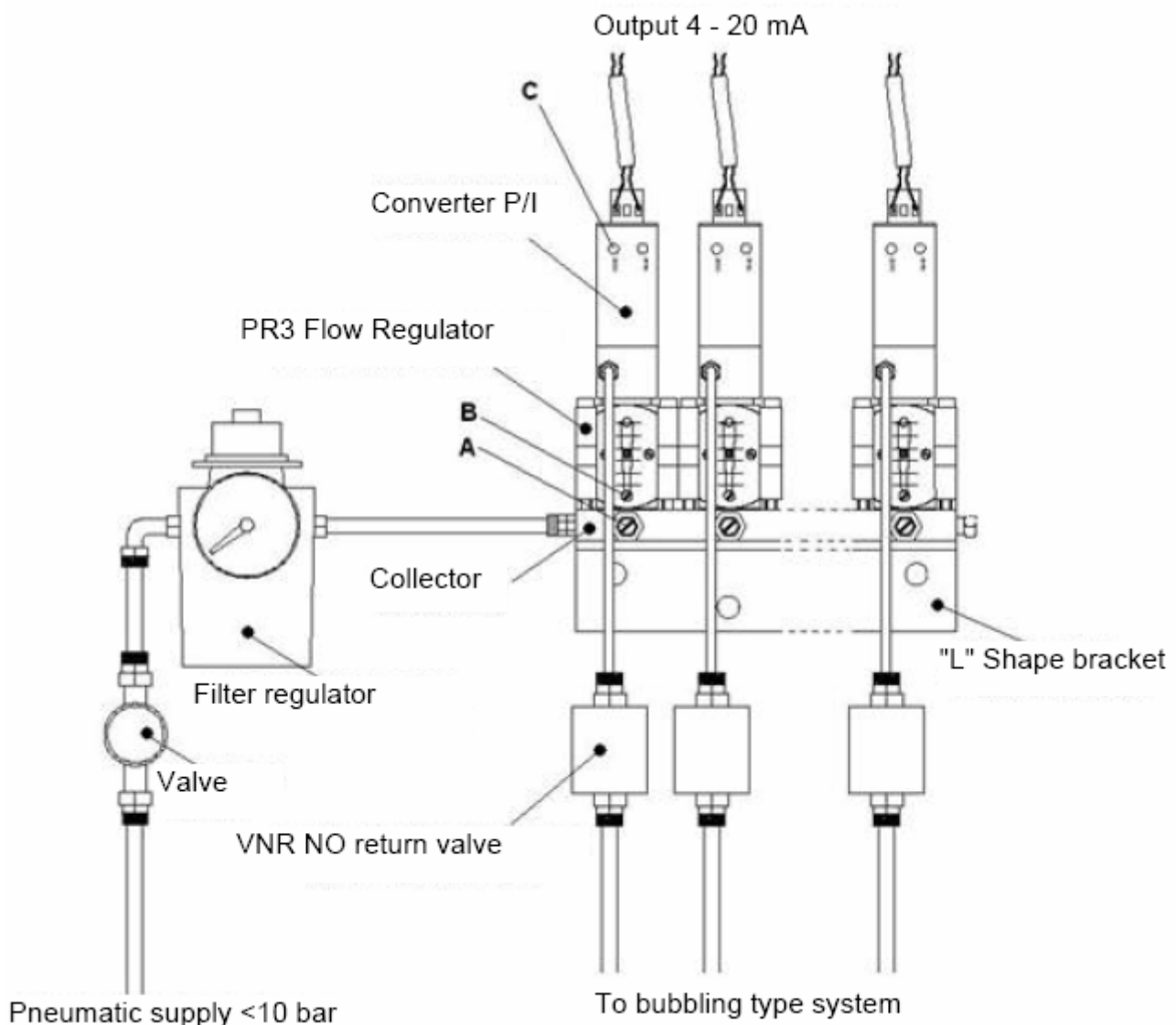
BMS system consists of the following main components:

- Pressure/current converter 27M series ;
- Flow regulator complete with PR3 series rotameter.

These components are supplied already assembled both in single and multiple version, i.e. with components mounted on a multi position collector (up to 15) provided with needle shutoff valves for each position, useful when it is requested to shut off one line without interrupt the normal functioning of the others.

Flow rate value on PR3 regulator as well as trimmer positions on 27M converter are factory adjusted.

To insulate system from process it is available a non return valve VNR series.



BUBBLING SYSTEM FOR LEVEL MEASUREMENT

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ORDERING CODE

27M P/I CONVERTER

CODE	DESCRIPTION
	VERSION
C	Ceramic
P	Piezoresistive
	PROCESS CONNECTION
P	1/8" for PR3 constant flow regulator
	ELECTRICAL CONNECTIONS
C	DIN 43650 Connector IP65
M	Extractable terminals
	MEASURING RANGE
01	0÷0,1 0,25 bar
02	0÷0,15 0,6 bar
03	0÷0,4 1,6 bar
04	0÷0,8 3,2 bar
11	0÷1,5 6 bar
30	3÷15 psi
	OPTIONS / ACCESSORIES
ATX	Version ATEX Ex II 2 G EEx ia
E	TAG transcription
N	Shipyard approval
PR3xx	Mounting on PR3 regulator

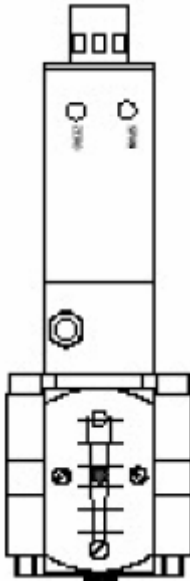
VNR NO RETURN VALVE

	OPTIONS/ACCESSORIES
CF	Counterflange AISI 304 st.st.

PR3 FLOW REGULATOR

CODE	DESCRIPTION
	VERSION
01	1 unit per row
02	2 units per row
03	3 units per row
04	4 units per row
05	5 units per row
06	6 units per row
07	7 units per row
08	8 units per row
09	9 units per row
10	10 units per row
11	11 units per row
12	12 units per row
13	13 units per row
14	14 units per row
15	15 units per row
	COLLECTOR MATERIAL
D	Duralumin
	MOUNTING
M	Duralumin L bracket for multiple version
S	Steel bracket (single version only)
T	Stop plug for free position on collector

CODIFICATION EXAMPLES

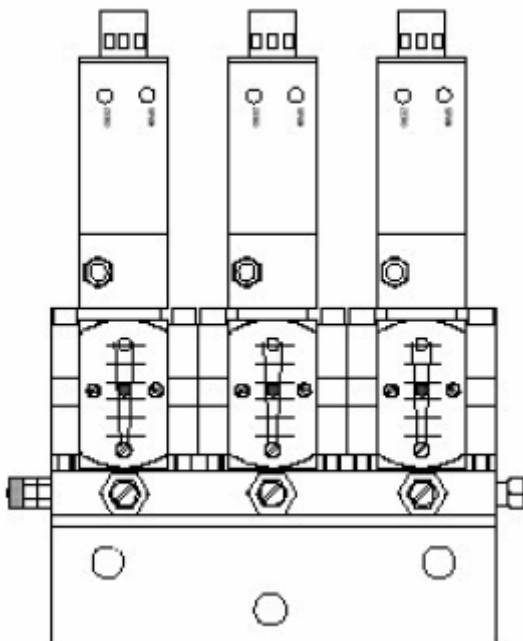


- A) *P/I converter with integral ceramic sensor (4÷20 mA output), DIN rail mounting, process connection 1/8" for PR3 regulator, extractable terminals electrical connection calibration 0÷5 m H₂O, Marine type approval, mounting on PR3 regulator*

Code = 27 R IC 03 A 23 EV 1 C 4

Complete with single position flow regulator, supply connection: 1/4"G,

Code = PR3 01



- B) *P/I converter with integral ceramic sensor (4÷20 mA output), process connection 1/8" for PR3 regulator, extractable terminals electrical connection calibration 0÷10m H₂O, Version ATEX Ex II 2 G EEx ia IIC T5/T6, TAG transcription, Marine type approval, mounting on PR3 regulator*

Code = 27M C P M 03 ATX E N PR3xx

Complete with three position flow regulator, supply connection: 1/4"G, three position duralumin collector, duralumin fixing bracket

Code = PR3 03 D3 M3