

NEW
Product Information

ES - the new converter

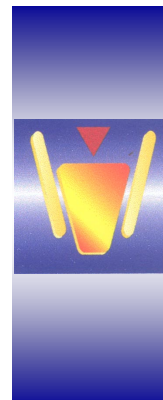
Variable Area Flowmeter Type BGN with ES

Designed for the process:

- Robust construction
- Communication capabilities
- Pulse output also for hazardous areas
- For measuring the flow of liquids and gases



Sensors



Measuring principle

The fluid will flow from bottom to top through the meter tube of the flowmeter. The float is lifted until an annular gap between the meter ring and the cone-shaped float is produced which corresponds to the flow. The forces acting on the float are in equilibrium. The forces that are mainly acting on the float comprise buoyancy according to the principle of Archimedes, the flow force of the medium and the weight force.

Each position of the float corresponds to a flow value measured during calibration, which is transferred to a scale.

The BGN variable area flowmeter consists of a meter tube with connections, a meter ring, and a conical float. By means of a magnet, the position of the float is transferred to an encapsulated follow magnet, which has been fitted to a pointer axle. The position of a second annular follow magnet fitted on the pointer axle is transferred to the scale by means of the pointer. This value is recorded and evaluated by the ES converter.



Technical data

Measured error	+/-1.6% of measured value (BGN) +/-0.2% of measured value (ES)
Repeatability	< 0.1% of measured value
Fluid temperature	BGN-120: -50°C to +200°C BGN-170: -20°C to +125°C
Ambient temp.	-40°C to +70°C
Process conn.	DN 15 to DN 100 in accordance with DIN 2501 Flanges in accordance with DIN, ANSI, BST and other standards; special connections on request
Electrical conn.	Power supply 12-30 V DC 2-wire technique, 4-20 mA, HART
Materials	BGN 120: Flanges 1.4571, fitting 1.4571, all wetted parts 1.4571; BGN 170: Flanges 1.4571, fitting 1.4571, all wetted parts PTFE
Safety class	Ex ia IIC T6
EU declaration conformity	EMC directives 89/336 EWG, 92/31 EWG, 93/68 EWG EN 50 081 Parts 1 and 2, EN 50 082 Parts 1 und 2 NAMUR-Richtlinie NE21 (As of 1993, standard requirements)

Measuring ranges

Nominal size DN	Measuring range	
	Water l/h 20°C	Air Nm ³ /h 20°C, 1013 mbar
15	0.5 - 5	0.015 - 0.15
	60 - 600	1.7 - 17
25	0.5 - 5	0.015 - 0.15
	400 - 4000	11 - 110
50	400 - 4000	11 - 110
	2500 - 25000	71 - 710
80	1600 - 16000	46 - 460
	4000 - 40000	110 - 1100
100	4000 - 40000	110 - 1100
	8000 - 80000	240 - 2400

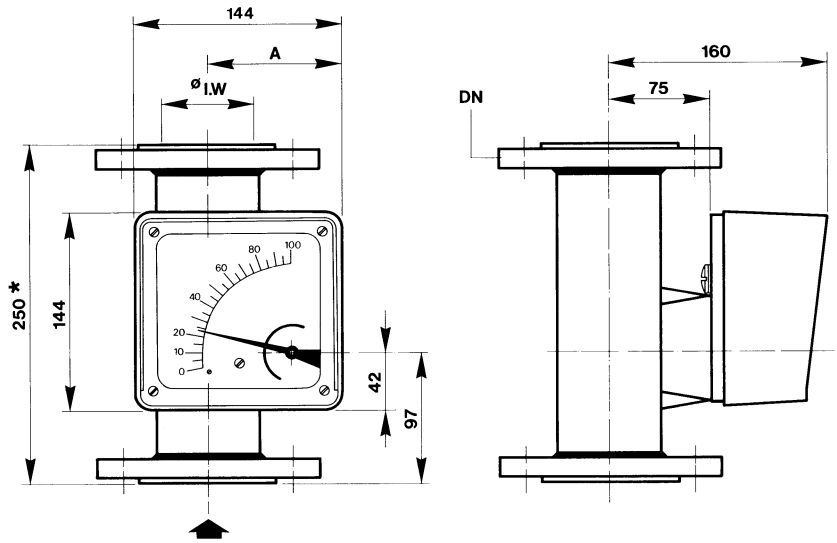
The table contains the minimum and maximum ranges for BGN 120. Please contact us if you are interested in the measuring ranges for other media and materials.

Advantages of the Variable Area Flowmeter BGN

... with the micro-process or controlled ES converter

- Robust design with measuring ring and cone-shaped float
- For high fluid temperatures
- Linear characteristic thanks to optimized float
- High-grade steel and PTFE version
- Magneto-resistive signal collection
- Compensation of homogenous interference fields

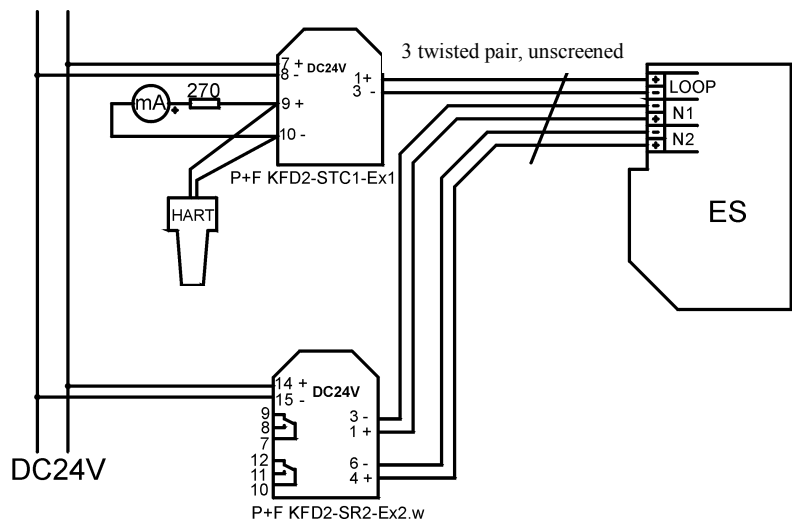
Main dimensions



... and with modern electronics with communication capabilities

- 2-wire technology
- 4-20 mA output (Ex i)
- 2 binary outputs in acc. with NAMUR
- limit values (MIN, MAX) or 1 limit value (MIN, MAX, MIN/MAX) and 1 pulse output
- User-friendly, easy-to-use special software
- HART protocol (Profibus PA in preparation)

Connection diagram



Subject to changes without notice

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