

Construction & Specification



Sizes	: DN15-DN80 (½" - 3")
Standard Flow Ranges	
Air (ATP)	: 0.1 – 700 m ³ /hr
Water	: 5 l/hr – 40 m ³ /hr
Instrument Types	
Direct Reading	: 100mm Scale
Alarm	: Single or Dual NAMUR Type
Transmitter	: 2-wire 4 to 20mA
Approvals	
Alarm	: EEx ia IIC T6
Transmitter	: EEx ia IIC T6 or EEx nA II T6
Accuracy	: ± 2% FSD
Repeatability	: 0.5% of Flow
Materials	: 316 SS standard
Connections	
Flanged	: DIN PN16 or ANSI 150
Screwed	: BSP female
Installation length	: 250mm
Protection	: IP65
Fluid Pressure (max.)	: 100bar (or flange rating)
Temperature Range	: -30° to +65°C Ambient
	: -40° to +120°C Fluid*

* Higher Temperature versions available, please enquire.

Features & Benefits

Clear 100 mm Scale	→	Easily Read on Plants
Modular Output Devices	→	Simple In situ Upgrading
Independent 4 to 20mA Output	→	Verifiable Performance
Liquid or Gas Metering	→	Suitable for Many Plant Applications
Simple Construction	→	Rugged and Easily Installed
Stable Zero Point	→	Unaffected by Installation
Low Hysteresis	→	Repeatable Performance

PRINCIPLE OF OPERATION

Fluid, passing through an orifice within the tube, causes a profiled float to assume a position where the forces created by flow are balanced by the weight of the float. A magnet in the float is sensed by the FloTrak system, providing a direct reading flow rate scale, optional alarms or an independent 4 to 20mA transmitter.

Instrument Options

The meter is installed in a vertical line with flow upwards and is normally supported by the surrounding pipework. Several styles of instrument are available:

Direct Reading Indicator

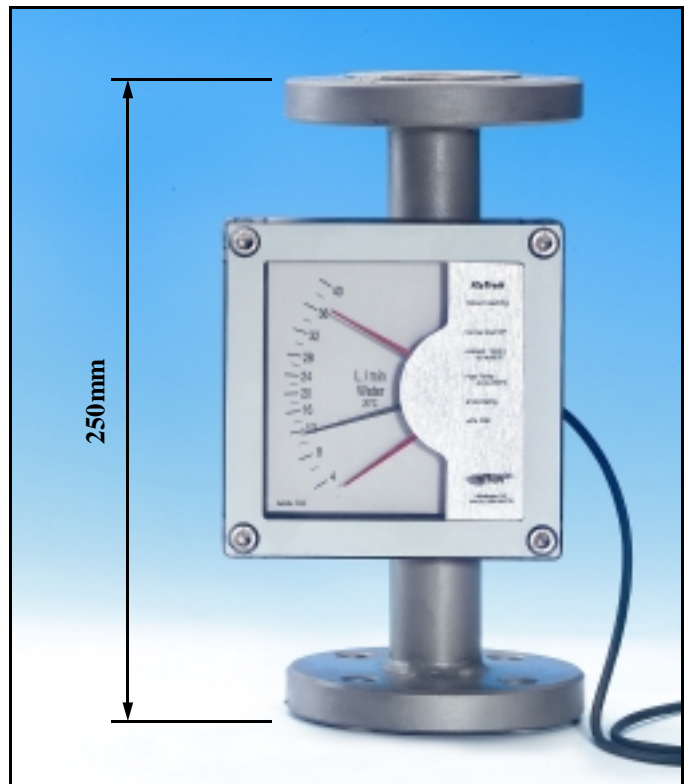
Clear indication over a 100mm long scale.
Can be scaled to suit exact process conditions.

Flow Alarm Unit

The Direct Reading Indicator with one or two fully adjustable set-point trips, for connection via an interface unit.

Transmitter

4 to 20mA loop output proportional to percentage of reading. Available with the Direct Reading Indicator.




Additional Features

- ◆ Gas Damping is fitted as standard on gas ranges
- ◆ Alternative flange connection ratings and types are available on request.
- ◆ Special calibrations or flow ranges.
- ◆ Alternative materials are available to suit process fluid.


Please enquire for specifications or features not quoted in this standard leaflet.

Analogue Transmitter

TYPE nA - For use without Barrier

Output	: 4 to 20mA (2 wire)
Loop Powered	: 8 to 30 V DC 800Ω max. @ 24V
Protection	:  II 2D / II 3G T70°C IP65 EEx nA II T6
Ambient Range	: -30°C ≤ Ta ≤ +65°C
Max. Voltage (Ui)	: 30 V
Max Current (Ii)	: 100 mA
Standard Connection	: M20 Cable Gland

TYPE ia - Barrier Must be used

Output	: 4 to 20mA (2 wire)
Loop Powered	: 8 to 30 V DC 800Ω max. @ 24V
Protection	:  II 2GD T70°C IP 65 EEx ia IIC T6
Ambient Range	: -30°C ≤ Ta ≤ +65°C
Max. Voltage (Ui)	: 30 V
Max Current (Ii)	: 100 mA
Standard Connection	: M20 Cable Gland

Flow Rate Alarm Units

SPECIFICATION- Sensor Unit

Model 1A	Single Set Point
Model 2A	Dual Set Point
Sensor	NAMUR 19234 SJ 2 - N Inductive sensor
Adjustment	Over 0-100% of scale
Connections (2 cores per alarm)	2 metre Flying lead
CENELEC Approval	EEx ia IIC T6 II 1D T108°C

SPECIFICATION- Interface Unit

Relay Output	SPCO 2 Amp, 240V AC
Mounting	35mm DIN Rail , or Screwed to wall/panel
CENELEC Approval	[EEx ia IIC]

Interface Unit Order Codes

KF A6 – SR2 – Ex 1 .W

Number of sensors
 1= Single channel unit
 2= Dual channel unit

Power supply:
 A5= 115V AC ±10%
 A6= 230V AC ±10%
 D2= 20 – 30 V DC

Standard Flow Ranges

SIZE (mm)	WATER Flow Scales (at 20°C)	AIR Flow Scales (at 20°C & 1013 mbar)	Max. Pressure Drop (mbar)
DN 15 (1/2") Flange or 3/4" BSP	5 – 50 L/h	0.2 – 1.5 m ³ /h	40
	10 – 70 L/h	0.3 – 2 m ³ /h	40
	10 – 100 L/h	0.3 – 3 m ³ /h	40
	20 – 160 L/h	0.5 – 5 m ³ /h	60
	25 – 250 L/h	0.5 – 7 m ³ /h	60
	40 – 400 L/h	1 – 11 m ³ /h	60
	60 – 600 L/h	2 – 17 m ³ /h	80
DN 25 (1") Flange or 1" BSP	0.1 – 1 m ³ /h	3 – 30 m ³ /h	60
	0.2 – 1.6 m ³ /h	5 – 45 m ³ /h	75
	0.25 – 2.5 m ³ /h	7 – 70 m ³ /h	90
	0.4 – 4 m ³ /h	10 – 110 m ³ /h	100
	0.6 – 6 m ³ /h	–	500
DN 50 (2") Flange or 2" BSP	0.4 – 4 m ³ /h	10 – 110 m ³ /h	60
	0.6 – 6 m ³ /h	20 – 170 m ³ /h	70
	1 – 10 m ³ /h	30 – 300 m ³ /h	85
	2 – 16 m ³ /h	50 – 450 m ³ /h	100
	2.5 – 25 m ³ /h	–	130
DN 80 (2 1/2") Flange	2 – 16 m ³ /h	–	80
	2.5 – 25 m ³ /h	–	90
	4 – 40 m ³ /h	–	120

Special Ranges and Customised Scales are produced to suit other fluids or operating conditions.
Please enquire for other Flow ranges.

Order Codes

SIZE & TYPE		+	FLOW RANGE
EXAMPLE	15 P D		40 – 400 L/h Water
DN or BSP (DN 15 (1/2") or 3/4" BSP) 15 (DN 25 (1") or 1" BSP) 25 (DN 50 (2") or 2" BSP) 50	←		
Connection Type P = PN 16 A = ANSI 150 S = BSP	←		
Output D = Direct Reading 1A = Single Alarm 2A = Dual Alarm TnA = 4 to 20 mA EEx nA II T6 Tia = 4 to 20 mA EEx ia IIC T6	←		
	} Specify Interface Unit if required		
			Specify Units & Fluid type: For standard air and water ranges consult table above. For alternative fluids or conditions, please specify nominal flow or preferred flow range, units, fluid composition and process conditions at the meter.

For further applications or technical advice please contact:

