



Vision
Turbine Flow Meters

Flow sensor

Vision Series 1000 battery powered

DESCRIPTION

The small flow sensors VISION measurement technology is ideal for the accurate measurement of low viscous and non-aggressive fluids. The VISION 1000 series is most suited for the measurement of flow rates from 0,1 to 2,5 l/min. The flow sensors can be mounted in any position.

MEASURING PRINCIPLE

Flow sensors are indirect volumetric meters. When the fluid passes through, a rotor is activated and the movement is either electronically or mechanically transmitted outside. The rotor is turned by the fluid force, proportional to the flow rate. A coil detects the passage of the rotor and supplies pulses, which can be utilized for digital or analogue signal processing. The generated pulses are specified as the K-factor. The large number of pulses provides high resolution. As the mass of the turbine is very small the response time is very short. It is not necessary to install a straight length of pipeline at the upstream side of the meter.



SPECIFICATIONS

Type	
	VISION 1005 2F66 - COIL

Performance	
Flow rate	0.1 – 2.5 l/min
Accuracy	± 3% of reading
Repeatability	< 0.5% under the same operating conditions
Operating temperature	-20°C to +100°C, max. 60°C for VISION in stainless steel
Operating pressure rate	max. 25 bar
Burst pressure	100 bar

Pick up				
Pulse sensor	COIL (battery powered)			
Input power	2 – 5.5 V			
Output signal	Push-Pull			
Output current	max. 30 mA			
Power consumption	~ 2.2 µA @2V			
K-factor	Material	Nominal size	Flow range	K-factor
	Trogamid CX7323	5 mm	0.1 – 2.5 l/min	22000 pulse/liter
	Stainless steel, INOX 1.4401 / AISI 316	5 mm	0.1 – 2.5 l/min	24500 pulse/liter



Badger Meter

Material	
Housing	Trogamid CX7323
	Stainless steel, INOX 1.4401 / AISI 316
Rotor	PPS Ferrite bound
Bearings	2 PTFE / Graphite bearings (standard), 2 PTFE bearings without added graphite for deionized water

Fluids	
Viscosity	0.8 – 16 mm ² /sec (mPas/cST)
Fluid type	Liquids
Filter	20 to 40 micron recommended

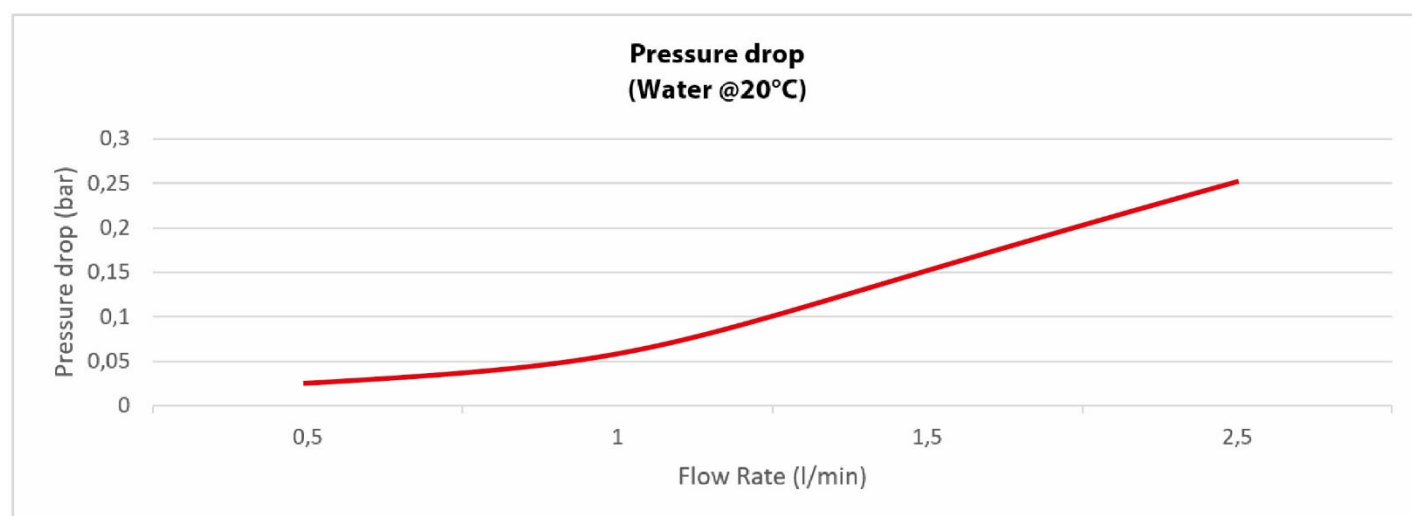
Installation	
Nominal size DN	5 mm
Mounting position	In any orientation
Electrical connection	3 Pin (2.8 x 0.5) for MINI DIN Connector, EN 60529
IP Protection class (DIN Connector)	IP67
Mechanical connection	G 1/4" Trogamid, Stainless steel
	NPT 1/4" Trogamid
Tightening torque for screwed connection	approx. 6 Nm

Calibration (Optional)	
5-Point Calibration	@ Water, 20°C

Weight			
	Housing	Connector	Weight
	Trogamid CX7323	DIN	15 g
	Stainless steel, INOX 1.4401 / AISI 316	DIN	60 g

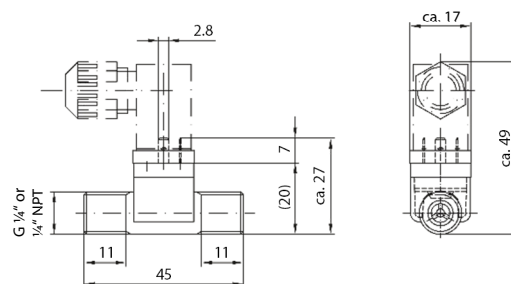
Approvals		
	VISION with housing of	Approvals
	Trogamid CX7323	KTW-BWGL, ROHS, CE, UKCA
	Stainless steel, INOX 1.4401 / AISI 316	ROHS, CE, UKCA

PRESSURE DROP



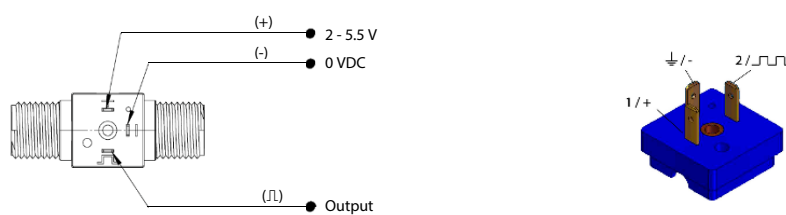
DRAWINGS

DIN connector




ELECTRICAL WIRING

COIL (battery powered)



ORDERING MATRIX VISION 1000 – COIL + DISPLAY

Select process and electrical connection	Code		
Mechanical connector and body material: G 1/4" Trogamid G 1/4" Stainless steel NPT 1/4" Trogamid	56547		
	56133		
	56548		
Electrical connection: COIL and DIN connector		-166	
Turbine model:		-2F66	
Available displays see below			Display option

Ordering code displays:	Code	
Remote mounted ILR-701T display (3 m cable) / Total / Flow rate <u>Example</u> shows display with flow sensor		-56703
Remote mounted ILR-750T display (3 m cable) / Total / Flow rate / 4-20 mA output <u>Example</u> shows display with flow sensor		-56704
RF-Display ILR 701T (transmitter + receiver) / Total	 Receiver  Transmitter	-56700

Examples:	Code			
VISION 1005 2F66-COIL G1/4" + DIN connector	-56547	-166	-2F66	
VISION 1005 2F66-COIL G1/4" with ILR701T remote (3 m cable)	-56547	-166	-2F66	-56703
VISION 1005 2F66-COIL G1/4" with ILR750T remote (3m cable)	-56547	-166	-2F66	-56704
VISION 1005 2F66-COIL G1/4" with RF ILR701T	-56547	-166	-2F66	-56700

DISPLAYS

Technical Data ILR 701T	
Display flow	Actual flow: 6 digits
	Total flow: 11 digits, non-resettable 6 digits, resettable
Output	Analog output: /
	Pulse output: /
Display units	Liter, Pints, Quarts, Gallons
Input	Coil
Pulse input scale	0.5000 – 2.0000
Temperature	-20 °C to + 80 °C
Linearization (Optional)	9 points
Protection class	IP 67
Internal power supply	Battery CR123A Lithium, 3 VDC
Remote mount	Installation: Available with 3 m cable or as RF Display
	Weight: 230 g

Technical Data ILR 750T	
Display flow	Actual flow: 6 digits
	Total flow: 11 digits, non-resettable 6 digits, resettable
Output	Analog output: 4-20 mA
	Pulse output: Scaleable
Display units	Liter, Pints, Quarts, Gallons
Input	Coil
Pulse input scale	0.5000 – 2.0000
Temperature	-20 °C to + 80 °C
Linearization (Optional)	9 points
Protection class	IP 67
Internal power supply	Battery CR123A Lithium, 3 VDC
Remote mount	Installation: Available with 3 m cable
	Weight: 340 g
Approvals	CE, UKCA, ROHS

Technical Data RF ILR 701T	
Display flow	Actual flow: /
	Total flow: 11 digits, non-resettable 6 digits, resettable
Output	Analog output: /
	Pulse output: /
Display units	Liter, Pints, Quarts, Gallons
Input	Coil
Pulse input scale	0.5000 – 2.0000
Temperature	-20 °C to + 80 °C
Linearization (Optional)	9 points
Protection class	IP 67
Internal power supply	Battery CR123A Lithium, 3 VDC (Transmitter, Receiver/Display)
RF frequency	2,4 GHz ISM
Radio range	5 to 6 m
Receiver / Display	LCD Display with wall mounting bracket
Transmitter	Transmitter: Electronic board, battery powered CR123A Lithium, 3 VDC
	Installation: Will be mounted directly onto the VISION turbine meter
Remote mount	Installation: RF Display
	Weight: 210 g
Approvals	CE, UKCA, ROHS

Control. Manage. Optimize.

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