



Vision

Turbine Flow Meters

Flow sensors

Vision Series 3000 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 3000 series is most suited for the measurement of flow rates from 5 to 65 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 3012 - COIL

Performance	
Flow rate	5 – 65 l/min
Accuracy	± 3% of reading
Repeatability	< 0.5% under the same operating conditions
Operating temperature	-20°C to 100°C
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				
Power consumption	approx. 2.2 µA @ 2V				
K-factor	Version	Material	Nominal size	Flow range	K-factor
	VISION 3012	Trogamid CX7323	12 mm	5 – 65 l/min	210 pulse/liter



Badger Meter

Material	
Housing	Trogamid CX7323
Rotor	PPS Ferrite bound
Bearings	2x Hostaform, Ball bearings

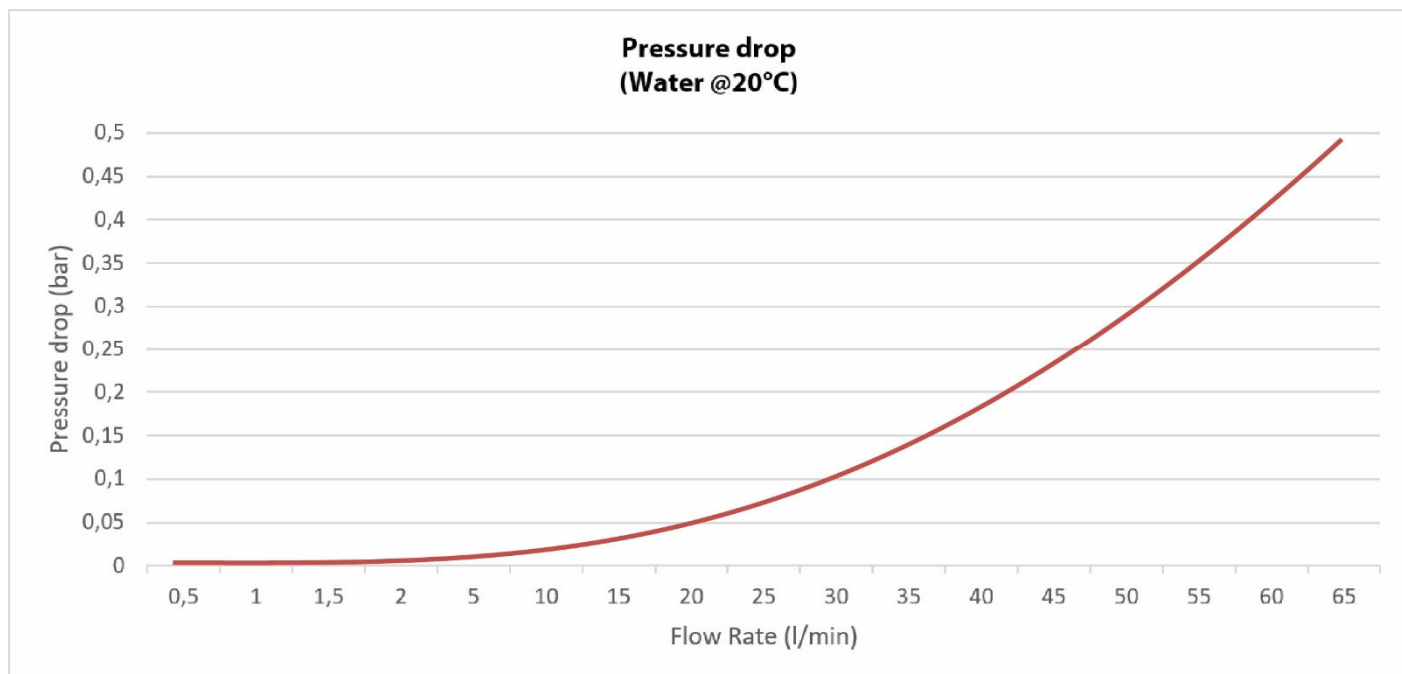
Fluids	
Viscosity	0.8 – 16 mm ² /sec (mPas/cST)
Fluid type	Liquids
Filter	20 to 40 micron recommended

Installation	
Nominal size DN	12 mm
Mounting position	In any orientation, observe flow direction
Electrical connection	3 Pin (2.8 x 0.5) for MINI DIN Connector, EN 60529
IP Protection class (DIN Connector)	IP67
Mechanical connection	G 3/4", NPT 3/4"
Tightening torque for screwed connection	approx. 6 Nm

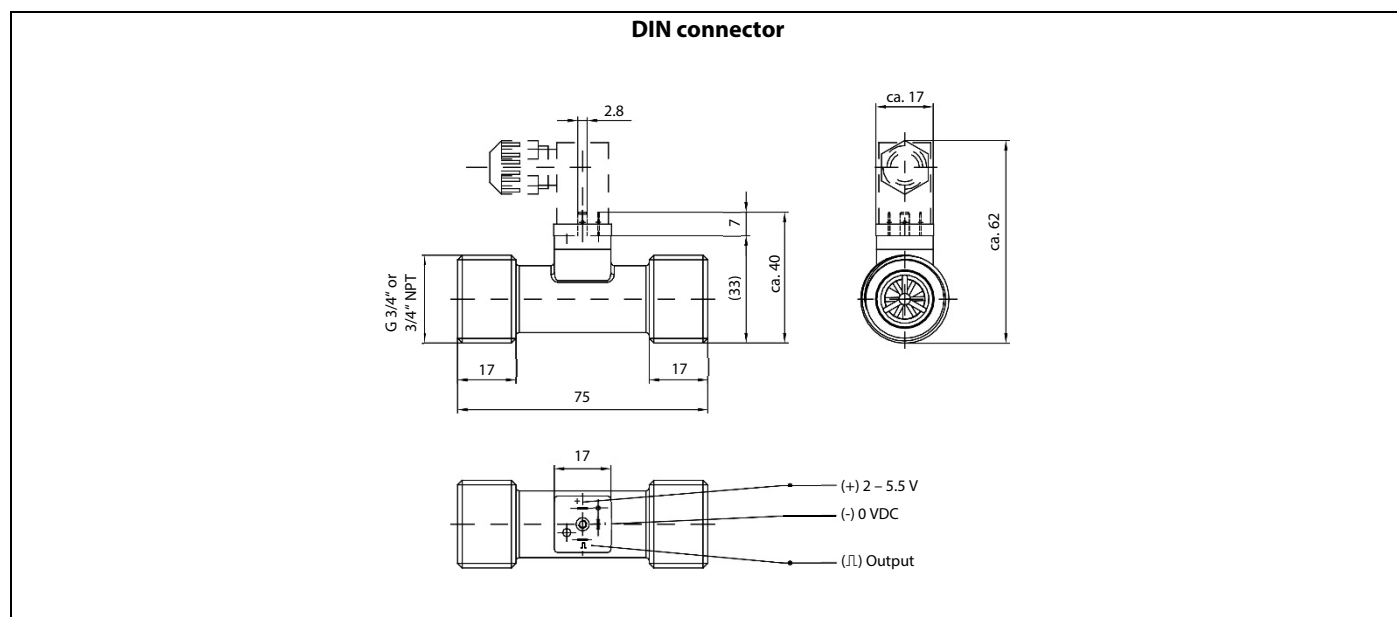
Weight			
	Housing	Connector	Weight
	Trogamid CX7323	DIN	35 g

Approvals		
	Vision with housing of	Approvals
	Trogamid CX7323	ROHS, CE, UKCA

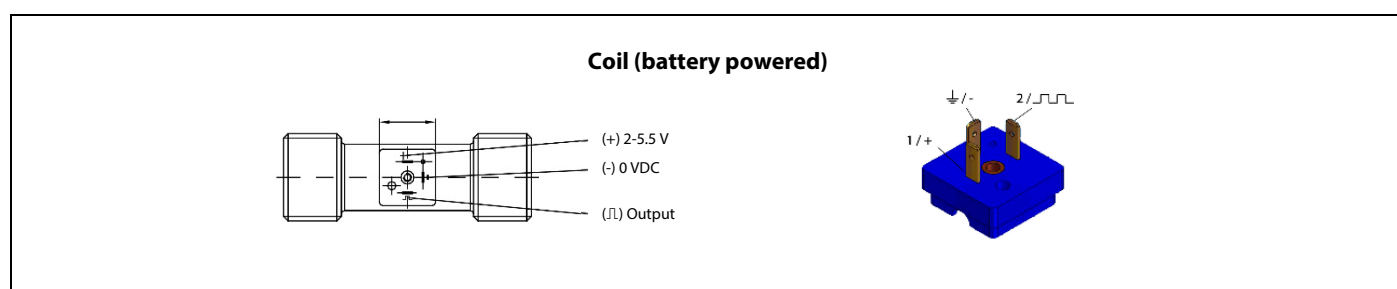
PRESSURE DROP



DRAWINGS




ELECTRICAL WIRING



ORDERING MATRIX - VISION 3000 – COIL + DISPLAY

Select process and electrical connection	Code		
Mechanical connector:			
G 3/4" Trogamid	56422		
NPT 3/4" Trogamid	56423		
Electrical connection:			
COIL and DIN connector		-166	
Turbine model:			
VISION 3012			-4F16
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
Meter mounted ILR-701T display / Total / Flow rate (Display including bracket)		-56701

Meter mounted ILR-750T display / Total / Flow rate / 4.20mA output (Display including bracket)		-56706
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Examples:	Code			
VISION 3012-COIL G3/4" with DIN connector	56422	-166	-4F16	
VISION 3012-COIL G3/4" with ILR701T remote (3m cable)	56422	-166	-4F16	-56703
VISION 3012-COIL G3/4" with ILR750T remote (3m cable)	56422	-166	-4F16	-56704
VISION 3012-COIL G3/4" with ILR701T meter mount	56422	-166	-4F16	-56701
VISION 3012-COIL G3/4" with ILR750T meter mount	56422	-166	-4F16	-56706
VISION 3012-COIL G3/4" with RF ILR 701T	56422	-166	-4F16	-56700

DISPLAYS

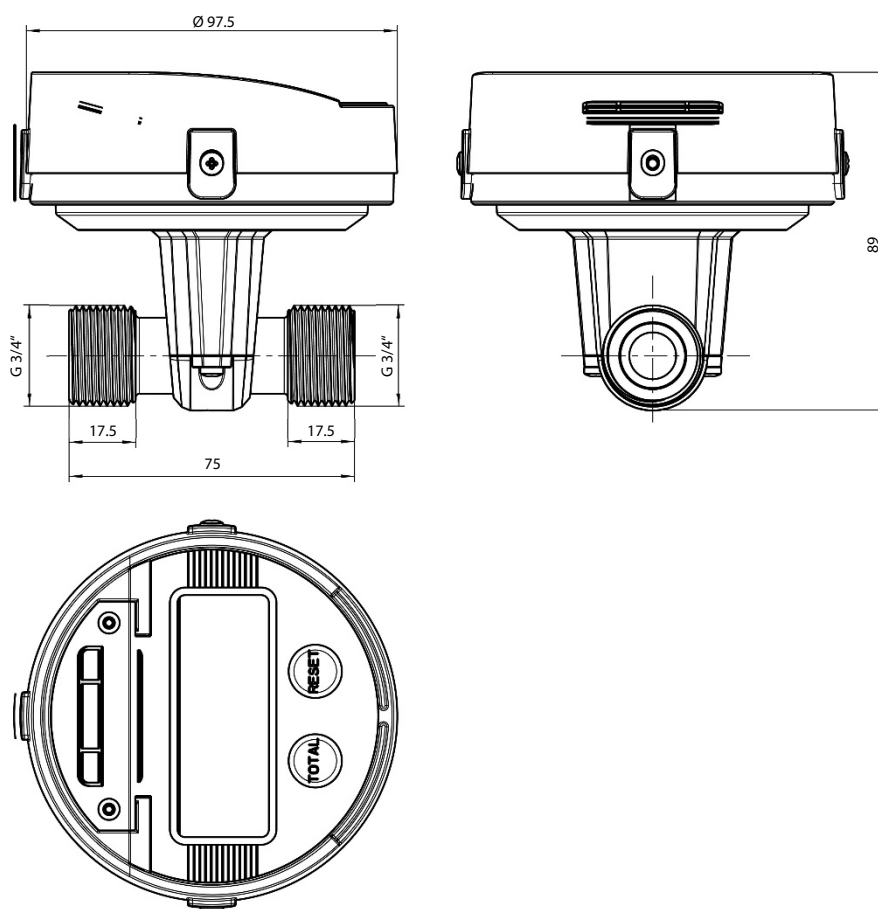
Technical Data ILR 701T	
Display flow	Actual flow: 6 digits
	Total flow: 11 digits, non-resettable 6 digits, resettable
Output	Analog output: /
	Pulse output: /
Display units	Liter, Pints, Quarts, Gallons
Input	Coil
Pulse input scale	0.5000 – 2.0000
Temperature	-20 °C to + 80 °C
Linearization (Optional)	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
Meter mount	Installation: Including bracket for the VISION turbine meter
	Weight: 155 g
Approvals	CE, UKCA, ROHS

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
Meter mount	Installation: Including bracket for the VISION turbine meter
	Weight: 275 g
Approvals	CE, UKCA, ROHS

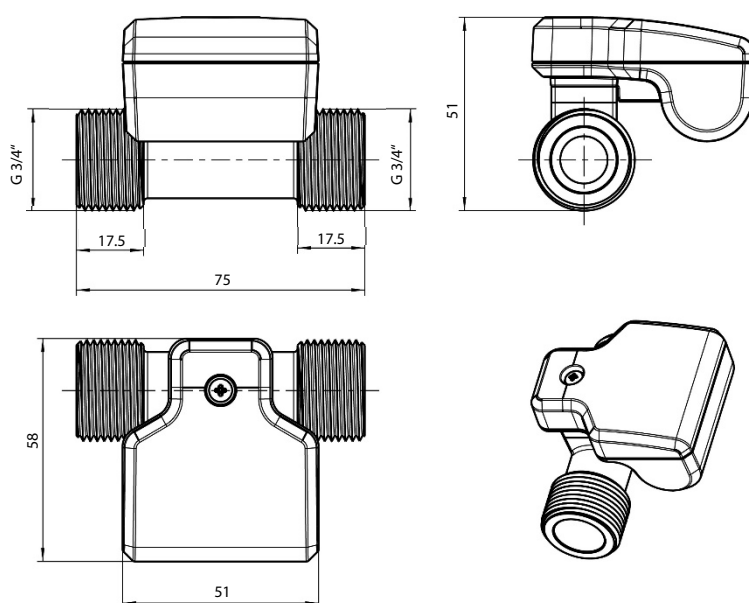
Technical Data RF ILR 701T	
Display flow	Actual flow: /
	Total flow: 11 digits, non-resettable 6 digits, resettable
Output	Analog output: /
	Pulse output: /
Display units	Liter, Pints, Quarts, Gallons
Input	Coil
Pulse input scale	0.5000 – 2.0000
Temperature	-20 °C to + 80 °C
Linearization (Optional)	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

DISPLAY DRAWINGS

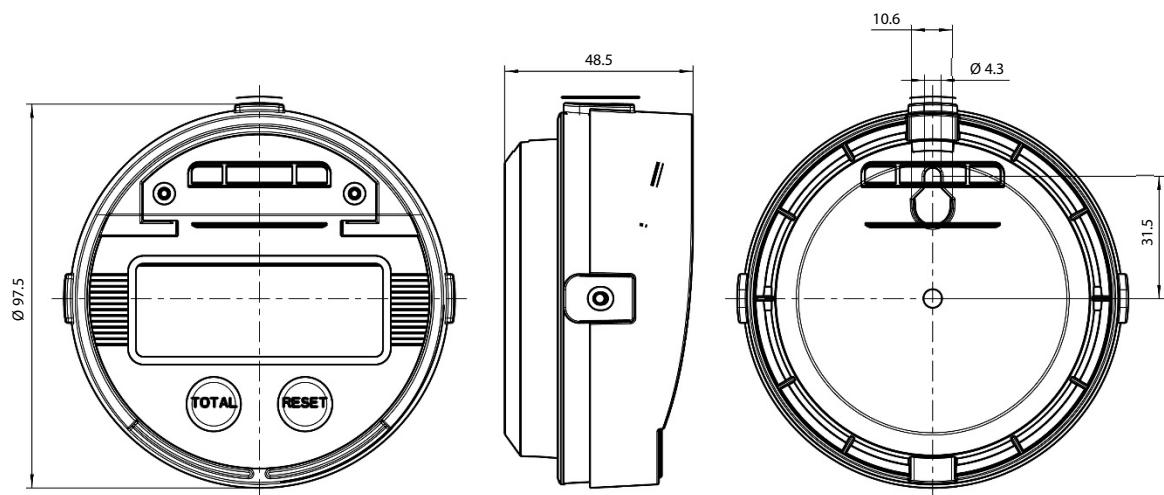
VISION 3000 with meter mount ILR701T display



VISION 3000 with RF 701T Transmitter



RF 701T Receiver



Control. Manage. Optimize.

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