



Vision

Turbine Flow Meters

Turbine meter

Vision Series 2000 battery powered

DESCRIPTION

The small turbine meter VISION measurement technology is ideal for the accurate measurement of low viscous and non-aggressive fluids. The VISION 2000 series is most suited for the measurement of flow rates from 0.5 to 35 l/min. The turbine meters can be mounted in any position.

MEASURING PRINCIPLE

Turbine meters 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 2006 - COIL VISION 2008 - COIL
-------------	--

Performance	
Flow rate	0.5 – 35 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	200 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 2008 4F17-COIL	Trogamid CX7323	8 mm	2 – 35 l/min	750 pulse/liter
	VISION 2008 4F22-COIL	Trogamid CX7323	8 mm	1 – 25 l/min	1000 pulse/liter
	VISION 2008 4F44-COIL	Trogamid CX7323	8 mm	1 – 15 l/min	2200 pulse/liter
	VISION 2006 4F44-COIL	Trogamid CX7323	6 mm	1 – 10 l/min	3300 pulse/liter
	VISION 2008 2F66-COIL	Trogamid CX7323	8 mm	0.5 – 7.5 l/min	4700 pulse/liter
VISION 2006 2F66-COIL	Trogamid CX7323	6 mm	0.5 – 5 l/min	6900 pulse/liter	



Badger Meter

Material	
Housing	Trogamid CX7323
Rotor	PPS Ferrite bound
Bearings	2 PTFE / Graphite bearings

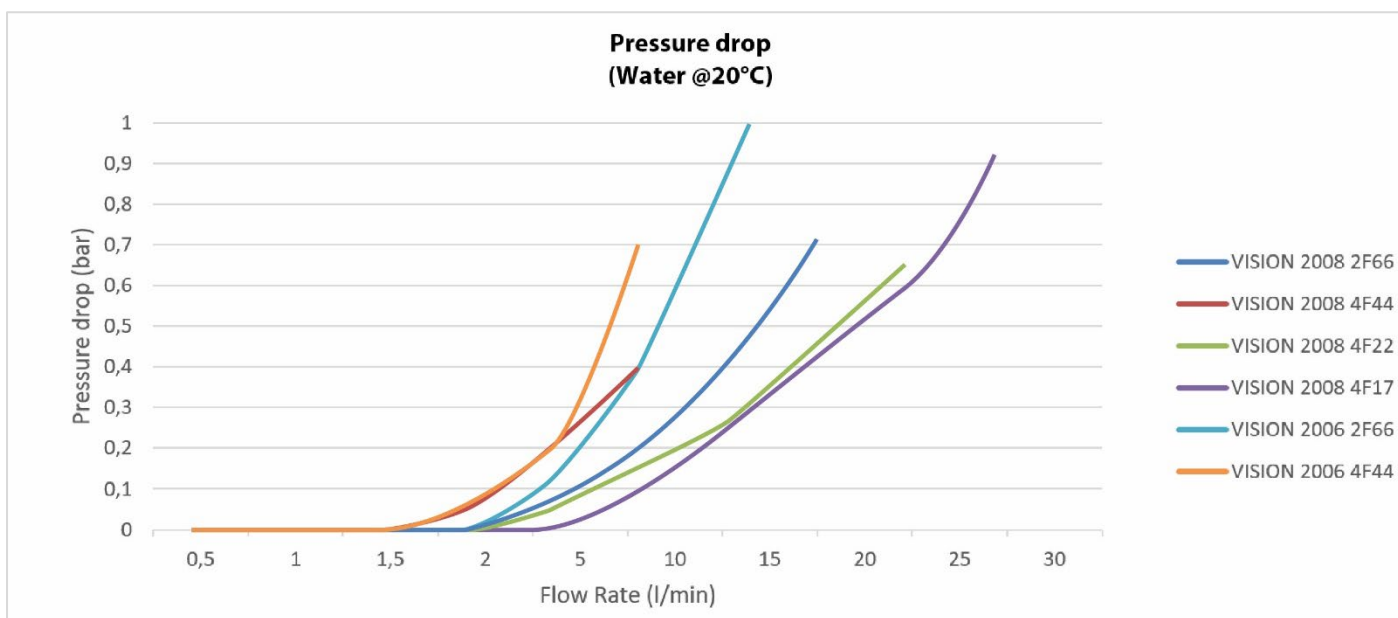
Fluids	
Viscosity	0.8 – 16 mm ² /sec (mPas/cST)
Fluid type	Liquids
Filter	20 to 40 micron recommended

Installation	
Nominal size DN	6 mm, 8 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	Trogamid: G 3/8", NPT 3/8", O-ring, Hose nipple
Tightening torque for screwed connection	approx. 6 Nm

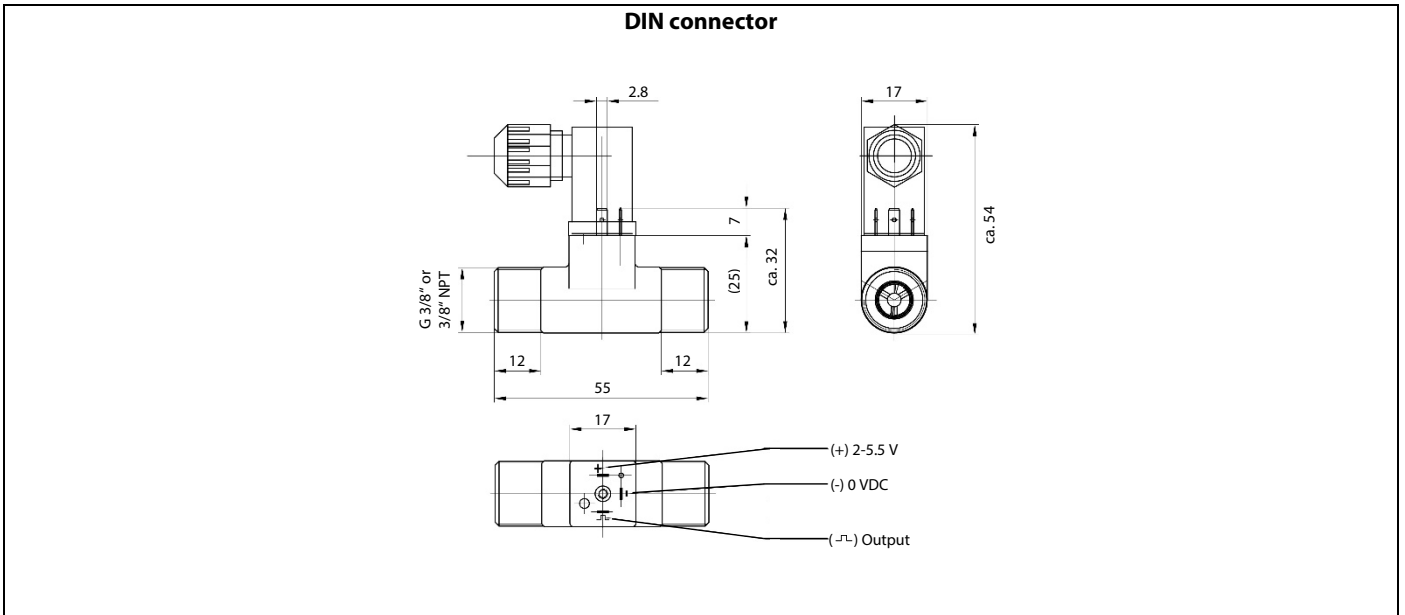
Weight			
	Housing	Connector	Weight
	Trogamid CX7323	DIN	20 g

Approvals		
	Housing	Approvals
	Trogamid CX7323	KTW, NSF/ANSI 61, WRAS, ROHS, CE

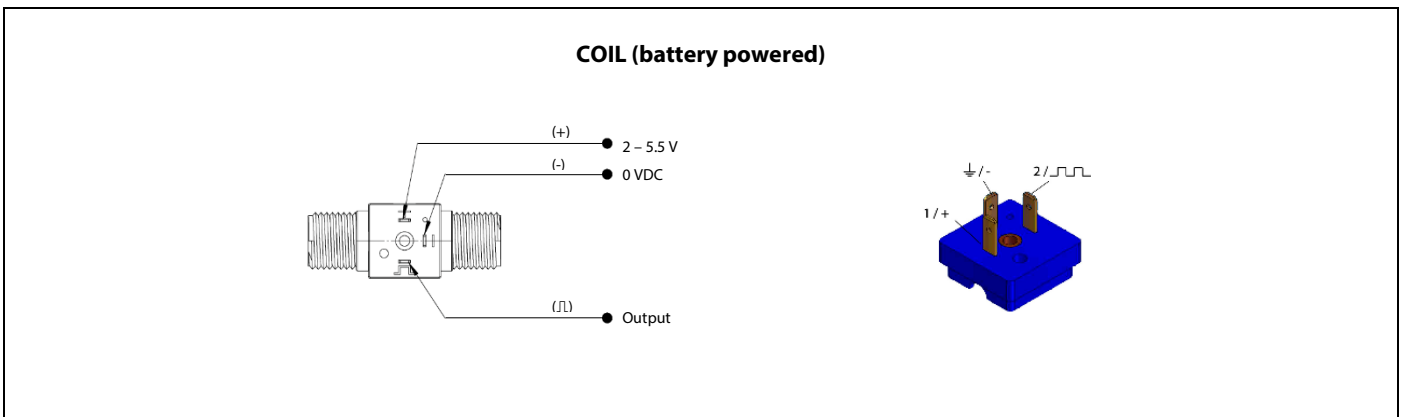
PRESSURE DROP



DRAWINGS








ELECTRICAL WIRING



ORDERING MATRIX - VISION 2000 – COIL + DISPLAY

Select process and electrical connection	Code	
Mechanical connector:		
VISION 2008, G 3/8"	56500	
VISION 2008, NPT 3/8"	56502	
VISION 2008, O-Ring	56520	
VISION 2008, Hose nipple	56138	
VISION 2006, G 3/8"	56510	
VISION 2006, NPT 3/8"	56512	
VISION 2006, O-Ring	56521	
VISION 2006, Hose nipple	56138	
Electrical connection:		
COIL and DIN connector	-166	
Turbine model:		
VISION 2008		-4F17
VISION 2008		-4F22
VISION 2008		-4F44
VISION 2008		-2F66
VISION 2006		-4F44
VISION 2006		-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 turbine meter		-56703
Remote mounted ILR-750T display (3 m cable) / Total / Flow rate / 4-20 mA output <u>Example</u> shows display with turbine meter		-56704
RF-Display ILR 701T (transmitter + receiver) / Total	 Receiver  Transmitter	-56700

Meter mounted ILR-701T display / Total / Flow rate (Display including bracket)		-56707
Meter mounted ILR-750T display / Total / Flow rate / 4.20mA output (Display including bracket)		-56705

Examples:	Code			
VISION 2008 2F66 - COIL G3/8"	56500	-166	-2F66	
VISION 2008 4F17 - COIL G3/8" with ILR701T remote (3m cable)	56500	-166	-4F17	-56703
VISION 2008 4F22 - COIL O-ring with ILR750T metermount	56520	-166	-4F22	-56705
VISION 2006 2F66 - COIL G3/8"	56510	-166	-2F66	
VISION 2006 4F44 - COIL G3/8" with ILR701T remote (3m cable)	56510	-166	-4F44	-56703
VISION 2006 4F44 - COIL O-Ring with ILR750T metermount	56521	-166	-4F44	-56705

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

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: Scalable
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

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

Control. Manage. Optimize.

Dynasonics, AquaCUE and SoloCUE are registered trademarks of Badger Meter, Inc. Other trademarks appearing in this document are the property of their respective entities. Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2021 Badger Meter, Inc. All rights reserved.