MagFlux® Q 8200 Series

ELECTROMAGNETIC FLOW METER

General

MagFlux® Q Electromagnetic Flow Meter, created in composite materials, designed with an optimized construction which secures optimal performance. MagFlux® Q provides you very stable and highly accurate flow measurements in conductive liquids, especially at low flow velocity.

MagFlux Q is constructed without outer metal parts, which makes it a perfect solution for areas that provide risk of corrosion.

MagFlux® Flow Meters have no moving parts to create hydraulic influence on the flow, use a well-proven technology, and communicate using a standard protocol.

MagFlux® Flow Sensors are available in the sizes DN 50, DN80, DN 100 and DN150 with standard construction lengths and EN flanges.

MagFlux® Flow Meters can be installed either with the converter compact mounted on the flow sensor, wallmounted or mounted in a remote panel.

Features

- Sensor in ABS Plast, no outer parts in metal
- Very high precision at low flow speed
- Hastelloy C electrodes
- High dynamic measuring range with an accuracy of up to 0,25%
- Works perfectly with classic MagFlux sensors and converters
- Low weight
- Ideal for sea water applications, e.g. aqua culture

Application

MagFlux® Q Flow Meters are used for measuring and totalizing flow of conductive liquids in pressurized closed pipe systems.

MagFlux® Q Flow Meters measures in both directions of potable water; waste water and process fluids, but also aquaculture, naval installations and other similar installations, with sea water or even heated salt water.

The high precision on very low velocity, 0,1 m/s, is making the MagFlux Q a perfect solution for district measuring wells, measuring drinking water and detect water loss even in small leaks.

DATASHEET
EN 3.0X MAGFLUX Q DATASHEET 1711

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a **xylem** brand

**Specifications
Display, Converter and
Connection box**

Display

Display	White background-lit LCD-display (64 x 128 pixels) with soft keys
Display Indication	Indication of flow , flow direction, volume, totalizers, configuration and graph
Power Supply	From MagFlux Converter
Clock	Real-time clock with built-in lithium battery (lifetime 10 years@20°C)
Communication	MODBUS® RTU-mode, 9600 baud, 2-wire RS 485, master-mode
Interface	1 pcs. RS-485 Modbus® RTU-mode 1 pcs. USB 1,1 type mini B, female 1 pcs. for Communication module
Memory Storage	32 Mb Flash memory, <345.000 loggings incl. date, time and value (curve display)
Enclosure Rating	IP 67, NEMA 6 (when mounted on Converter)
Material	Housing: Glass-reinforced Polycarbonate Protection Lid: Transparent Polycarbonate
Temperature Range	- 20 … 60 °C / -5 ... 150°F
Operating relative Humidity	Max. 85% Noncondensing
Weight	0,5 kg / 1.1lb

Converter

Accuracy	+/- 0,1% of reading
Repeatability	+/- 0,1%
Measuring Input Resolution	16 bit
Min. Liquid Conductivity	≥ 5 µS
Power Supply	24 V AC, 50 / 60 Hz ± 10 % or 230 (115) V AC, 50 / 60 Hz ± 10 % or 10-30 VDC
Power Consumption	Max. 10 W
Internal Communication	MODBUS® RTU-mode
External Communication	MODBUS® RTU-mode, 9600 baud, 2-wire RS 485, slave-mode
Interface	1 pcs. RS 485 for connection to Display Unit or PLC
Analog Output	1 pcs. Active 4 - 20 mA, galvanically isolated, 12 bit resolution, (max. load 800 Ω) Min. range = 0 - 0,2 m/s (0-0.6ft/s), Max. range = 0 - 10 m/s (0-30ft/s)
Digital Outputs	1 pcs. Voltage-free electromechanical relay (max. 50 V DC / 1 A) 1 pcs. Optically isolated MOSFET relay (max. 50 VAC / V DC / 120 mA) Programmable for: Totalizer counter, batch counter, high/low flow , empty pipe and flow direction.
Digital Inputs	One, max. 30 V DC, < 5 V DC = 0 (low), > 10 V DC = 1 (high), pulse length > 100 ms
Enclosure Rating	IP 67, NEMA 6
Material	Glass-reinforced Polycarbonate
Temperature Range	- 20 … 60 °C / -5 ... 150°F
Operating relative Humidity	Max. 85% Noncondensing
Weight	1,0 kg / 2.2lb
Approvals	CE approvals EN 61000-6-4:2007-02-14, EN 61000-6-2:2005-09-08

Connection Box

Enclosure Rating	IP 68, NEMA 6X (using gel potting kit part no. 579035). The flow meter can withstand unlimited immersion of up to 10 m of water.
Material	Glass-reinforced Polycarbonate
Temperature Range	- 20 … 100 °C / -5 ... 212°F

Dimensions Magflux® Q Sensor ABS
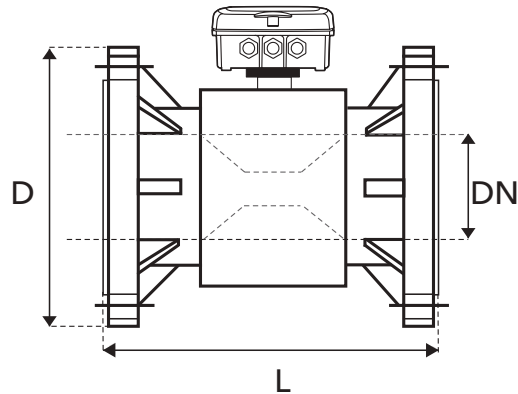
Dimensions

Magflux® Q Sensor Sizes and Dimensions Information						
Size	Pressure	D	L	Weight	Qmin	Qmax
DN	PN	[mm]	[mm]	[kg]	0,2 m/s	8 m/s
EN 1092-1 Flanges					m³/h	
50	2" 16	165	200	3,8	1,2	55
80	3" 16	200	200	5	3,6	145
100	4" 16	220	250	6,8	6	225
150	6" 16	285	300	9,2	12	500

Specifications MagFlux® Q Sensor

MagFlux® Q Sensor Specifications	
Mounting Flanges	Compatible with EN1092-1
Built-in length	Standard length according to ISO 13359
Accuracy ①	Better than ± 0,25 % @ 0,25-8 m/s
Ratio	0,5-100
Measuring Frequency	2,5 Hz
Materials	
Housing	ABS
Flanges	ABS
Measuring pipe	ABS
Lining	ABS
Electrodes ②	Hastelloy C
Temperature Range	
Medium Temperature	-20…80 °C / -4...176 °F
Ambient temperature: Compact Converter Remote Converter	-10…60 °C / 15...140 °F -20…80 °C / -4...176 °F
Enclosure	IP 67, NEMA 4, Standard IP 68, NEMA 6P (10m Wc, using the Gel potting kit 579035) - Remote Converter

① Of measured value.
② Electrodes ONLY available in Hastelloy Incl. built in ground electrode.

MagFlux™ Q Electromagnetic Flow Meter

Mounting Data

Accurate flow measurement requires a minimum of three (3) pipe diameters of straight pipe upstream and two (2) pipe diameters of straight pipe downstream from the center of the Flow Sensor.

Minimum pipe diameter distances for +/- 0,25 % accuracy

Min. 3 x Diameter inlet — *Min. 2 x Diameter outlet*
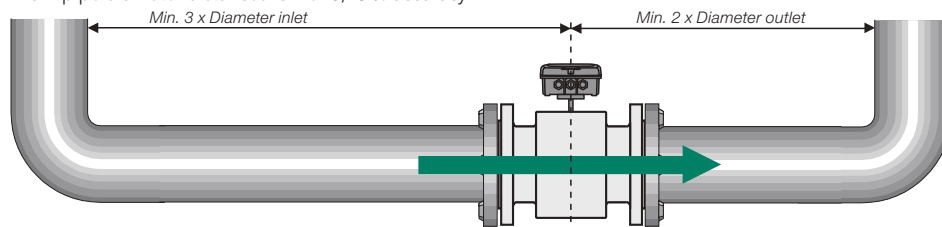
Special design allows using short build-in construction still providing very accurate flow measurement even at one (1) pipe diameter of straight pipe upstream and one (1) pipe diameter of straight pipe downstream from the center of the Flow Sensor.

Minimum pipe diameter distances for up to 0,5% accuracy

Min. 1 x Diameter inlet and 1 x diameter outlet
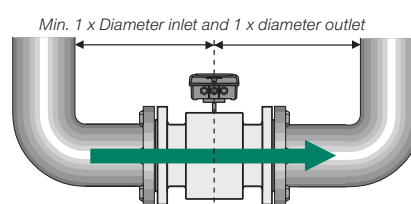
Magflux® Q Sensor Order Numbers

Sensor	
208222-016-41	MagFlux® Q 8200 Sensor ABS DN50 EN/PN16 Hastelloy C
208228-016-41	MagFlux® Q 8200 Sensor ABS DN80 EN/PN16 Hastelloy C
208231-016-41	MagFlux® Q 8200 Sensor ABS DN100 EN/PN16 Hastelloy C
208237-016-41	MagFlux® Q 8200 Sensor ABS DN150 EN/PN16 Hastelloy C

Magflux® Converter Order Numbers

| MagFlux® Converter	
Sensor mounted converter with display	
207920	MagFlux® Converter w/display unit for sensor mounting 230VAC
297920	MagFlux® Converter w/ display unit sensor mounting 115VAC
207921	MagFlux® Converter w/display unit for sensor mounting, 24VAC
207922	MagFlux® Converter w/display unit for sensor mounting, 10-30VDC
Sensor mounted converter without display	
207910	MagFlux® Converter w/o display sensor mounting, 230VAC
297910	MagFlux® Converter w/o Display unit Sensor mounting 115VAC
207911	MagFlux® Converter w/o display sensor mounting, 24VAC
207912	MagFlux® Converter w/o display sensor mounting, 10-30VDC
Sensor wall mounted converter with display	
207925	MagFlux® Converter w/display unit for wall mounting, 230VAC
297925	MagFlux® Converter w/display unit for wall mounting, 115VAC
207926	MagFlux® Converter w/display unit for wall mounting, 24VAC
207927	MagFlux® Converter w/display unit for wall mounting, 10-30VDC
Sensor wall mounted converter without display	
207928	MagFlux® Converter w/o display unit for wall mounting, 230VAC
297928	MagFlux® Converter w/o display unit for wall mounting, 115VAC
207929	MagFlux® Converter w/o display unit for wall mounting, 10-30VDC

MagFlux™ Q Electromagnetic Flow Meter

Order Numbers Accessories

Accessories	
571025	Packing 65 / 40mm for MagFlux QUAD PORON11 3.2mm m. Mounting tape
106010	Cable mounting and potting of MagFlux® Sensor, ex. cable
200062	Complete MagFlux® cabinet with blind lid, sensor mounted
200242	Mounting plate, Field Cabinet (small)
205546	Modbus and RS 485 communications module
205547	Profibus DP communication module
207930	Wall mounting kit for MagFlux®, SuSix® and Oxix®
207935	Panel Mounting Bracket for MagFlux®, SuSix® and Oxix®
207937	Surge Arrester for MagFlux® for wall mounting
207938	Surge Arrester for MagFlux® for sensor mounting
207940	Display Unit for MagFlux®, SuSix®, Oxix®
207980	MagFlux® Converter Verificator
500220	Cover for Field Cabinet (small) transparent
500221	Cover for Field Cabinet (small) Opaque
579035	MagFlux® Gel potting kit f/ sensor IP68
691075	Communication cable 2X2X0,5mm2 (AWG24) Shielded twisted pair
691080	Cable for MagFlux® sensor
691095	PC Mini USB/USB Cable
691098	USB mini/USB mini, plug for cabinet 0,2m cable
807020	Connection PCB for MagFlux
840110	MJK Field-Link

Online Information

Find the latest updated product information, video tutorials and a lot more on the website.

Use the QR code to find the website, if you use the digital version of the datasheet, just click to go straight to the electromagnetic flow measurement area.
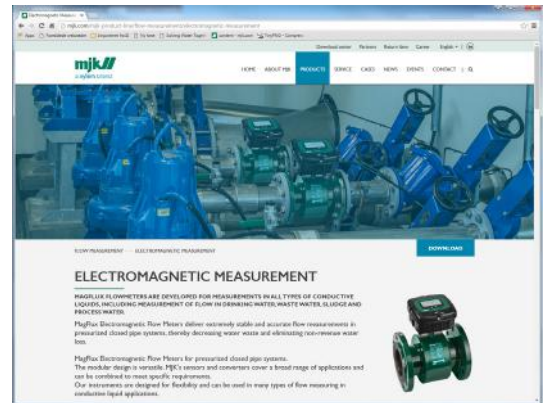
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