

“Sensing the pulse of industry”

tekMag TM08 Battery Powered Magnetic Flow Sensor With TMC010 Converter

The **tekMag TM08** Series is part of Tekflo's family of magnetic flow sensors, each having the highest signal to media noise ratio, with fast response time, but achieved with low power consumption. **tekMag TM08** amazingly operates on sizes up to 600mm (24") diameter, running merely on 4 x 3.6 Vdc lithium batteries. Solar energy systems are available.

Despite its low power consumption, **tekMagTM08's** powerful magnetizing current, complete with adjustable high exciter frequencies, ensures insignificant media noise. For example, normal coatings, such as from various chemicals, liquid food, or calcium carbonate, have virtually no effect on performance..

Cost effective basic construction options are available in carbon or stainless steel, with flanged process connections.

Production is strictly adhered and certified to ISO 9001 conditions. This assures consistent quality and guarantees to operate correctly to customized conditions straight from the packing crate.

The **tekMag TM08** has a wide range of liners, seals and electrode materials, allowing application for a wide range of chemicals, as well as water, raw sewage and similar.

The **tekMag TM08** is powered by an intelligent, internal battery powered Converter type **TMC10**, which may be either compact or remote.

All **tekMags** are supplied with Calibration Certificates traceable to The USA National Institute of Standards and Technology (NIST) and other Internationally recognized standards.

Features:

- + **tekMag TM08 with TMC10** technology provides battery power for up to 600mm (24") diameters
- + **tekMag** technology offers the highest signal : media noise ratio and fast response time
- + Suitable for permanent normal coatings of many chemicals, liquid food, calcium carbonate and similar
- + Accuracy $< \pm 1.0\%$ of reading > 0.3 m/s (1 fps)
- + Resolution to 1000th of range
- + Calibration Certificates provided with traceability to USA NIST and other international standards
- + Quality Assurance to ISO 9001
- + Custom calibration and quality guarantees operation to specification straight out of the packing crate
- + Sizes 25 – 600mm (1" – 24") with wide range of flanged process connections
- + Meets European EMC Conformity Standards EN 61326 – 1 for use in industrial locations
- + Meets European Pressure Equipment Directive – Sound Engineering Practice

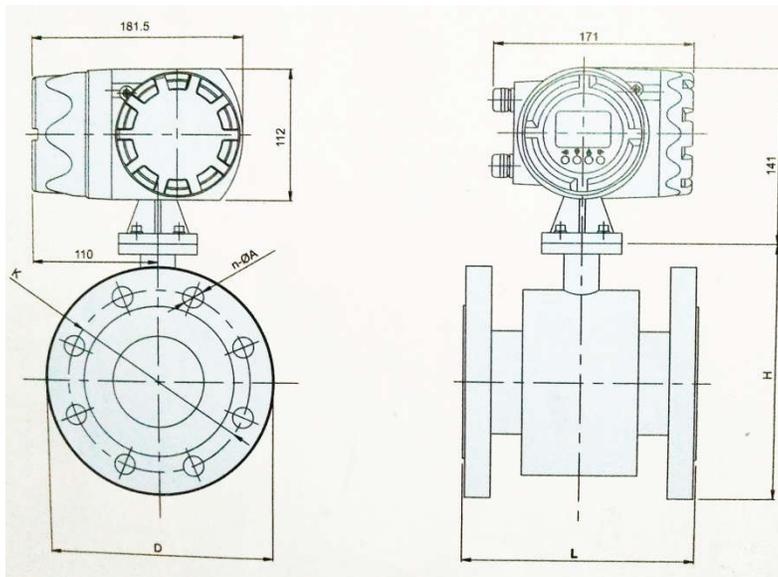


TekMag TM08 Sensor and TMC010 Converter Specification

Accuracy:	< ± 1.0% of reading > 0.3 m/s (1 fps) to 5 m/s (16 fps) < ± 0.003 m/s (0.01 fps) for < 0.3 m/s (1 fps)
Maximum mean velocity:	5 m/s (16 fps)
Sizes:	25 – 600mm diameter (1" – 24")
Max pressures:	40 bar g (580 psig) for 15 – 50mm (1/2" – 2") 16 bar g (232 psig) for 15 – 150mm (1/2" – 6") 10 bar g (145 psig) for 15 – 600mm (1/2" – 24")
Temperature range:	-10° C to + 60° C (14°F to 140°F)
Optional flanged connections:	DIN PN 10, 16, 25, 40 or ANSI 150, 300 rf, or JIS 10k, 25k, 40k flanges size dependent
European Pressure Directive:	TekMags conform to the European Pressure Directive PED97/23/EC, Article 3, Sound Engineering Practice (SEP), Table 7 Group 2, Table 8 Group 1 and Table 9, Group 2 to 10 bar g (145 psig) maximum
Media minimum conductivity:	5 micro Siemens/cm (5 micro mhos/cm)
Materials of construction:	AISI 316 non-magnetic stainless steel flow tube with various liners Epoxy coated carbon steel casing or AISI 304 stainless steel or AISI 316 stainless steel
Electrode materials:	AISI 316L stainless steel, Hastelloy B, Hastelloy C, titanium, platinum, tantalum
Electrode seals:	Viton, Kalrez
Liner materials:	Hard rubber PTFE F46 polyimide: PFA
Sensor Protection class:	IP65 /NEMA 4X weatherproof with compact converters only. For remote converters only: IP 68 protected against water immersion to 5 m w.g. for long periods. NEMA 4X weatherproof NEMA 6P protected for water immersion to 5 m w.g for long periods
Cable length:	10 m (30 feet) standard. European EMC Conformity: Meets EN 61326 – 1 Class A, Table 2 for Industrial applications
Compatible converter:	TMC10 compact or remote, bi-directional, with 6-digit rate indication and 10 digit totals. Passive pulse output for testing is included. See separate specifications.
Min and max ranges:	Min range 0 – 1m/s (0 – 3 fps) mean velocity Max range 0 – 5m/s (0 – 16fps) mean velocity
Note: Min Range m ³ / h	= 0.0028 mm nominal size ² Max Range m ³ / h = 0.014 x mm nominal size ²
Min range gpm	= 8 x inches nominal size ² Max Range gpm = 40 x inches nominal size ²
Ranges are expressed 0 – max flow rate required. Choose any range between the min and max above	
TMC10 Converter:	6-digit rate of flow indicator, 10 digit totalizer, with electrical pulse test output
Power supply:	4 x 3.6 Vdc lithium batteries
Protection:	IP 65 (NEMA 4X)
Programming:	4 keys
Operational temperature:	minus 10° to + 60° C (+18° to + 140° F)

TekMag TM08 Sensor and Compact TMC010 Converter Dimensions

Nominal Diameter		L		H		Compact Weight		Remote Weight	
mm	Ins.	mm	Ins.	mm	Ins.	kg	lbs	kg	lbs
25	1"	150	5.90"	145	5.71"	11	24	9	20
32	1.25"	150	5.90"	163	6.42"	13	29	11	24
40	1.50"	150	5.90"	173	6.81"	14	31	12	27
50	2"	200	7.87"	188	7.40"	16	35	14	31
65	2.50"	200	7.87"	203	7.99"	21	46	19	42
80	3"	200	7.87"	220	8.66"	21	46	19	42
100	4"	250	9.84"	230	9.06"	28	62	26	57
125	5"	250	9.84"	270	10.6"	30	66	28	62
150	6"	300	11.8"	303	11.9"	41	90	39	86
200	8"	350	13.8"	353	13.9"	53	117	51	112
250	10"	400	15.8"	408	16.1"	92	202	90	198
300	12"	500	19.7"	460	18.1"	110	242	108	238
350	14"	500	19.7"	518	20.4"	131	288	129	284
400	16"	600	23.6"	573	22.6"	155	341	153	337
450	18"	600	23.6"	623	24.5"	222	488	217	477
500	20"	600	23.6"	675	26.6"	239	526	220	484
600	24"	600	23.6"	745	29.3"	262	576	260	572



Note: The TMC010 Converter may be remote, max 15m (50 feet) cables
 Converter dimensions : 171mm (6.73") front face with display x 141 mm (5.55") high
 X 182mm (7.17") deep

TekMag TM08 Sensor and TMC010 Converter Ordering Code

Example: **TekMag TM08** - R - 2 - A - 1/2" - LV - 2 - A - 20feet - 200gpm - 2

<p>TekMag Converter: _____</p> <p>With compact TMC10 converter included = C With remote TMC10 converter included = R (See extra price in 'Cable Length' options below)</p> <p>Process Connections: _____</p> <p>DIN 2633 PN6 = 1 DIN 2633 PN10 = 2 DIN 2633 PN16 = 3 DIN 2633 PN25 = 4 DIN 2633 PN40 = 5 ANSI 150 rf = 6 ANSI 300 rf = 7 JIS 10k = 8 JIS 16k = 9 JIS 25k = 10 JIS 40k = 11 AWWA f f, Class D = 12</p> <p>Process Connections and Casing Material: _____</p> <p>Epoxy coated carbon steel = A AISI 304 stainless steel = B</p> <p>Sensor Diameter mm or inches _____</p> <p>15mm – 600mm = 015 - 600 for DIN or JIS flanges 1/2" – 24" for ANSI flanges = 1/2" – 24" for ANSI flanges</p> <p>Electrode Materials: _____</p> <p>AISI 316L = L, Hast C = C, Hast B = B, Titanium = T, Pt = P, Tantalum = A Note: Electrode Seals ADD V for Viton, K for Kalrez</p> <p>Liner Materials: _____</p> <p>Hard rubber = 1 PTFE = 2 FA46 polyimide = 3 PFA = 4</p> <p>Sensor Protection: _____</p> <p>IP 65 (NEMA 4X) remote or compact converter = A IP67 remote converter only = B IP68 remote converter only = C</p> <p>Cable Length: _____</p> <p>10 m (30 feet) = 1 Longer cable max 15 m (50 feet) specify = _ m or _ feet Compact converter – no cable = 2</p> <p>Flow Range: _____</p> <p>Choose any range between min and max and state units eg. 0 – 200gpm</p> <p>Grounding: _____</p> <p>2 Grounding rings = 2 No grounding necessary = 0</p>	<div style="border-top: 1px solid black; border-bottom: 1px solid black; border-left: 1px solid black; border-right: 1px solid black; height: 500px; margin: 0 auto;"></div>
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Technical Data Sheet & General Specifications

TekMag TM08 Enquiry Form

Customer's Name, Project Name, & Location:						
Detail	Sensor 1	Sensor 2	Sensor 3	Sensor 4	Sensor 5	Sensor 6
Quantity						
Media Type ADD any special notes, such as Dirty (D), Clean (C), Deionised Water(DW) Note: For energy measurement, solutions of ethylene glycol, propylene glycol, glycol substitutes, or brine, a special flow configuration is necessary. Please provide % solution by weight.....						
Typical Flow Rate With Units						
Min & Max Flow Rate With Units						
Cable Length (10m /30 feet standard) With remote TMC10 Converter						
Bi-directional (B)/ Uni-directional (U)						
Pressure Range and Units						
Temperature Range and Units						
Liquid Viscosity and Units						
Explosive Atmosphere Tot Available						
Nominal Pipe Size (N) or ID (I) Specify mm or inches						
Pipe Schedule or Wall Thickness Specify mm or inches						
Straight Pipe Runs Available						
Pipe Material Is pipe electrically isolated (Yes/No)						
Is the flow sensor to be used in an area of magnetic field ? Yes / No						
Electronics Weatherproof (WP), Local (L), or Remote (R)						
Outputs: Not Available						
Communication Networks: Not Available						
Sensor Submersible (Yes/No) If yes, to how many metres w.g.						

tekflo sensors®

Factory & Flow Laboratories:
 Block 2, #04 – 685
 Balestier Road
 Singapore 320002
 Phone: + 65 (0) 67753340
 Fax: + 65 (0) 67791626

Sales and Service: sales@tekflosensors.com
 Emergency 24-Hour Service: +65 (0) 882 692 768
 Website: www.tekflosensors.com

Specifications are subject to change without notice