

# tekflo sensors — Specification



## TekMag TMC Series Magnetic Flow Sensor Converters

The **TekMag TMC** Series of Converters is an intuitive platform for **Tekflo's** family of magnetic flow sensors. They provide each sensor with the highest signal to media noise ratio, with fast response, low power consumption, all at attractive system prices.

The unique **TekMag TMC** technology allows a comprehensive range of **Tekflo's TekMag** magnetic flow sensors to be available for a wide range of applications. Media may be drinking water, liquid food, beverages, unfiltered raw sewage, harsh chemicals, pastes and slurries. Regardless of media type, **TekMag TMC's** powerful magnetising current, complete with adjustable high exciter frequencies for optimum performance, provides a clean signal, virtually eliminating superimposed media noise. For example, normal greasy sewage coatings, or noisy mining slurries have an insignificant effect on accuracy.

Despite the high magnetising current, the power consumption is among the lowest ever achieved. This allows **Tekflo's** sizes to range from 2mm to 2000mm (5/64" to 80"), and for solid state plastic magnetic flow sensors to be available, with negligible heat generation.

**TekMag** technology achieves bi-directional flow rates ranging from drops per hour to 120,000 m<sup>3</sup>/h (470,000 gpm). Equally impressive is that sizes up to 600mm (24") may be run from the sunshine, with a mere 4 x 3.5Vdc internal lithium battery pack back-up.

Production is strictly adhered and certified to ISO 9001 conditions. This ensures consistent quality, and guarantees correct operation to customized conditions straight from the packing crate.

There is a multiple choice **TekMag TMC Converters**. There are accuracy choices of  $\pm 0.5\%$  to  $\pm 0.2\%$  of reading, as well as analog, frequency and communication protocol outputs. Power may be derived from internal batteries, external 24V dc or main power,



**TMC Intelligent Converters**  
Remote or Compact Mounting

### TekMag Technology Features:

- + Provides the highest possible signal : media noise ratio
- + Allows solid state plastic constructed sensors, with no heat generation
- + Provides the smallest sized wafer mags
- + Offers bi-directional flow rates from drops per hour to 120,000 m<sup>3</sup>/h (470,000 gpm)
- + Suitable for permanent coatings of sewage grease, calcium carbonate and similar
- + Options with solar panels having internal 4 x 3.5Vdc lithium battery back-up up to 600mm (24")
- + Allows resolution to down to 0.001 of maximum flow
- + System Calibration Certificates provide traceability to USA NIST and other international standards
- + Quality Assurance strictly to ISO 9001
- + Custom calibration guarantees correct operation to specification straight from the packing crate
- + Range of sizes 2mm – 2000mm (5/64" – 80")
- + Meets European EMC Conformity Standards EN 61326 – 1 for use in industrial locations





## TekMag TMC Specifications

Note: for a complete flow meter system specification, see appropriate **TekMag** sensor specification.

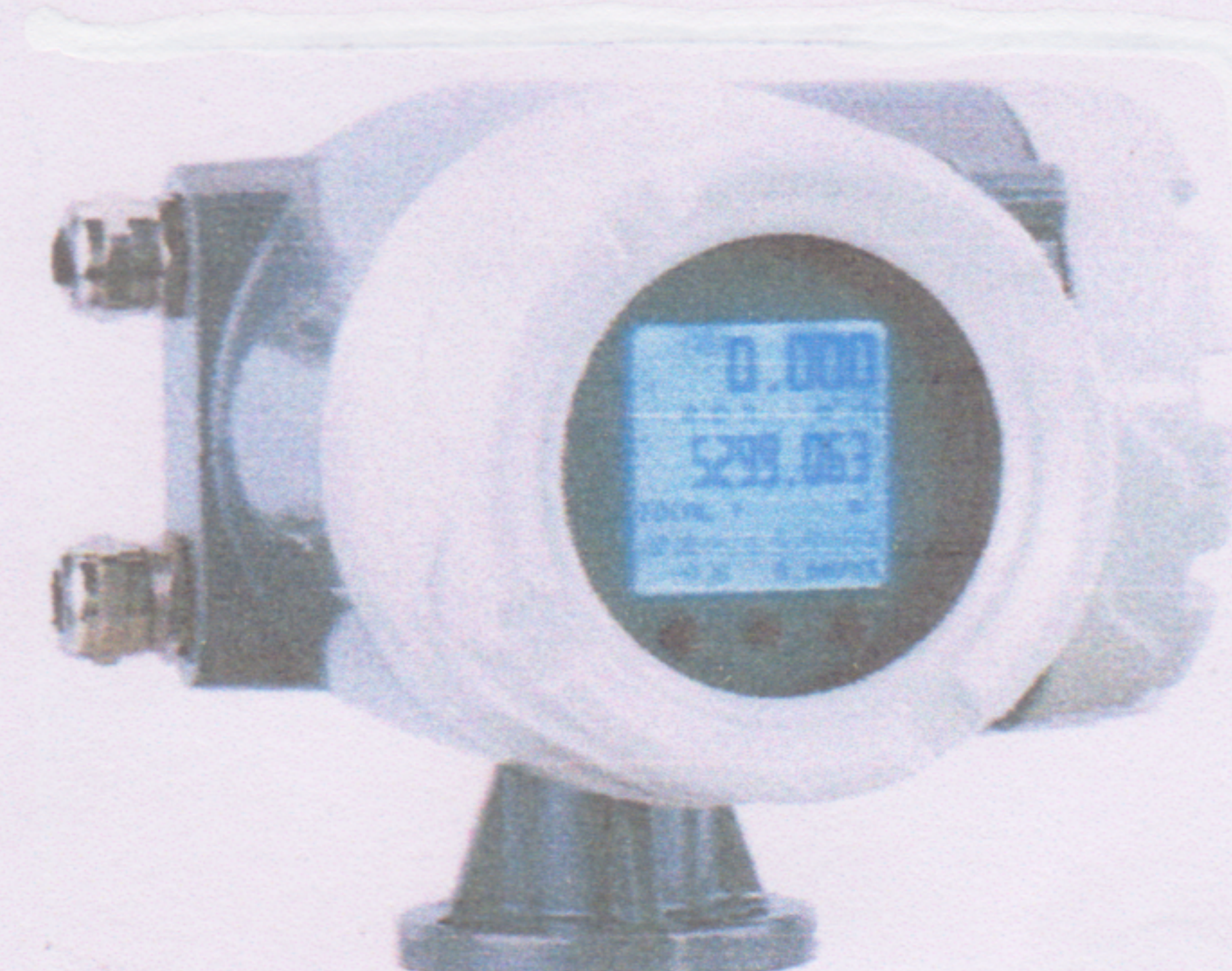
### TekMag Converter TMC03

Installation:	Compact or with remote mounting bracket
Outputs:	Bi-directional 4-20mA and active scaled pulse or frequency
Accuracy:	See appropriate <b>TekMag</b> sensor specification
Display:	6-digit LED rate of flow, 10-digit LED totals
Programming:	4 character keypad
Dimensions:	132 mm (5.20") diameter x 132 mm (5.20") length x 95mm (3.74") high
Power supply:	85 – 265 V, 50 – 60 Hz, or 24Vdc
Temperature range:	- 25° C to + 60° C (-13° F to + 140°F)
Protection Class:	IP 65 and NEMA 4X weatherproof For submersible sensors, converter must be remote
Enclosure material:	Epoxy coated aluminium
European EMC Conformity:	Meets EN61326 – Industrial Class A



### TekMag High Accuracy Converter TMC04

Installation:	Compact or with remote mounting bracket
Accuracy:	< ± 0.2% of reading > 0.1 m/s (0.33 fps) to 10 m/s (33 fps) < ±0.0002 m/s (0.00066 fps) for < 0.1 m/s (0.33 fps)
Outputs:	Bi-directional 4-20mA and active scaled pulse or frequency
Optional communication:	RS485 or HART protocol
Display:	6-digit LED rate of flow, 10-digit LED totals
Programming:	3 character keypad
Dimensions:	171mm (6.73") dia. x 182mm (7.17") dia. x 141mm (5.55") high
Power supply:	85 – 265 V, 50 – 60 Hz, or 24Vdc
Temperature range:	- 25° C to + 60° C (-13° F to + 140°F)
Protection Class:	IP 65 and NEMA 4X weatherproof For submersible sensors, converters must be remote
Enclosure:	Epoxy coated aluminium
Explosion proof:	Certificate pending
European EMC Conformity:	Meets EN61326 – Industrial Class A



### TekMag Battery Operated Converter TMC10

Installation:	Compact or remote
Accuracy:	< ± 1% of reading for > 0.3 m/s (1 fps) to 5 m/s (16 fps) < ± 0.003 m/s (0.01 fps) for < 0.3 m/s (0.01 fps)
Outputs:	None, except test output
Display:	6-digit LED rate of flow, 10-digit LED totals Bi-directional
Programming:	4 character keypad
Dimensions:	182mm (7.17") x 171mm (6.73") x 141mm (5.55") deep
Power supply:	4 x 3.6 Vdc lithium batteries
Temperature range:	- 25° C to + 60° C (-13° F to + 140°F)
Protection Class:	IP 65 and NEMA 4X weatherproof For submersible sensors, converters must be remote
Enclosure material:	Epoxy coated aluminium
European EMC Conformity:	Meets EN61326 – Industrial Class A





## TekMag General 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.....						
Min & Max Flow Rate With Units						
Power Supply : 85 – 265 Vac, 50 or 60 Hz, 24Vdc, Battery Supply – Is Solar Panel Required ?						
Cable Length (8m standard)						
Remote Converters Only						
Bi-directional (B)/ Uni-directional (U)						
Pressure Range and Units						
Temperature Range and Units						
Electrical Conductivity						
Explosive Atmosphere and Type Required						
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 fields? Yes / No						
Electronics Weatherproof (WP), IP67/NEMA 6, Local (L), or Remote (R)						
Analog and Pulse Frequency Required						
Is Communication Network Required? If yes, specify which						
Complete Energy System (Yes/No) Requires 2 temperature sensors						
Volumetric Flow Rate and Total Display Units						
Sensor Submersible (Yes/No) If yes, to how many metres w.g. Not available with temperature sensors						

Note: For energy flow applications a separate Energy Flow Computer is necessary, with an integral temperature sensor and remote temperature sensor for supply and return pipes. Both temperature sensors are matched and require 4-20mA outputs and are provided with identical TekProbe protection. Consult factory.

### tekflo sensors®

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Specifications are subject to change without notice