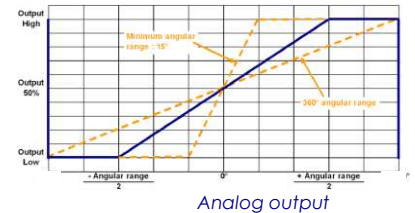
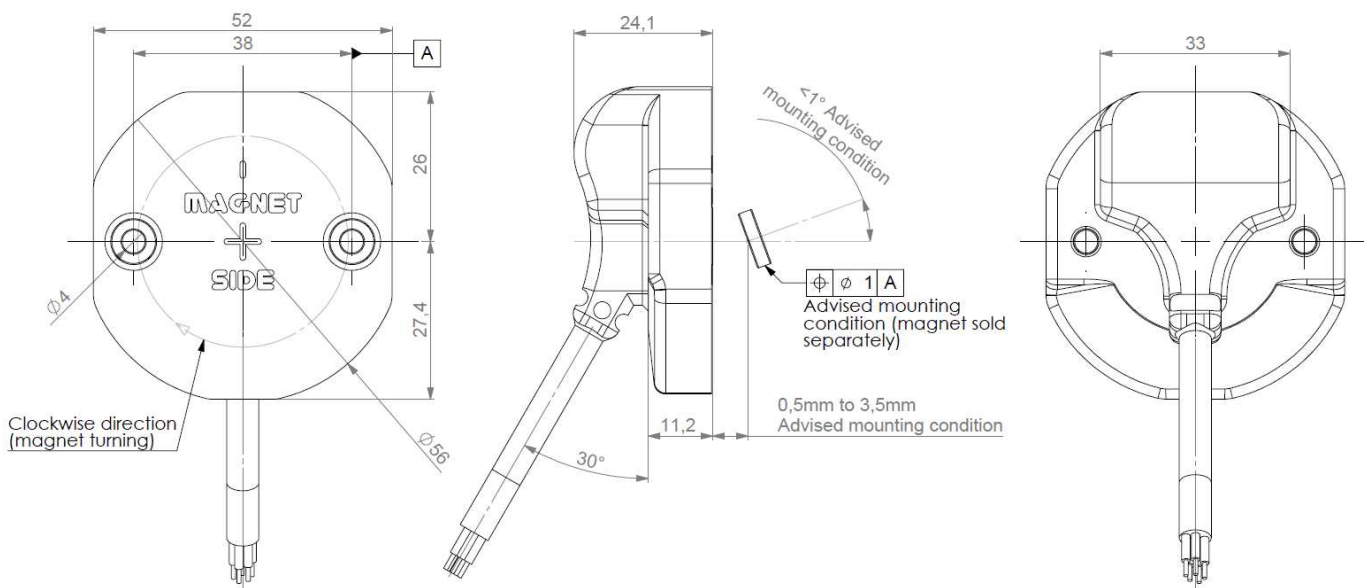


MAGNETIC ANALOG ABSOLUTE MULTI TURN MODULAR SENSORS, TCW4 RANGE

- With its modular design, the TCW4 analog absolute multi-turn sensor offers maximum flexibility when installing it.
- Application fields : agriculture, construction, forestry vehicles, medical, solar panels...
- Robustness and excellent resistance to shocks / vibrations.
- Standard IP 67 protection (IP69K option).
- Operating temperature range: -20°C to 85°C.
- Magnetic technology.
- Universal supply 5 to 30Vdc.
- Available resolution up to 12 bits per revolution.
- Turn counting up to 16 bits.
- Also available : PWM, SSI and CANopen outputs.
- Standard PUR cable output.
- Consult us for integration in particular magnetic environment (motor/brake, etc...)



STANDARD TCW4 DIMENSION



Advised mechanical working conditions (for optimal performances) :

- recommended air gap: 0,5mm to 3mm (between magnet's and sensor's faces),
- recommended parallelism : $\pm 1^\circ$ (between magnet and sensor),
- Misalignment tolerance : $\pm 0,5$ mm (between magnet's and sensor's centers).

Shaft system with magnet to be ordered separately (cf specific data-sheet M9105).

MECHANICAL DATA

Material	Macromelt OM638	Protection	IP 67
Encoder weight (approx.)	0,150 kg	Shocks (EN60068-2-27)	$\leq 2000\text{m.s}^{-2}$ (during 6 ms)
Operating temperature	- 20... + 85 °C (encoder T°)	Vibrations (EN60068-2-6)	$\leq 200\text{m.s}^{-2}$ (55 ... 2 000 Hz)
Storage temperature	- 20... + 85 °C	EMC	EN 61000-6-4, EN 61000-6-2

ADAPTATION POSSIBILITY

BEI Sensors distinguishes itself by its flexible approach and ability to react to customers needs, with us no limit exists; we shall always try to supply you the product offering the best solution to your specifications.

Modified mechanics: Precision prototypes units, small and medium size. Units that will match themselves exactly to your mechanical configuration or to your dimensional constraints.

Specific shaft system: for example with integrated coupling.

Send us your subset: we can integrate our encoder into your subset and return you the complete assembly with the guarantee of an optimal mounting.

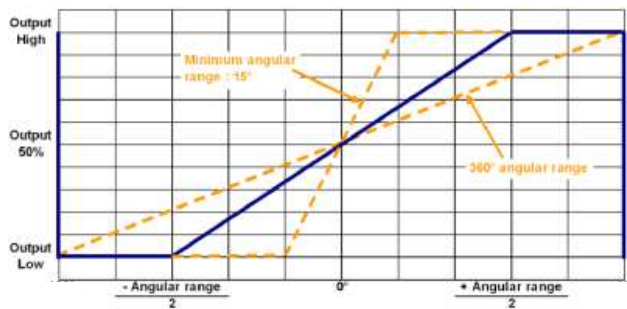
Connection / Cable assemblies: On the whole range of our sensors a wide selection of electrical connections are possible.

MAGNETIC ANALOG ABSOLUTE MULTI TURN MODULAR SENSORS, TCW4 RANGE

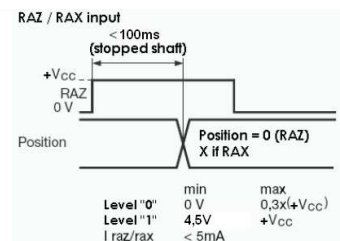
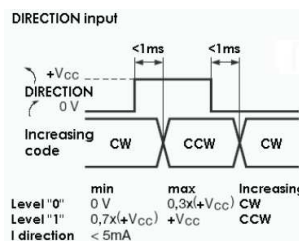
ELECTRICAL DATA

Power supply	5V or 10–30Vdc or 15-30Vdc	Introduction	< 1 s
Consumption without load	< 40mA (at 24Vdc)	Response time	< 10 ms (5L2 & 3L1 electronic)
Resolution	12 bits		< 1ms (other electronics)
Accuracy	± 0.3 %	Advised load	>10kOhms (Voltage output)
Repeatability	± 0.1 %		500Ohms (current output)

ANALOG OUTPUT



INPUTS



Nota : Do not connect other pinouts, connect DIRECTION and RAZ to a potential (RAZ at 0V if not used)

CONNECTION

	+Vcc	0V	Analog output	RAZ - Reset	Direction	Ground
L5	Brown BN	White WH	Green GN	Blue BU	Red RD	General shielding

ORDERING REFERENCE (Contact the factory for special versions, ex : stainless steel version, connections...)

	Mechanics	Supply Output stage	Direction	Resolution	Connection	Connection orientation
TCW4 : Absolute multi turn encoder	00 : Modular	3L1 : 15 to 30Vdc 0..10V output 5L2 : 10 to 30Vdc 0.5..4.5V output 3L3 : 15 to 30Vdc 4..20mA output 3L4 : 15 to 30Vdc 0..20mA output 2LR : 5V +/- 5% Ratio 10...90% voltage supply	3 : Analog output with Direction input	xxxxx : Calibrated angle in degree Ex : 03600 3600°	L5 : cable output	R020 : Radial Cable 2m
Ex: TCW4 _	00 //	3 L1	3 //	03600 //	L5	R020

Made in France