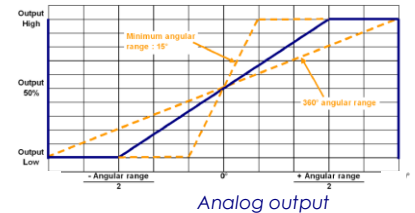
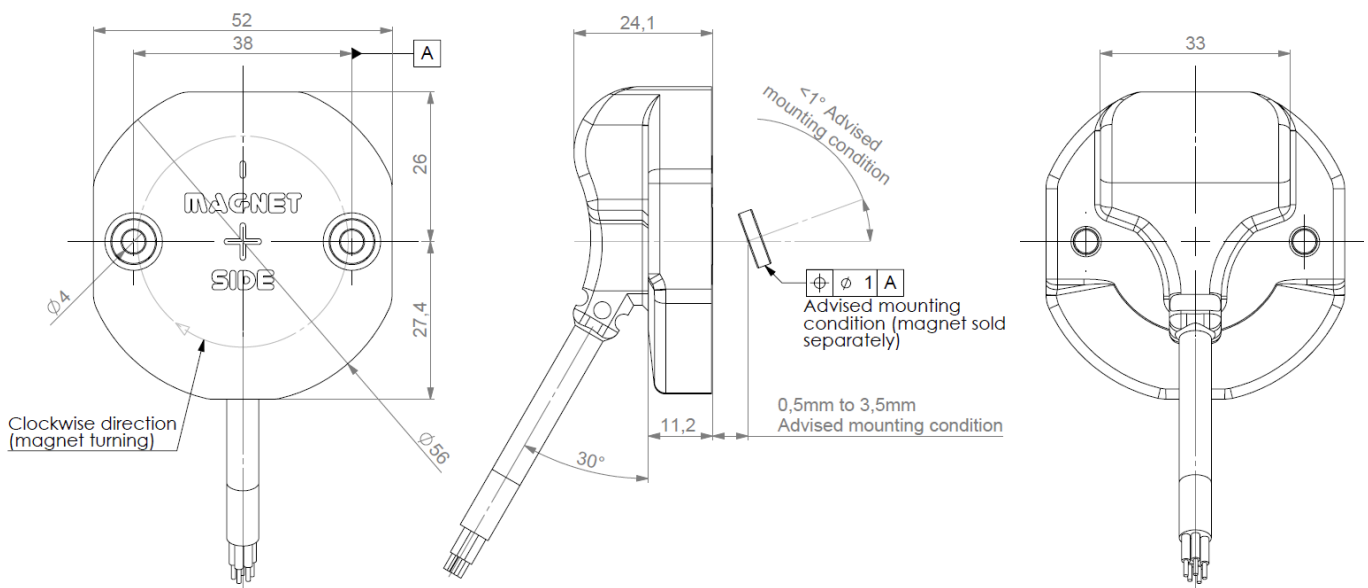


## MAGNETIC ANALOG ABSOLUTE MULTI TURN MODULAR SENSORS, TCW4 RANGE

- 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 : +/-1° (between magnet and sensor),
- Misalignment tolerance : +/-0,5mm (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)	≤ 2000m.s <sup>-2</sup> (during 6 ms)
Operating temperature	- 20... + 85 °C (encoder T°)	Vibrations (EN60068-2-6)	≤ 200m.s <sup>-2</sup> (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.

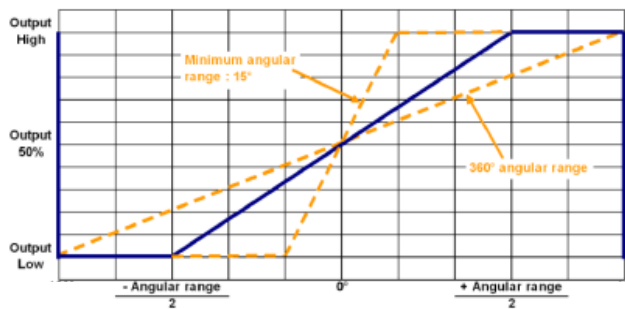
**Connection / Cable assemblies:** On the whole range of our sensors a wide selection of electrical connections are possible.

## MAGNETIC ANALOG ABSOLUTE MULTI TURN MODULAR SENSORS, TCW4 RANGE

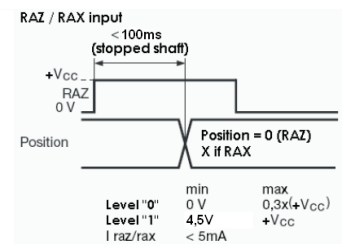
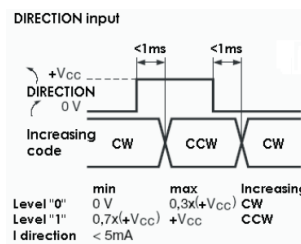
### ELECTRICAL DATA

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

Made in France