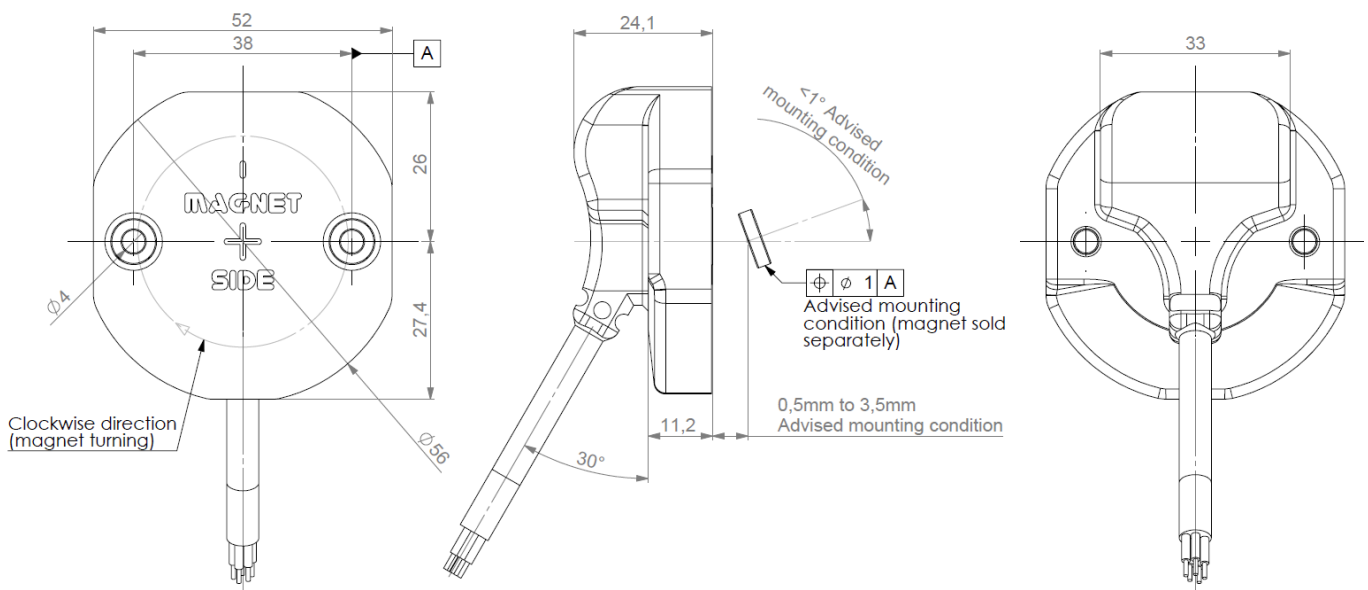


PRELIMINARY - MAGNETIC SSI ABSOLUTE MULTI TURN MODULAR SENSORS, TCW4 RANGE

- With its modular design, the TCW4 SSI 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 IP67 protection (IP69K option).
- Operating temperature range: -20°C to 85°C.
- Magnetic technology.
- Universal supply 5 to 30Vdc – SSI output interface.
- Available resolution up to 12 bits per revolution.
- Turn counting up to 16 bits (Standard 13 bits).
- Also available : analog, PWM and CANopen outputs.
- Standard PUR cable output.



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)	$\leq 2000m.s^{-2}$ (during 6 ms)
Operating temperature	- 20... + 85 °C (encoder T°)	Vibrations (EN60068-2-6)	$\leq 200m.s^{-2}$ (55 ... 2 000 Hz)
Storage temperature	- 20... + 85 °C	Max. speed	6000 min ⁻¹

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.

PRELIMINARY - MAGNETIC SSI ABSOLUTE MULTI TURN MODULAR SENSORS, TCW4 RANGE

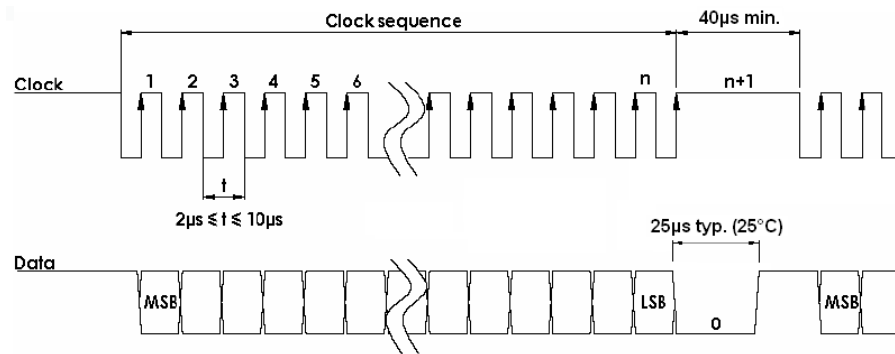


ELECTRICAL DATA

Power supply	5-30Vdc	Sampling rate*	1 kHz
Consumption without load	< 40mA (at 24Vdc)	Accuracy	± 0.3 %
Resolution in the turn	12 bits	Repeatability	± 0.1 %
Number of turns	16 bits max.	Introduction	< 1s
Total resolution	Up to 28 bits	Refresh rate	< 400µs

* Nota : Internal data refresh rate

SSI TRANSMISSION



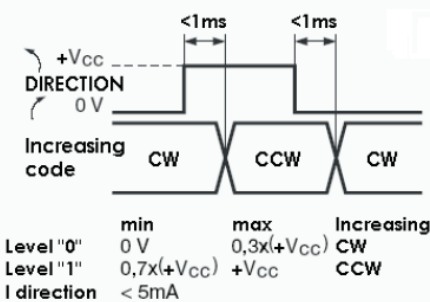
Transmission	Transmission up to 400m at 100kHz in function of the cable characteristics.
Cable	High security of transmission by using shielded cable and twisted pairs.

* Consult us for length > 100m.

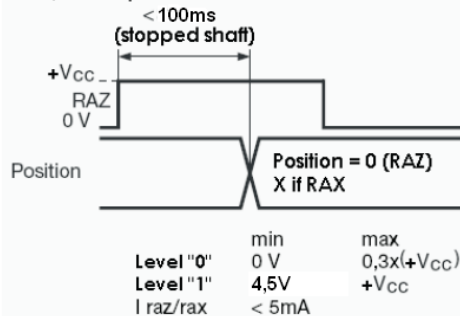
STANDARD SSI CONNECTION

Ref.	Type	+ Vcc	0 V	Clk+	Data+	RAZ	Data-	Clk-	Direction	Ground
S5	SSI cable PUR 8230/050	BN/GN Brown/Green	WH/GN White/Green	GN Green	GY Gray	BU Blue	PK Pink	BN Brown	WH White	General shielding

DIRECTION input



RAZ / RAX input



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

TCW4 ORDERING REFERENCE (Contact the factory for special versions , ex : dimensions, connections...)

	Mechanics	Supply	Output stage	Code	Resolution	Connection	Orientation
TCW4 :	00 :	P :	SS :	B :	12B13D5 :	S5 :	R005 :
Magnetic Absolute multi-turn encoder	modular	5 to 30Vdc	SSI without parity	Binary	25 bits	SSI PUR cable	50cm radial cable
				G :	12B12D4 :		
				Gray	24 bits		

Ex: TCW4_ 00 // P SS G // 12B13D5 // S5 R005

Made in France