

# FTS1

## “THROUGHT-SHAFT” MAGNETIC ANGLE ENCODER



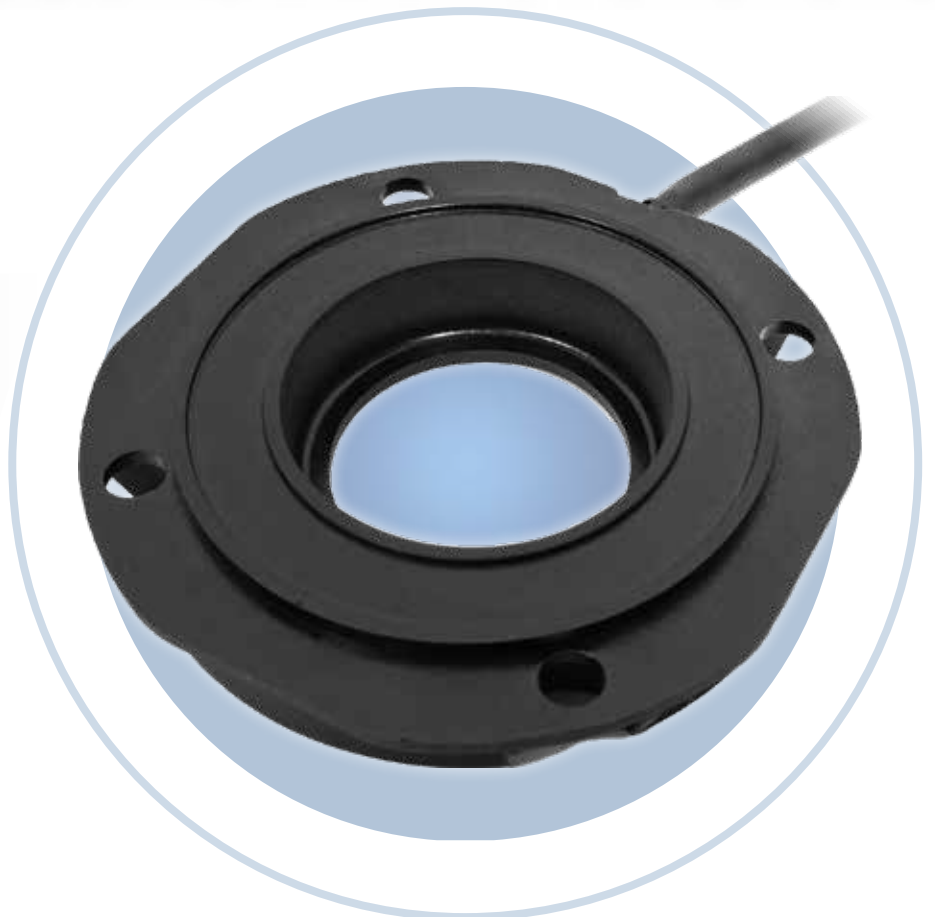
*Wear free magnetic encoder for synchronous electric motors.  
Its design and technology improve performances minimizing  
overall motor dimension.*



**FTS1** patented solution fits wide range of electric motors dedicated for Off- Highway applications, in specific traction power units.

Its innovative through shaft design, allow most compact installation whenever a brake is required on the motor.

Its algorithm is developed for solutions requiring the highest performances, optimizing total motor effectiveness.



## KEY VALUES



Shock proof



Magnetic technology



SIN/COS  
Analog Out



IP68 and IP69K  
protection class



Wide temperature  
range

| Description | P/N            |
|-------------|----------------|
| <b>FTS1</b> | <b>1109678</b> |

### Default Parameters:

Sin-Cos output

2,5V centered output

Ring magnet included



## APPLICATIONS



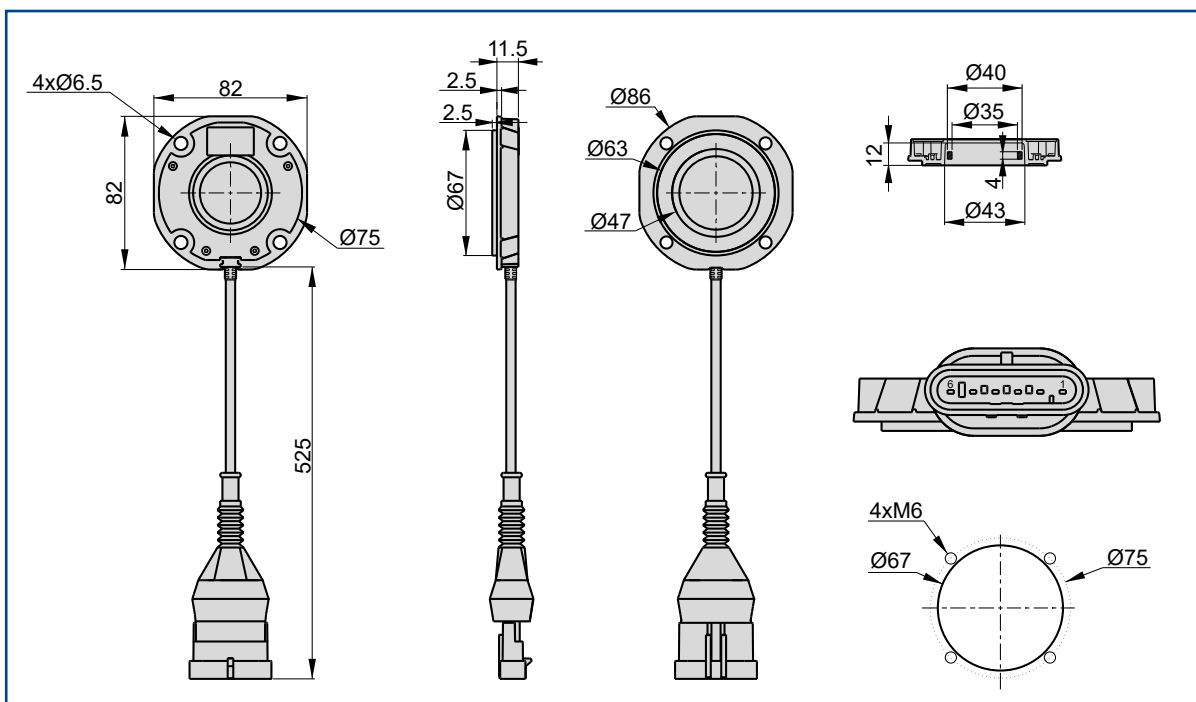
Electric motors

## TECHNICAL DATA

|                                      |                                                       |
|--------------------------------------|-------------------------------------------------------|
| <b>Measurement Range</b>             | 360° mechanical, accepting variable number of poles   |
| <b>Supply voltage</b>                | +4,5...+18Vdc.                                        |
| <b>Output signals</b>                | Sin-Cos, voltage with selectable offset and amplitude |
| <b>Accuracy</b>                      | up to 0,5°                                            |
| <b>Working temperature</b>           | -40°C ... +105°C (with 5V supply, 85°C otherwise)     |
| <b>Tracking delay</b>                | <0,01ms                                               |
| <b>Vibrations</b>                    | 20g between 10 Hz ... 2000 Hz IEC 60068-2-6.          |
| <b>Shock</b>                         | Pulse on 3 axes; 50g 11 ms IEC 60068-2-27.            |
| <b>Electromagnetic compatibility</b> | 2014/30/EU Electromagnetic Compatibility (EMC).       |
| <b>Protections and immunity</b>      | Protected against reverse polarity and short circuit  |
| <b>IP Protection Level</b>           | IP66, IP68 and IP69K                                  |

All performance data are values resulting from qualification tests on specific configuration sample production batch.  
Final product configuration, actual application and respect of installation recommendation may impact on some performance data.  
Where not differently indicated, data refer to Tamb condition test environment.

## DIMENSIONS



# ORDERING KEY

| FAMILY         | SUBFAMILY         | CASE MATERIAL                            | CONNECTOR                      | CHANNEL 1 RANGE (±)      | CHANNEL 2 RANGE (±) AND VERSE | SUPPLY VOLTAGE | OUTPUT TYPE    | SPECIAL / CUSTOM FEATURE / SW / CUSTOMER | MANUAL ZERO HALL PEN          | FACTORY LINEARITY TABLE SUPPLIED | ACCESSORIES / MAGNET TYPE          | PROJECT REVISION |
|----------------|-------------------|------------------------------------------|--------------------------------|--------------------------|-------------------------------|----------------|----------------|------------------------------------------|-------------------------------|----------------------------------|------------------------------------|------------------|
| SPEED POSITION | 1<br>Trough shaft | C<br>Plastic without sleeves             | A2<br>Pigtail AMP 6 poles 50cm | W360<br>clock wise ±xxx° | 0NOT<br>Single channel        | E<br>5-18Vdc   | 010<br>SIN-COS | 000<br>standard                          | 0<br>not available (standard) | 0<br>not supplied (standard)     | 001<br>Ring magnet DE: 40mm H: 4mm | 2                |
|                |                   | D<br>Plastic without sleeves, blind hole |                                |                          |                               |                |                |                                          |                               |                                  |                                    |                  |
|                |                   |                                          |                                |                          |                               |                |                |                                          |                               |                                  |                                    |                  |

## EXAMPLE OF RESULTING ORDERING CODE

FTS1.C.A2.W360.0NOT.E.010.000.0.0.001.2

Further possibilities available, some options are mutually exclusive, please contact our team for more details.