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| Code        | Project | Release | Title               |
|-------------|---------|---------|---------------------|
| <i>ST10</i> | A02     | В       | TECHNICAL DATASHEET |

## OPTICAL ENCODER EN38FN

## **GENERAL FEATURES**

- Incremental optical rotary encoder with small overall dimensions.
- Flange and body made of aluminium.
- Sealed cable output either radial or axial position.



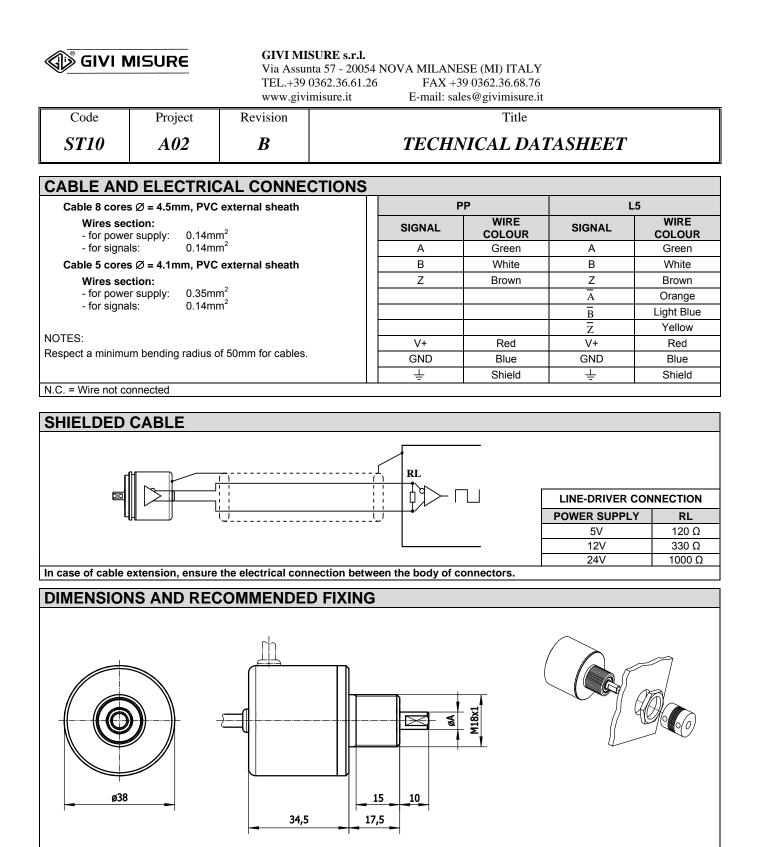
## MECHANICAL AND ELECTRICAL FEATURES

| MECHANICAL   | Cod. EN38FN                      | PP                                   | L5  |  |
|--|----------------------------------|--------------------------------------|---|--|
|  | Pulses per revolution            | from 5 to 3600 ppr                   |   |  |
| <ul><li>Flange and body made of aluminium.</li><li>Ring for high protection.</li></ul> | Max. rotating speed              | momentary<br>permanent               | 8000rpm<br>6000rpm  |  |
| Shaft made of stainless steel.   | Max. load on shaft               | 30 N (radial) – 30 N (axial)         |   |  |
| Ball bearings.   | Shaft (diameter A x length L) mm | ø6 h7 – ø8 h7                        |   |  |
| • Fixing by threaded nut M18x1.  | Protection class                 | IP65 (standard) *<br>IP67 (optional) |   |  |
| ELECTRICAL   | Operating temperature            | 0 ÷ 70° C                            |   |  |
| LECTRICAL  | Storage temperature              | -20 ÷ 80° C                          |   |  |
| <ul> <li>Protection against shortcuts.</li> </ul>                                      | Humidity                         | 20 ÷ 90 % (no                        | 20 ÷ 90 % (not condensed)   |  |
| <ul> <li>High stability of output signals.</li> </ul>                                  | Power supply                     | 5 ÷ 28V ± 10%                        |   |  |
|  | Current consumption at 5V        | 40 mA                                |   |  |
|  | Max. output current              | 40 mA                                | 70 mA   |  |
|  | Max. frequency                   | 120                                  | kHz   |  |
|  | Output                           | Push-Pull                            | Line Driver   |  |
|  | Standard length of cable         | lard length of cable 1m              |   |  |
|  | Electrical connections           | see rel. table                       |   |  |
|  | Electrical protections           |                                      | inversion of power supply polarity<br>short-circuits on output port |  |
|  | Weight                           | 80 g                                 |   |  |

\* It is important to note that shaft rotates more freely in the version with protection class IP65.

| ORDERING CODE             |              |       |                          |  |                                       |  |                                     |  |  |  |
|---------------------------|--------------|-------|--------------------------|--|---------------------------------------|--|-------------------------------------|--|--|--|
| MODEL                     | CABLE OUTPUT | PPR   | POWER SUPPLY             | SHAFT Ø                                | CABLE                                 | OUTPUT                                 | OPTIONS                             |  |  |  |
| EN38FN                    | HR           | xxxxx | 05V                      | D06                                    | M01                                   | L5 C                                   | V2                                  |  |  |  |
| HR = radial<br>HA = axial |              |       | 05V = 5∨<br>0528 = 5÷28∨ | <b>D06</b> = ø6mm<br><b>D08</b> = ø8mm | <b>M0.5</b> = 0.5m<br><b>M01</b> = 1m | L5 C = LINE DRIVER<br>PP C = PUSH-PULL | No code = standard<br>configuration |  |  |  |
|                           |              |       |                          |  | <b>M40</b> = 40m <sub>MAX</sub>       |  | V2 = protection class               |  |  |  |

Example ~ OPTICAL ENCODER EN38FN HR 00300 05V D06M01 L5 C V2



Use an elastic coupling for shaft junction.

## WHAT TO AVOID

- Any type of mechanical working (cut, drill, mill, etc.)
- Any modification either on the body or on the shaft of the encoder
- Any kind of bad usage
- External hits or stresses



Without prior notice, the products may be subject to modifications that the Manufacturer reserves to introduce as deemed necessary for their improvement.