

IEP58™

Programmable Line

- Standard dimension Ø58mm
- Hollow or solid shaft
- High resolution up to 16384 PPR
- Programmable via USB cable
- Magnetic Encoder Technology

APPLICATIONS

- Motion control
- Automated machinery
- Conveyor lines



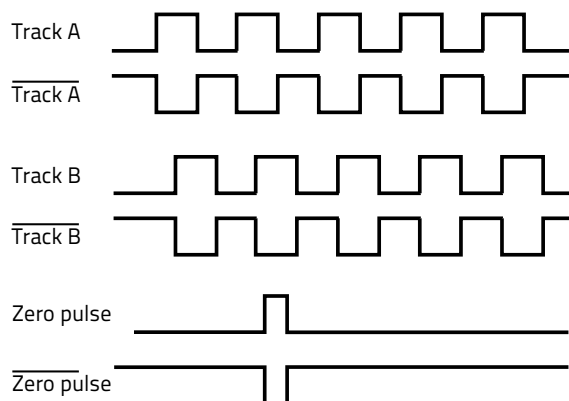
| MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS | |
|---|--|
| Case dimension | Ø 58 mm, depth 54 mm |
| Shaft dimension | Hollow Ø 14 or 15 mm, solid Ø 6, 8 or 10 mm |
| Shaft loading (axial and radial) | 100 N max. |
| Shaft rotational speed | 6000 rpm continuous, 12000 rpm temporary |
| Starting torque at 20 °C | 0,15 Ncm (S06); 0,4 Ncm (S08/S10/H14/H15) |
| Bearings life | 400 x 10 ⁶ rev. min. (10 ⁹ rev. min. with 20 N shaft loading max.) |
| Weight | 0.2 kg (7 oz) ca. |
| Case material | Aluminium anticorrosional UNI EN AW-6082 |
| Flange material | Aluminium anticorrosional UNI EN AW-6082 |
| Shaft material | Stainless steel non-magnetic UNI EN 4305 |
| Bearings material | ABEC 5 |
| Mechanical protection | IP65 |
| Shock resistance | 100g, 6 ms (MIL STD 202F) |
| Vibration resistance | 10 g, 5-2000 Hz (MIL STD 202F) |
| Operating temperature | -40 to +85°C (-40 to 185°F) |
| Storage temperature | -40 to +100°C (-40 to 212°F), 98% R.H. non condensing |

Note: specifications subject to changes without prior notice, please refer to the user manual received with the product for mounting, wiring and operation.

ELECTRICAL SPECIFICATIONS

| | |
|---------------------|--|
| Resolution | Programmable from 1 to 16384 PPR |
| Accuracy | ± 0.05° |
| Counting frequency | 500 kHz max. |
| Output signals | AB0 and /A/B/0 |
| Output circuit | Smart Push-Pull & Line Driver |
| Power supply | 5 – 30 Vdc |
| Consumption | 60 mA max. |
| Output current | 40 mA max (per each channel) |
| Connection | 12-poles shielded cable 1.5m or connector M12 or M23 |
| Protection | Polarity inversion and short circuit |
| EMC | According to EN61000-4-2 and EN61000-4-4 |
| Light source | Ga-Al diodes |
| Optoelectronic life | > 100000 hrs |

OUTPUT AND INPUT SIGNALS



The incremental encoders supply A and B, 90° phase shifted signals, and their related complement outputs.

A single channel can provide the rotation speed only, whereas two phase shifted channels can give also the rotation direction and increase resolution.

The 0 index is used as reference mark for the "home" position.

Index set: the 0 index is selectable for length 90° or 180° electrical.

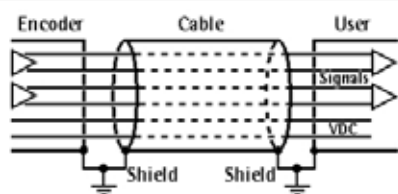
Count dir.: the count direction is selectable cw or ccw.

SDA:: serial data line carries the data bits.

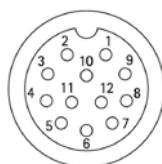
SCL: serial clock line is used for data timing.

ELECTRICAL CONNECTIONS

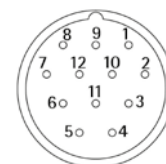
| Signal | 0Vdc | +Vdc | A | /A | B | /B | 0 | /0 | Index set | Count dir. | SDA | SCL | Ground |
|---------|-------|-------|-------|--------|------|------|------|-----|-----------|------------|-----------|----------|--------|
| Wire | White | Brown | Green | Yellow | Gray | Pink | Blue | Red | Black | Violet | Gray/Pink | Red/Blue | Shield |
| M12 pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Case |
| M23 pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Case |



12-poles cable



M12 12-pin connector

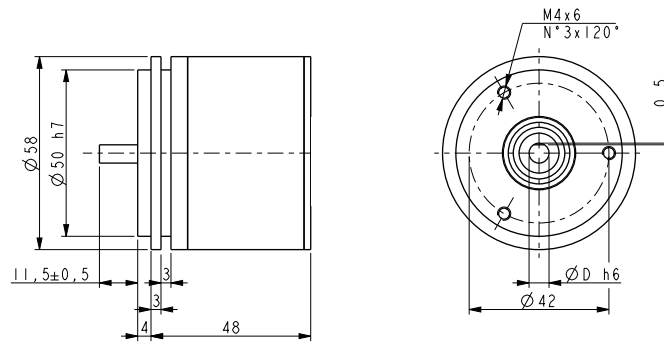


M23 12-pin cw connector

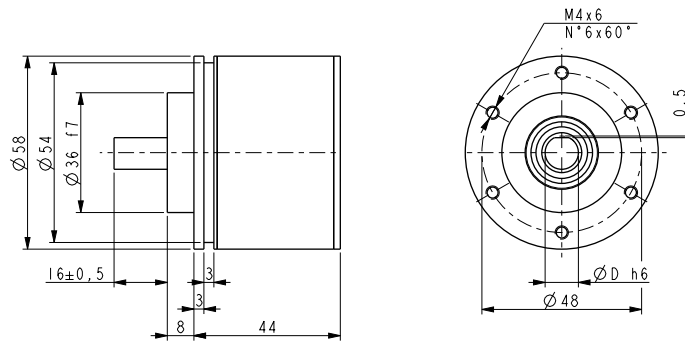
NOTE: view and pin-out of the connectors on the encoder side

DIMENSIONS

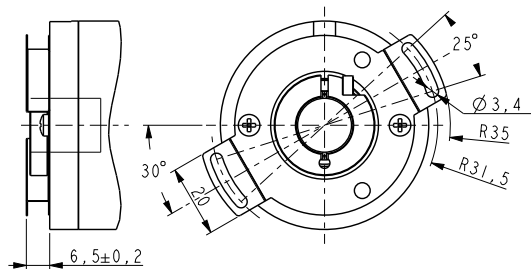
S06 VERSION



S08/S10 VERSION



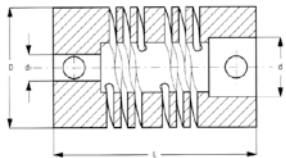
H14/H15 VERSION



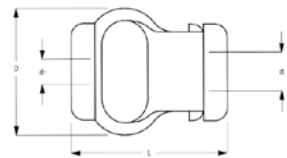
MODEL SELECTION

| SHAFT | CONNECTION | MODEL | ORDER NO. |
|---------------------------|-------------|--------------------|-----------|
| Solid shaft • Ø 6 mm | Cable 1.5 m | IEP58-S06-PROG-C15 | 95B081830 |
| | M12 conn. | IEP58-S06-PROG-M12 | 95B081840 |
| | M23 conn. | IEP58-S06-PROG-M23 | 95B081850 |
| Solid shaft • Ø 8 mm | Cable 1.5 m | IEP58-S08-PROG-C15 | 95B081860 |
| | M12 conn. | IEP58-S08-PROG-M12 | 95B081870 |
| | M23 conn. | IEP58-S08-PROG-M23 | 95B081880 |
| Solid shaft • Ø 10 mm | Cable 1.5 m | IEP58-S10-PROG-C15 | 95B081890 |
| | M12 conn. | IEP58-S10-PROG-M12 | 95B081900 |
| | M23 conn. | IEP58-S10-PROG-M23 | 95B081910 |
| Hollow shaft ○ Ø 14 mm | Cable 1.5 m | IEP58-H14-PROG-C15 | 95B081920 |
| | M12 conn. | IEP58-H14-PROG-M12 | 95B081930 |
| | M23 conn. | IEP58-H14-PROG-M23 | 95B081940 |
| Hollow shaft ○ Ø 15 mm | Cable 1.5 m | IEP58-H15-PROG-C15 | 95B081950 |
| | M12 conn. | IEP58-H15-PROG-M12 | 95B081960 |
| | M23 conn. | IEP58-H15-PROG-M23 | 95B081970 |

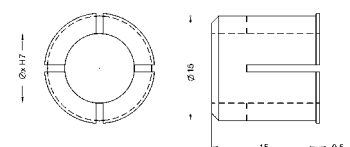
| ACCESSORIES | | |
|--|-------------------|-----------|
| DESCRIPTION | MODEL | ORDER NO. |
| IEP58 PROGRAMMING TOOL | IEP58-PROG-TOOL | 95B081980 |
| M23 PROGRAMMING CABLE | CN-M23-PROG CABLE | 95B081990 |
| M12 PROGRAMMING CABLE | CN-M12-PROG CABLE | 95B082000 |
| Flexible Aluminium coupling Ø6 mm | FAC06-06 | 95B081300 |
| Flexible Aluminium coupling Ø10 mm | FAC10-10 | 95B081310 |
| Flexible standard plastic coupling Ø6 mm | FBC06-06 | 95B081320 |
| Flexible standard plastic coupling Ø10 mm | FBC10-10 | 95B081330 |
| Encoder reducing sleeve Ø15 - 6 mm | RS15-06 | 95B081340 |
| Encoder reducing sleeve Ø15 - 8 mm | RS15-08 | 95B081350 |
| Encoder reducing sleeve Ø15 - 10 mm | RS15-10 | 95B081360 |
| Encoder reducing sleeve Ø15 - 11 mm | RS15-11 | 95B081370 |
| Encoder reducing sleeve Ø15 - 12 mm | RS15-12 | 95B081380 |
| Encoder reducing sleeve Ø15 - 9.52 mm (3/8") | RS15-3/8 | 95B081390 |
| Ø58 Encoder fixing clamps (3 kits) | ST-58-KIT | 95B081400 |
| Ø58 Encoder mounting bell | ST-58-BELL | 95B081410 |
| Ø58 Encoder mounting L-bracket | ST-58-BRKT | 95B081420 |
| Ø58 Encoder mounting square flange | ST-58-FLNG | 95B081430 |
| Incremental encoder conn. cw M23 12-poles with 5m cable | CN-M23-12P-05 | 95B081260 |
| Incremental encoder conn. cw M23 12-poles with 10m cable | CN-M23-12P-10 | 95B081270 |
| Incremental encoder conn. cw M23 12-poles without cable | CN-M23-12P-00 | 95B081280 |
| Metal M12 12-poles female conn. with 5m cable | CN-M12-12P-05 | 95B082010 |
| Metal M12 12-poles female conn. with 10m cable | CN-M12-12P-10 | 95B082020 |
| Metal M12 12-poles female connector without cable | CN-M12-12P-00 | 95B082030 |



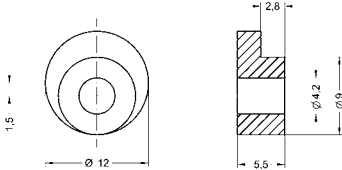
FAC06-06 (L22/D19/d6 mm)
FAC10-10 (L24/D25/d10 mm)



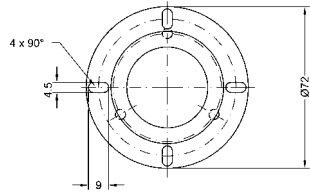
FBC06-06 (L29/D22/d6 mm)
FBC10-10 (L29/D22/d10 mm)



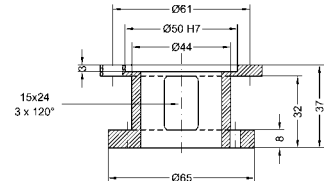
RS15-xx (int. Ø as specified in description)



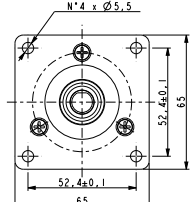
ST58-KIT



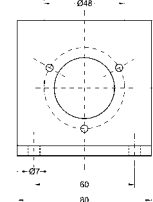
ST-58-BELL



ST-58-BRKT



ST-58-FLNG



ST-58-FLNG

