

REM-100BA0T-5C13S12M-H1181  
Absolute Rotary Encoder - Multiturn  
Industrial Line



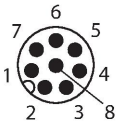
Technical data

|                                        |                                               |
|----------------------------------------|-----------------------------------------------|
| Type                                   | REM-100BA0T-5C13S12M-H1181                    |
| ID                                     | 100011286                                     |
| Measuring principle                    | Magnetic                                      |
| General data                           |                                               |
| Max. Rotational Speed                  | 4000 rpm                                      |
| Moment of inertia of the rotor         | $6 \times 10^{-6} \text{ kgm}^2$              |
| Starting torque                        | $< 0.01 \text{ Nm}$                           |
| Repetition accuracy                    | $\pm 0.2^\circ \text{ At } 25^\circ \text{C}$ |
| Absolute accuracy                      | $\pm 1^\circ \text{ At } 25^\circ \text{C}$   |
| Output type                            | Absolute multiturn                            |
| Resolution singleturn                  | 13 Bit                                        |
| Resolution multiturn                   | 12 Bit                                        |
| Electrical data                        |                                               |
| Operating voltage $U_B$                | 10...30 VDC                                   |
| No-load current                        | $\leq 40 \text{ mA}$                          |
| Short-circuit protection               | yes                                           |
| Wire break/reverse polarity protection | yes                                           |
| Communication protocol                 | SSi                                           |
| Output function                        | Binary coded                                  |
| Mechanical data                        |                                               |
| Flange type                            | Flange with mounting element                  |
| Flange diameter                        | $\varnothing 36 \text{ mm}$                   |
| Shaft Type                             | Blind hole shaft                              |
| Shaft diameter D (mm)                  | 6.35                                          |
| Shaft diameter D                       | 0.25 in                                       |
| Shaft Length L [mm]                    | 18.5                                          |

Features

- Flange with mounting element
- Blind hole hollow shaft,  $\varnothing 6.35 \text{ mm}$  (plug-in depth max. 18.5 mm)
- Magnetic measuring principle
- Shaft material: stainless steel
- Protection class IP67 on housing and shaft side
- $-40 \dots +85^\circ \text{C}$
- Max. 4000 rpm (continuous operation 2000 rpm)
- Energy harvesting technology
- 10...30 VDC
- SSI, binary
- M12  $\times$  1 male, 8-pin
- Singleturn, 13-bit resolution
- Multiturn, 12-bit resolution

Wiring diagram



Technical data

|                                          |                        |
|------------------------------------------|------------------------|
| Outer diameter of compression fitting D1 | 24 mm                  |
| Shaft material                           | Stainless steel        |
| Housing material                         | Die-cast zinc          |
| Electrical connection                    | Connector, M12 × 1     |
|                                          | M12, 8-pin             |
| Axial shaft load                         | 20 N                   |
| Radial shaft load                        | 40 N                   |
| Environmental conditions                 |                        |
| Ambient temperature                      | -40...+85 °C           |
| Vibration resistance (EN 60068-2-6)      | 300 m/s², 10...2000 Hz |
| Shock resistance (EN 60068-2-27)         | 2500 m/s², 6 ms        |
| Protection class                         | IP67                   |
| Protection class shaft                   | IP67                   |

Accessories

| Dimension drawing | Type           | ID      |                                                                                                                                                                                                                                            |
|-------------------|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | E-RKC 8T-264-2 | U-04781 | Connection cable, female M12, straight, 8-pin (twisted pairs), shielded, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |

