## Type 7030 with ATEX approval


### One type for every situation:

- **Version "flameproof-enclosure":** approval 1, 2 and 21, 22
- **Zone 1, 2 and 21, 22:** Ex II 2G EEx d II C T6 and Ex II 2D IP6x T85°C
- **High resolution:** max. 5000 ppr.
- **Choice of construction:** Through hollow shaft or solid shaft up to max. ø 12 mm.

### Compact:

- **Can be used even where space is tight:** installation depth only 94 mm, minimal clearance required - thanks to through hollow shaft

### Safe:

- **Easy start-up,** short-circuit proof outputs, reverse polarity protection, overvoltage protection
- **No malfunction if voltage is too high**

**Mechanical characteristics:**

| | |
|---|---|
| Speed: | max. 6000 $min^{-1}$ |
| Rotor moment of inertia: | approx. 15 x $10^{-6}$ $kgm^2$ |
| Starting torque: | < 0.05 Nm |
| Radial load capacity of shaft: | 80 N |
| Axial load capacity of shaft:: | 40 N |
| Weight: | approx. 1.2 kg |
| Protection acc. to EN 60 529: | IP 65 |
| EX approval for hazardous areas: | ATEX,<br>Explosion proof zone 1 and 21<br>ExII2GEExdIICT6 and ExII2DIP6xT85°C |
| Working temperature: | -20° C ... +60 °C[1)] |
| Shaft: | stainless steel |
| Shock resistance acc. to DIN-IEC 68-2-27 | 1000 m/s2. 6 ms |
| Vibration resistance acc. to DIN-IEC 68-2-6: | 100 m/s2, 10 ... 2000 Hz |

[1)] Non-condensing

**Please note!**

– All standards for installation of electrical systems in hazardous environments have to be observed.

– Manipulations (opening, mechanical treatment etc.) will cause the loss of the EX–license, warranty claims will not be accepted and the installer will be responsible for any consequential damages.

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### Electrical characteristics:

| | | |
|---|---|---|
| Output circuit: | RS 422 (TTL-compatible) | Push-pull |
| Supply voltage: | 5 V (±5 %) or 10 ... 30 V DC | 10 ... 30 V DC |
| Power consumption (no load) without inverted signal: | - | typ. 55 mA / max. 125 mA |
| Power consumption (no load) with inverted signals: | typ. 70 mA / max. 90 mA | typ. 80 mA/ max.150 mA |
| Permissible load/channel: | max. ±20 mA | max. ±30 mA |
| Pulse frequency: | max. 300 kHz | max. 300 kHz |
| Signal level high: | min. 2.5 V | min. $U_B$ –2.5 V |
| Signal level low: | max. 0.5 V | max. 2.0 V |
| Rise time tr | max. 200 ns | max. 1 µs |
| Fall time tf | max. 200 ns | max. 1 µs |
| Short circuit proof outputs:[1)] | yes[2)] | yes |
| Reverse connection protection at UB: | no | yes |
| Conforms to CE requirements acc. to EN 61000-6-2, EN 61000-6-4 and EN 61000-6-3 | | |
| RoHS compliant acc. to EU guideline 2002/95/EG | | |

1) If supply voltage correctly applied
2) Only one channel allowed to be shorted-out:
(If UB=5 V, short-circuit to channel, 0 V, or +UB is permitted)
(If UB=5-30 V, short-circuit to channel or 0 V is permitted)

### Terminal assignment

| Signal: | 0V | 0V Sensor[2)] | $+U_B$ | $+U_B$ Sensor[2)] | A | $\overline{A}$ | B | $\overline{B}$ | 0 | $\overline{0}$ | Shield |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Colour: | WH | GY PK | BN | RD BU | GN | YE | GY | PK | BU | RD | PH[1)] |
| | | | | | | | | | | | |

1) PH = Shield is attached to connector housing

2) Sensor cables are connected to the supply voltage internally if long feeder cables are involved they can be used to adjust or control the voltage at the encoder

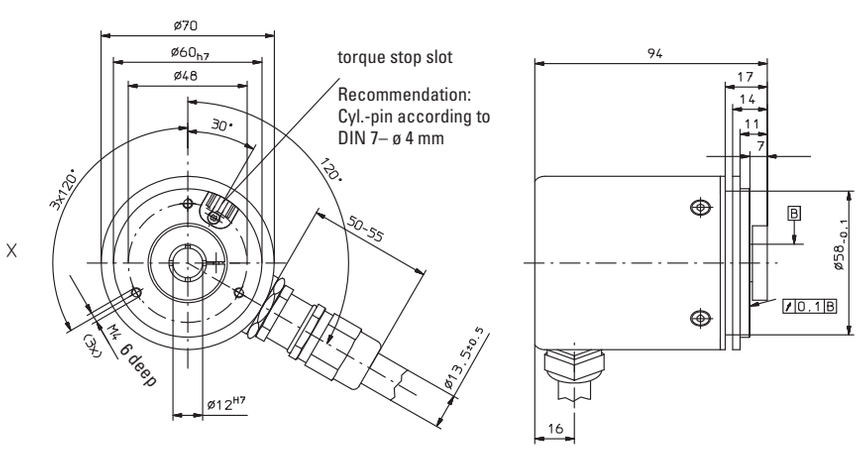
- If sensor cables are not in use, they have to be isolated or 0 $V_{Sensor}$ has to be connected to 0 V and $U_{BSensor}$ has to be connected to $U_B$

- Using RS 422 outputs and long cable distances, a wave impedance has to be applied at each cable end.

Isolate unused outputs before initial startup.

### Dimensions hollow shaft version:

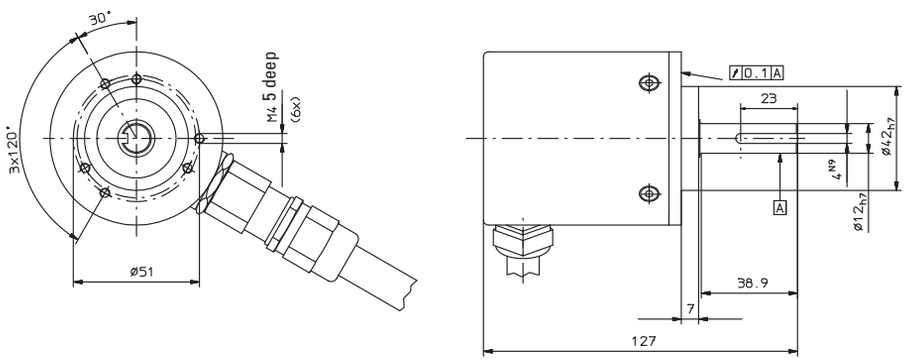
8.7030.14xx



## Type 7030 with ATEX approval

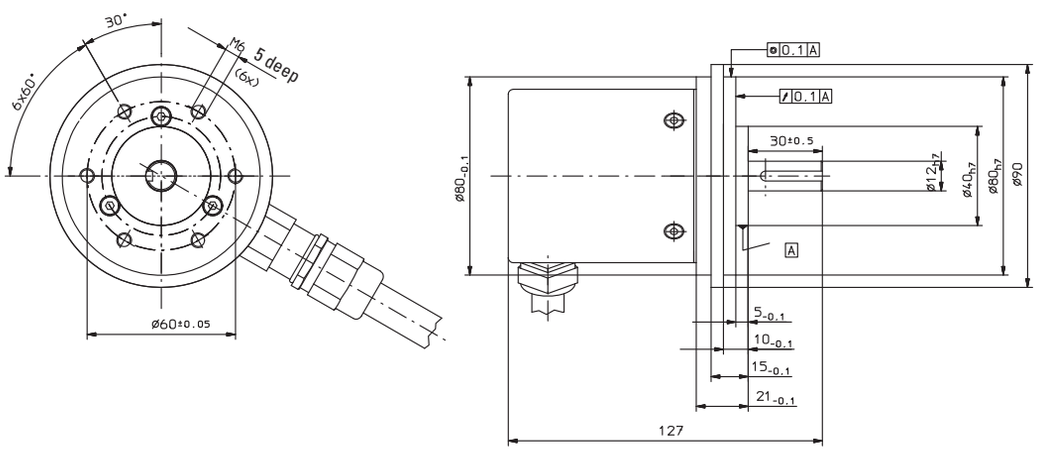
**Dimensions shaft version:**

8.7030.25xx



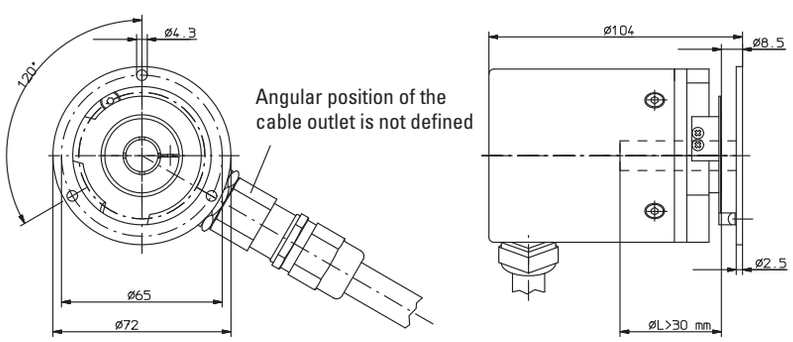

**Dimensions shaft version:**

8.7030.26xx




**Dimensions hollow shaft version:**

8.7030.27xx



## Type 7030 with ATEX approval

**Order code:**

8.7030.XXXX.XXXX

Type

Flange and hollow shaft or shaft
- 14 = Synchronous flange with hollow shaft ø 12 mm
- **25 = Clamping flange with shaft ø 12 mm**
- 26 = Clamping flange with shaft ø 12 mm and mounted flange adapter
- **27 = Stator coupling with Hollow shaft ø 12 mm**

Pulse rate
25, 50, 60, 100, 125, 200, 250, 256, 300, 360, 500, 512, 600, 720, 800, 1000, 1024, 1200, 1250, 1500, 2000, 2048, 2500, 3000, 3600, 4000,
(e.g. 250 pulses=> 0250)
Other pulse rates on request

Type of connection
- **2 = Cable radial (2 m PVC-cable) other cable lengths on request**

Output circuit and voltage supply
- **1 = RS 422 (with inverted signal) 5 V supply voltage**
- 2 = Push-pull (without inverted signal) 10 ... 30 V supply voltage
- **3 = Push-pull (with inverted signal) 10 ... 30 V supply voltage**
- 4 = RS 422 (with inverted signal) 10 ... 30 V supply voltage

*Preferred types are indicated in* ***bold***

**Accessories:**
Cables and connectors, also pre-assembled, can be found in the chapter Connection Technology
Mounting attachments and couplings can be found in the chapter Accessories