

## TG 74 d

Ex approval ATEX II 2 G Ex db eb IIC T6 Gb

Solid shaft  $\varnothing 14$  mm with EURO flange B10

### Overview

- Tachogenerator / ATEX
- Ex-approved by ATEX II 2 G Ex db eb IIC T6 Gb
- Low response time
- Solid shaft  $\varnothing 14$  mm
- EURO flange B10
- High signal quality due to patented LongLife technology
- Recognition of sense of rotation



**HUBNER**  
BERLIN  
A Baumer Brand

### Technical data

#### Technical data - electrical ratings

|                                |                                          |
|--------------------------------|------------------------------------------|
| Reversal tolerance             | $\leq 0.1$ %                             |
| Linearity tolerance            | $\leq 0.15$ %                            |
| Temperature coefficient        | $\pm 0.06$ %/K (open-circuit)            |
| Isolation class                | B                                        |
| Calibration tolerance          | $\pm 5$ %                                |
| Climatic test                  | Humid heat, constant (IEC 60068-2-3, Ca) |
| Performance                    | 12 W (speed $\geq 5000$ rpm)             |
| Armature-circuit time-constant | $< 150$ $\mu$ s                          |
| Voltage                        | 20...150 mV per rpm                      |
| Interference immunity          | EN 61000-6-2                             |
| Emitted interference           | EN 61000-6-3                             |
| Approval                       | CE<br>ATEX                               |

#### Technical data - mechanical design

|               |                                 |
|---------------|---------------------------------|
| Size (flange) | $\varnothing 115$ mm            |
| Shaft type    | $\varnothing 14$ mm solid shaft |

#### Technical data - mechanical design

|                         |                                                                                    |
|-------------------------|------------------------------------------------------------------------------------|
| Flange                  | EURO flange B10                                                                    |
| Protection EN 60529     | IP 54 (T6)                                                                         |
| Torque                  | 1.5 Ncm                                                                            |
| Rotor moment of inertia | 1.15 kgcm <sup>2</sup>                                                             |
| Admitted shaft load     | $\leq 60$ N axial<br>$\leq 80$ N radial                                            |
| Material                | Aluminium die cast alloy<br>Shaft: stainless steel                                 |
| Ambient temperature     | -20...+55 °C                                                                       |
| Resistance              | IEC 60068-2-6<br>Vibration 10 g, 10-2000 Hz<br>IEC 60068-2-27<br>Shock 300 g, 6 ms |
| Corrosion protection    | IEC 60068-2-52 Salt mist<br>for ambient conditions C4 according to ISO 12944-2     |
| Explosion protection    | II 2 G Ex db eb IIC T6 Gb (gas)                                                    |
| Weight approx.          | 3.8 kg                                                                             |
| Connection              | Screw terminal connector                                                           |

## TG 74 d

Ex approval ATEX II 2 G Ex db eb IIC T6 Gb

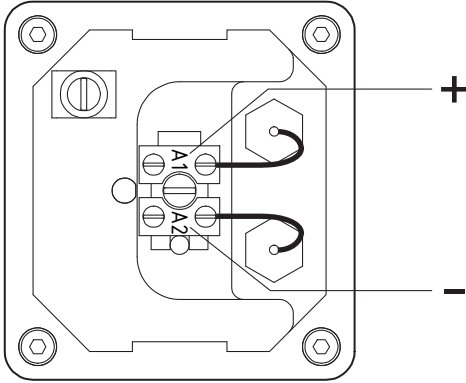
Solid shaft  $\varnothing 14$  mm with EURO flange B10

### Terminal assignment

**View A** (see dimension)

Connecting terminal

Polarity for positive rotating direction

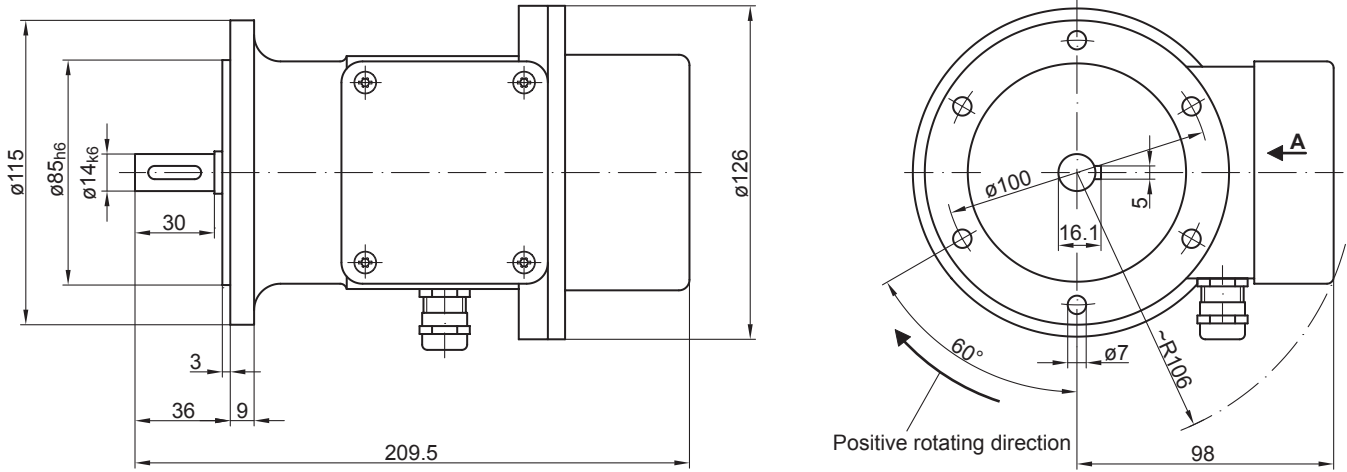


## TG 74 d

Ex approval ATEX II 2 G Ex db eb IIC T6 Gb

Solid shaft  $\varnothing 14$  mm with EURO flange B10

### Dimensions



## TG 74 d

Ex approval ATEX II 2 G Ex db eb IIC T6 Gb

Solid shaft ø14 mm with EURO flange B10

### Ordering reference

| Product        | TG74-## |
|----------------|---------|
| Tachogenerator | TG74-   |
| <b>Voltage</b> |         |
| 20 mV per rpm  | 2d      |
| 40 mV per rpm  | 4d      |
| 60 mV per rpm  | 6d      |
| 100 mV per rpm | 10d     |
| 150 mV per rpm | 15d     |

### Data according to type

| Type     | Voltage (DC) | At current | Minimum load required depending on speed range [rpm] |                      |                            | Maximum operating speed | Armature resistance | Armature inductance |
|----------|--------------|------------|------------------------------------------------------|----------------------|----------------------------|-------------------------|---------------------|---------------------|
|          | U [mV/rpm]   | I [mA]     | 0-3000<br>$R_L$ [kΩ]                                 | 0-6000<br>$R_L$ [kΩ] | 0- $n_{max}$<br>$R_L$ [kΩ] | $n_{max}$ [rpm]         | $R_A$ (20°C) [Ω]    | $L_A$ [mH]          |
| TG74-2d  | 20           | 200        | ≥0.3                                                 | ≥1.2                 | ≥2.2                       | 8000                    | 9.2                 | 45                  |
| TG74-4d  | 40           | 100        | ≥1.2                                                 | ≥4.8                 | ≥8.6                       | 8000                    | 38                  | 170                 |
| TG74-6d  | 60           | 66         | ≥2.7                                                 | ≥11                  | ≥15                        | 7000                    | 86                  | 390                 |
| TG74-10d | 100          | 40         | ≥7.5                                                 | —                    | ≥15                        | 4200                    | 235                 | 1080                |
| TG74-15d | 150          | 27         | —                                                    | —                    | ≥16                        | 2800                    | 575                 | 2420                |

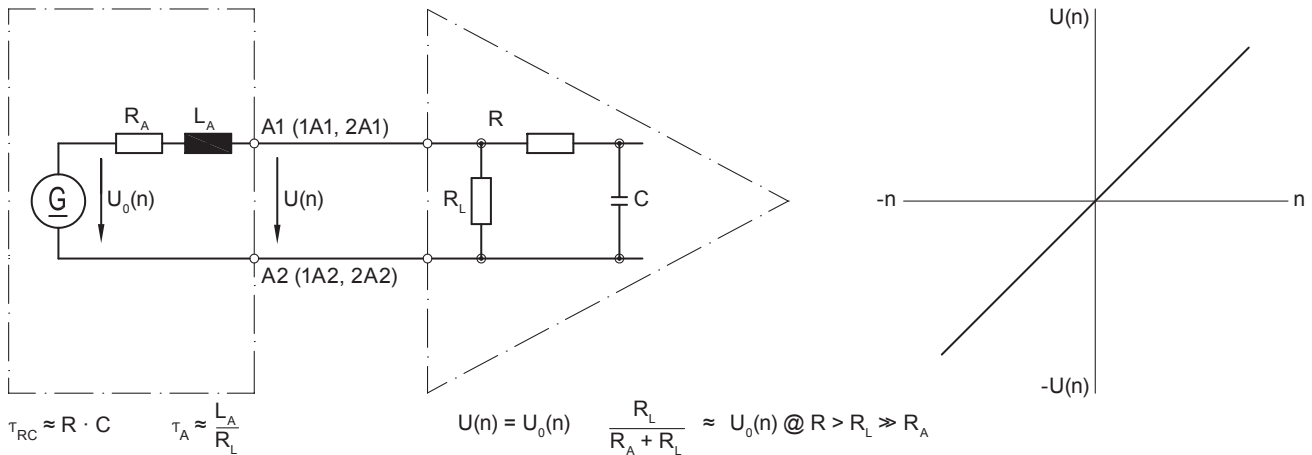
Superimposed ripple (for  $\tau_{RC} = 0.7$  ms):

≤0.6% (peak-peak)

≤0.2% (rms)

### Equivalent circuit diagram

Tachogenerator



Polarity for positive rotating direction (see dimension) / A1 (1A1, 2A1): + (VDE) / A2 (1A2, 2A2): - (VDE)

### Accessories

#### Mounting accessories

Spring disk coupling K 35 (shaft ø6...12 mm)

Spring disk coupling K 50 (shaft ø11...16 mm)

Spring disk coupling K 60 (shaft ø11...22 mm)