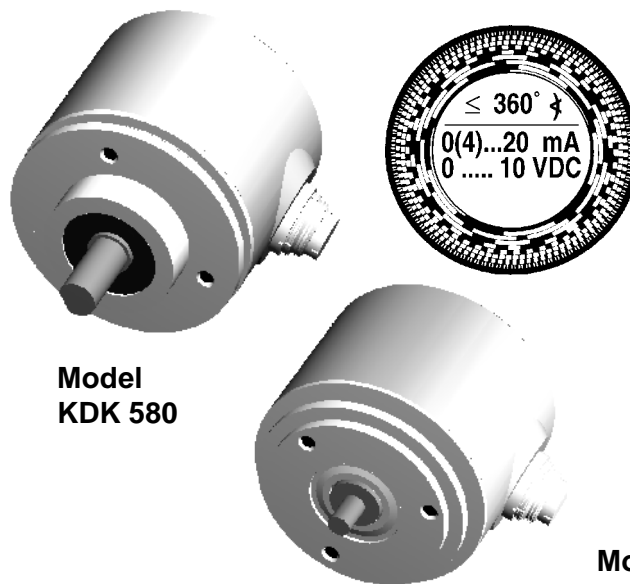


- **Contactless electro-optical sensor system**
- **Minimum measuring range 0 to 15°**
- **Maximum measuring range 0 to 360°**
- **With 12 Bit D/A-Converter**
- **Four different signal outputs at option:
0 (4) to 20 mA or 0 to 10 VDC or ±10 VDC**
- **Protection grades IP 65 (KDS) and IP 66 (KDK)**
- **Model KDS 580 with synchron flange
Model KDK 580 with clamping flange**



**Model
KDK 580**

**Model
KDS 580**

Construction

Flange and case in aluminium - shaft in stainless steel - ball-bearings with Nilos ring or radial packing ring seal - code disc in plastic or glass - GaAlAs diode and phototransistor array - gate array - 12 Bit D/A converter - SMD technology.

Standard

measuring ranges: **15°, 30°, 45°, 60°, 75°, 90°,
105°, 180°, 270°, 360°**

Ranges within the field of 15° to 360° can be made available.

Electrical Data

(Valid for both versions unless otherwise stated)

- Signal sense: CW or CCW
- Supply voltage range V_s : +21,5 to +32 VDC or
 ±13 to ±16 VDC
- Supply current I_s : 90 mA typ. / 110 mA max.
- Linearity : 0.5 % or 0,25 %
- Temperature drift: 0.0015 % /K typ.
- Stability: ≤ 0,1 % within 24 hours
- Measuring frequency: < 1 kHz
- EMC-Standards: EN 50081-2, EN 50082-2

Current output

- Accuracy
 - at starting point 0 mA: 0 mA ± 10 µA typ / ± 15 µA max.
 4 mA: 4 mA ± 10 µA typ / ± 15 µA max.
 - at end point 20 mA: 20 mA ± 5 µA typ / ± 15 µA max.
- Load resistance: 0 to 500 Ω

Voltage output

- Accuracy
 - at starting point 0 V: 0 V ±2.5 mV typ. / ±7.5 mV max.
 - at end point 10 V: 10 V ±2.5 mV typ. / ±7.5 mV max.
- Output current : 5 mA max. When load resistance
 > 2 kΩ (short circuit proof)

Calibrated output signals

| Type | output signal | V_s | Signal sense | midpoint |
|---------|-----------------|---------------|--------------|----------|
| KD. 581 | 0 ... 20 mA | 21,5 ... 32 V | CW | 10 mA |
| KD. 582 | | | CCW | |
| KD. 583 | 4 ... 20 mA | 21,5 ... 32 V | CW | 12 mA |
| KD. 584 | | | CCW | |
| KD. 585 | ± 10 V | ±13 ... ±16 V | CW | 0 V |
| KD. 586 | | | CCW | |
| KD. 58A | 0 ... 10 V | 21,5 ... 32 V | CW | 5 V |
| KD. 58B | | | CCW | |
| KD. 589 | Special variant | | | |

All data apply to both models.

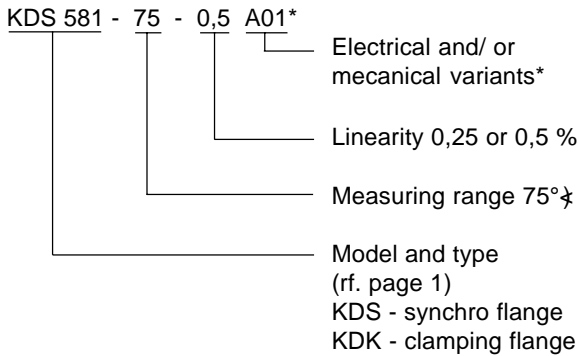
Mechanical Data

- Operating speed: 10.000 rpm max.
- Operating torque: ≤ 3 Ncm (8 Ncm - KDK 66)
- Wind-up torque: ≤ 1 Ncm (4 Ncm - KDK 66)
- Angular acceleration: 10⁵ rad/s² max.
- Inertial mass of rotor: 15 gcm²
- Permissible axial and radial shaft load: 100 N max.
- Bearing life expectancy: 10⁹ turns
- Mass: 250 g approx.

Environmental Data

- Operating temperature range : -20° C to + 60° C
 - optional: -40° C to + 70° C
- Storage temperature range : -25° C to + 70° C
- Permissible rel. humidity : 85 % without condensation
- Resistance to shock : 200 m/s² ; 11 ms (DIN EN 60068-2-27)
- Resistance to vibration : 5 Hz ... 1000 Hz ; 100 m/s² (DIN EN 60068-2-6)
- Protection grade (DIN EN 60529)
 - KDS 580 : IP 65 (Nilos ring)
 - KDK 580: IP 66 (radial packing ring)

Order code format



* Standard versions carry the final number "01". Any variants will be marked by a following figure according to an internal manufacturer's register.

Electrical connections

(View at socket on housing)

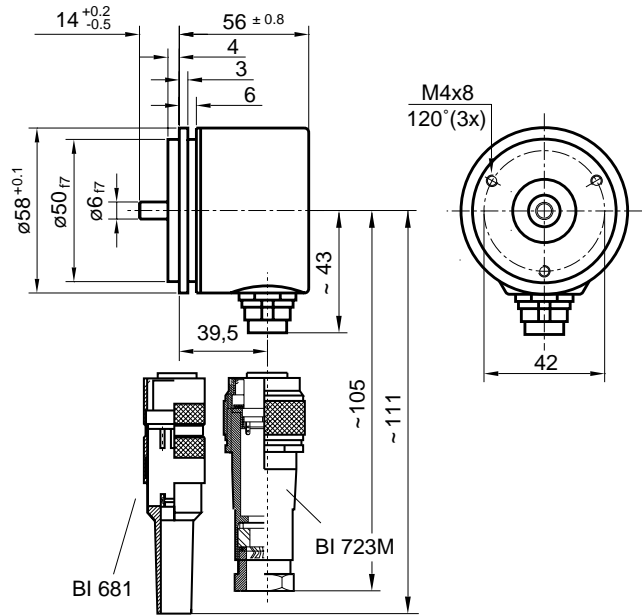
| KD. 581, 582, 583, 584, 58A and 58B | KD. 585 and 586 |
|--|---|
| 1 = +V _S 2 = -V _S (0V) -I _A 3 = +I _A / V _A (Output) | 1 = +V _S 2 = 0V (Common) 3 = -V _S 4 = +V _A (Output) |
| 3SS | 4SS |

Counter plug are are not included in the supplied items.

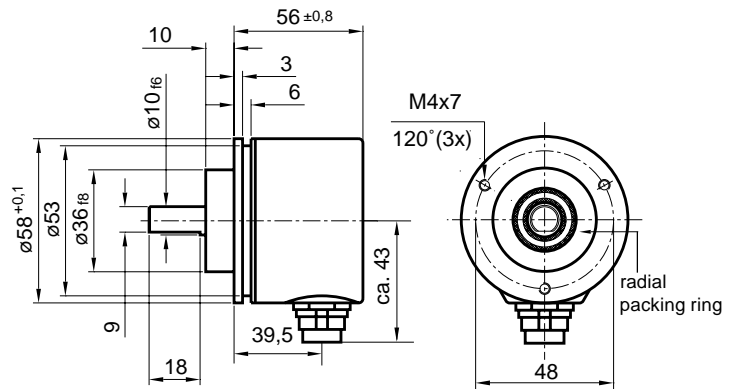
- Plug BI 681/3 PS or 4 PS (IP 40)
- Plug BI 723 M/3 PS or 4 PS (IP 66),
(Metal housing with fixing ring for common)

Dimensions in mm

Model KDS 580 with synchro flange



Model KDK 58 with clamping flange



Mounting clamps KL 66-2

(3 pcs per item)

- Reference circle: 71,5^{+0.5} mm
- Material: brass, nickel plated
- Screws to be used: M 4 to DIN 7991

