

Angle Sensor non-contacting redundant

Series RSC2800
Model 700



Special features

- non-contacting, magnetic
- electrical range 30° up to 360° in 10°-steps available
- available with push-on coupling or marked shaft
- simple mounting
- protection class IP54 or IP65
- long life
- internal resolution 12 Bit
- independent linearity $\pm 0.5\%$
- redundant output signal

The RSC2800 non-contacting sensor utilizes the orientation of a magnetic field for the determination of the measurement angle. A magnet is attached to the sensor shaft, while the magnetic field orientation is captured with an integrated circuit. An analog output signal represents the calculated angle.

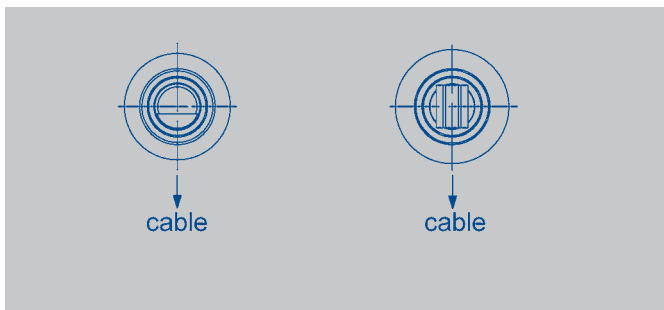
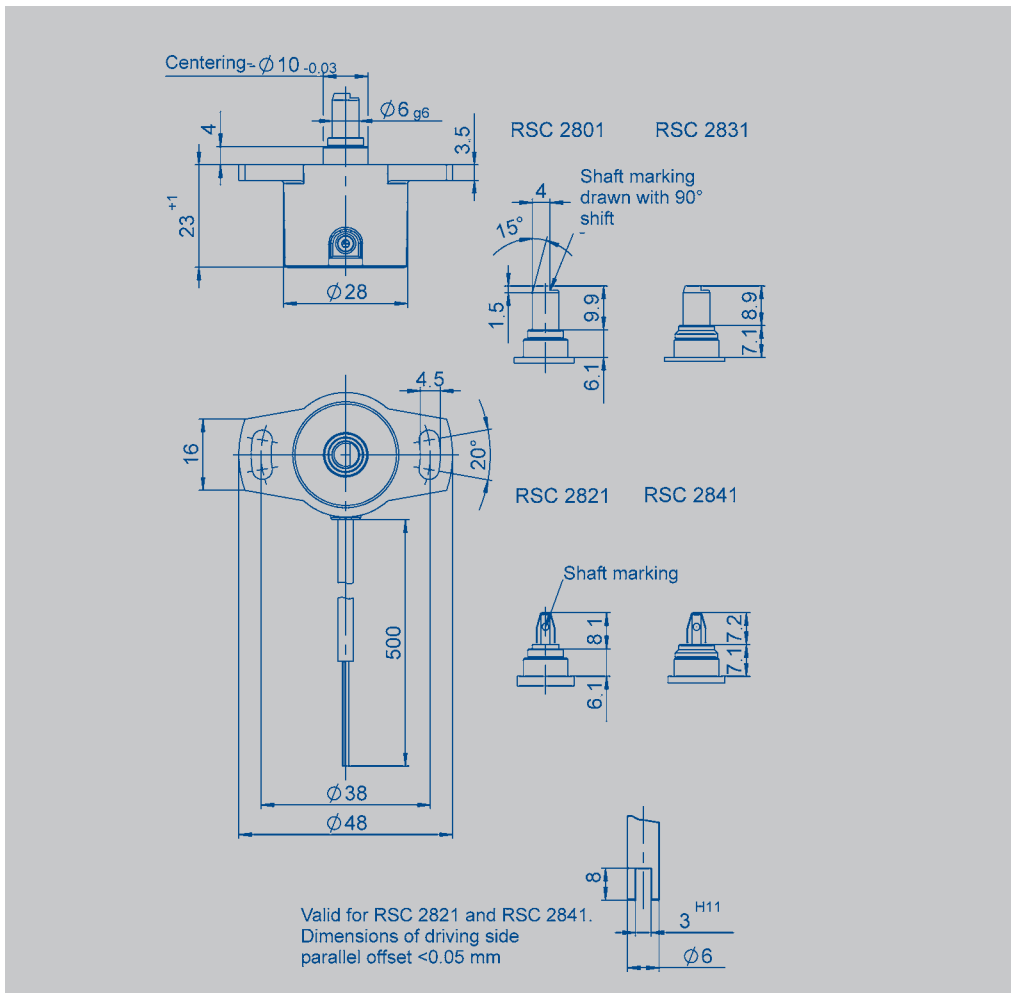
The housing is made of a special high grade temperature-resistant plastic material. Elongated slots allow easy mounting.

The special backlash-free push-on coupling ensures extremely quick and simple installation. The transducer is not sensitive to either dirt or dampness.

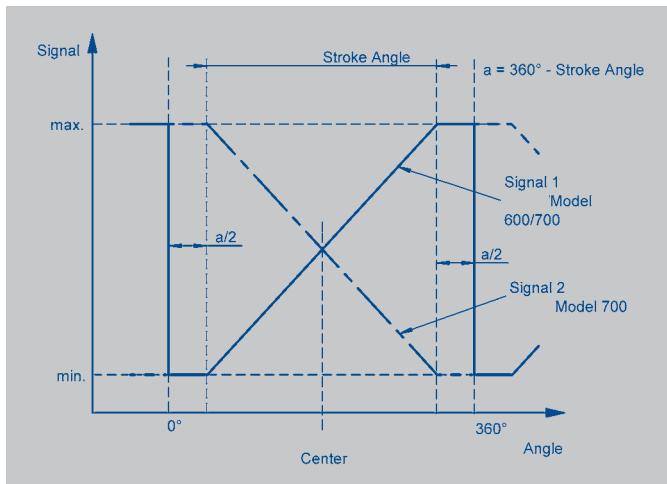
Electrical connections are made via a shielded cable with 4 lead wires which is sealed into the housing.

| Description | |
|------------------------|--|
| Housing | high grade, temperature resistant plastic |
| Shaft | stainless steel |
| Bearings | bronze sleeve bearing |
| Electrical connections | shielded cable AWG26, outer diameter 4.5 mm |
| Cable | |
| Ground | brown |
| Supply voltage | green |
| Output signal 1 | white |
| Output signal 2 | yellow |

Connect shield of connecting cable to ground.



When the shaft marking is pointing to cable, the sensor is located in an electrical center position.



Mechanical Data

| | | |
|--|---------------------------------------|-------------------|
| Dimensions | see dimension drawing | |
| Mounting | 2 M4 fillister-head screws and washer | |
| Starting torque of mounting clamps at housing flange | 400 | Ncm |
| Mechanical travel | 360 continuous | ° |
| Permitted shaft loading (axial and radial) static or dynamic force | 20 | N |
| Torque | 0.5 (IP65) 0.15 (IP54) | Ncm |
| Maximum operational speed | 120 | min ⁻¹ |
| Weight | ca. 50 | g |

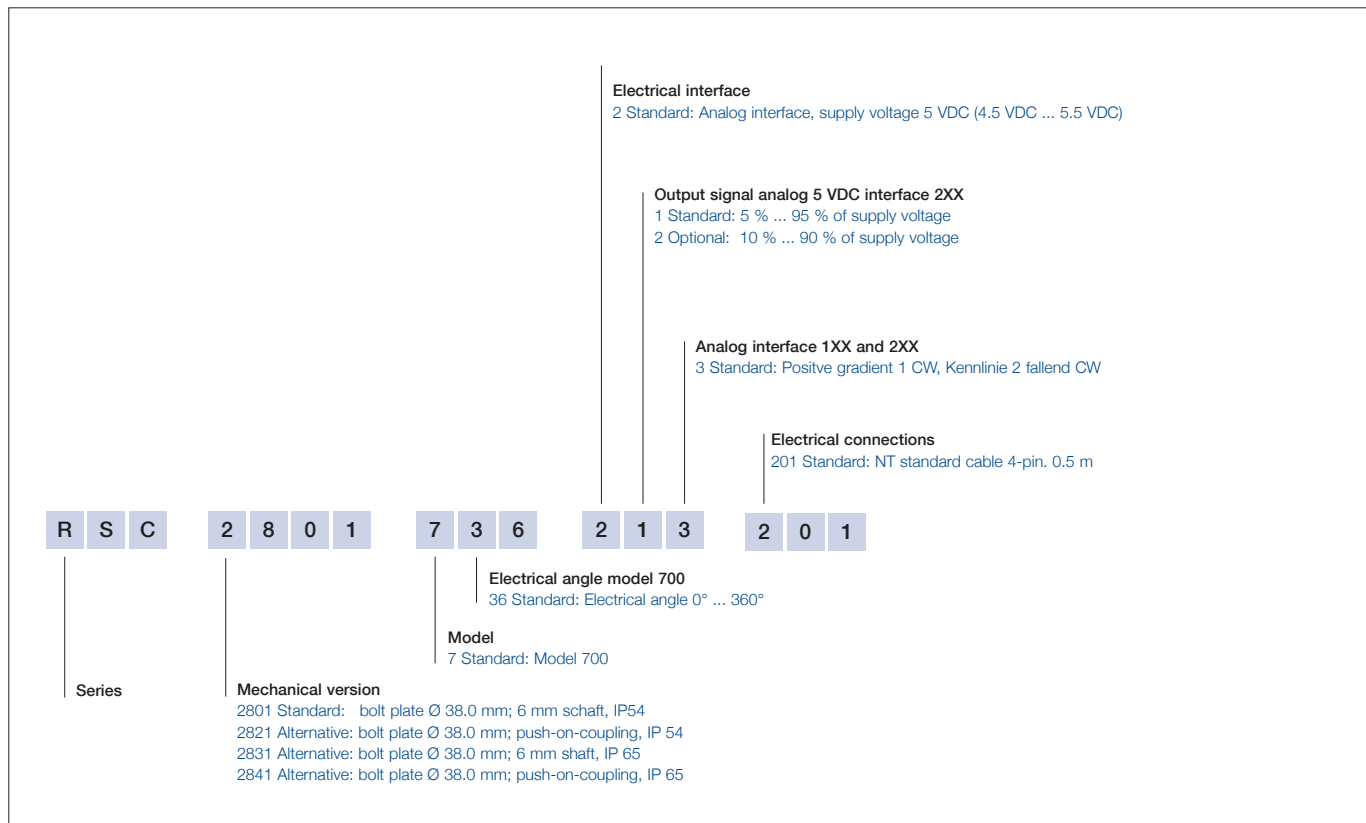
Electrical Data

| | | |
|--|---|-----------------|
| Supply voltage U_b | 5 ±0.5 | VDC |
| Ripple | no ripple definable in case of ratiometric output | |
| No-load supply current | 40 typical | mA |
| Reverse voltage | yes, only feeder | |
| Short circuit protection | yes | |
| Measuring range | 0 ... 30, 0...360 (10° steps) | ° |
| Repeatability | ≤ 0.03 of signal range | % |
| Independent linearity | each signal ±0.5 of signal range | % |
| Output signal | ratiometric (supply voltage 5V ±0.5V) load ≥ 1 kΩ | |
| TC of output signal | ≤ 100 | ppm/K |
| RH of output signal | ≤ 10 | ppm/% |
| Insulation resistance (500 VDC, 1 bar, 2s) | ≥ 10 | MΩ |
| Cable length, bare, tinned | ca. 500 | mm |
| Cable diameter | ca. 0.14 | mm ² |

Environmental Data

| | | |
|--|--|---------------|
| Temperature range | -40...+85 | °C |
| Vibration (IEC 68T2-6) | 5...2000 $A_{max} = 0.75$ $\dot{a}_{max} = 20$ | Hz mm g |
| Shock (IEC 68T2-27) | 50 (11 ms) | g |
| Life | > 50 x 10 ⁶ (mechanical) | movem. |
| Protection class (DIN 40050 / IEC 529) | IP54 or IP65 | |
| CE-conformable | ESD EN 61000-4-2 HF-Feld EN 61000-4-3 BURST EN 61000-4-4 | |

Ordering specifications



Recommended accessories

Process-controlled indicators
 MAP... with display