

Non-Contacting Angle Sensors

RSC2800-600 Series



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.

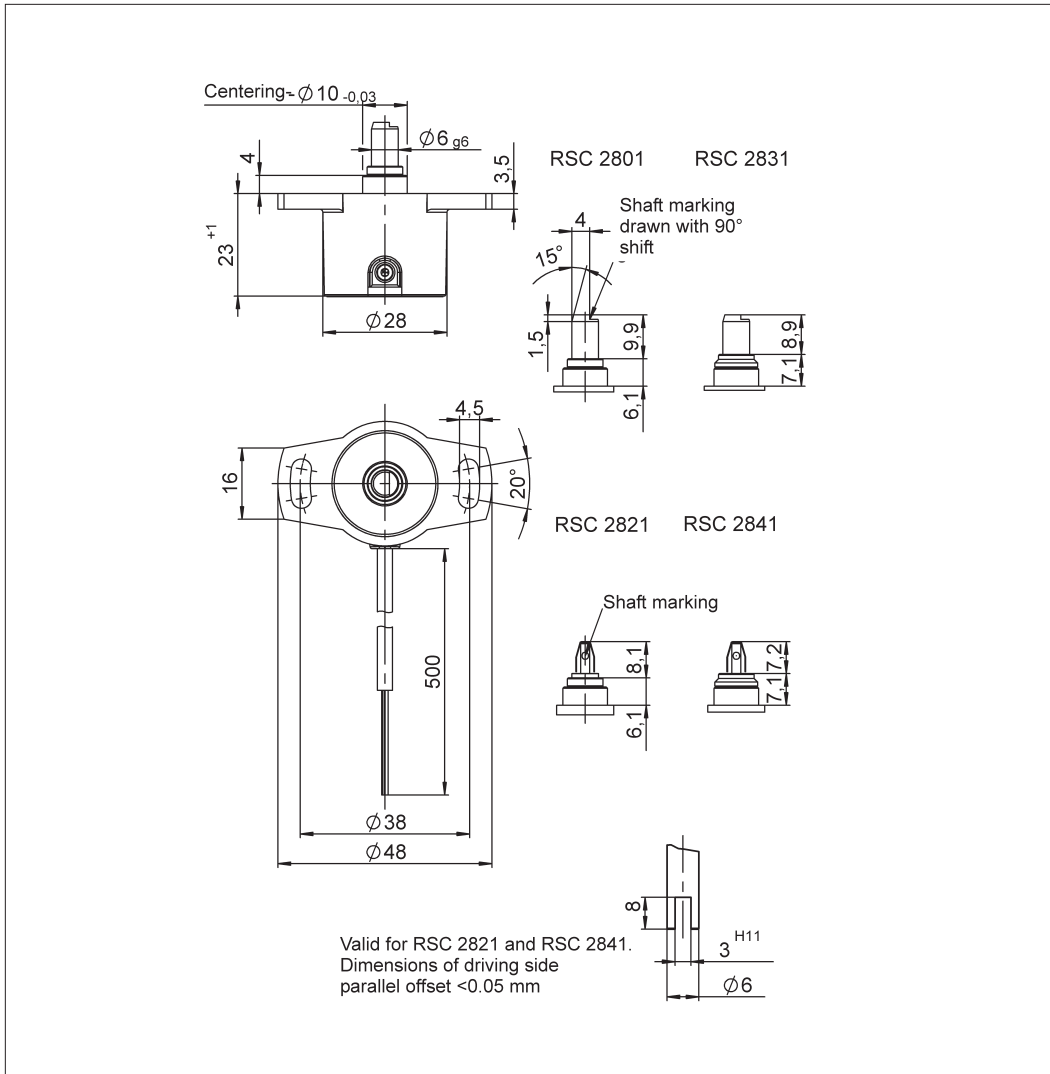
Special features

- non-contacting, magnetic
- angle ranges available from 30° to full 360° in 10° steps
- available with push-on coupling or marked shaft
- simple mounting
- protection class IP 54 or IP 65
- long life
- internal resolution 12-bit
- independent linearity to $\pm 0.5^\circ$

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

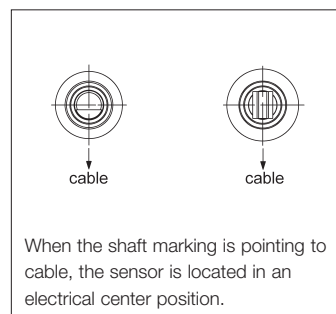
The special backlash-free push-on coupling ensures extremely quick and simple installation. The transducer is not sensitive to either dirt or dampness.

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 with lead wires, AWG 26, outer diameter 4.5 mm
Cable	
Ground	brown
Supply voltage	green
Output signal	white
Open	yellow

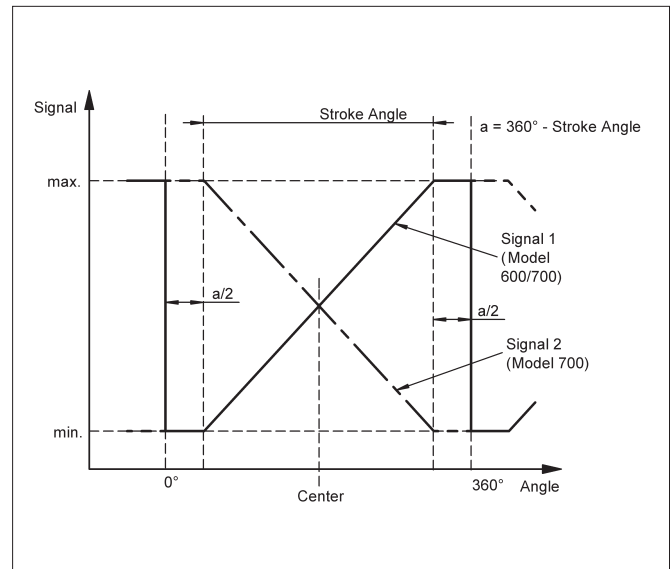
Connect shield of connecting cable to ground.



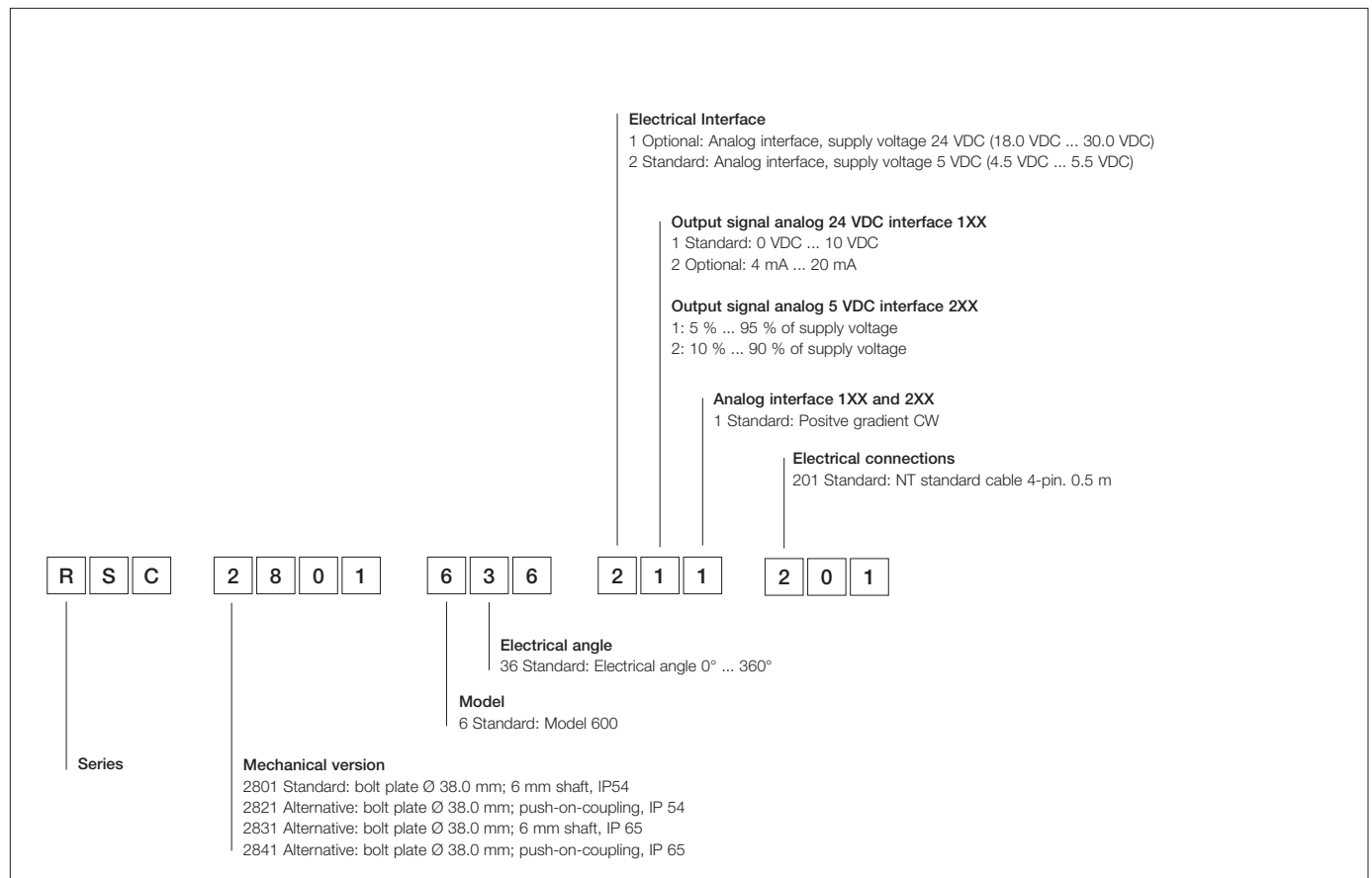
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Mechanical Data		
Dimensions	see dimension drawing	
Mounting	2 M4 fillister-head screws and washer	
Starting torque of mounting clamps at housing flange	400	Ncm
Mechanical travel	360, continuous	°
Permitted shaft loading (axial and radial) static or dynamic force	20	N
Torque	0.5 (IP 65) 0.15 (IP 54)	Ncm
Maximum operational speed	120	RPM
Weight	approx. 50	g
Electrical Data		
Power supply voltage Ub	5 ±0.5 24 ±6	VDC VDC
Ripple	Ub = 5 V -> no ripple definable in case of ratiometric output	
	Ub = 24 V/ Output 0...10 V ≤ 20	%
	Ub = 24 V/ Output 0/4...20 mA ≤ 20	%
No-load supply current	Ub = 5 V	typ. 15 mA
Protected against reverse voltage	yes, only supply	
Short circuit protection	yes	
Measurement range	0...30 up to 0...360 (10° steps)	°
Repeatability	≤ 0.03 of signal range	%
Independent linearity	±0.5 of signal range	%
Output signals	ratiometric (supply voltage 5 V ±0.5 V) load ≥ 1 kΩ 0...10 V (supply voltage 24 V ±6 V) load ≥ 1 kΩ 0/4...20 (supply voltage 24 V ±6 V, load 0...500 Ω) propagation delay <1	
		V V mA ms
TC of output signal	≤ 100	ppm/K
RH of output signal	≤ 10	ppm/%
Insulation resistance (500 VDC, 1 bar, 2s)	≥ 10	MΩ
Conductor length, bare, tinned	approx. 500	mm
Conductor diameter	approx. 0.14 (AWG 25)	mm ²
Environmental Data		
Temperature range	-40...+125 (supply voltage 5 V)	°C
	-40...+85 (supply voltage 24 V)	°C
Vibration	5...2000 A _{max} = 0.75 a _{max} = 20	Hz mm g
Shock (IEC 682-27)	50 (11 ms)	g
Life	> 50 million (mechanical)	movem.
Protection class DIN 40050 / IEC 529	IP 54 or IP 65	
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