

FNC Speed Sensor



Features

- Detecting speed and direction of rotation of ferroat gearwheels with high resolution
- Wide frequency range
- Wide temperature range

Technical data - electrical ratings

Voltage supply	9VDC to 30VDC
Consumption w/o load	max. 20 mA
Frequency range	0...20 kHz
Push-pull outputs	$I_{max} = \pm 30$ mA
Output voltage HI UHI	$> U_{supply} - 1,5V$
Output voltage LO ULO	$< 1,5V$
EMC compliant	EN 50121-3-2
Approval	CE

Technical data - mechanical design

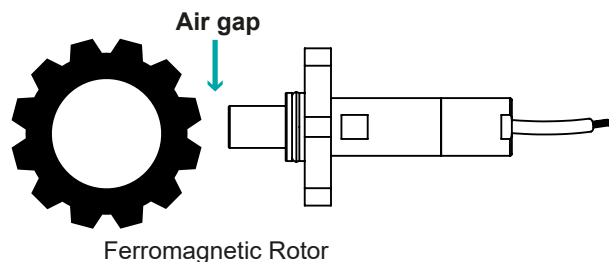
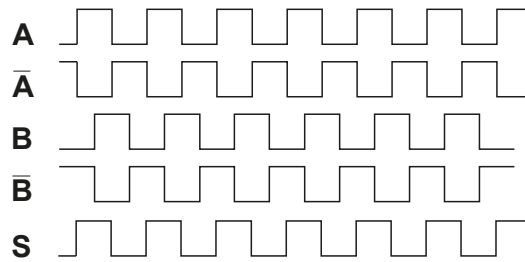
Air gap between sensor housing and pole wheel for involute gear	Module1- 0,5...0,7 mm Module1,5 - 0,5...1,3 mm Module ≥ 2 - 0,5...1,5 mm
Operating temperature	-40...+125 °C
Weight approx.	150 g
Protection class	Sensor head :IP68
Shock & vibration	EN 61373 Cat.3

Cable Wiring

Function	Color	Renk	Explanation
+VB	Brown	Kahve	Supply Voltage
GND	White	Beyaz	Ground
A	Green	Yeşil	A Channel
A'	Red	Kırmızı	A Inverted Channel
B	Yellow	Sarı	B Channel
B'	Pink	Pembe	B Inverted Channel
S	Gray	Gri	Speed

**Standard cable (hologen free, d13mm, 6x0.6mm², AWG20, armoured cable -40 to +125°C)

Pulse Diagram



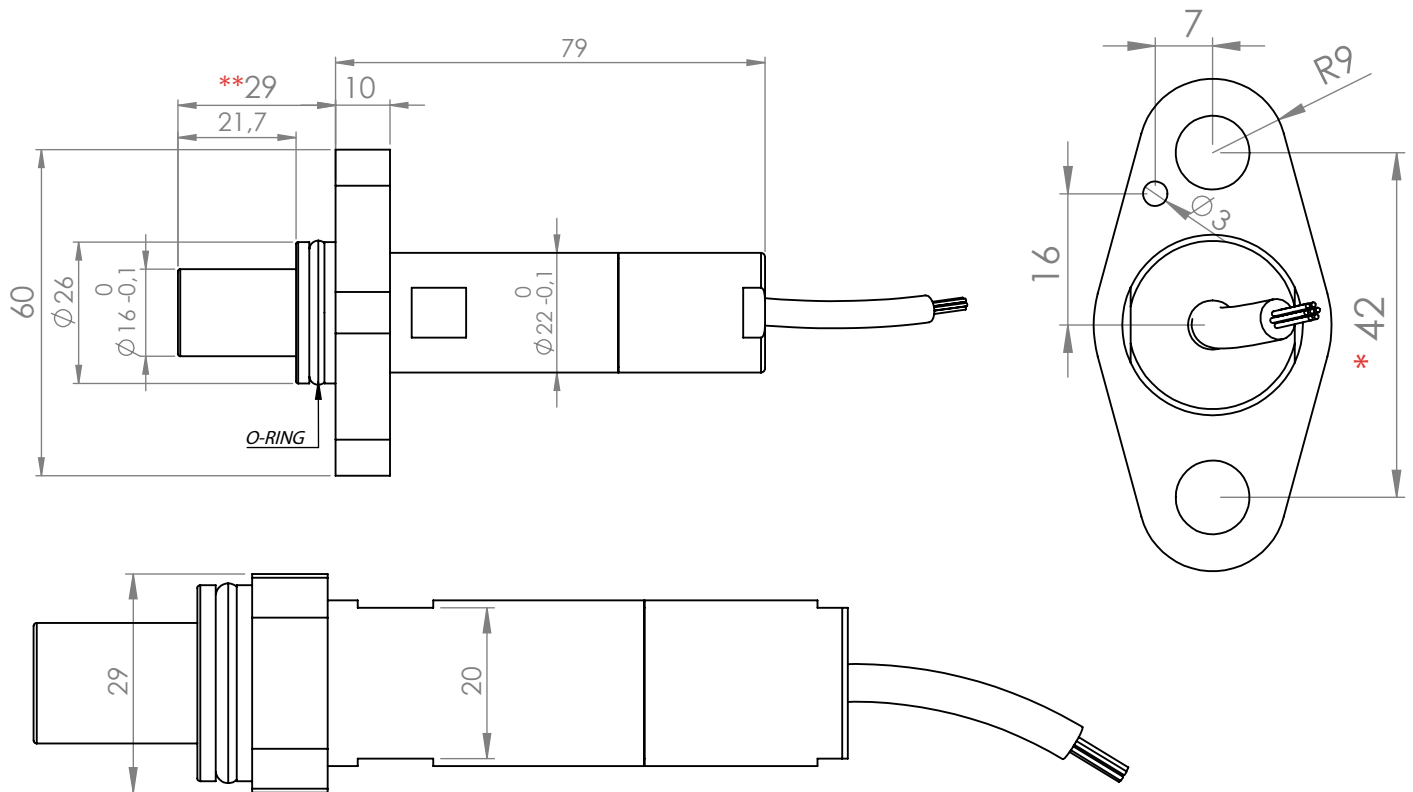
Signal Output

2 phase shifted square wave signals, minimum edge shift with an involute gear wheel: minimal phase shift of 20° between A & B signals.

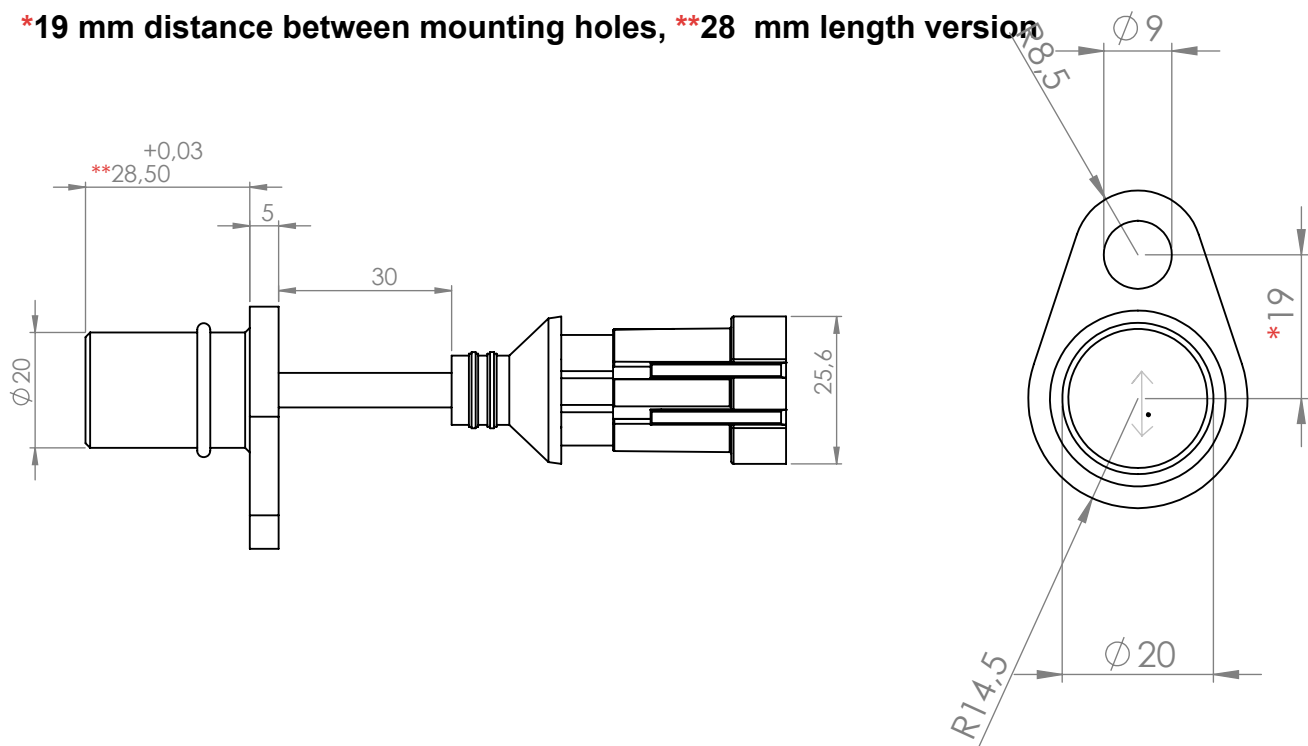
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Mechanical Dimensions

***42 mm distance between mounting holes, **29 mm length version**



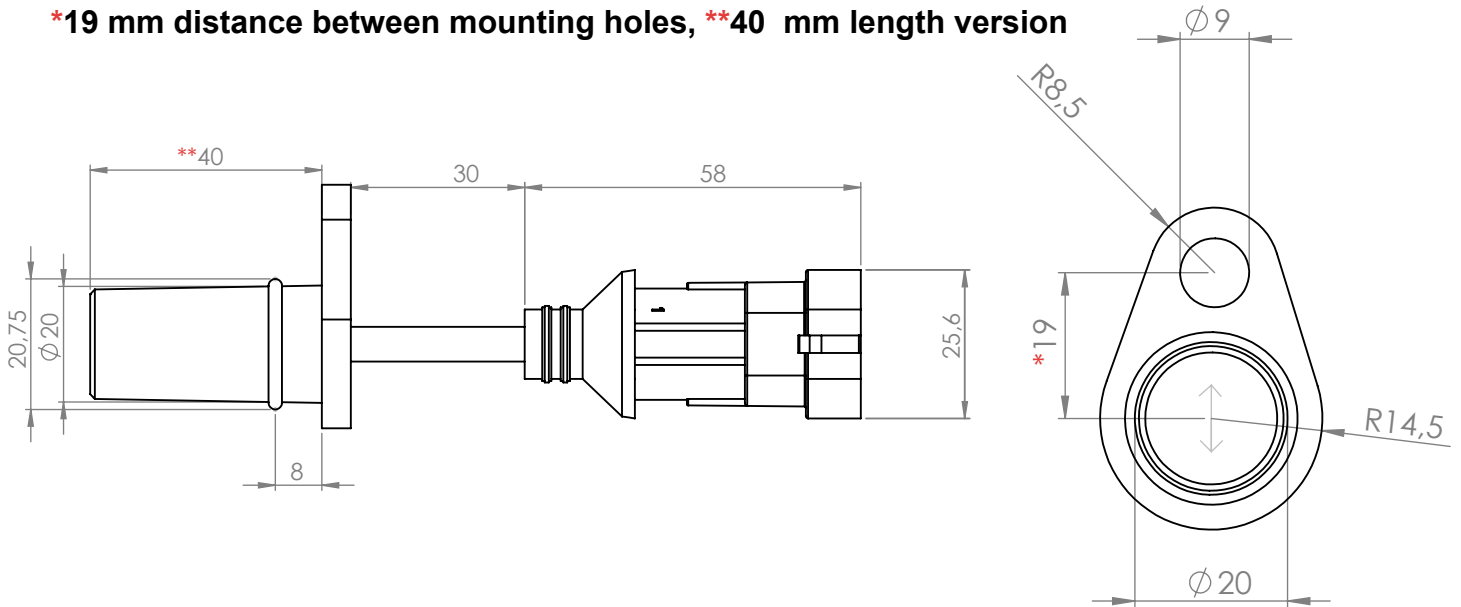
***19 mm distance between mounting holes, **28 mm length version**



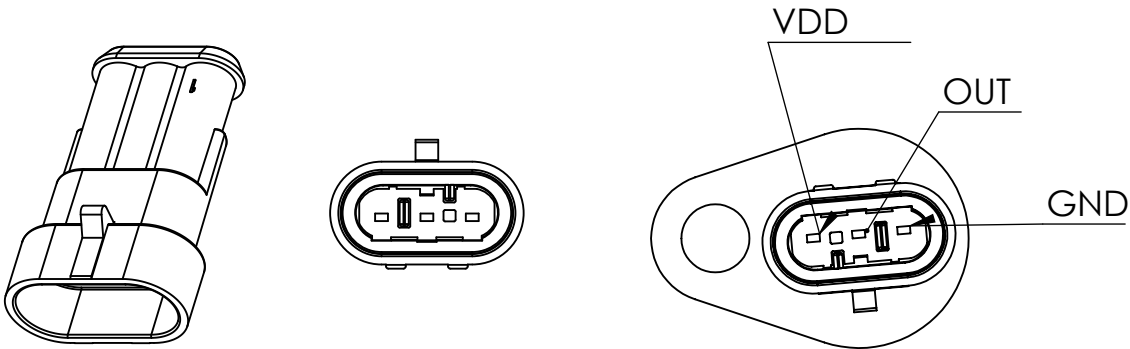
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Mechanical Dimensions

***19 mm distance between mounting holes, **40 mm length version**



Connector Pin Design



Encoder Part Number

FNC SS 16 4229 M1.0 2N - A05

Sensor
SS : Speed Sensor

Sensor head diameter
16 : 16 mm
20 : 20 mm

Mounting hole diameter and length
4229 : 42 mm hole diameter, 29 mm length
1928 : 19 mm hole diameter, 28 mm length
1940 : 19 mm hole diameter, 40 mm length

Connection
A05 : 5 cm cable length
A05C3P : 5 cm cable length with 3 pin connector

Electronic type
2N : Push pull 2 channels (A , B)
4N : Push pull 2 channels (A , B) & inverted (A', B')
ODS : Open drain speed

Target module
M1.0 : 1 module
M1.5 : 1.5 module
M2.0 : 2 module