



E620 / E621 Incremental Rotary Encoders

Incremental rotary encoders with or without zero pulse, square flanged, compatible with the international standardized series SIZE25, or with centering mask diameter 50 mm (series E650/651). The construction technology, together with the compact and innovating electronic specifications, allow to achieve high performances at a contained price level.



■ Mechanical and environmental specifications

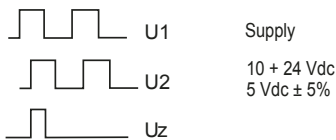
Dimensions	See the drawing
Weight	E620 - 320 g / RE620 - 440 g
Materials: Case	E620 ABS self-extinguishing / RE620 aluminium
Shaft	Stainless Steel AISI 303
Shaft diameter	6 - 8 - 9.52 - 10 mm
Revolutions per minute	6000* continuous / 10000 temporary
	* Max operating speed with IP65 sealing ring applied on the shaft: 3000rpm
Starting torque	≤ 0.8 Ncm
Inertia	≤ 25 g cm ²
Max load	80 N axial - 100 N radial
Vibration resistance (10÷2000 Hz)	100 m/sec
Shock resistance (11ms)	50 G
Protection degree	IP64 (optional IP65)
Operating temperature	-10 ÷ +70°C
Stocking temperature	-20 ÷ 80°C

■ Electrical and operating specifications

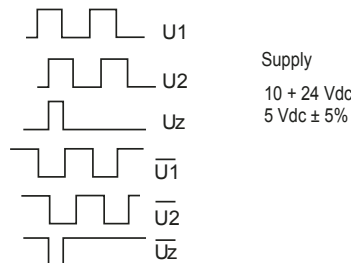
Pulse code	Incremental
Pulses-revolution	2 ÷ 36000
Zero reference pulse	1 pulse each revolution
Output Signals	Two square waves 90°±15° out of phase. Zero pulse 90°±15° wide
Electronic output	Push-pull, line-driver, open collector NPN, pull-up resistor NPN. Protection against short circuits
Supply	10÷24 Vdc or 5 Vdc±5%. Protection against polarity reversal
Current consumption	30÷80 mA
Max frequency	100/200 KHz
Connection outlets	Axial or radial connector type MS 7p (10p for line driver output) / Axial or radial cable 3 m long (1 m for line driver output)

■ Electronics

Open collector - pull-up resistor - push-pull



Line driver



With connection diagram 1-3-4: signal U2 lags signal U1 with clockwise rotation (seen from the shaft side).
 With connection diagram 2: signal U2 lags signal U1 with anticlockwise rotation (seen from the shaft side).

■ Connections

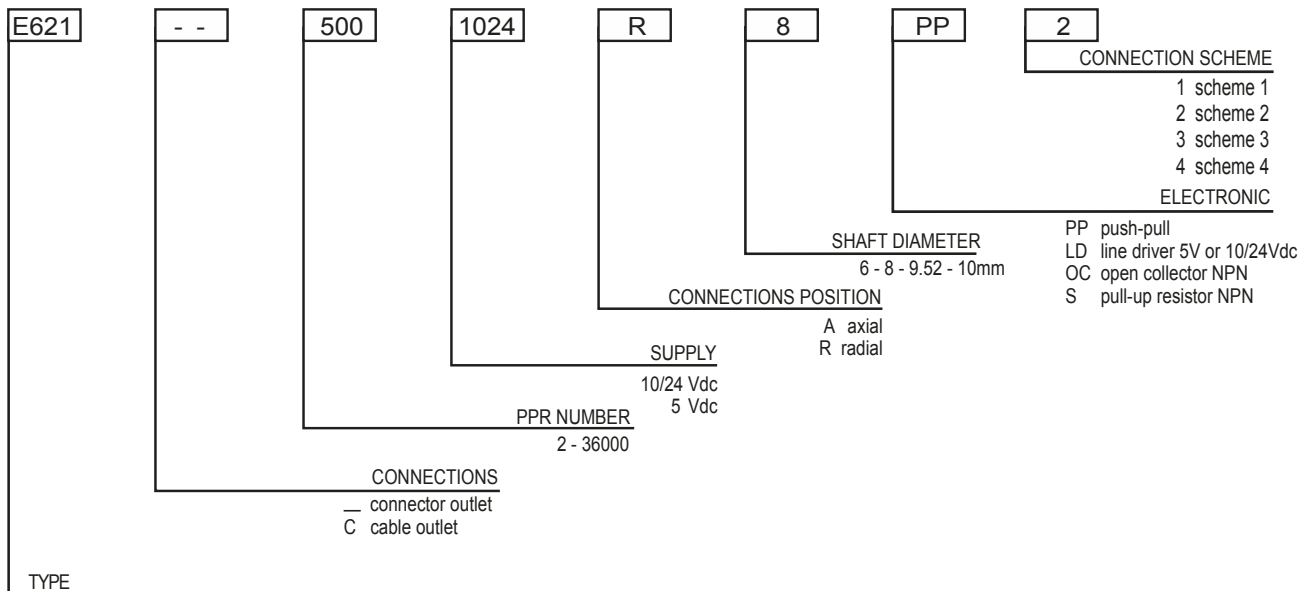
• Open collector - pull-up resistor - push-pull

Signals	7-pin connector		Cable colours
	Scheme 1	Scheme 2	
Out 1	A	C	White
Out 2	B	E	Green
Out Z	C	D	Brown
+Vdc	D	F	Red
Ov	F	A	Blue
Non connected	E	B	
Non connected	G	G	
Earth			Shield

• Line driver

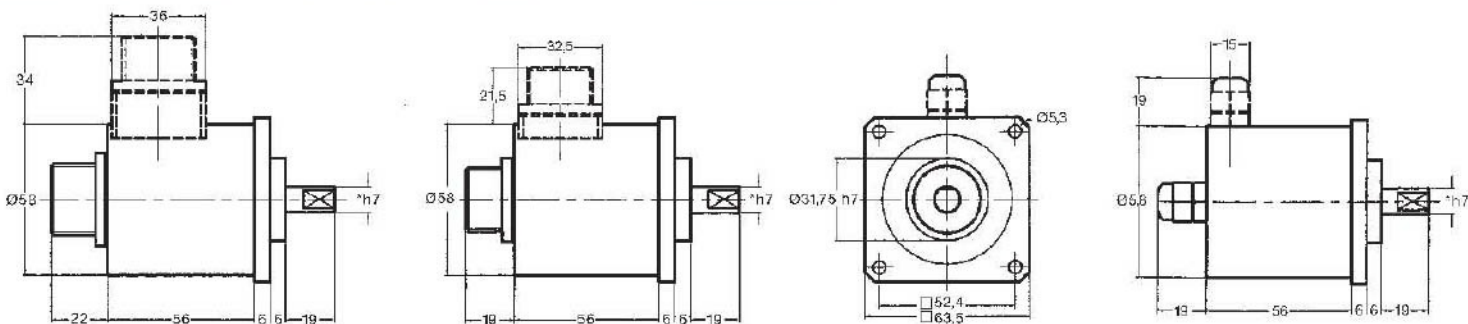
Signals	Connector		Cable colours
	7 pin	10 pin	
	Scheme 3	Scheme 4	
	without zero pulse	with zero pulse	
Out 1	A	A	White
Out 2	B	B	Green
Out Z		C	Grey
+Vdc	D	D	Red
+Vdc		E	Red
Ov	F	F	Blue
Out $\bar{1}$	C	G	Brown
Out $\bar{2}$	E	H	Yellow
Out \bar{Z}		I	Pink
Non connected	G	J	
Earth			Shield

■ Ordering information



E620 without zero pulse
 E621 with zero pulse
 E650 without zero pulse, centering mask \varnothing 50 mm
 E651 with zero pulse, centering mask \varnothing 50 mm
 SERIES RE Aluminium case

■ Dimensions



* AVAILABLE SHAFTDIAMETER 6 - 8 - 9.52 - 10 mm
 * SERIES E650/E651 WITH CENTERING MASK \varnothing 50 mm AVAILABLE

LEADERS IN SENSORS & HEAVY DUTY JOYSTICKS

ALTHERIS bv

Scheveningseweg 15
 2517 KS DEN HAAG
 The Netherlands

+31 (0)70 3924421

+31 (0)70 3644249

Offices in : Benelux | Germany | France | UK | Italy | USA

www.altheris.com

sales@altheris.nl

ALTHERIS
 SENSORS & CONTROLS