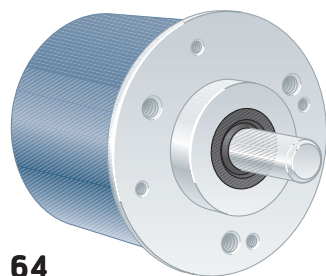
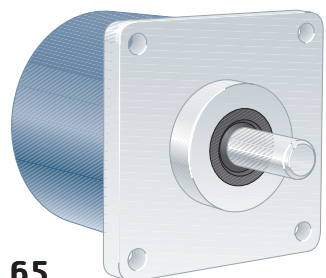


505 — Ruggedized Shaft encoder, Incremental



64



65

Short description:

- >> 6 short-circuit protected outputs
- >> IP 67 at housing, IP 66 at shaft inlet
- >> 5 Vdc or 9...30 Vdc
- >> Robust housing for harsh environment
- >> Shock and vibration protected

Suitable applications:

- >> Imperial measurements
- >> Industrial applications

General information

Encoder data		
Type	RSI 505	
Operating temperature	-40°C .. +70°C	
Storage temperature	-30°C .. +70°C	
Ingress protection class	IP-67 according to IEC 60529	
At shaft inlet	IP-66 according to IEC 60529	
Vibration (55 to 2000Hz)	< 300 m/s ² according to IEC 60068-2-6 ⁽¹⁾	
Shock (6ms)	< 2000 m/s ² according to IEC 60068-2-27	
Cover material	Aluminium	
Cover surface treatment	Coated and cromated or anodized	
Weight	Approx. 300g	
Accuracy and resolution		
Line count	1..5000 ppr	5001..10 000 ppr
Dividing error	± 50 °el	± 90 °el
Channel separation	90 ± 25 °el	90 ± 45 °el
Measuring steps	4 x Line count	

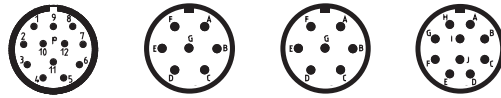
Flange option

Flange type	64, Round	65, Square
Outer geometry	∅63.5 mm	□63.5 mm
Mounting holes	3 x UNF 10x32 4 x UNC 4x40	4 x 5.2mm
Flange material	Aluminium	Aluminium
Surface treatment	Anodized	Anodized

Shaft option

Shaft type	∅8 round	∅9.52 round	∅10 with face
Axial shaft load	50 N	50 N	50 N
Radial shaft load	60 N	60 N	60 N
Mech. permissible speed	6000 rpm (12 000)	6000 rpm (12 000)	6000 rpm (12 000)
Shaft material	Stainless steel	Stainless steel	Stainless steel
Moment of inertia	1,9 x 10 ⁻⁶ kgm ²	1,9 x 10 ⁻⁶ kgm ²	2,0 x 10 ⁻⁶ kgm ²

⁽¹⁾ <150m/s² on encoders with connectors



Connection option

Connector type	Cable	12 pin EML	7 pin MS	7 pin MS sp	10 pin MS
Function	Colour	PIN	PIN	PIN	PIN
S00	Green	5	A	A	A
S00 inverted	Blue	6	NA	C	G
S90	Yellow	8	B	B	B
S90 inverted	Black	1	NA	E	H
Sref	Red	3	C	NA	C
Sref inverted	Brown	4	NA	NA	I
+E Volt	Violet	12	D	D	D
0 Volt	White	10	F	F	F
STATUS	Gray	7	NA	NA	NA
Sensor +E Volt	NA	NA	NA	NA	E
Case	Shield	Chassis	Chassis	Chassis	Chassis

NA=Not Available

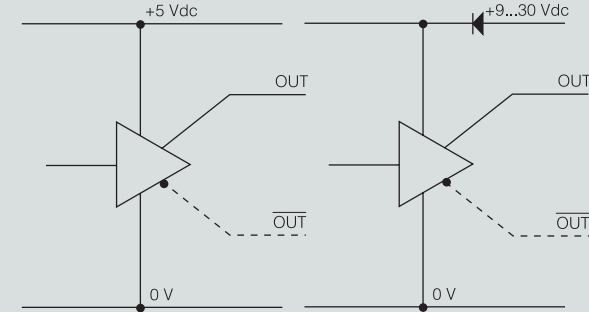
Electrical option

Power supply	5 V ±10%	9-30 V	
Polarity protected	No	Yes	
Output signals	TTL ¹	HTL	RS-422
Short circuit protected	Yes	Yes	Yes
Current consumption	45 mA	50 mA at 24Vdc	25 mA at 24Vdc
Max consumption	75 mA	75 mA	40 mA
Output load (max)	±20 mA	±40 mA	±20 mA
Output frequency (max)	300 kHz	300 kHz	300 kHz
U _{high} at 10mA load	> 3.0 V	> +EV - 2.0 V	> 3.0 V
U _{low} at 10mA load	< 0.4 V	< 1.15 V	< 0.4 V
Cable length (max)	50 m	200 m @ 50 kHz	1 km (TIA/EIA-422-B)
STATUS output	Yes	Yes	Yes
High level	Encoder OK	Encoder OK	Encoder OK
Low level	Warning/Failure	Warning/Failure	Warning/Failure

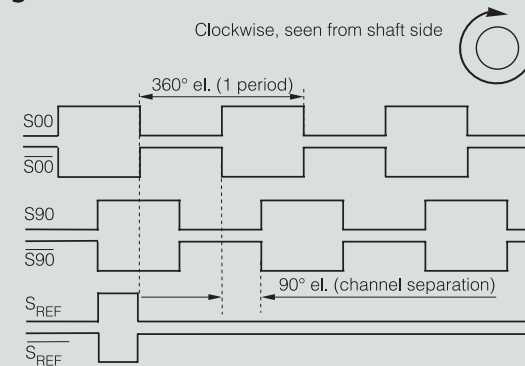
¹TTL output comply to the RS-422 standard when differential transmission is used

NA=Not Available

Output circuit

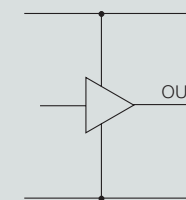


Output signals

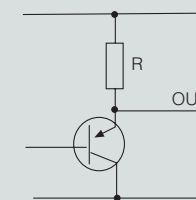


Status outputs

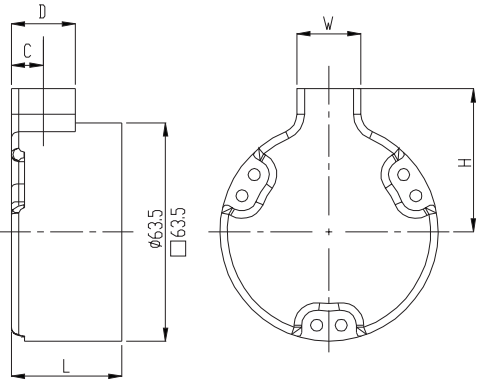
TTL-output / RS-422



HTL-output



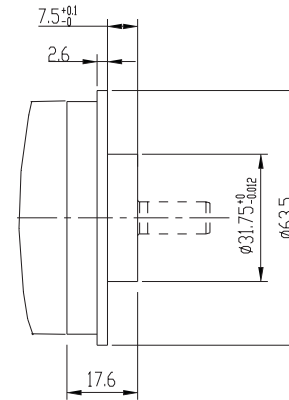
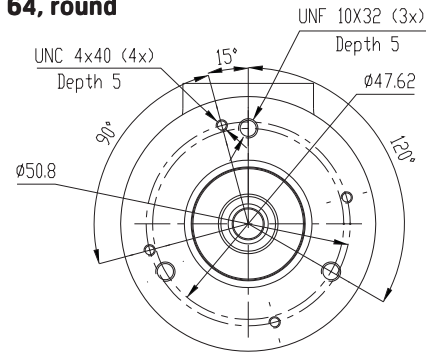
Dimensions



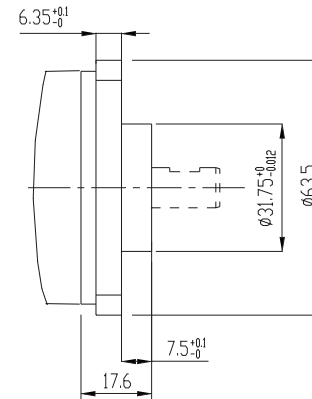
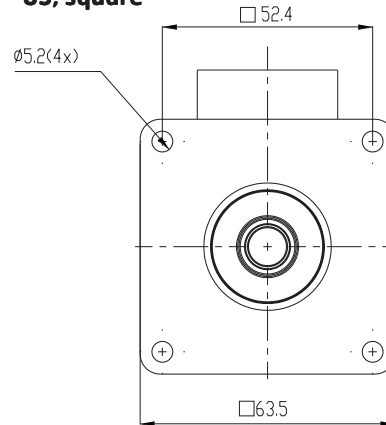
Connector	Orientation	L	H	W	D	C
Cable	Radial	29.4	34	17	17	8.5
	Axial	38.9	-	-	-	-
EML	Radial	29.4	32	27	27	13.5
	Axial	38.9	-	-	-	-
MS 7p	Radial	-	-	-	-	-
	Axial	38.9	-	-	-	-
MS 10p	Radial	-	-	-	-	-
	Axial	43.9	-	-	-	-

Flanges

64, round

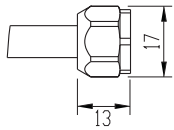


65, square

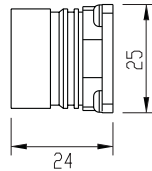


Connectors

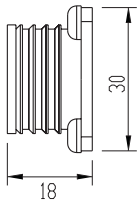
Cable 5x2x0,25 shielded



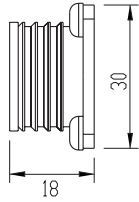
12pin EML



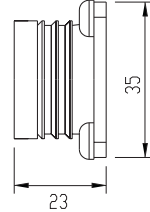
7pin MS



7pin MS sp

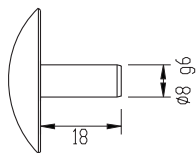


10pin MS

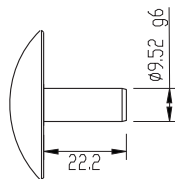


Shafts

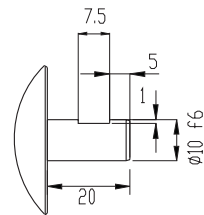
8 mm round



9.52 mm round



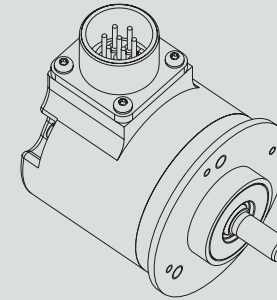
10 mm with face



Various combinations/examples

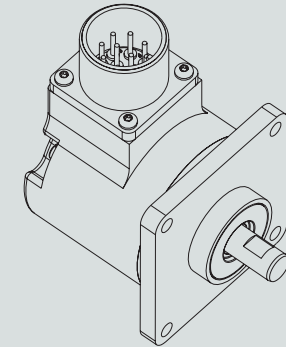
RSI 505 64

8 mm round, radial MS



RSI 505 65

10 mm with face, radial MS



Ordering information Tick your choice

Type	RSI 505				
Flange	64, Round	65, Square			
Shaft	Ø8 round	Ø9.52 round	Ø10 with face		
Electronics ⁽¹⁾	Supply	5Vdc	9-30Vdc		
	Output	TTL	HTL	RS-422	
Connection	Cable	12 pin EML	7 pin MS	7 pin MS sp	10 pin MS
Connecting direction	Axial/Radial	Axial/Radial	Axial/Radial	Axial/Radial	Axial/Radial
Line count	1..5000	5001..10 000			

⁽¹⁾ Possible combinations: 5Vdc/TTL, 9-30Vdc/HTL or 9-30Vdc/RS-422

Please, specify line count and cable length when ordering

Ordering example: RSI 505 65 Ø8ro 5Vdc 1024ppr TTL 12 pin EML Axial