

52

CLS replaces 521

PPS replaces 522

Short description:

- >> Electrical interfaces:
Current Limited Source
PTC Protected Source
- >> IP 67 at housing,
IP 66 at shaft inlet
- >> 9...30 Vdc
- >> Robust housing for harsh
environment
- >> Shock and vibration
protected

Suitable applications:

- >> Standard to demanding
industrial applications

General information

Encoder data		
Type	RSI 593	
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	

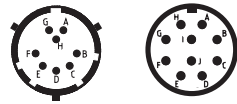
Flange option

Flange type	52, LL68
Outer diameter	ø68 mm
Mounting holes	3 x M3 & 3 x M4
Flange material	Aluminium
Surface treatment	Anodized

Shaft option

Shaft type	Ø6 round	Ø6 with face	Ø10 round	Ø10 with face
Axial shaft load	50 N	50 N	50 N	50 N
Radial shaft load	60 N	60 N	60 N	60 N
Mech. permissible speed	6000 rpm (12 000)	6000 rpm (12 000)	6000 rpm (12 000)	6000 rpm (12 000)
Shaft material	Stainless steel	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	2,0 x 10 ⁻⁶ kgm ²

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



Connection option

Connector type	Cable	8 pin PT	10 pin MS
Function	Colour	PIN	PIN
S00	Yellow	D	D
S00 inverted ¹	Black	C	C
S90	Green	A	A
S90 inverted ¹	White	B	B
Sref	Brown	G	G
Sref inverted ¹	Violet	H	H
+E Volt	Red	E	E
0 Volt	Blue	F	F
STATUS	Grey	NA	I
Case	Shield	Chassis	Chassis
Connecting direction (available on flange option -52)			
Axial	No	Yes	Yes
Radial	Yes	No	No

¹ On encoders with PPS electronics the inverted signals are not available. NA=Not Available

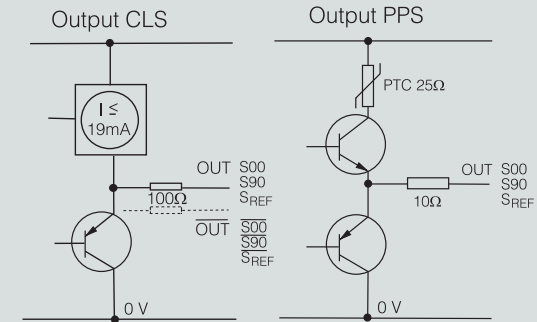
Electrical option

Power supply	9-30 Vdc	
Polarity protected	Yes	
Output signals	Current Limited Source*	PTC Protected Source**
Short circuit protected	Yes, in source	Yes, in source
Current consumption	60 mA at 24Vdc	60 mA at 24Vdc
Max consumption	90 mA	90 mA
Output load (max)	+19 mA / - 40 mA	±40 mA
Output frequency (max)	200 kHz	200 kHz
U _{high} at 10mA load	---	> +EV - 4.0 V
U _{low} at 10mA load	< 6 V	< 1.3 V
Cable length (max)	---	200 m @ 100 kHz
STATUS output	Yes	Yes
High level	Encoder OK	Encoder OK
Low level	Warning/Failure	Warning/Failure

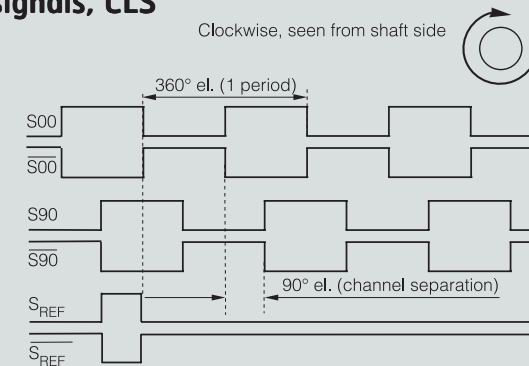
* CLS = Current Limited Source (replaces model 521)

** PPS = PTC Protected Source (replaces model 522)

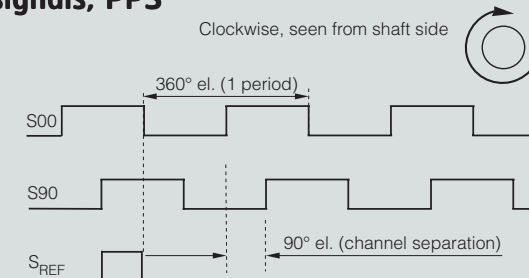
Output circuit



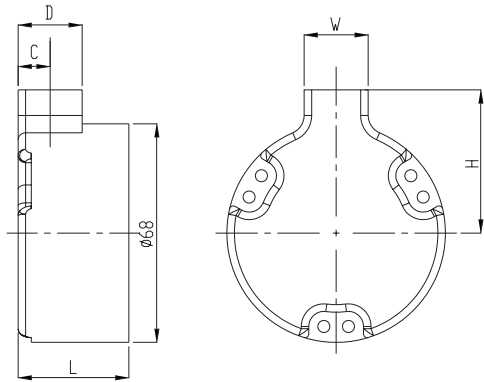
Output signals, CLS



Output signals, PPS



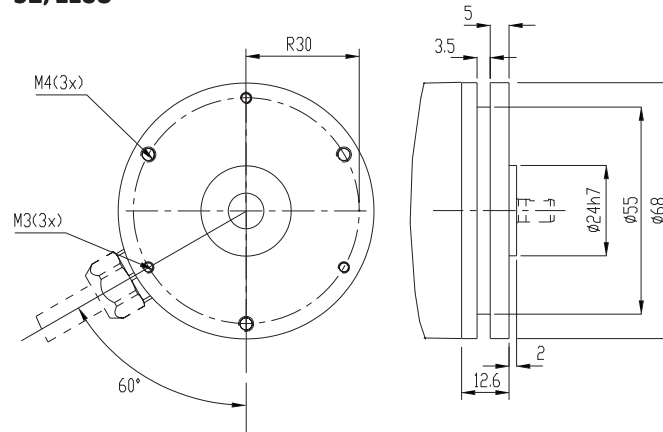
Dimensions



Connector	Orientation	L	H	W	D	C
Cable	Radial $\varnothing 68$	44.7	34	0	0	14
PT 8p	Axial $\varnothing 68$	44.7	-	-	-	-
MS 10p	Axial $\varnothing 68$	44.7	-	-	-	-

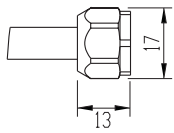
Flanges

52, LL68

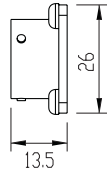


Connectors

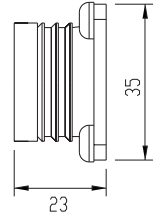
Cable
5x2x0,25 shielded



8pin PT

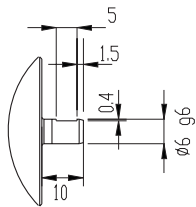


10pin MS

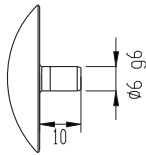


Shafts

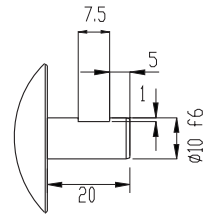
6 mm with face



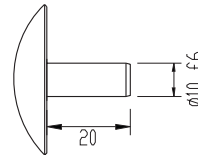
6 mm round



10 mm with face

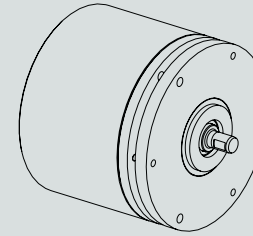


10 mm round



Various combinations/example

RSI 593 52
6 mm with face, radial cable



Ordering information Tick your choice

Type	RSI 593			
Flange	52, LL68			
Shaft	Ø6 round	Ø6 with face	Ø10 round	Ø10 with face
Electronics	Supply	9-30Vdc		
	Output	CLS PPS		
Connection	Cable	8 pin PT	10 pin MS	
Connecting direction	Radial	Axial	Axial	
Line count	1..5000	5001..10 000		

Please, specify line count and cable length when ordering

Ordering example: RSI 593 52 Ø6ro 9-30Vdc 1024ppr CLS 8 pin PT Axial