**X-heavy duty incremental, certified to SIL2, PLd, Cat 3**

- Performance encoder for heavy duty industries
- High Current HTL output for signal transmission over long cables
- Certified according to SIL2/PLd, Cat. 3

**Mechanical data**

Operating temperature	-20 °C...+80 °C
Ingress protection class [IEC 60529]	IP66 and IP67 (IP66 at shaft inlet)
Vibration [IEC 60068-2-64]	≤ 20 g, 55-2000 Hz
Shock [IEC 60068-2-27]	≤ 400 g, 3.5 ms
Shaft load (axial/radial)	100 N / 100 N
Rotational speed max	6000 rpm
Shaft material	Stainless steel
Cover material	Anodized aluminium
Weight	Approx. 1500 g
Max angular acceleration	1000 rad/s ²

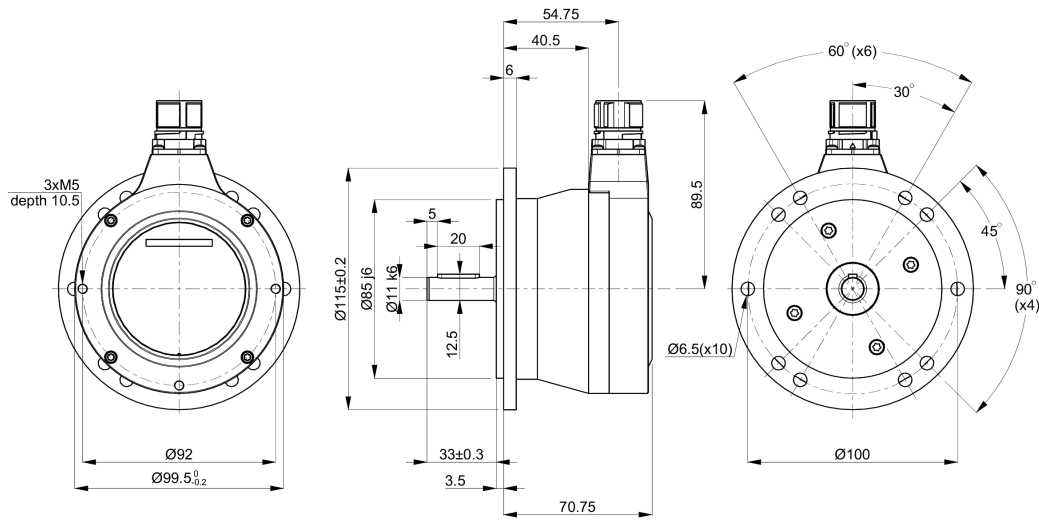
Encoder config

Code key description	850091560
Type	FSI
Model	850
Shaft type	Ø11 mm with key nut
Flange type	Euro-flange (B10-type)
Resolution	2048 ppr
Power supply	9-30 Vdc
Output signal	HCHTL
Connection type	M23 connector 12-pin
Connecting direction	Radial
Number of channels	6 (S00, S00\, S90, S90\, Sref, Sref\)
Safety certificates	EN ISO 13849-1, IEC 61800-5-2, IEC 61508, IEC 62061

Electrical data

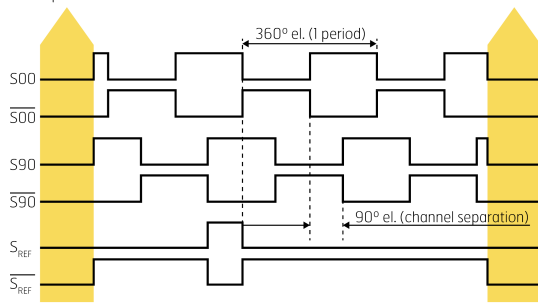
Polarity protected	Yes
Short circuit protected outputs	Yes
Current consumption	60 mA at 24 Vdc (Max. 80 mA)
Incremental output load (max)	± 40 mA
Output frequency max	100 kHz
Cable length max	350 m at 100 kHz
Channel separation	90 °el ± 25 °el
Dividing error	± 50 °el
MTTFd value [Years]	3243 years
PFH	3.5E-8 Failures / hour
Mission Time	20 years
Startup delay	< 10 Seconds

Dimensions



Output signal

Start up time of the encoder = safe state Safe state = All channels low level



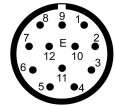
Safe signals: S00, S00\, S90, S90\
 Safe state output signal < 2.4V
 High signal output level > +Ev - 4.0V

Clockwise, seen from shaft side



Pin Configuration

Function	Pin
+E Volt	12
0 Volt	10
0 (Sref)	3
0 inverted (Sref\)	4
1 (S90)	8
1 inverted (S90\)	1
2 (S00)	5
2 inverted (S00\)	6



Order information

Part number 1289796-01