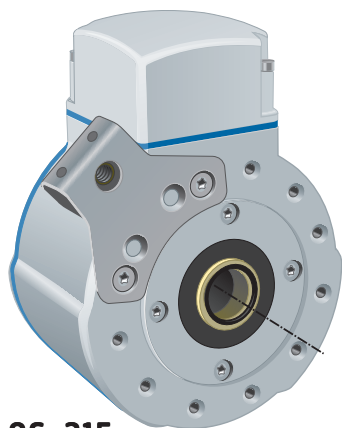


86-120



86-315

Short description:

- >> Performance model for heavy duty industry
- >> Hybrid bearings for extended lifetime
- >> High vibration and shock resistance
- >> Electrically insulated up to 2.5 kV
- >> Cable connection in external terminal box
- >> Status output for warning indication

General information

Encoder data	
Type	XH1 801
Operating temperature	-40 °C .. +100 °C (+80 °C for HC-HTL)
Ingress protection class	IP-67 according to IEC 60529
At shaft inlet	IP-66 according to IEC 60529
Vibration (50 to 2000Hz)	< 200 m/s ² according to IEC 60068-2-6
Shock (11 ms)	< 1500 m/s ² according to IEC 60068-2-27
Cover material	Aluminium
Cover surface treatment	Anodized
Weight	Approx. 1,6 kg
Resolution	
Line count	500, 1000, 1024, 2048, 2500, 3072, 4096, 5000, 8192, 10000 ppr Other line counts available on request
Accuracy	
	1..5000 ppr 5001..10 000 ppr
Dividing error	± 25 °el ± 50 °el
Channel separation	90 °el ± 25 °el 90 °el ± 45 °el
Measuring steps	4 x Line count

Flange option

Flange type	86-120	86-315
Shaft type	Blind	Blind
Flange material	Aluminium (anodized)	Aluminium (anodized)
Torque bracket material	Stainless steel	Stainless steel

Shaft option

Hollow-shaft dimension	Ø 12 mm	Ø 12 mm with keyway	Ø 16 mm	Ø 17 mm taper
Shaft type	Blind	Blind	Blind	Blind
Axial shaft load @ 1500 rpm	100 N	100 N	100 N	100 N
Radial shaft load @ 1500 rpm	300 N	300 N	300 N	300 N
Mech. permissible speed	6000 rpm	6000 rpm	6000 rpm	6000 rpm
Shaft material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Moment of inertia	55 x 10 ⁻⁶ kgm ²	55 x 10 ⁻⁶ kgm ²	55 x 10 ⁻⁶ kgm ²	55 x 10 ⁻⁶ kgm ²

801 — X-heavy duty Hollow shaft encoder, Incremental

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Connection option

Function	Connection type		
	Cable ⁽¹⁾	Screw terminal ⁽²⁾	12 pin M23 CW
S00	Yellow	F	5
S00 inverted	Black	E	6
S90	Green	D	8
S90 inverted	White	C	1
Sref	Brown	B	3
Sref inverted	Violet	A	4
+E Volt	Red	K	12
0 Volt	Blue	H	10
Status	Grey	L	7
Housing	Shield	Chassis	Chassis
Connecting direction			
Radial / Adjustable			

⁽¹⁾ PVC 5x2x0,25 mm²

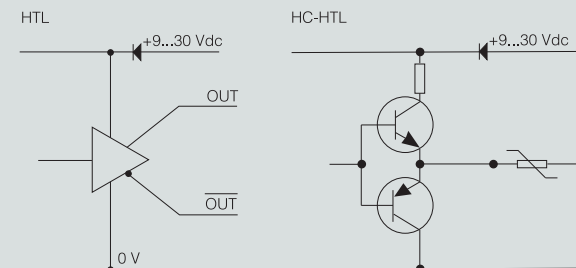
⁽²⁾ Cable gland for cable dimension \varnothing 8-11 mm

Electrical option

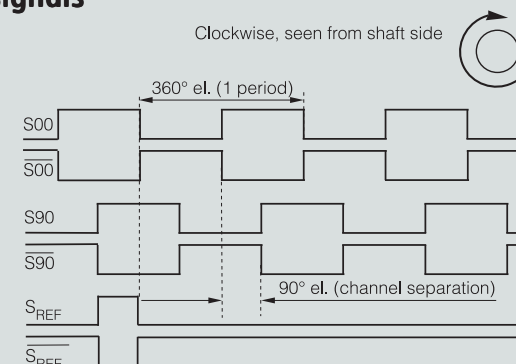
Power supply	9-30 Vdc	
Polarity protected	Yes	
Output signals ⁽¹⁾	HTL	HC-HTL
Short circuit protected	Yes	Yes
Current consumption	60 mA @ 24 Vdc	60 mA @ 24 Vdc
Max consumption	80 mA	80 mA
Output load (max)	\pm 40 mA	\pm 40 mA
Output frequency (max)	200 kHz	100 kHz
U _{high} @ 40 mA load	> +EV - 2,0 Vdc	> +EV - 4,0 Vdc
U _{low} @ 40 mA load	< 1,15 Vdc	< 2,5 Vdc
Cable length (max)	200 m @ 50 kHz	350 m @ 100 kHz
Status output		
High level (green LED)	Encoder OK	
Low level (red LED)	Warning / Failure	

⁽¹⁾ Interface 1 Vpp is also available, see separate datasheet.

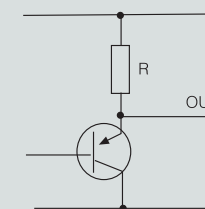
Output circuit



Output signals



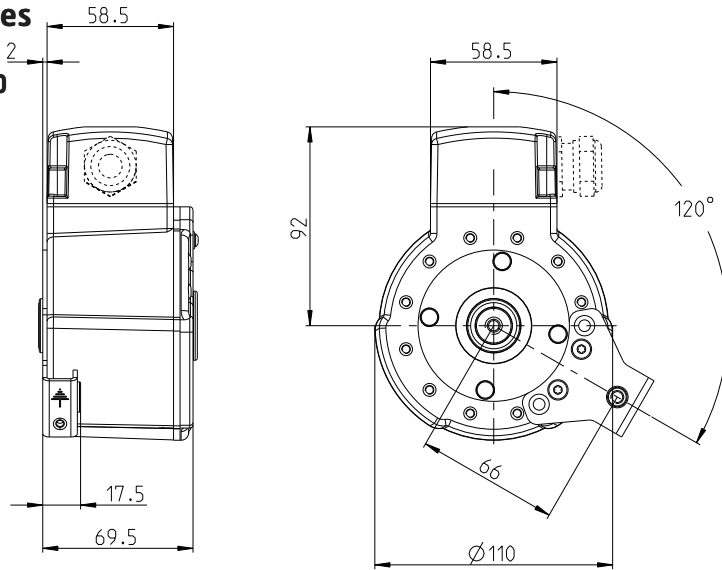
Status output



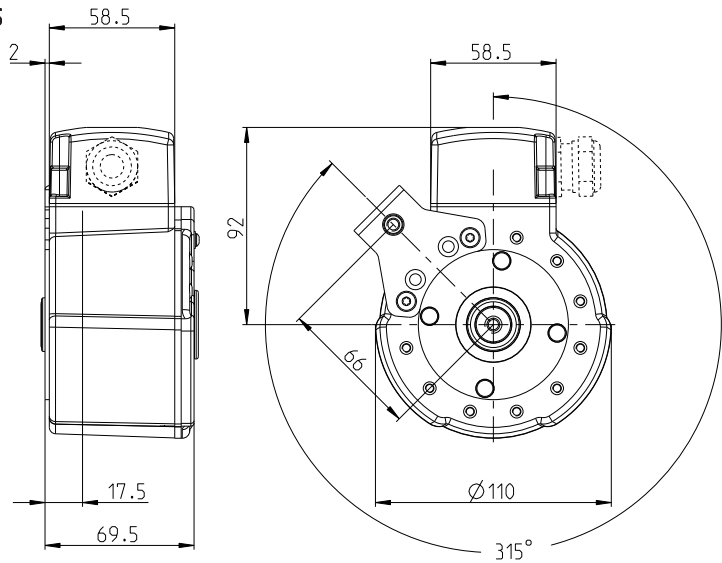


Flanges

86-120

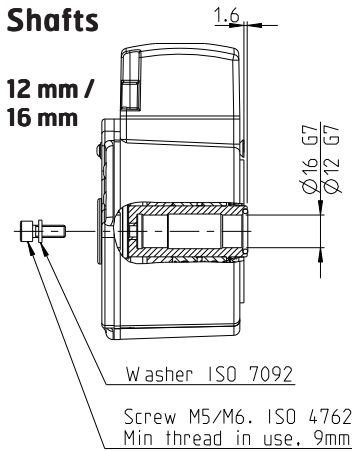


86-315

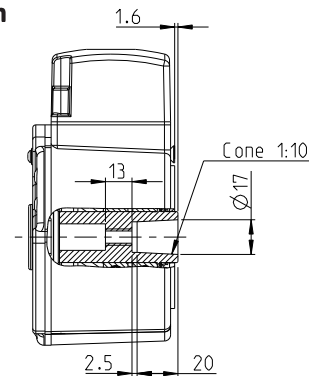


Shafts

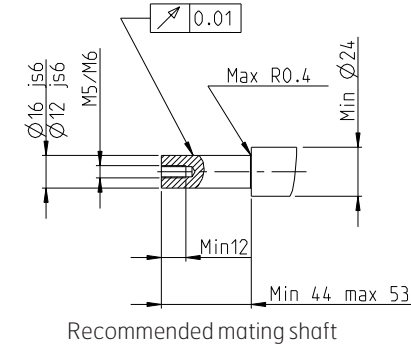
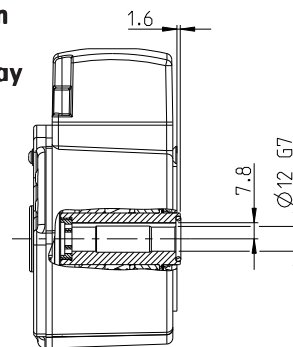
12 mm / 16 mm



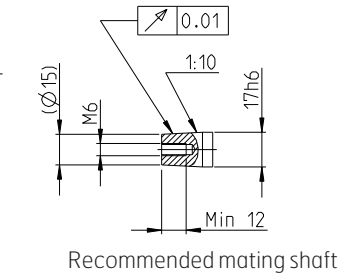
17 mm taper



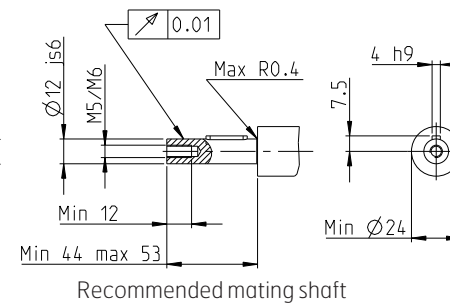
12 mm with keyway



Recommended mating shaft



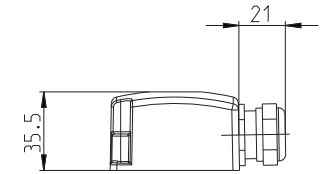
Recommended mating shaft



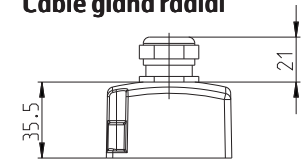
Recommended mating shaft

Connections

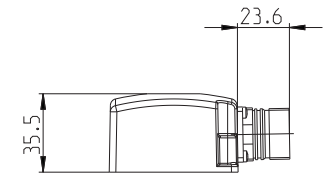
Cable gland adjustable



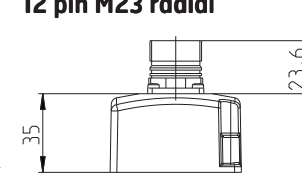
Cable gland radial



12 pin M23 adjustable

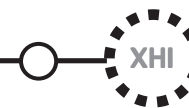


12 pin M23 radial



801 — X-heavy duty Hollow shaft encoder, Incremental

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Accessories

Mounting accessories	Part number
Torque arm M6	01208014
Mating connector M23	01209096
Other accessories	Part number
Speed monitor	00208070
OptoLink Receiver	01300330
OptoLink Transmitter	01300320

Various combinations/examples

XHI 801 86-120

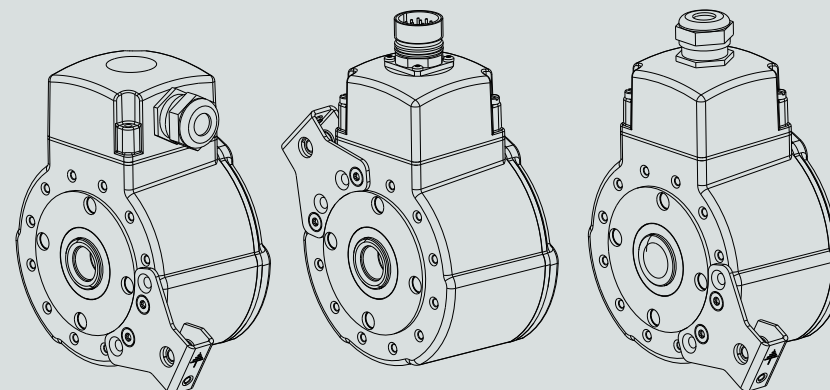
16 mm, adjustable cable gland

XHI 801 86-315

16 mm, radial 12 pin M23

XHI 801 86-120

17 mm taper, radial cable gland



Ordering information Tick your choice

Type	XHI 801			
Flange	86-120 / 86-315			
Shaft	Ø 12 mm	Ø 12 mm with keyway	Ø 16 mm	Ø 17 mm taper
Electronics	Supply	9-30 Vdc		
	Output	HTL	HC-HTL	
Connection	Cable 1,5 m / 5 m / 10 m	Cable gland	12 pin M23	
Connecting direction	Radial / Adjustable			
Line count	500 / 1000 / 1024 / 2048 / 2500 / 3072 / 4096 / 5000 / 8192 / 10000 ppr			
Functionality	Standard	OVP		

OVP: Overvoltage protection

Ordering example: XHI 801, 86-120, Ø 12 mm, 9-30 Vdc, HTL, 12 pin M23, radial, 1024 ppr, OVP