

Heavy Duty Series

Solid shaft with EURO flange B10
1000...10,000 pulses per revolution



FHD S115 Series



Features

- Robust, compact housing
- Two bearings with large distance
- High shaft load up to 300N
- Highest operating speed 10,000 rpm
- Terminal box, M23 connector, cable options

Technical data-electrical ratings

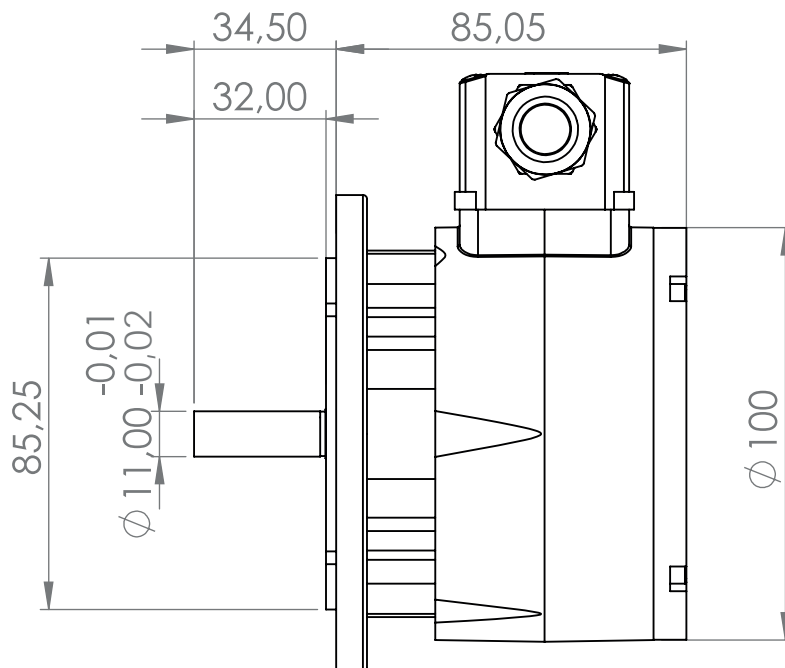
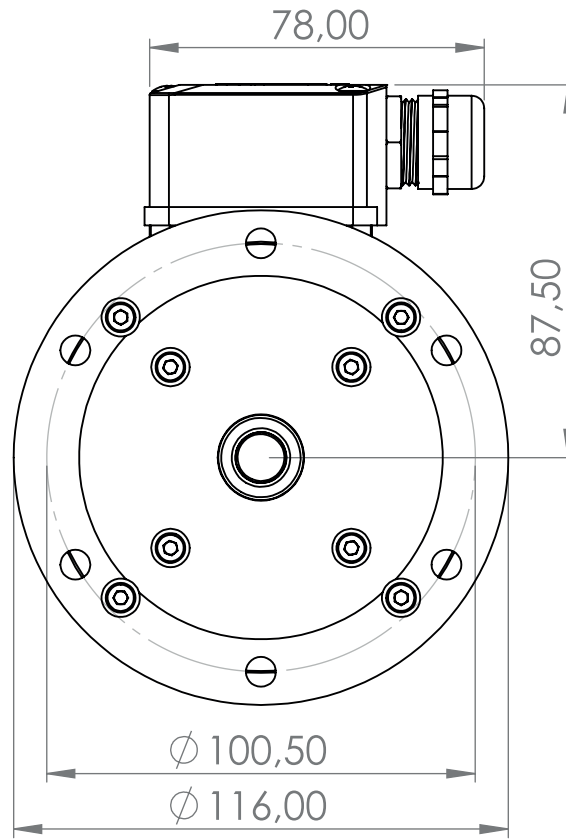
Voltage supply	9VDC to 30VDC 5VDC \pm 5%
Consumption w/o load	\leq 100 mA
Resolution (steps/turn)	1000...10.000 ppr
Phase shift	90° \pm 15°
Scan ratio	45...55%
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	<200 kHz
Output signals	90° shifted A and B, Z+ inverted
Output circuit	TTL / RS422 Push-pull short-circuit proof NPN Open Collector
Transmission length	\leq 400m at 100kHz
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE

Technical data-mechanical ratings

Dimensions (flange)	B10 flange / 115 mm
Shaft loading	\leq 240 N axial \leq 300 N radial
Protection DIN EN 60529	IP66
Operating speed	\leq 10,000 rpm
Operating torque	\leq 4 Ncm
Rotor moment of inertia	160 gcm ²
Materials	Housing: die-cast aluminum Shaft: stainless steel
Shaft diameter	\varnothing 11 mm solid shaft
Bearings lifetime	2x10 ⁹ rev. at 100% of full rated shaft load (minimum)
Operating temperature	-40...+100°C
Storage temperature	-40°C up to +90°C
Weight approx.	1.2 kg

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Mechanical Dimensions



Heavy Duty Series

Cable / Connector Wiring, Part Number

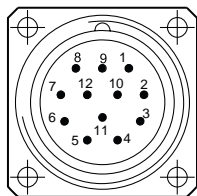
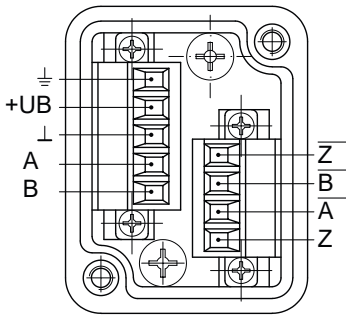


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Terminal Connection

FHD S115

Connecting terminal terminal box

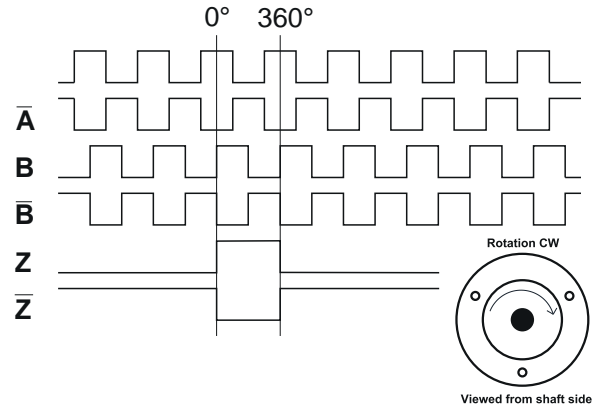


FHD S115

Flange connector
M23, 12-pin

Pin	Assignment
1	\overline{B}
2	nc
3	Z
4	\overline{Z}
5	A
6	\overline{A}
7	nc
8	B
9, 10	nc
11	GND
12	+UB

Pulse Diagram



Encoder Part Number

FHD 115 S 11 6 30V 1024 - T

Housing
115 : 115 mm

Flange
S : Servo flange

Shaft diameter
11 : 11 mm shaft with keyway

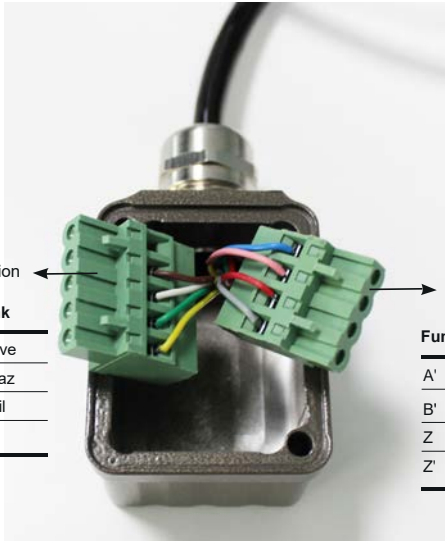
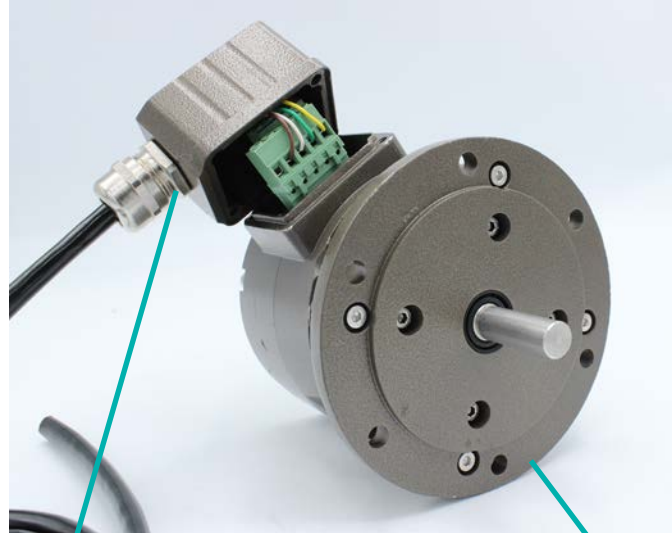
Output Channels
2 : AB
3 : ABZ
4 : AB+A'B'
6 : ABZ+A'B'Z'

Electrical Connections
T : Terminal box
M : M23, 12 pin connector
TC : Terminal box with cable
R : Redundant Dsub connection

PPR Options
1000 - 1024 - 2000 - 2048 - 2500 - 4096 - 5000 - 8092 - 10000

Supply Voltage and Output Circuit
5V : 5V in / out
5VHC : 5V in / out High Current version
245V : 5-30V in 5V out
30V : 5-30V in / out
30VHC : 5-30V in / out High Current version

Electrical Connection Details



5 pin terminal block connection

Function	Color	Renk
+VB	Brown	Kahve
GND	White	Beyaz
A	Green	Yeşil
B	Yellow	Sarı

4 pin terminal block connection

Function	Color	Renk
A'	Red	Kırmızı
B'	Pink	Pembe
Z	Gray	Gri
Z'	Blue	Mavi

