

## Heavy Duty incremental encoder

- ▶ Extremely robust housing for harsh environments
- ▶ 6 or 3 short-circuit protected outputs 1, 1, 2, 2, 0, 0 / 1, 2, 0
- ▶ IP 65, encapsulation class
- ▶ Electrically insulated hollow-shaft
- ▶ 5 Vdc or 9...30 Vdc
- ▶ Available with Advanced internal diagnostics, ADS



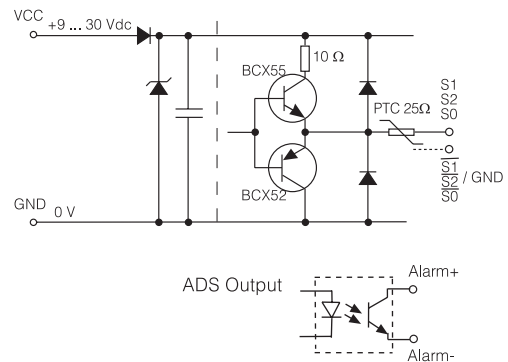
## ELECTRICAL SPECIFICATION

Supply voltage +EV	9-30V	5V ± 10%
	Polarity protected	---
Current consumption at no load	60mA @ 24V Max 80mA	85mA Max 155mA
Line counts	500, 1000, 1024, 2048, 2500, 3072, 4096, 5000, 6350, 10000	
Measuring steps	4 x Line counts	
Accuracy	1-5000ppr	5001-10000ppr
Dividing error	± 50° el	± 90° el
Channel separation	90° ± 25° el	90° ± 45° el
Outputs	High current HTL	RS-422
	Short circuit protected	
Load max	± 40mA	± 20mA
Max cable length	350m @ 100kHz	1km (TIA/EIA-422-B)
U <sub>high</sub> (at 40mA load)	> +EV - 4,0V	> 3,0V
U <sub>low</sub> (at 40mA load)	< 2,5V	< 1,15V
Frequency range	0...100kHz	0...200kHz
Option	Advanced Diagnostic System ADS	
Alarm output	Opto-coupler	
OK	Closed-circuit	V <sub>CE</sub> < 2V at 10mA
Error	Open-circuit	min 500ms
Voltage max	35V	
Current max	30mA	
PC communication	RS-232	Max 10m cable

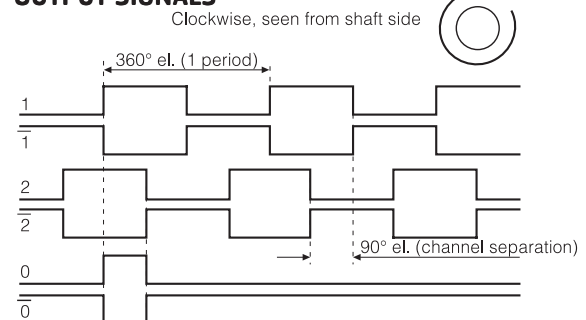
## ACCESSORIES

Torque arm	
M5	Part. No. 01208013
M6	Part. No. 01208014
ADS PC software kit	Part. No. 01209084

## OUTPUT CIRCUIT

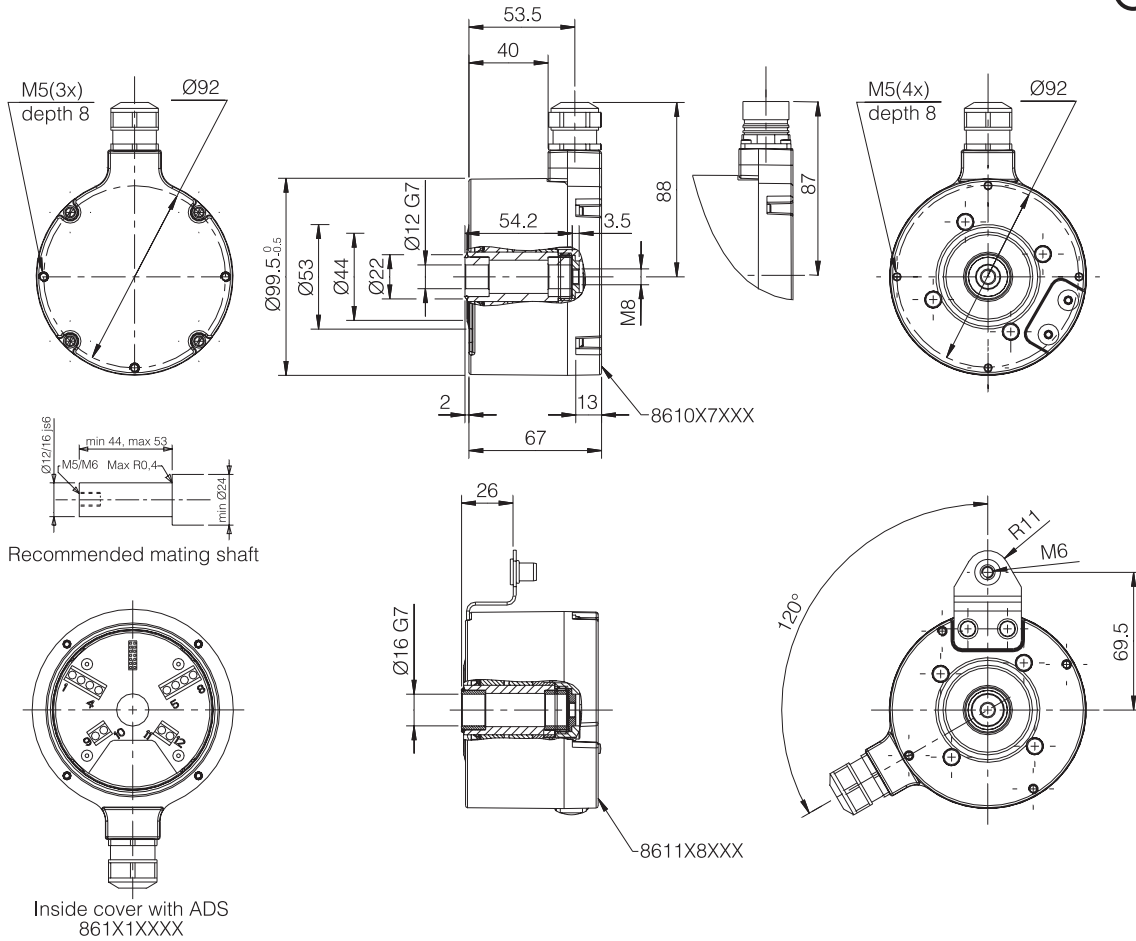


## OUTPUT SIGNALS



## CONNECTION

Function	Terminal	12 pin EML	Colour	
+ E Volt	1	12	Red	
0 Volt	2	10	Blue	
0	3	3	Brown	
0 (0 Volt *)	4	4	Violet	* 3 channel output
1	5	8	Green	All 0 Volt pins are internally connected on the PCB
1 (0 Volt *)	6	1	White	
2	7	5	Yellow	
2 (0 Volt *)	8	6	Black	
Alarm +	9	9	Grey	ADS outputs
Alarm -	10	11	Pink	
RXD	11	7	Grey / Pink	
TXD	12	2	Red / Blue	
Case			Shield	



## MECHANICAL SPECIFICATION

Isolated Hollow-shaft	Ø12, 16mm, Stainless steel / PEEK
Moment of inertia	55 x 10 <sup>-6</sup> kgm <sup>2</sup>
Load max	
Radial	300N
Axial	100N
Speed max	4000 rpm
Code disc	Extended temp
Temperature	
Operating	-20°C ... +80°C
Storage	-25°C ... +80°C (+105°C max 1h)
Housing	Aluminum, coated
Weight	Approx. 1300g
Protection class	IP 65 according to IEC 529
Vibration	<100m/s <sup>2</sup> (50...2000 Hz)
Shock	<1000m/s <sup>2</sup> (11ms)
Cable	10x0,25mm <sup>2</sup> twisted pair PVC (Not ADS)
Connector	12 pin EML

## ORDERING INFORMATION

8 6 1 - [ ] - [ ]

### Option

#### Mechanical

- 0 = Standard
- 1 = Torque bracket (for M6 torque arm)

#### Electrical

- 0 = Standard
- 1 = ADS (1024, 2048 and 4096 ppr)

#### Hollow-shaft

- 7 = Ø 12 mm
- 8 = Ø 16 mm

#### Connection

- 1 = Connector, radial 12 pin EML CW
- 2 = Connector, radial 12 pin EML CCW
- 3 = Cable, radial 1.5 m
- 4 = M20 cable gland, radial Ø8-11mm
- 5 = M20 cable gland, radial Ø11-14mm
- 9 = Cable, radial xx m

#### Supply voltage

- 1 = 5 Vdc (Only 6 channel output, not available with ADS)
- 5 = 9...30 Vdc
- 7 = 9...30 Vdc (RS-422 output, only 6 channel output, not available with ADS)

#### Outputs

- 5 = 3 channels 1, 2, 0
- 6 = 6 channels 1, 1, 2, 2, 0, 0

#### Line counts

- 500, 1000, 1024, 2048, 2500, 3072, 4096, 5000
- 6350, 10000 ppr (Other line counts on request)