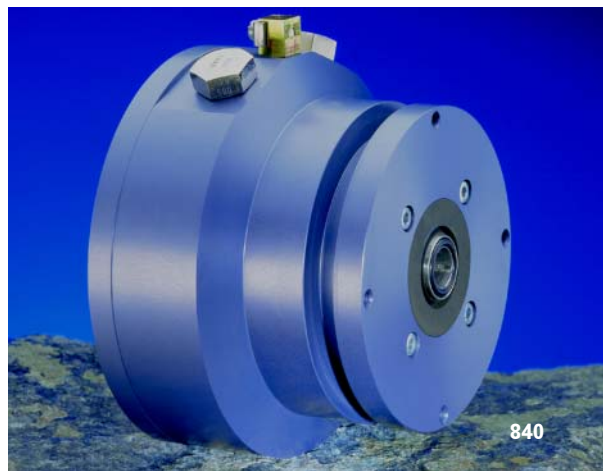




### Explosion proof incremental encoder



- ▶ Extremely robust housing for harsh environments
- ▶ Shock and vibration protected
- ▶ IP 65, encapsulation class
- ▶ Explosion proof EExd IIC T4/T5
- ▶ 9...30 Vdc
- ▶ 3 or 6 short-circuit protected outputs



### ELECTRICAL SPECIFICATION

Supply voltage +EV	9-30V
	Polarity protected
Current consumption at no load	60mA @ 24V Max 80mA
Line counts	1000, 1024, 2048, 4096, 5000
Measuring steps	4 x Line counts
Accuracy	
Dividing error	± 50° el
Channel separation	90° ± 25° el
Outputs	High current HTL
Load max	± 40mA
Cable length max	350m @ 100kHz
U <sub>high</sub> (at 40mA load)	> +EV - 4,0V
U <sub>low</sub> (at 40mA load)	< 2,5V
Frequency range	0...100kHz

### ACCESSORIES

Torque arm M5	Part. No. 01208013
Cable gland	
EEx d IIC, PG 13,5	Part. No. 00208021
EEx d IIC, PG 9	Part. No. 00208023

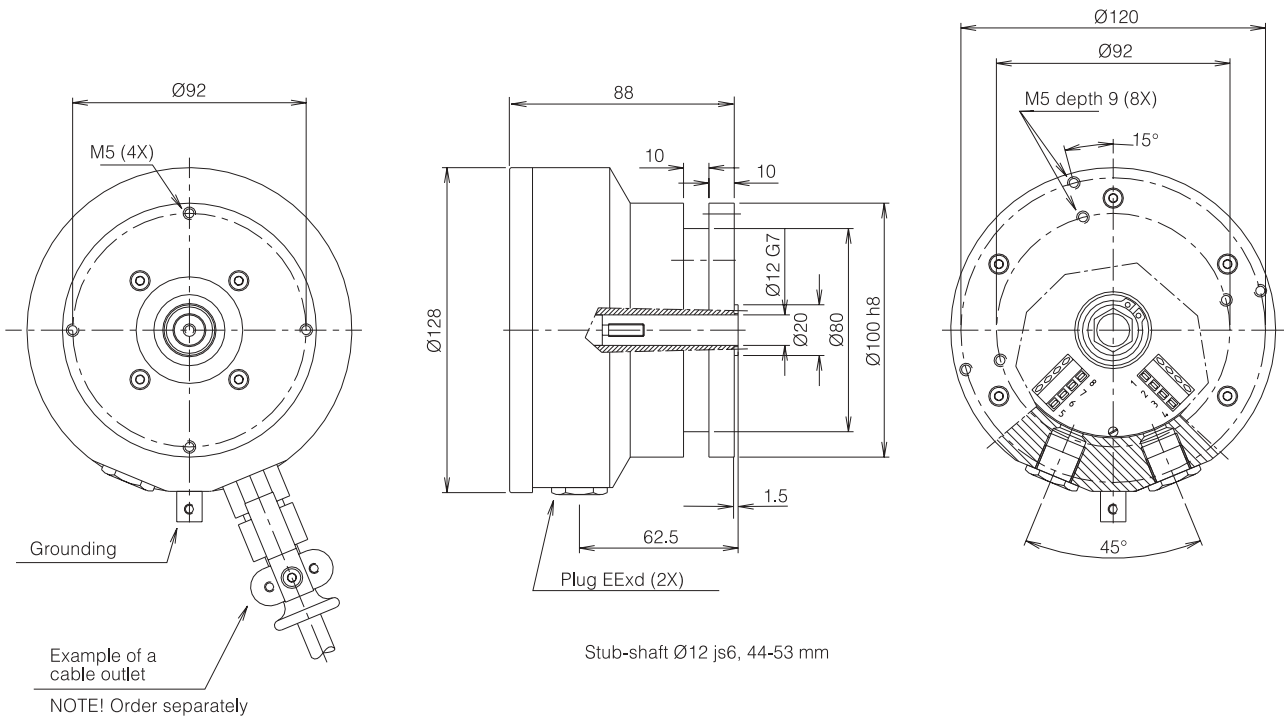
### POSSIBLE OPTIONS / PERFORMANCES OF EEX 840

The possible options/performances of EEx 840 are limited by the certificate (SP Ex 98.E.604X). The possible options/performances are:

- Line counts other than mentioned in the specification on request. Only glass disc can be used
- Temperature class: (Ta = ambient temperature)
  - T5: -20°C < Ta < +40°C, 3000rpm max
  - T5: -20°C < Ta < +60°C, 1500rpm max
  - T4: -20°C < Ta < +70°C, 3000rpm max
 T4 means that the surface temperature of the encoder must not exceed 135°C (running). For T5 the corresponding temperature is 100°C. Most Ex-classified motors are working in class T3 (200°) which means that an encoder with T4 can be used together with these motors.
- Electronics with screw terminal connection and 3 or 6 channel output, all short-circuit protected via PTC resistors.
- Threaded holes for cable glands PG9 alt. PG11 alt. PG13,5 alt. M16x1,5 alt. M20x1,5. Only limitation is that there could not be M thread in both holes since there are no EEx d certified plugs.

### CONNECTION

Function	Terminal	
+ E Volt	1	
0 Volt	2	
0	3	
0 (GND*)	4	
1 (GND*)	5	* 3 Channel output
1	6	
2 (GND*)	7	
2	8	



## MECHANICAL SPECIFICATION

Hollow-shaft	Ø 12mm	Stainless steel
Moment of inertia	16 x 10 <sup>-6</sup> kgm <sup>2</sup>	
Load max	Radial	140N
	Axial	75N
Speed max	3500 rpm	
Code disc	Extended temp	
Temperature	Operating	-20°C ... +70°C
	Storage	-25°C ... +80°C
Housing	Aluminum, anodized	
Weight	Approx. 1700g	
Protection class	IP 65 according to IEC 529	
Vibration	<100m/s <sup>2</sup> (50...2000 Hz)	
Shock	<1000m/s <sup>2</sup> (11ms)	

## ORDERING INFORMATION

### Available models

#### 840 900025

EEx d IIC T4, -20°C<Ta<+70°C, 3000 rpm max, 2048 ppr, 3 outputs, 9-30 Vdc, PG9/M20x1,5

#### 840 900026

EEx d IIC T4, -20°C<Ta<+70°C, 3000 rpm max, 1024 ppr, 6 outputs, 9-30 Vdc, PG9/PG9

#### 840 900027

EEx d IIC T4, -20°C<Ta<+70°C, 3000 rpm max, 1024 ppr, 6 outputs, 9-30 Vdc, PG13,5/PG13,5

#### 840 900028

EEx d IIC T4, -20°C<Ta<+70°C, 3000 rpm max, 1024 ppr, 6 outputs, 9-30 Vdc, PG9/M20x1,5

#### 840 900029

EEx d IIC T4, -20°C<Ta<+70°C, 3000 rpm max, 2048 ppr, 6 outputs, 9-30 Vdc, PG9/M20x1,5