

# 70-140

Absolute shaft encoder with 12 mm shaft.  
Special merits: robust construction and low torque.



## Electrical Specifications:

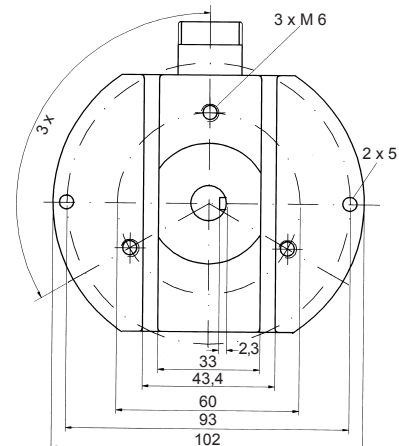
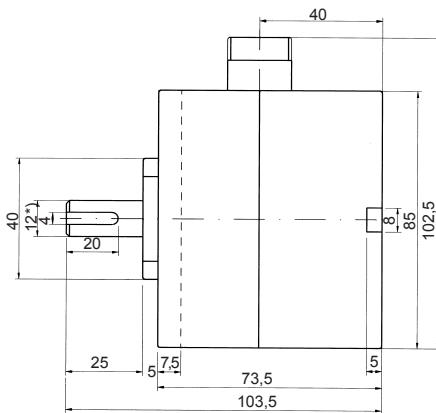
Max. signal element frequency: 10 KHz  
 Permissible temp. range: -20° . . . +60° C

Power supply: 12V . . . 24V DC +20%  
 Max. current consumption: max. 100 mA (without load)  
 Max. fan-out: 40 mA (per channel)  
 Residual ripple: max. ± 5% U<sub>B</sub>

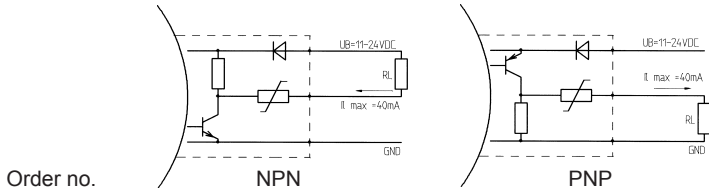
## Mechanical Specifications:

Enclosure: Zinc diecasting  
 Shaft: Stainless steel  
 Bearing: Deep groove ball bearing  
 Weight: ca. 1,2 kg  
 System of protection: IP 54  
 Max. speed: 6000 U/min  
 Torque: ca. 3 Ncm  
 Max: shaftload: axial 30 N  
 radial 50 N

## Mechanical Dimensions:



Output Circuits:



Output Code

Binary, BCD

Gray  
(beginning at 00)

Gray-Excess  
(beginning ≠ 0)

Resolution:

2, 4, 8, 16, 32, 64, 128,  
256, 512, 1024

2, 4, 8, 16, 32, 64, 128,  
256, 360, 512, 1024,

45, 90, 180, 360, 720

Inputs:

Count direction reversal (looking at the shaft)

Input open = clockwise

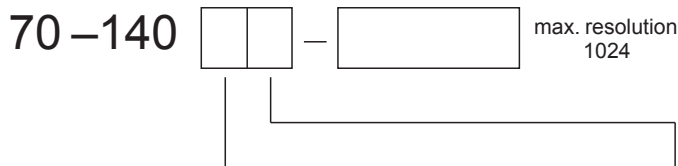
Input + UB = counter-clockwise

Pin Configuration:

	*BCD		10 <sub>0</sub>				10 <sub>1</sub>				10 <sub>2</sub>				10 <sub>3</sub>		
	GND	+UB	1	2	4	8	1	2	4	8	1	2	4	8	1	↔	
Typ of connection			2 <sub>0</sub>	2 <sub>1</sub>	2 <sub>2</sub>	2 <sub>3</sub>	2 <sub>4</sub>	2 <sub>5</sub>	2 <sub>6</sub>	2 <sub>7</sub>	2 <sub>8</sub>	2 <sub>9</sub>	2 <sub>10</sub>	2 <sub>11</sub>	optional	↔	
F (12pol.)	1	2	3	4	5	6	7	8	9	10	11	12	-	-	-	-	
„ F (16pol.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
„ K (00)			brown	green	yellow	grey	pink	blue	red	black	violet	gr/pi	bl/re	wh/gn	br/gn	wh/ye	ye/br

\* Binär, BCD, only 1024

Order No.:



Coding + Count-Direction + Output

- |                |               |               |
|----------------|---------------|---------------|
| A = Gray → NPN | E = Bin → NPN | I = BCD → NPN |
| B = Gray ← NPN | F = Bin ← NPN | L = BCD ← NPN |
| C = Gray → PNP | G = Bin → PNP | K = BCD → PNP |
| D = Gray ← PNP | H = Bin ← PNP | M = BCD ← PNP |
| N = Gray ↔ NPN | P = Bin ↔ NPN | S = BCD ↔ NPN |
| O = Gray ↔ PNP | R = Bin ↔ PNP | T = BCD ↔ PNP |

Modification

- A = None  
 B = Parity (odd)  
 C = Parity (even)  
 F = Connector ax. ↔ 12pol ↔ 16pol.)  
 K = Cable output (00)  
 (matching plug with ready made cable upon request)

See page 53/54 for mechanical accessories