

Quality - made in Germany



## RSH 120

### Incremental encoder

- shockproof up to 200 g
- through hollow shaft from 27 to 55 mm
- up to 100.000 pulses/turn
- pulse frequency up to 4 MHz
- expanded temperature range up to + 110° C

### Technical data

Resolution in pulses/turn up to 10.000 P/T  
(see standard-pulse-numbers)

Number of channels 3 or 6  
 Pulse frequency up to 4 MHz  
 Output driver 5 V Line-Driver  
 or push-pull

### Electrical data

Operating voltage UB = 5 VDC ± 5 %  
 or UB = 10...30 VDC

Current consumption 60...200 mA  
 Output current 20 mA...1A  
 Output signals Channel A, B, N + inverse

### Mechanical data

Speed ≤ 4.000 min<sup>-1</sup>  
 Start-up torque < 0,3 Ncm (20° C)  
 Shaft loading ≤ 20 N radial, 10 N axial  
 Angular acceleration 10<sup>4</sup> rad/s<sup>2</sup>

### Material

Housing Aluminium  
 Shaft Stainless steel  
 Weight < 0,6 kg

### Ambient conditions

Vibration ≤ 10 g (20...2000 Hz)  
 Shock ≤ 100 g (11 ms)  
 Operating temperature - 20...+ 80° C  
 or upgrade to - 42 ...+ 110° C

Storage temperature - 30 ... + 90° C  
 Humidity < 85 % r. h.  
 Protection type IP 64 (DIN 40050/IEC 529)  
 EMV IEC 801

## PIN - assignment RSH 120

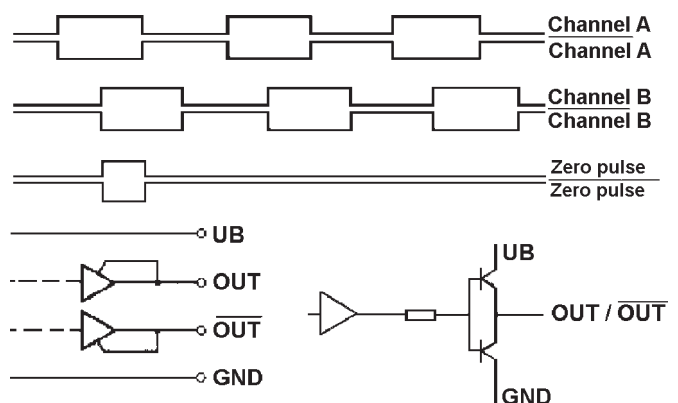
Signal	PIN	Cable colour
Channel B inverted	1	pink
not in use	2	-
Zero pulse	3	red
Zero pulse inverted	4	black
Channel A	5	brown
Channel A inverted	6	green
not in use	7	-
Channel B	8	gray
Shield	9	transparent
GND	10	white 0,5
not in use	11	-
UB	12	brown 0,5

### Instructions:

Not used out put channels before putting into operation.

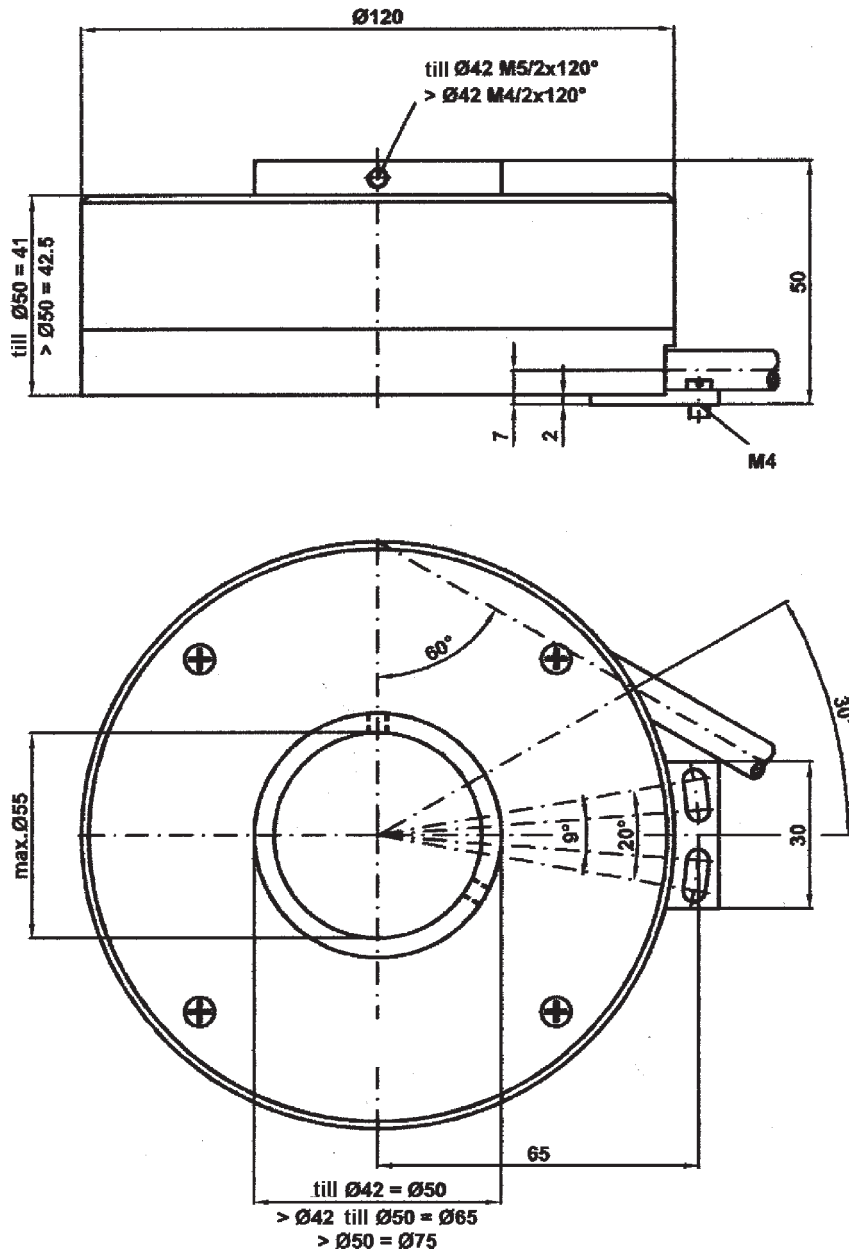
Please note that for major conductor lengths, the conductor ends must be terminated with a characteristic impedance.

### Circuit principle



# Dimension and cutout RSH 120

Through hollow shaft.  
deliverable hollow shafts:  
 27...55mm



## Type key of encoder

Encoder type	Pulse/T	Channels	Voltage	Driver	Flange	Output	Option
RSH 120	Look to Standard-pulse numbers	X = 3channelled	5 = 5 VDC	S = TTL	hollow shaft dimension in mm	KS = Cable radial	T = temperature-resistant up to + 110°C
RSH 120		Y = 6channelled	3 = 10 - 30 VDC	G = push pull	look at the dimension and cutout		
RSH 120					deliverable hollow shaft		
RSH 120	_____	_____	_____	_____	_____	KS	_____

### Standard-pulse-numbers:

1024, 2500 and 3600

Other pulse numbers on request