

Quality - made in Germany



## RSH 76

### Incremental encoder

- shockproof up to 200 g
- through hollow shaft from 16 to 27 mm
- up to 10.000 pulses/turn
- pulse frequency up to 4 MHz
- expanded temperature range up to + 110° C

#### Technical data

|                    |  |
|--------------------|--|
| Pulse/Turn         | up to 10.000 P/T<br>(see standard-Pulse-numbers) |
| Number of channels | 3 or 6   |
| Pulse frequency    | up to 4 MHz                                      |
| Output driver      | 5 V Line-Driver<br>or push-pull                  |

#### Electrical driver

|                     |   |
|---------------------|---|
| Operating voltage   | UB = 5 VDC ± 5 %<br>or UB = 10...30 VDC |
| Current consumption | 60...200 mA                             |
| Output current      | 20 mA...1A                              |
| Output signals      | Channel A, B, N + inverted              |

#### Mechanical data

|                      |                                    |
|----------------------|------------------------------------|
| Speed                | ≤ 10.000 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 | Steel     |
| Flange  | Aluminium |
| Weight  | < 0,4 kg  |

#### Ambient conditions

|                       |   |
|-----------------------|---|
| Vibration             | ≤ 20 g (20...2000 Hz)                       |
| Shock                 | ≤ 200 g (11 ms)                             |
| Operating temperature | 0...+ 80° C<br>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                                     |

RSH 76 05/03 - 005 Subject to change

### PIN - assignment RSH 76

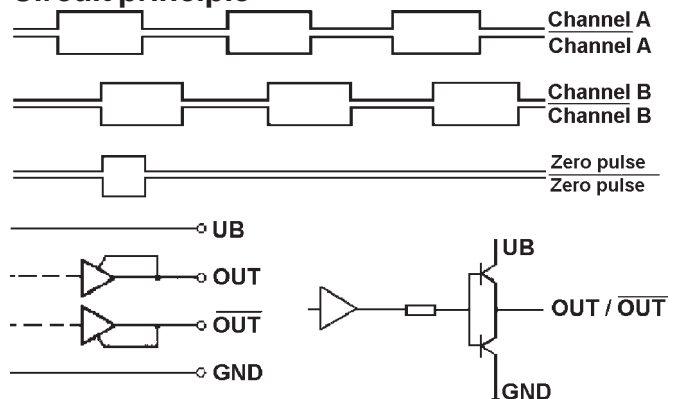
| Signal              | PIN | Cable colour |
|---------------------|-----|--------------|
| Channel B inverted  | 1   | pink         |
| not in use          | 2   | -            |
| Zero pulse          | 3   | red          |
| Zero pulse inverted | 4   | black        |
| Channel A           | 5   | brown        |
| 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 info operation.

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

#### Circuit principle



5 V TTL

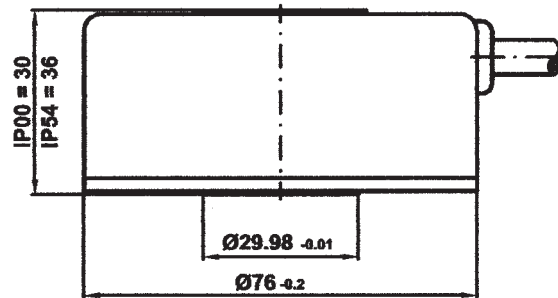
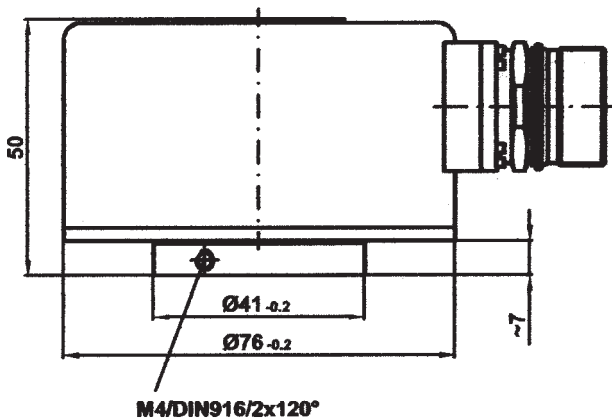
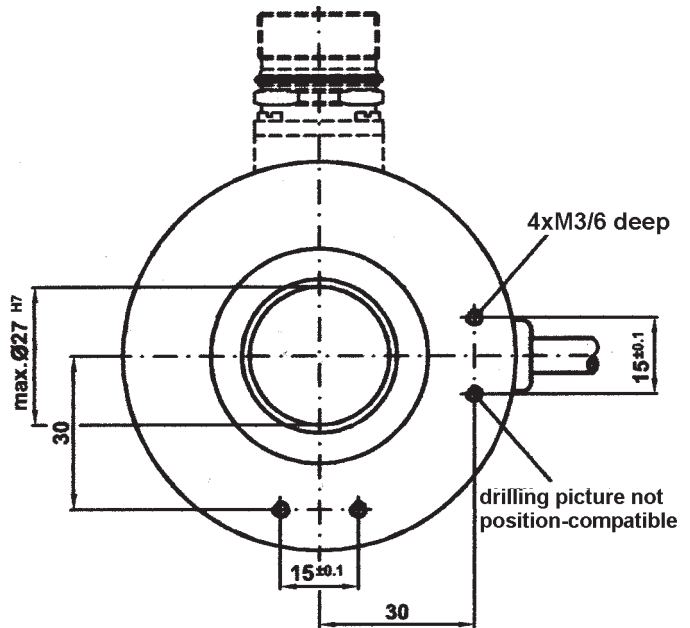
24 V HTL

# Dimension and cutout RSH 76

Through hollow shaft.

Deliverable hollow shafts:

- 16 mm
- 18 mm
- 22 mm
- 27 mm



## Type key of encoder

| Encoder type | Pulse/T                    | Channels           | Voltage         | Driver        | Flange                       | Output                     | Option   |
|--------------|----------------------------|--------------------|-----------------|---------------|------------------------------|----------------------------|--|
| RSH 76       | See Standard-Pulse-Numbers | X =<br>3channelled | 5 = 5 VDC       | S = TTL       | hollow dimension<br>in mm    |                            | T = temperature-<br>resistant up to +<br>110°C |
| RSH 76       |                            | Y =<br>6channelled | 3 = 10 - 30 VDC | G = push pull | See dimension<br>and cutout  | KS = Cable<br>radial       |  |
| RSH 76       |                            |                    |                 |               | Deliverable<br>hollow shafts | SS = 12pol.<br>plug radial |  |
| RSH 76       |                            |                    |                 |               |                              |                            |  |

Standard-Pulse-Numbers:

10 - 50 - 100 - 125 - 150 - 180 - 200 - 250 - 256 - 300 - 314 - 360 - 400 - 500 - 512 - 600 - 625 - 720 - 750 - 800 - 900 - 1000 - 1024 - 1200 - 1250 - 1375 - 1500 - 1800 - 2000 - 2048 - 2500 - 3600 - 4096 - 5000 - 6000 - 10000 **Other pulse-numbers on request**