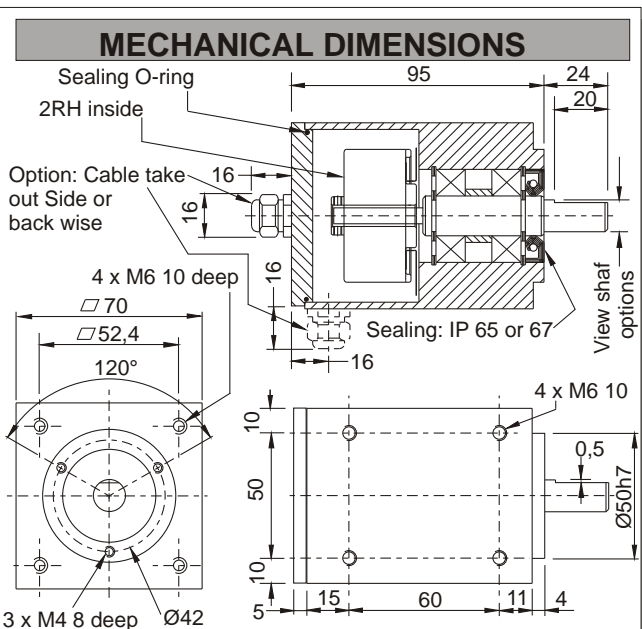
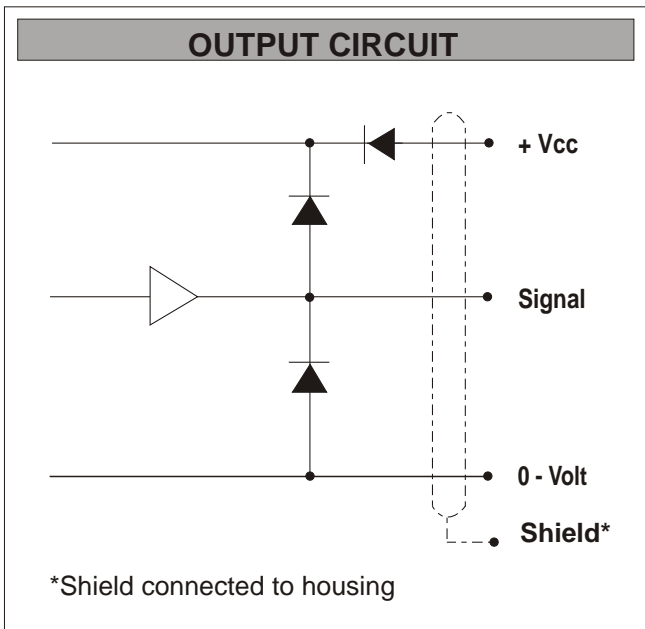





| CHARACTERISTICS | |
|--------------------------|---|
| ENCODER TYPE | Heavy duty shaft encoder |
| SMD - TECHNOLOGY | Strong compact electronics |
| HIGH IP-RATING | Std. IP 65 (option IP 67) |
| LOW CURRENT CONSUMPTION | To be connected directly to PLC'S and counters |
| SHORT CIRCUIT PROTECTION | Thermal shut down at 155°C |
| WIDE SUPPLY RANGE | Min. 4,5V to max. 30V |
| STRONG MEC. CONSTRUCTION | Based on 2 precision ball bearings, for harsh industrial environments |

| ELECTRICAL SPECIFICATIONS | |
|---------------------------|--|
| | At +25°C |
| Output waveform | Incremental (A, B) |
| Zero or index pulse | (Z) one pr./rev. |
| Output | Totempole (TP) |
| Supply-voltage (Vin) | Min 4,5V to Max. 30V * Reverse polarity protection |
| Current (no load) | Max. 35 mA |
| Max. load pr. output | 30 mA - (Short circuit protected) * |
| V _{Out low} | Max. 500 mV @ I = 10 mA |
| Operating temp. | - 40°C to + 85°C |
| Storage temp. | - 40°C to + 85°C |
| Max. pulse frequency | 300 kHz * |
| V _{out high} | Min. (Vin -0,6) @ I = -10mA Min. (Vin -1,3) @ I = -25mA |
| Cable data | 8 leads (0,14 mm ²) pairtwisted/shielded |
| Output signals | Standard, Inverted, Differential (RS-422A compatible) |
| Certified acc. to | EN 50081-1 and EN 50082-2 |
| | * = It is not recommended to combine max. value for all 3 parameters |

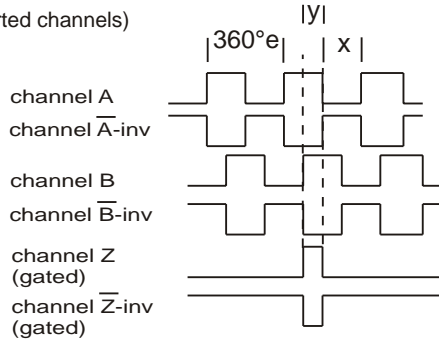
| MECHANICAL SPECIFICATIONS | |
|---------------------------|---|
| Weight | About 990 g |
| Materials : Housing | Anodized aluminum |
| Shaft | Stainless steel |
| Bearings | Lifetime lubricated ball bearings |
| Shaft dimensions | ø12 mm ø15 mm |
| Shaft loads | Axial max. 250 N Radial max. 500 N |
| Max. rev. | 3000 rev./min. |
| IP-rating | Standard IP 65 Option IP 67 |
| Start torque | <0,1 Nm at 25°C |
| Mass moment of inertia | 45 x 10 ⁻⁶ kgcm ² |
| Max. shock | 100 G/11 ms |
| Bump | 10 G - 16 ms (1000 x 3 axis) |
| Vibration | (10 - 2000 Hz)/10 G |



OUTPUT WAVEFORM

 Rotation: Clockwise (cw) from shaftside

(inv = inverted channels)



$X = 180^\circ e \pm 36^\circ e$ and $Y = 90^\circ e \pm 18^\circ e$
Z puls: Gated with A and B (standard)

Options: TTL or HTL compatible. Open Collector NPN or PNP
Gated Z-puls or none-gated Z-puls.
View more Output options in section 15 - page 1

CONNECTIONS

| Color code | Standard |
|------------|-----------|
| Pink | Ch. A |
| Grey* | Ch. A Gnd |
| Green | Ch. B |
| Yellow* | Ch. B Gnd |
| White | Ch. Z |
| Brown* | Ch. Z Gnd |
| Red | Vcc |
| Blue* | Gnd |

*Blue, grey, yellow and brown are internal connected

| Color code | Differential |
|------------|--------------|
| Pink | Ch. A |
| Grey | Ch. A inv. |
| Green | Ch. B |
| Yellow | Ch. B inv. |
| White | Ch. Z |
| Brown | Ch. Z inv. |
| Red | Vcc |
| Blue | Gnd |

ORDERING CODES

| | Options | Ordering codes |
|-------------------|---|----------------|
| Pulses pr.rev.: | No. of pulses | XXXXX |
| Output signal: | Normal, TP-Standard, A, B, Z (3 channel) | N |
| | TP-Differential: A, B, Z and A-inv, B-inv, Z-inv (6 channel) | D |
| | Line driver OL 7272 for extra long cable, up to 100 meters (Differential) | M |
| | Line driver chip 26C31 (V out low < 0,4 V) (RS-422A compatible @ 5V) Only 5 Volt (Differential) | L |
| Shaft dimensions: | ø12 mm | 12 |
| | ø15 mm | 15 |
| IP-rating: | IP 65 (Standard) | 65 |
| | IP 67 (Option) | 67 |
| Length of cable: | Standard 1 meter | 01 |
| | No. of meters | XX |
| Cable take out: | Standard back | B |
| | Side | S |
| Connector: | Coninvers Connector or MIL-connector View Section 20 page 6 to 9 | |

PULSES/REV.

| | | | | |
|----|-----|-----|------|-------|
| 1 | 32 | 150 | 600 | 2048 |
| 2 | 36 | 180 | 635 | 2500 |
| 5 | 40 | 200 | 720 | 3000 |
| 6 | 50 | 250 | 800 | 3600 |
| 8 | 60 | 300 | 1000 | 4000 |
| 10 | 64 | 360 | 1024 | 4096 |
| 15 | 75 | 400 | 1131 | 5000 |
| 16 | 80 | 455 | 1250 | 9000 |
| 20 | 90 | 500 | 1500 | 12500 |
| 25 | 100 | 512 | 2000 | |
| 30 | 125 | | | |

Advanced Output Options:

| Options | Ordering codes |
|---------------------------------|----------------|
| Normal Open Collector NPN | NON |
| Differential Open Collector NPN | DON |
| Normal Open Collector PNP | NOP |
| Differential Open collector PNP | DOP |

To order replace with

Output signal Output signal

2RHDS



Pulses



Output signal



Shaft



IP-rating



Length of cable



Cable take out