



Euro Encoder ES 381

Optical incremental encoder, small and efficient, case height only 30 mm

Resolution

| Resolution (Pulses/Revolution): | | | |
|---------------------------------|------|------|------|
| 20 | 30 | 32 | 40 |
| 50 | 60 | 100 | 125 |
| 200 | 256 | 300 | 360 |
| 400 | 500 | 512 | 600 |
| 800 | 900 | 1000 | 1024 |
| 1200 | 1500 | 1800 | 2000 |
| 2048 | 2500 | 3600 | |

Type explanation

| ES 381-6-3600-05-D-S | |
|------------------------|---|
| Encoder type | Incremental |
| Flange diameter | ø 38 mm |
| Case diameter | ø 38 mm |
| Number of channels | 3 = A + B + M 6 = AA + BB + MM |
| Resolutions | xxxx = Impulse pro Umdrehung |
| Supply voltage | 05 = 5 VDC ±5% 12 = 4,5 ... 13 VDC 24 = 10,8 ... 26 VDC |
| Output driver | D-RS422 C R P |
| Position of connection | S |
| Shaft diameter | ø 6 mm |

Technical data

Mechanical data

| | |
|----------------------|-------------------------------|
| Rotational speed | $\leq 6000 \text{ min}^{-1}$ |
| Torque | $\leq 0,1 \text{ Ncm}$ |
| Moment of inertia | 8 g cm^2 |
| shaft loading | $\leq 30 \text{ N radial}$ |
| | $\leq 20 \text{ N axial}$ |
| Angular acceleration | $\leq 10^5 \text{ rad/sec}^2$ |
| Weight | $\leq 0,15 \text{ kg}$ |

Environmental conditions

| | |
|-----------------------|------------------------------------|
| Vibration | 150 ms^{-2} (50 Hz / 1h) |
| Shock | 490 ms^{-2} (11 ms) |
| Operating temperature | -10 ... +70°C |
| Storage temperature | -30 ... +80°C |
| Atmospheric humidity | $\leq 85\% \text{ r.h.}$ |
| Protection class | IP 50 (DIN 40050/IEC 144) |

Electrical data

| | |
|--------------------------------|--|
| Scanning type | Optical, without contact |
| Transmitter, infrared | LED |
| Receiver | Photo-Transistor |
| Supply voltage | $V_{cc} = 5 \text{ VDC} \pm 5\%$, output D $V_{cc} = 4,5 \dots 13 \text{ VDC}$, output R, C $V_{cc} = 10,8 \dots 26 \text{ VDC}$, output C, P |
| Power consumption | $\leq 80 \text{ mA}$, output C, R, P $\leq 150 \text{ mA}$, Output D |
| Output frequency | $\leq 200 \text{ kHz}$ |
| Signal level | High $> V_{cc} - 1 \text{ V}$ Low $< 0,5 \text{ V}$ (20 mA) |
| Load capacity of the outputs | 20 mA |
| Dielectric strength of outputs | +50 V |

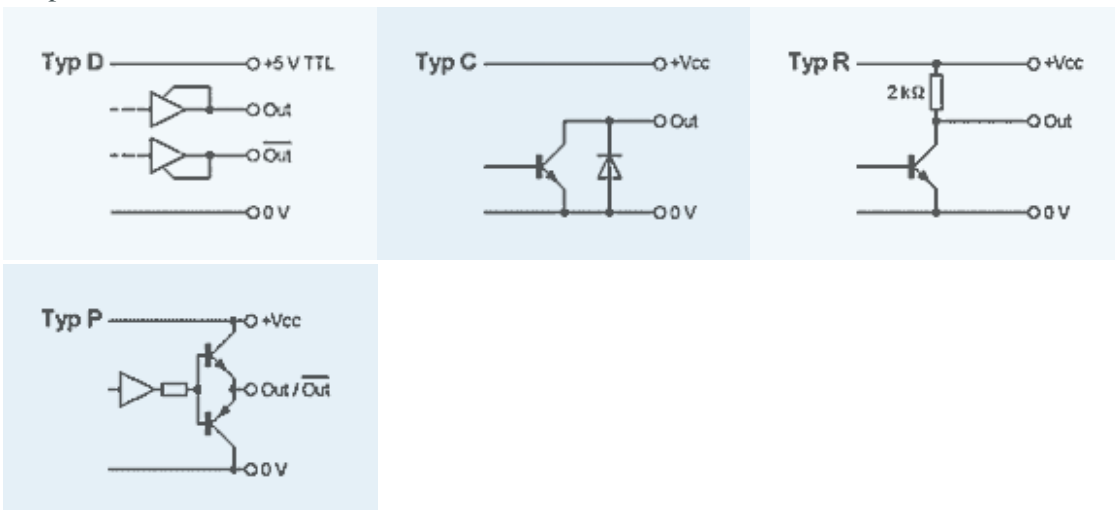
Cable 3 channels

| Wire colour | Signal |
|-------------|----------|
| Brown | +Vcc |
| Grey | 0 V GND |
| Green | Signal A |
| White | Signal B |
| Yellow | Signal M |
| Shield | N.C. |

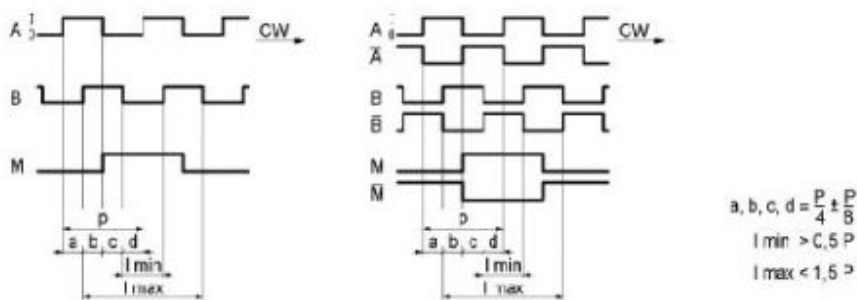
Cable 6 channels

| Wire colour | Signal |
|-------------|-----------|
| Brown | +Vcc |
| White | 0 V GND |
| Green | Signal A+ |
| Grey | Signal A- |
| Yellow | Signal B+ |
| Pink | Signal B- |
| Blue | Signal M+ |
| Red | Signal M- |
| Shield | N.C. |

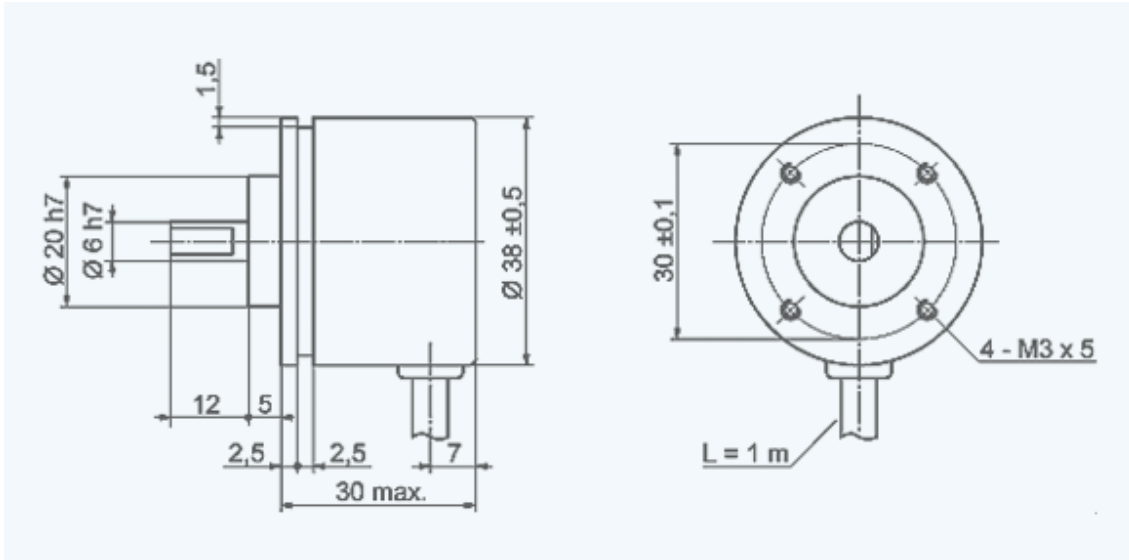
Output driver



Output channels / Output signals



Outline drawing



Version E 507-209 · Subject to change

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