



OFFICIAL DISTRIBUTOR

RGB ELEKTRONIKA AGACIAK CIACIEK SP.J.
ul. Jana Długosza 2-6
51-162 Wrocław

+48 71 325 15 05
biuro@rgbelektronika.pl

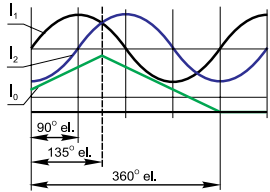
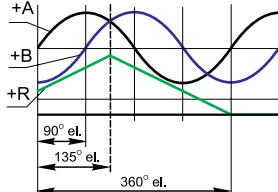
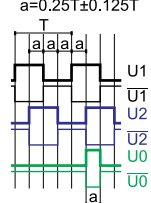
ENCODER ROD 700 18000 ROD70018000 SIN/COS 18000 PPR +5V REPLACEMENT
ID23627



PRECIZIKA
METROLOGY



ELECTRICAL DATA

| VERSION | A170-A \sim 11 μ App | A170-AV \sim 1 Vpp | A170-F \square TTL |
|-----------------------------|--|---|---|
| Supply voltage (U_p) | +5 V \pm 5% 100 mA max. | +5 V \pm 5% 120 mA max. | +5 V \pm 5%; 150 mA max. |
| Light source | LED | LED | LED |
| Incremental signals | Two sinusoidal I_1 and I_2 Amplitude at 1 k Ω load: - $I_1 = 7 \dots 16 \mu$ A - $I_2 = 7 \dots 16 \mu$ A | Differential sine +A/-A and +B/-B Amplitude at 120 Ω load: - A = 0.6...1.2 V - B = 0.6...1.2 V | Differential square-wave $U1/\overline{U1}$ and $U2/\overline{U2}$. Signal levels at 20 mA load current: - low (logic "0") \leq 0.5 V - high (logic "1") \geq 2.4 V |
| Reference signal | One quasi-triangular I_0 peak per revolution. Signal magnitude at 1 k Ω load: - $I_0 = 2 \dots 8 \mu$ A (usable component) | One quasi-triangular +R and its complementary -R per revolution. Signals magnitude at 120 Ω load - R = 2...8 V (usable component) | One differential square-wave $U0/\overline{U0}$ per revolution. Signal levels at 20 mA load current: - low (logic "0") < 0.5 V - high (logic "1") > 2.4 V |
| Maximum operating frequency | (-3 dB cutoff) \geq 160 kHz | (-3 dB cutoff) \geq 180 kHz | (160-2500 kHz (depends on interpolation factor) |
| Direction of signals | I_2 lags I_1 for clockwise rotation (viewed from encoder mounting side) | +B lags +A for clockwise rotation (viewed from encoder mounting side) | $U2$ lags $U1$ with clockwise rotation (viewed from encoder mounting side) |
| Maximum rise and fall time | - | - | < 0.5 μ s |
| Standard cable length | 1 m, without connector | 1 m, without connector | 1 m, without connector |
| Maximum cable length | 5 m | 25 m | 25 m |
| Output signals |  |  |  |

Note:

- Maximum working rotation speed (with proper encoder counting) is limited by maximum operating frequency and maximum mechanical rotation speed.
- If cable extension is used, power supply conductor cross-section should not be smaller than 0.5 mm².

ACCESSORIES

| | | | | | | | | |
|--------------------------------|-------------------------------|-----------------------------|-------------------------------|----------------------------|------------------------------|--------------------------------|-------------------------------|-------------------------------------|
| CONNECTORS FOR CABLE | B12 12-pin round connector | C9 9-pin round connector | C12 12-pin round connector | D9 9-pin flat connector | D15 15-pin flat connector | RS10 10-pin round connector | ONC 10-pin round connector | HR25 8-pins round mini connector |
| DIGITAL READOUT DEVICES | CS3000 | | | | CS5000 | | | |
| COUPLING | SC98-1 | | | | SC98-2 | | | |
| EXTERNAL INTERPOLATOR | NK | | | | | | | |

ORDER FORM

| OUTPUT SIGNAL VERSION: | PULSE NUMBER PER REVOLUTION: | OPTIONAL LINE NUMBER ON DISC (Z): | REFERENCE SIGNAL: | ACCURACY GRADE: | CABLE OR CONNECTOR OUTLET: | CABLE LENGTH: | CONNECTOR TYPE: | COUPLING: |
|------------------------|---------------------------------|--|---|--|--|--|--|------------------------------------|
| A AV F | 1...18000 ... 1...3600000 | 18000 36000 *only for A170-F | S - one per revolution, K - distance-coded | 25 \pm 2.5 arc.sec. 50 \pm 5.0 arc.sec. | S - version S (cable outlet) C-version C (connector outlet) | AR01 - 1m AR02 - 2m AR03 - 3m ... | W - without connector B12 - round, 12 pins C9 - round, 9 pins C12 - round, 12 pins D9 - flat, 9 pins D15 - flat, 15 pins RS10 - round, 10 pins ONC - round, 10 pins | 0 - without coupling 1 - SC98-1 |
| ORDER EXAMPLES: | | 1) A170-F-360000/36000-K-25-C-AR01/C12-1 2) A170-F-360000-K-25-S-AR01/C12-1 | | | | | | |