

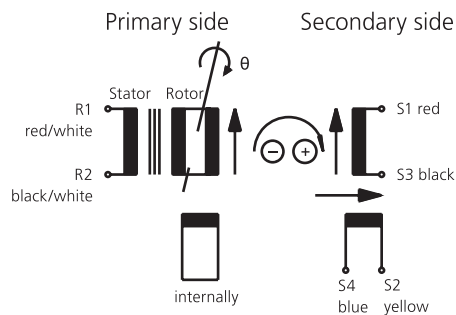


RESOLVER

R 71

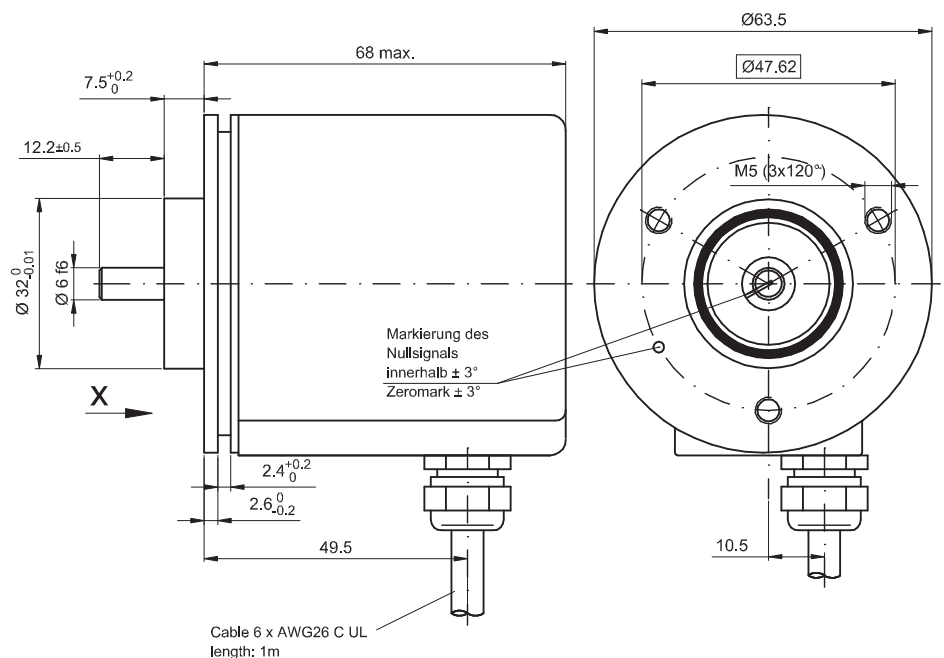
FACTS

- Shaft Ø: max. 12 mm
- Hollow shaft Ø: max. 20 mm
- Outer Ø: 71 mm
- Operation temp.: -55 °C ... +155 °C
- Perm. Speed: 5.000 min⁻¹
- Inside: Resolver size 21



Input: $E(R1-R2) = E \cdot \sin(\cos)$
 Output: $E(S1-S3) = TR \cdot E(R1-R2) \cdot \cos \theta$
 $E(S2-S4) = TR \cdot E(R1-R2) \cdot \sin \theta$
 TR = Transformation ratio

Positive counting direction:
 Rotor cw as viewed (X →)



SELECTION GUIDE FOR ELECTRONICAL DATA

| | | |
|------------------------|--|--|
| Primary side | R1 - R2 | R1 - R2 |
| Pole Pairs | 1 | 1 |
| Transformation ratio | $0.5 \pm 10\%$ | $0.5 \pm 10\%$ |
| Input voltage | 7 V | 7 V |
| Input current | 47 mA | 35 mA |
| Input frequency | 5 kHz | 8 kHz |
| Phase shift | $8^\circ \pm 3^\circ$ | $-3^\circ \pm 3^\circ$ |
| Null voltage | 30 mV max. | 30 mV max. |
| Impedance | | |
| Zro | $92 \Omega + j \cdot 120 \Omega$ | $110 \Omega + j \cdot 170 \Omega$ |
| Zrs | $82 \Omega + j \cdot 100 \Omega$ | $95 \Omega + j \cdot 153 \Omega$ |
| Zso | $154 \Omega + j \cdot 275 \Omega$ | $210 \Omega + j \cdot 387 \Omega$ |
| Zss | $140 \Omega + j \cdot 240 \Omega$ | $178 \Omega + j \cdot 347 \Omega$ |
| D.C. resistance | | |
| Rotor | $56 \Omega \pm 10\%$ at 20 °C | $56 \Omega \pm 10\%$ at 20 °C |
| Stator | $53 \Omega \pm 10\%$ at 20 °C | $53 \Omega \pm 10\%$ at 20 °C |
| Accuracy | $\pm 6'$ | $\pm 6'$ |
| Accuracy ripple | 10' | 10' |
| Operating temperature | -55 °C ... +155 °C (-67 °F ... +311 °F) | -55 °C ... +155 °C (-67 °F ... +311 °F) |
| Max. permissible speed | 5.000 min ⁻¹ | 5.000 min ⁻¹ |
| Weight rotor/stator | 350 g | 350 g |
| Hi-pot housing/winding | 500 V _{AC} | 500 V _{AC} |
| Hi-pot winding/winding | 250 V _{AC} | 250 V _{AC} |
| Rotor / Stator | Completely impregnated | Completely impregnated |

CABLE LAYOUT

| | |
|----------|--------|
| RESOLVER | LEADS |
| R1 | brown |
| R2 | orange |
| S1 | red |
| S3 | black |
| S2 | yellow |
| S4 | green |

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