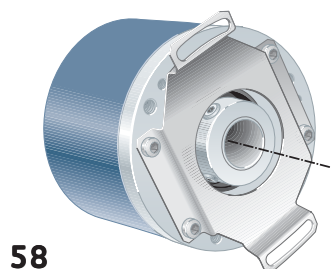
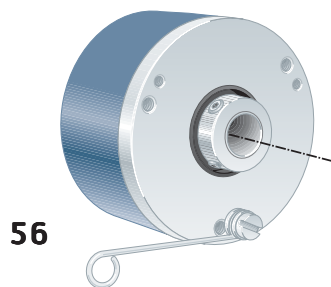


507 — Ruggedized Hollow shaft encoder, Absolute

CANopen



Short description:

- >> 13 bit CANopen output
- >> IP 67 at housing, IP 66 at shaft inlet
- >> 9...36 Vdc
- >> Robust housing for harsh environment
- >> Shock and vibration protected

Suitable applications:

- >> Standard to demanding industrial applications
- >> Positioning applications
- >> Printing machines
- >> Packaging machines

General information

| Encoder data | |
|--------------------------|--|
| Type | RHA 507 |
| Operating temperature | -40°C .. +80°C |
| Storage temperature | -30°C .. +80°C |
| Ingress protection class | IP-67 according to IEC 60529 |
| At shaft inlet | IP-66 according to IEC 60529 |
| Vibration (55 to 2000Hz) | < 300 m/s ² according to IEC 60068-2-6 ⁽¹⁾ |
| Shock (6ms) | < 2000 m/s ² according to IEC 60068-2-27 |
| Cover material | Aluminium |
| Cover surface treatment | Coated and cromated or anodized |
| Weight | Approx. 300g |
| Accuracy and resolution | |
| Resolution | 13 Bit, 8192 positions per revolution |
| Accuracy | ± 1 LSB |

Flange option

| Flange type | 56, hollow-shaft | 58, hollow-shaft |
|-------------------|------------------|------------------|
| Type | Standard | Standard |
| Diameter | ø58mm | ø58mm |
| Flange material | Aluminium | Aluminium |
| Surface treatment | Anodized | Anodized |
| Torque support | Torque arm | Stator coupling |

Shaft option

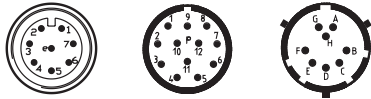
| Hollow-shaft type | Ø 8 mm | Ø 10 mm | Ø 12 mm | Ø 14 mm |
|-------------------------|---|---|---|---|
| Axial shaft load | 10 N | 10 N | 10 N | 10 N |
| Radial shaft load | 20 N | 20 N | 20 N | 20 N |
| Mech. permissible speed | 6000 rpm (12 000) | 6000 rpm (12 000) | 6000 rpm (12 000) | 6000 rpm (12 000) |
| Shaft material | Stainless steel | Stainless steel | Stainless steel | Stainless steel |
| Moment of inertia | 1,9 x 10 ⁻⁶ kgm ² | 1,9 x 10 ⁻⁶ kgm ² | 2,0 x 10 ⁻⁶ kgm ² | 2,0 x 10 ⁻⁶ kgm ² |

⁽¹⁾<150m/s² on encoders with connectors

CANopen

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Connection option

| Connector type | Cable | 8 pin M12 | 12 pin EML | 8 pin PT |
|----------------------|----------|-----------|------------|----------|
| Function | Colour | PIN | PIN | PIN |
| Address Bit 0 | White | 1 | 1 | A |
| Address Bit 1 | Brown | 2 | 2 | B |
| Address Bit 2 | Grey | 3 | 3 | C |
| Address Bit 3 | Pink | 4 | 4 | D |
| Address 0V | Blue/Red | NA | 11 | NA |
| CAN_H | Green | 5 | 8 | G |
| CAN_L | Yellow | 6 | 9 | H |
| 0V | Blue | 7 | 10 | F |
| +EV | Red | 8 | 12 | E |
| Housing | Shield | Chassis | Chassis | Chassis |
| Connecting direction | | | | |
| Axial | Yes | Yes | Yes | Yes |
| Radial | Yes | Yes | Yes | Yes |

NA=Not available

Electrical option

| | |
|--------------------------|---|
| Power supply | 9-36Vdc |
| Polarity protected | Yes |
| Output interface | CANopen |
| Short circuit protected | Yes |
| Current consumption | 100mA @ 24Vdc |
| Max current consumpt. | 150mA |
| Physical interface | CAN according to ISO-11898 |
| Supported profile | Device profile for encoders DS406 v2.0 |
| Baud rate ⁽¹⁾ | Max. 1Mbit/s software adjustable |
| Node adress | Hardware or software adjustable |
| Code type | Binary |
| Supported functions | Code sequence, Preset, Scaling and Node Guarding |
| Position update freq. | 1kHz |
| Start up delay | 700ms |

⁽¹⁾ Default baudrate 125 kBit/s

Accessories

| Accessories | Part number |
|-----------------------------|-------------------------|
| Configuration file EDS file | 619208-01 |
| Mating connector 8 pin M12 | 00201081 ⁽¹⁾ |
| 8 pin PT | 00201009 ⁽¹⁾ |
| 12 pin EML | 01209090 ⁽¹⁾ |
| Torque support M6 | 01209143 ⁽²⁾ |
| Torque arm M6 | 01208014 ⁽³⁾ |

⁽¹⁾ Also available with assembled cable.

⁽²⁾ Only for 56 flange.

⁽³⁾ Length 70-1000mm available, specify when ordering.

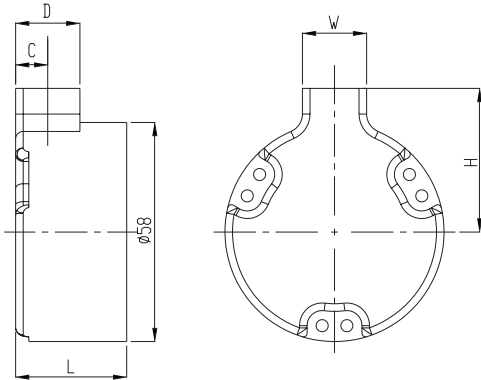
For additional accessories like assembled cables and torque arms please advise separate datasheets for accessories.

507 Ruggedized Hollow shaft encoder, Absolute

CANopen



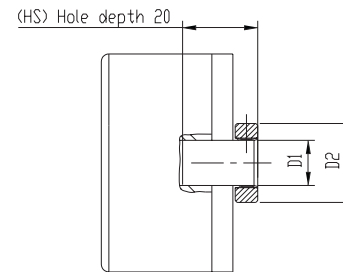
Dimensions



| Connector | Orientation | L | H | W | D | C |
|-----------|-------------|------|----|----|----|------|
| Cable | Radial | 29,4 | 34 | 17 | 17 | 8,5 |
| | Axial | 38,9 | | | | |
| EML | Radial | 29,4 | 32 | 27 | 27 | 13,5 |
| | Axial | 38,9 | | | | |
| 8p M12 | Radial | 29,4 | 38 | 27 | 27 | 9,5 |
| | Axial | 38,9 | | | | |
| 8p PT | Radial | 29,4 | 41 | 27 | 27 | 13,5 |
| | Axial | 38,9 | | | | |

Note: For complete encoder dimension please add connector and flange dimensions.

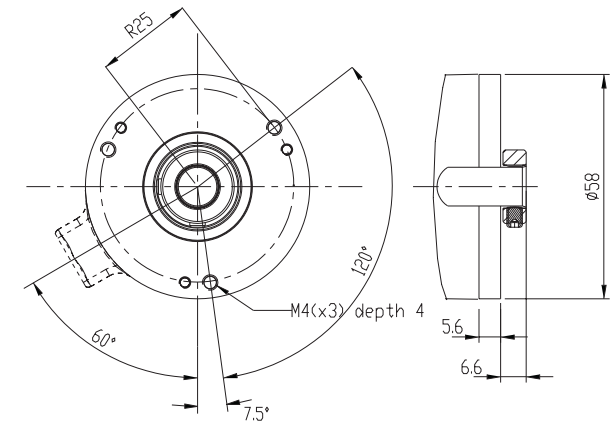
Shafts



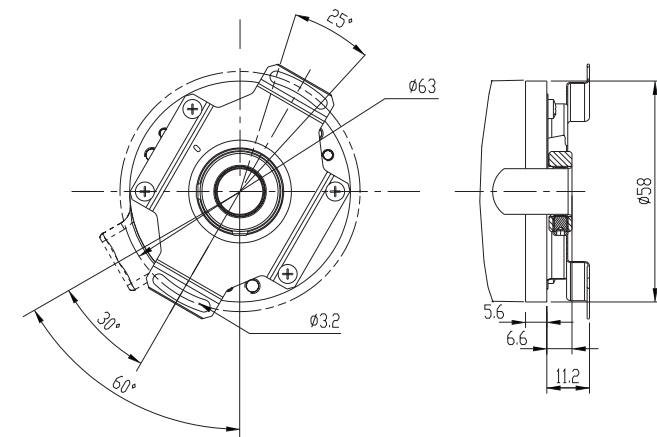
| | D1 | D2 |
|-------|--------|-----|
| ø8mm | ø8 G7 | ø19 |
| ø10mm | ø10 G7 | ø19 |
| ø12mm | ø12 G7 | ø21 |
| ø14mm | ø14 G7 | ø23 |

Flanges

56



58

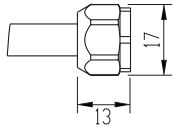


CANopen

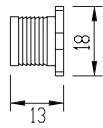


Connectors

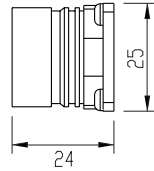
Cable
12x0,25 shielded



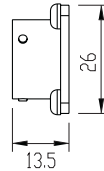
8pin M12



12pin EML

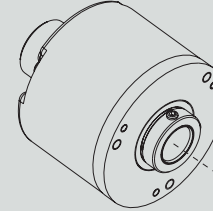


8pin PT

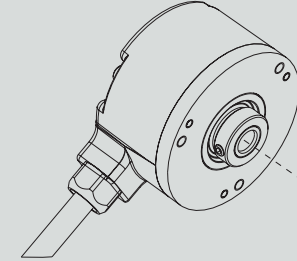


Various combinations/examples

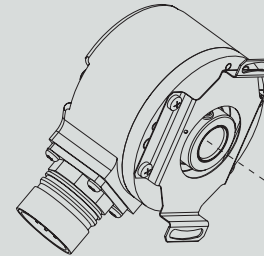
RHA 507 56 12 mm , axial EML



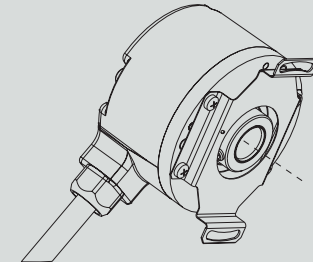
RHA 507 56 8 mm , radial cable



RHA 507 58 10 mm , radial EML



RHA 507 58 10 mm , radial cable



Ordering information Tick your choice

| | | | | | |
|----------------------|----------------------|--------------|--------------|--------------|--|
| Type | RHA 507 | | | | |
| Flange | 56, HS | 58, HS | | | |
| Shaft | Ø8mm | Ø10mm | Ø12mm | Ø14mm | |
| Electronics | Supply | 9-36Vdc | | | |
| | Output | SCO, CANopen | | | |
| Connection | Cable ⁽¹⁾ | 8 pin M12 | 12 pin EML | 8 pin PT | |
| Connecting direction | Axial/Radial | Axial/Radial | Axial/Radial | Axial/Radial | |
| Resolution | 13 bit | | | | |

⁽¹⁾ Note: Please specify cable length when ordering

Ordering example: RHA 507 56 ø10 9-36Vdc SCO 8 pin M12 Radial 13bit
Assembly drawing is available upon request from Leine & Linde AB