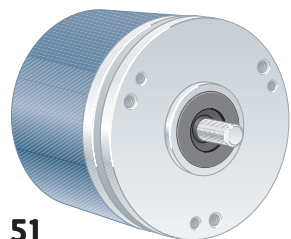
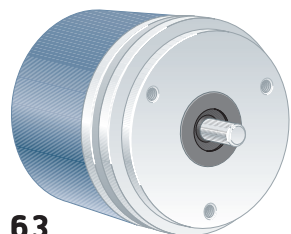


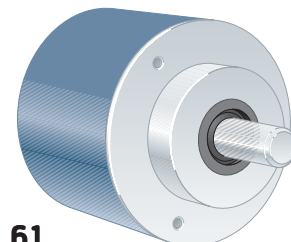
# 507 — Ruggedized Shaft encoder, Absolute CANopen



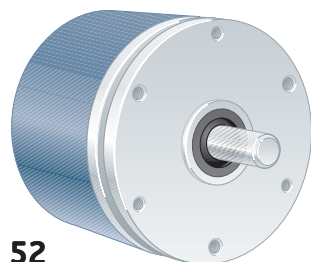
51



63



61



52

## 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                     | RSA 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 <sup>2</sup> according to IEC 60068-2-6 <sup>(1)</sup> |
| Shock (6ms)              | < 2000 m/s <sup>2</sup> 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 (Scaleable)                |
| Accuracy                 | ± 1 LSB                                                          |

<sup>(1)</sup> 150 m/s<sup>2</sup> for variants with connector

## Flange option

| Flange type       | 51, LL58        | 63, Synchro | 61, Clamping | 52, LL68        |
|-------------------|-----------------|-------------|--------------|-----------------|
| Outer diameter    | ø58 mm          | ø58 mm      | ø58 mm       | ø68 mm          |
| Mounting holes    | 3 x M3 & 3 x M4 | 3 x M4      | 3 x M3       | 3 x M3 & 3 x M4 |
| Flange material   | Aluminium       | Aluminium   | Aluminium    | Aluminium       |
| Surface treatment | Anodized        | Anodized    | Anodized     | Anodized        |

## Shaft option

| Shaft type              | Ø 6 round                               | Ø 6 with face                           | Ø 10 round                              | Ø 10 with face                          |
|-------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
| Axial shaft load        | 50 N                                    | 50 N                                    | 50 N                                    | 50 N                                    |
| Radial shaft load       | 60 N                                    | 60 N                                    | 60 N                                    | 60 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 <sup>-6</sup> kgm <sup>2</sup> | 1,9 x 10 <sup>-6</sup> kgm <sup>2</sup> | 2,0 x 10 <sup>-6</sup> kgm <sup>2</sup> | 2,0 x 10 <sup>-6</sup> kgm <sup>2</sup> |

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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  |
| <b>Connecting direction (available on flange option -51, -63, -61)</b> |          |           |            |          |
| Axial                                                                  | Yes      | Yes       | Yes        | Yes      |
| Radial                                                                 | Yes      | Yes       | Yes        | Yes      |
| <b>Connecting direction (available on flange option -52)</b>           |          |           |            |          |
| Axial                                                                  | No       | No        | No         | Yes      |
| Radial                                                                 | Yes      | No        | No         | No       |

NA=Not available

## Electrical option

|                          |                                                                                                           |
|--------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Power supply</b>      | <b>9-36Vdc</b>                                                                                            |
| Polarity protected       | Yes                                                                                                       |
| <b>Output interface</b>  | <b>CANopen</b>                                                                                            |
| 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<br>DSP-406                                                                    |
| Baud rate <sup>(1)</sup> | Max. 1Mbit/s software adjustable                                                                          |
| Node adress              | Hardware or software adjustable                                                                           |
| Code type                | Binary                                                                                                    |
| Supported functions      | Code sequence, Preset, Velocity,<br>Scaling, Acceleration, PDO<br>mapping, Heartbeat and Node<br>Guarding |
| Position update freq.    | 1kHz                                                                                                      |
| Start up delay           | 700ms                                                                                                     |

<sup>(1)</sup> Default baud rate 125 kBit/s

## Accessories

| Accessories                 | Part number              |
|-----------------------------|--------------------------|
| Configuration file EDS file | 619208-01                |
| Mating connector 8 pin M12  | 00201081 <sup>(1)</sup>  |
| 8 pin PT                    | 00201009 <sup>(1)</sup>  |
| 12 pin EML                  | 01209090 <sup>(1)</sup>  |
| Coupling 6-6 mm             | 464192222 <sup>(2)</sup> |
| 10-10 mm                    | 464333232 <sup>(2)</sup> |
| Mounting bracket            | 00208011 <sup>(3)</sup>  |
| Bearing box                 | 01209010 <sup>(4)</sup>  |

<sup>(1)</sup> Also available with assembled cable.

<sup>(2)</sup> Other couplings are also available.

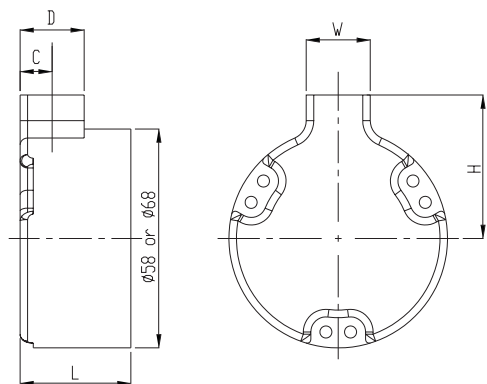
<sup>(3)</sup> Only for 63 Synchro and 61 Clamping flanges.

<sup>(4)</sup> Only for 63 Synchro flange.

For additional accessories like assembled cables, mounting clamps, measuring wheels, draw wire box etc.

Please advise separate datasheets for accessories.

## Dimensions

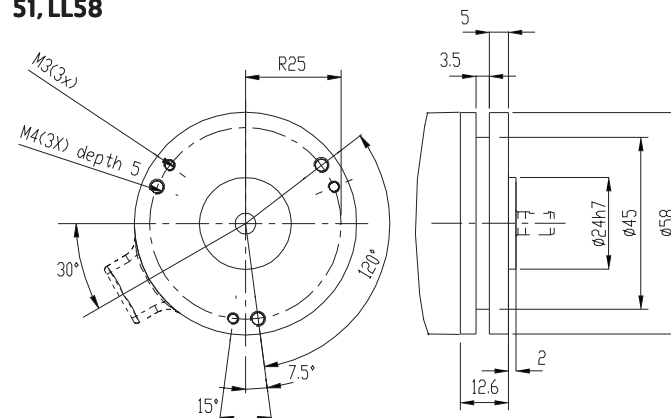


| Connector | Orientation | L    | H  | W  | D  | C    |
|-----------|-------------|------|----|----|----|------|
| Cable     | Radial Ø58  | 29,4 | 34 | 17 | 17 | 8,5  |
|           | Radial Ø68  | 44,7 | 34 | 0  | 0  | 14   |
|           | Axial       | 38,9 |    |    |    |      |
| EML       | Radial      | 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 Ø58   | 38,9 |    |    |    |      |
|           | Axial Ø68   | 44,7 |    |    |    |      |

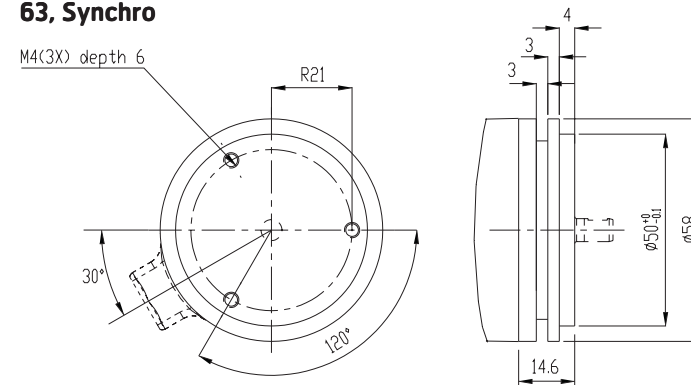
Note: For complete encoder dimension please add connector and flange dimensions.

## Flanges

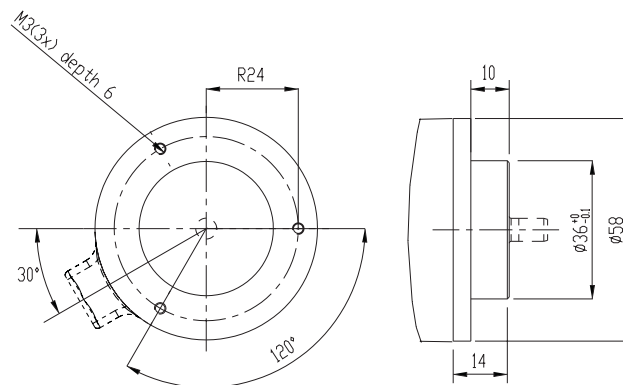
## 51, LL58



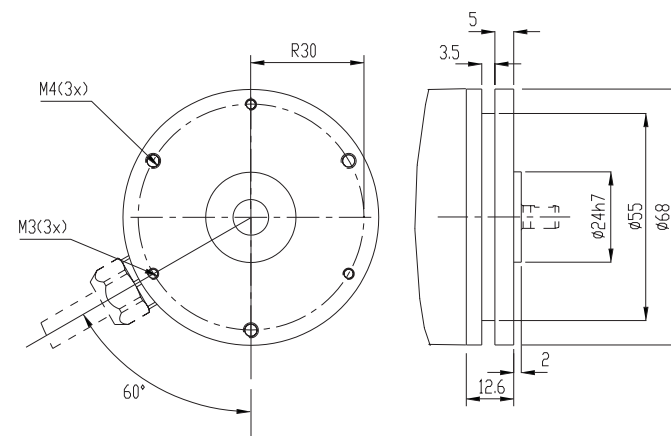
## 63, Synchro



## 61, Clamping



## 52, LL68



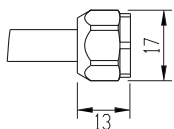
# 507 — Ruggedized Shaft encoder, Absolute

CANopen

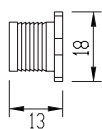


## Connectors

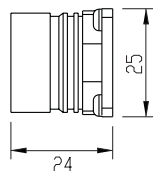
**Cable**  
16x0,25 shielded



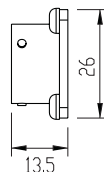
**8pin M12**



**12pin EML**

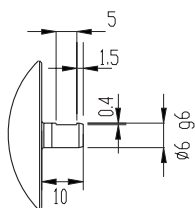


**8pin PT**

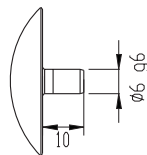


## Shafts

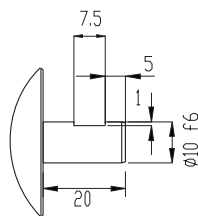
**6 mm with face**



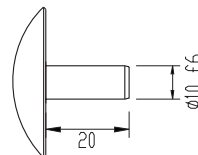
**6 mm round**



**10 mm with face**



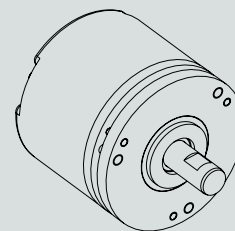
**10 mm round**



## Various combinations/examples

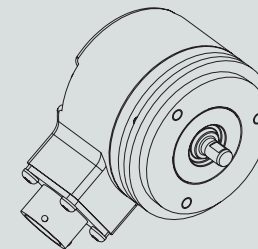
**RSA 507 51**

10 mm with face, axial M12



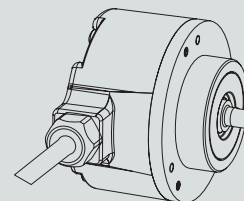
**RSA 507 63**

6 mm with face, radial PT



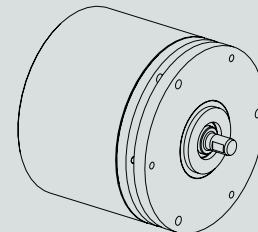
**RSA 507 61**

6 mm round, radial cable



**RSA 507 52**

6 mm with face, axial M12



## Ordering information Tick your choice

| Type                 | RSA 507              |                |              |                 |  |
|----------------------|----------------------|----------------|--------------|-----------------|--|
| Flange               | 51, LL58             | 63, Synchro    | 61, Clamping | 52, LL68        |  |
| Shaft                | Ø6mm round           | Ø6mm with face | Ø10mm round  | Ø10mm with face |  |
| Electronics          | Supply               | 9-36Vdc        |              |                 |  |
|                      | Output               | SCO, CANopen   |              |                 |  |
| Connection           | Cable <sup>(1)</sup> | 8 pin M12      | 12 pin EML   | 8 pin PT        |  |
| Connecting direction | Axial/Radial         | Axial/Radial   | Axial/Radial | Axial/Radial    |  |
| Resolution           | 13 bit               |                |              |                 |  |

<sup>(1)</sup> Note: Please specify cable length when ordering

Ordering example: RSA 507 63 Ø10ro 9-36Vdc SCO 12 pin EML Radial 13bit  
Assembly drawing is available upon request from Leine & Linde AB

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