



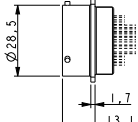

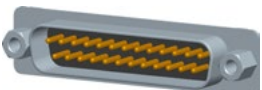
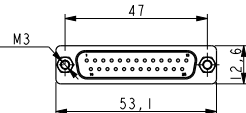
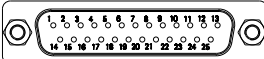
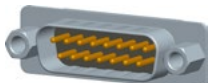
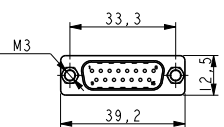
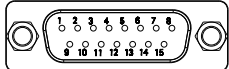
ROTACOD

ASR58 and AMR58 with integrated cam programmer electrical connections

| ASR58 & AMR58 series | | | | | | | | | |
|-------------------------------|-------------|-------------|---------------|------------|-------------------------------|-------------|-------------|---------------------------|------------|
| Function | DSub 15 pin | DSub 25 pin | Cable A32 pin | MIL 32-pin | Function | DSub 15 pin | DSub 25 pin | Cable A32 pin | MIL 32-pin |
| OUT 1 | | 1 | Brown | A | Select Program 2 ¹ | | 19 | White/Blue | V |
| OUT 2 | | 2 | Red | B | Select Program 2 ² | | 20 | Brown/Blue | W |
| OUT 3 | | 3 | Pink | C | Select Program 2 ³ | | 21 | White/Pink | X |
| OUT 4 | | 4 | Yellow | D | Zero setting | | 22 | Grey/Green | d |
| OUT 5 | | 5 | Green | E | Counting direction | | 23 | Yellow/Pink | g |
| OUT 6 | | 6 | Blue | F | +10Vdc +30Vdc | 14 | 24 | Green/Blue + Pink/Green | h |
| OUT 7 | | 7 | Violet | G | 0Vdc | 15 | 25 | Yellow/Blue + Yellow/Grey | j |
| OUT 8 | | 8 | Grey | H | Data OUT + | | | Blue/Red | N |
| OUT 9 | | 9 | | | Data OUT - | | | Pink/Grey | P |
| OUT 10 | | 10 | | | Clock IN + | | | White/Yellow | R |
| OUT 11 | | 11 | | | Clock IN - | | | Brown/Green | S |
| OUT 12 | | 12 | | | Fault | 7 | | White/Grey | Y |
| OUT 13 | | 13 | | | RD RS-232 | 12 | | Pink/Brown | Z |
| OUT 14 | | 14 | | | TD RS-232 | 13 | | Grey/Brown | a |
| OUT 15 | | 15 | | | 0Vdc | 6, 11 | | Brown/Black | b |
| OUT 16 | | 16 | | | 0Vdc RS-232 | 8 | | White/Black | c |
| Load Program | | 17 | White/Green | T | Shield | | | Shield | Case |
| Select Program 2 ⁰ | | 18 | Yellow/Brown | U | Analogue output | 4 | | | |
| | | | | | Speed | 5 | | | |

| Picture | Cable type | Order code |
|---|------------|-----------------------------|
|  | A32 | Lika encoder cable type A32 |

All cable specifications on page 222-223

| Picture | Dimensions | Description Connector order code | Frontal view | Mating connector order code |
|---|---|-------------------------------------|---|--------------------------------|
|  |  | MIL 32-pin plug E32MLP |  | E32MLS |
|  |  | DSub 25-pin plug EDB 25P |  | EDB 25S |
|  |  | DSub 15-pin plug EDA 15P |  | EDA 15S |

ROTAPULS • ROTACOD

Cable specifications

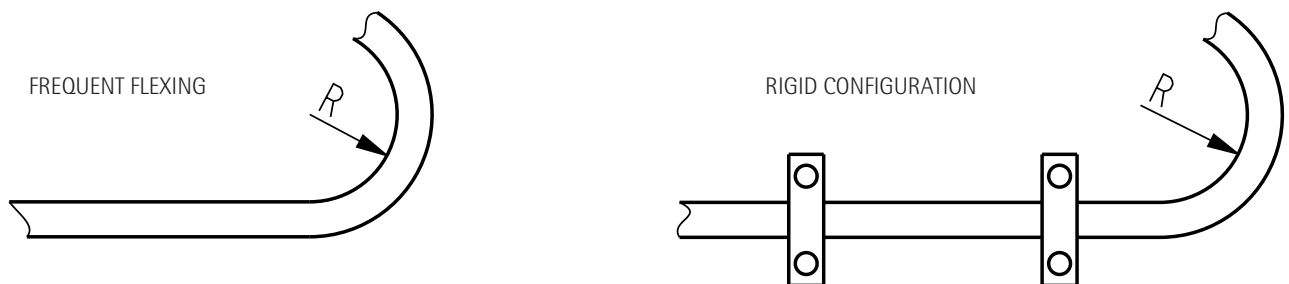
| Order code Cable type | Description | Notes |
|--|--|---|
| I5 Incremental encoders ABO | Cross section: 5 x 0,22mm ² (24/7 AWG) Jacket: PVC, flame retardant Shield: AL/PET foil + copper conductor External-Ø: 4,5 ±0,1 mm Min. bending radius: fix min. 23 mm / flexible min. 45 mm Operating temperature: fix -20 +80°C / flexible -5 +80°C Conductor resistance: <90 Ω/km | RoHS Ref. standard UL1581 |
| I8 Incremental encoders ABO /ABO | Cross section: 8 x 0,22mm ² (24/7 AWG) Jacket: PVC, flame retardant Shield: AL/PET foil + copper conductor External-Ø: 5,1 ±0,1 mm Min. bending radius: fix min. 25 mm / flexible min. 50 mm Operating temperature: fix -20 +80°C / flexible -5 +80°C Conductor resistance: <90 Ω/km | RoHS Ref. standard UL1581 |
| A8 Absolute encoders SSI, Analogue output | Cross section: 4 x 2 x 0,25mm ² (24 AWG) Jacket: PVC, flame retardant Shield: tinned copper braid, coverage >75% External-Ø: 7,0 ±0,15 mm Min. bending radius: fix min. 40 mm / flexible min. 75 mm Operating temperature: fix -20 +80°C / flexible -5 +80°C Conductor resistance: <80 Ω/km | RoHS Ref. standard UL1581 |
| T12 Absolute encoders BiSS/SSI + AB /AB output | Cross section: 4x0,25 + 4x2x0,14mm ² (24/26 AWG) Jacket: TPU, extraflexible Shield: tinned copper braid, coverage >85% External-Ø: 6,1 ±0,1 mm Min. bending radius: fix min. 25 mm / dynamic min. 45 mm Operating temperature: fix -40 +90°C / dynamic -50 +90°C Conductor resistance: <90 Ω/km - <148 Ω/km | RoHS Ref. standard UL1581 Halogen free Oil, hydrolisys, abrasion resistant Cable chain capable 10 m/s max, 6 m/s2 >1000000 cycles |
| M8 Absolute encoders SSI | Cross section: 2x0,22 + 6x0,14mm ² (24/26 AWG) Jacket: TPU, extraflexible Shield: tinned copper braid, coverage >85% External-Ø: 5,5 ±0,1 mm Min. bending radius: min 25 mm / dynamic min. 45 mm Operating temperature: fix -40 +90°C / dynamic -50 +90°C Conductor resistance: <90 Ω/km - <148 Ω/km | RoHS Ref. standard UL1581 Halogen free Oil, hydrolisys, abrasion resistant Cable chain capable 10 m/s max, 6 m/s2 >1000000 cycles |
| CB CAN, Modbus encoders | Cross section: 2x2x0,24 + 1x0,22mm ² Jacket: PUR/TMPU Shield: tinned copper braid, coverage >85% External-Ø: 6,6 ±0,5 mm Min. bending radius: fix 50 mm / dynamic 70 mm Operating temperature: fix -50 +80°C Characteristic impedance at 1 MHz: 120 Ω ±10% | RoHS Ref. standard UL758, UL1581 CSA/UL approval (AWM style 20417 60°C 30V) |
| A16 Absolute single turn encoder cable (bit parallel) | Cross section: 16 x 0,14mm ² Jacket: PVC, flame retardant Shield: tinned copper braid, coverage >85% External-Ø: 7,2 ±0,3 mm Bending radius: fix min. 45 mm / flexible min. 75 mm Conductor resistance: <148 Ω/km Operating temperature: fix min. -30 +70°C / -5 +70°C | RoHS |

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Cable specifications

| Order code Cable type | Description | Notes |
|--|---|-------|
| A19 Absolute single turn encoder cable (bit parallel) | Cross section: 19 x 0,14mm ² Jacket: PVC, flame retardant Shield: tinned copper braid, coverage >85% External-Ø: 7,2 ±0,3 mm Bending radius: fix min. 45 mm / flexible min. 75 mm Conductor resistance: <148 Ω/km Operating temperature: fix -20 +80°C / -5 +80°C | RoHS |
| A32 Absolute multi turn encoder cable (bit parallel) | Cross section: 32 x 0,14mm ² (26 AWG) Jacket: PVC, flame retardant Shield: tinned copper braid External-Ø: 9,1 ±0,4 mm Bending radius: fix min. 45 mm / flexible min. 90 mm Conductor resistance: <150 Ω/km Operating temperature: fix min. -30 +70°C / -5 +70°C | RoHS |
| A40 HM58 P Programmable encoder cable (bit parallel) | Cross section: 40 x 0,14mm ² (26 AWG) Jacket: PVC, flame retardant Shield: tinned copper braid, coverage >85% External-Ø: 10,2 ±0,1 mm Bending radius: fix min. 50 mm / flexible min. 100 mm Conductor resistance: <250 Ω/km Operating temperature: fix -40 +80°C / -5 +80°C | RoHS |

Cables having bending radius indicated with "flexible" can be used in low speed moving installations, while cables indicated with bending radius "dynamic" can be used in high speed and acceleration installations.



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Flexible couplings



| | | | Allowable misalignment | Vibration absorption | Zero backlash | High torsional stiffness | Stainless steel | Electrical insulation |
|-------------|--|---|------------------------|----------------------|---------------|--------------------------|-----------------|-----------------------|
| PAN | | Flexible helix coupling. Aluminium body with grub screw fixing. Allows high misalignments combined with good stiffness. | ● | | | ● | | |
| PGF | | Double-loop coupling. Thermoplastic loops and metal hubs with grub screws. Allows very high radial and axial misalignments. Silent running and good vibration absorption. | ○ | ● | | | | ○ |
| MST - MSTS | | Aluminium (MST) or stainless steel (MSTS) slit coupling. Grub screw or collar fixing. Keyway holes available. Medium flexibility, high torsional stiffness. | ● | | ○ | ● | ✓ | |
| MSX | | Duraluminium slit coupling with grub screws. High transmission accuracy in both directions. Zero backlash, excellent torsional stiffness. For encoder/servomotor applications. | | | ○ | ○ | | |
| MOL - MOS | | Oldham coupling, standard (MOL) and compact (MOS) version. Grub screw and collar fixing, keyway holes. Easy assembly of hubs with different diameters. Ideal for high misalignments at medium speed. | ○ | ● | | | | ○ |
| MSF | | Soft flexible coupling with grub screws. Easy assembly of hubs with different diameters. For encoders and general purpose motors. | ● | ● | | | | ○ |
| MFB - MFBS | | Bellow couplings with grub screw or collar fixing. Stainless steel, corrosion resistant version (MFBS). Good response time and constant velocity. | ● | | ○ | ● | ✓ | |
| MDW-MDS-XBW | | Precision disk couplings for encoders and servomotors. Adjustable nr. of disk and length by 1 mm. High rotational speed and excellent response. Clean-room service on request. | ● | | ○ | ○ | ✓ | |

○ = excellent

● = good

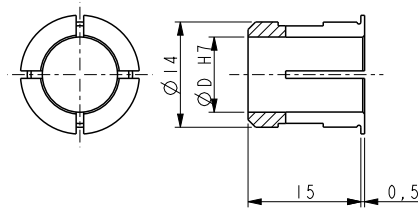
✓ = available

ROTAPULS • ROTACOD

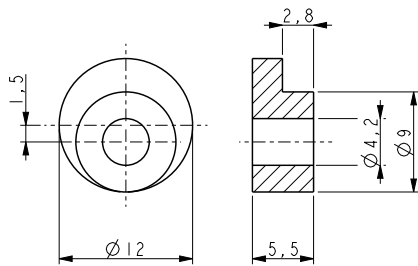
Accessories

BR1 reducing sleeve

| | |
|----------|--------------|
| BR1-12 | ∅ 12 mm h7 |
| BR1-11 | ∅ 11 mm h7 |
| BR1-10 | ∅ 10 mm h7 |
| BR1-9.52 | ∅ 9.52 mm h7 |
| BR1-8 | ∅ 8 mm h7 |
| BR1-6 | ∅ 6 mm h7 |



BR1 reducing sleeve

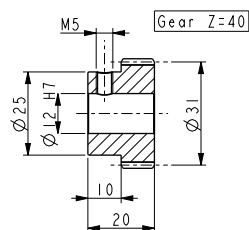
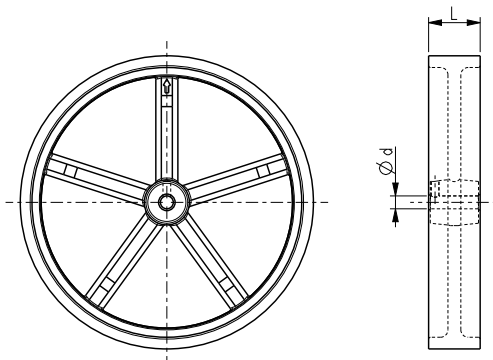


LKM-386 Fixing clamps

For all encoders with servo flange.
Kit LKM-386 is supplied as a set of 3 clamps, screws and nuts.

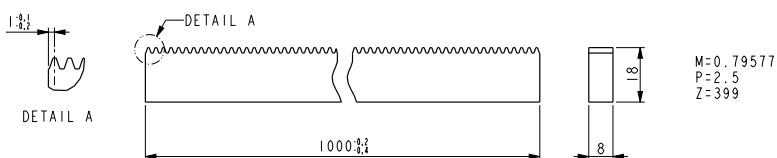
| Mod. | Circ. | Surface | ∅ d | L |
|------------|--------|------------------|-------|-------|
| RM200G | 200 mm | rubber (smooth) | 6 mm | 12 mm |
| RM200Z | 200 mm | metal (notched) | 6 mm | 12 mm |
| RM200GZ | 200 mm | rubber (notched) | 6 mm | 12 mm |
| RM500G | 500 mm | rubber (smooth) | 8 mm | 24 mm |
| RM500Z | 500 mm | metal (notched) | 8 mm | 24 mm |
| RM500GZ | 500 mm | rubber (notched) | 8 mm | 24 mm |
| RM500G-10 | 500 mm | rubber (smooth) | 10 mm | 24 mm |
| RM500GZ-10 | 500 mm | rubber (notched) | 10 mm | 24 mm |

RM200, RM500 metric wheels



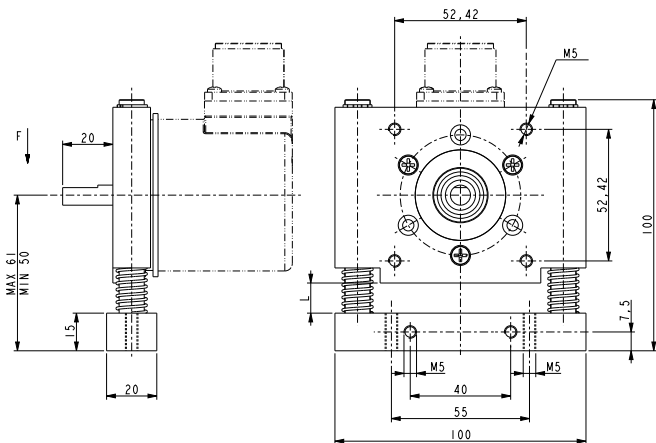
PF4260 (pinion) & LKM-1224 (rack)

For linear measurements.
1 turn of pinion equals 100 mm.
Suitable models: ICS, see PF0408.



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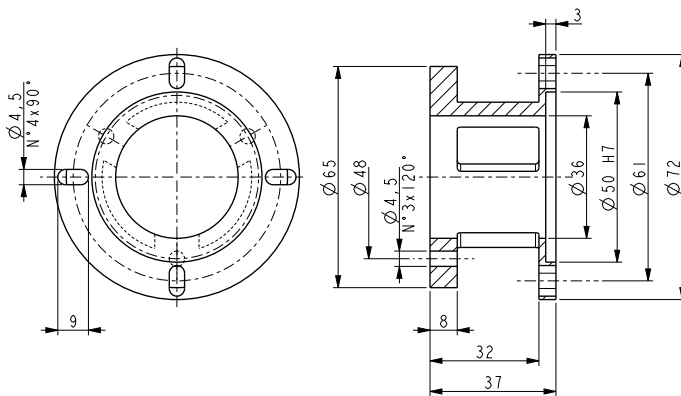
Accessories



PF0408 spring loaded fixing support

Can absorb misalignments when encoders are used with rack/pinions or metric wheels.

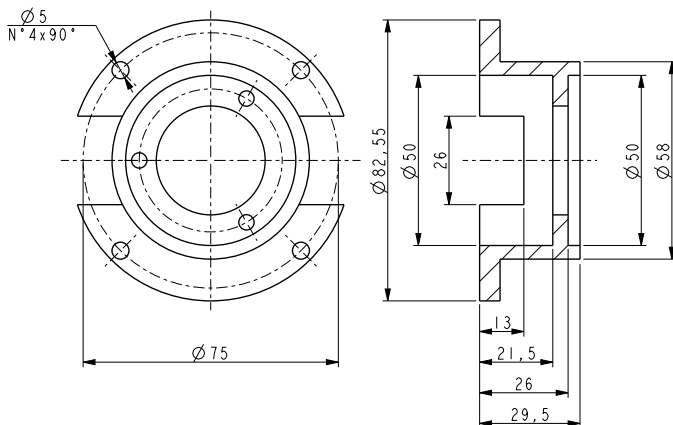
Suitable models: I58S, ES58S, EM58S, AS58S, AM58S.



PF4256 mounting bell

Suitable for all encoders having clamp flange (I58S, ES/EM58S, AS/AM58S).

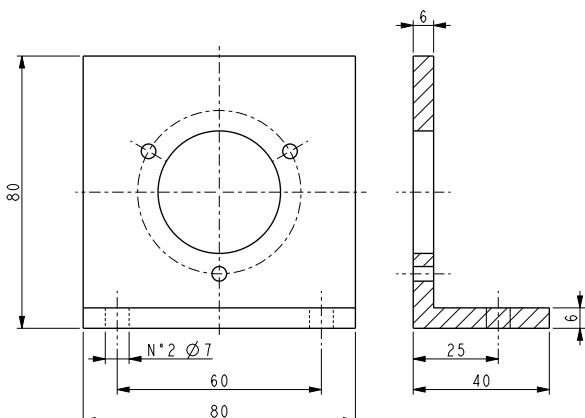
Fixing screws are supplied.



PF4264 mounting bell

Suitable for all encoders having servo flange (I58, ES/EM58, AS/AM58).

Fixing screws are supplied.



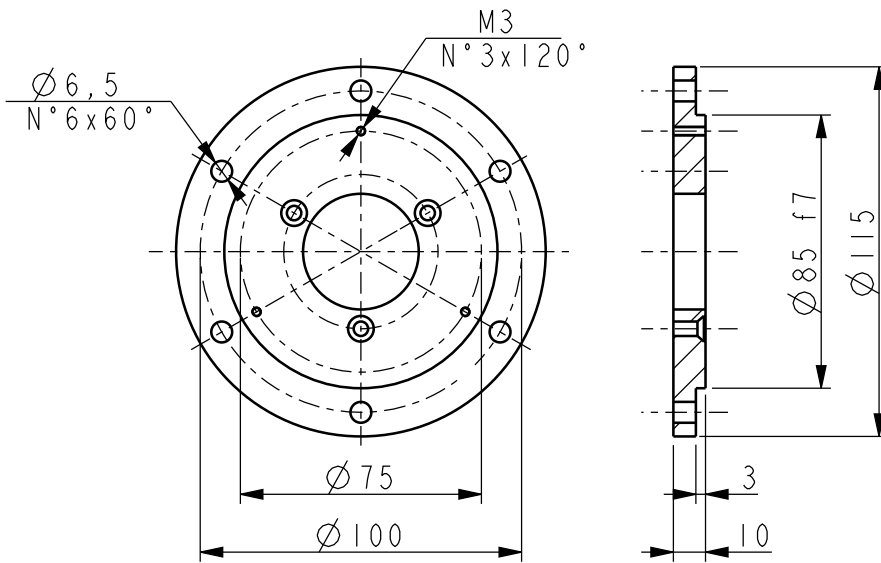
PF4257 mounting bracket

Suitable for all encoders having clamp flange (I58S, ES/EM58S, AS/AM58S).

Fixing screws are supplied.

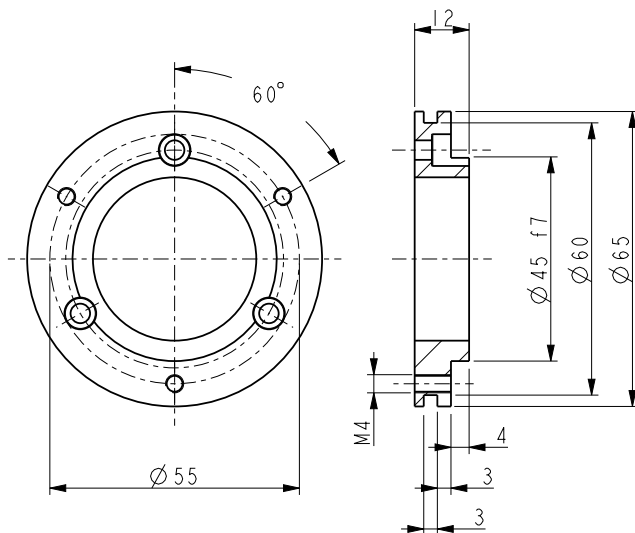
ROTAPULS • ROTACOD

Accessories



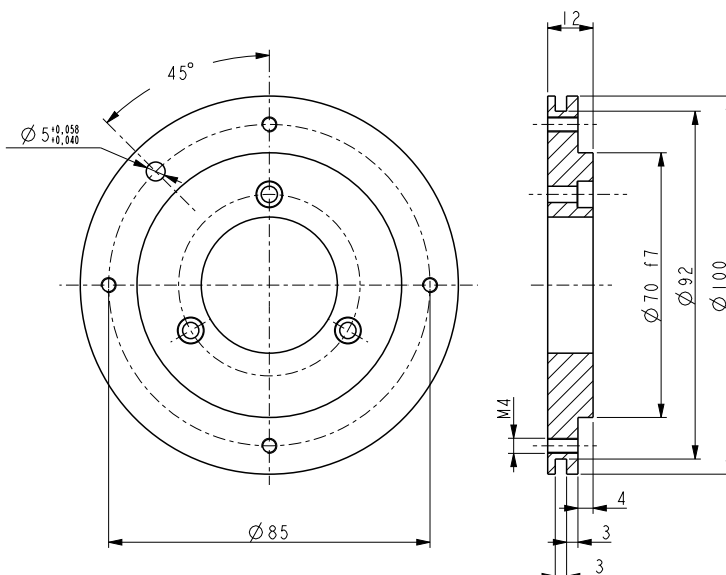
PF4258 adapter flange

Euroflange B10 adapter for:
I58S, I65, ES/EM58S, AS/AM58S encoders



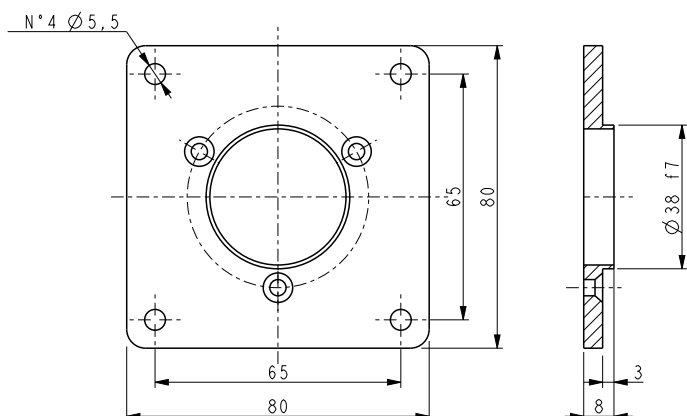
PF4263 adapter flange

Adapter flange to replace AS6 and AM6
encoders with AS58S and AM58S series.



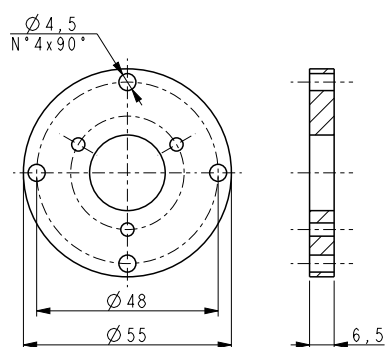
PF4262 adapter flange

Adapter flange to replace AS1 and AM1
encoders with AS58S and AM58S series.



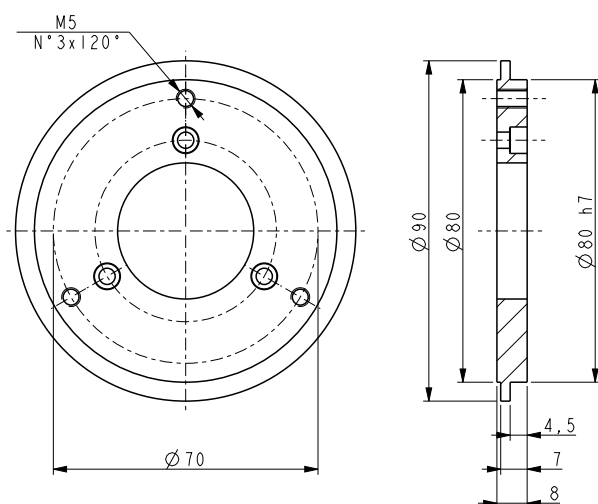
PF4259 square flange

Adapter for:
I58S, I65, ES/EM58S, AS/AM58S encoders.
Fixing screws are supplied.



PF4266 adapter flange

Adapter flange for:
I41 encoder for fixing on $\varnothing 48$ or $\square 34$ mm
Fixing screws are supplied.



PF4274 adapter flange

Adapter flange for:
I58S, ES/EM58S, AS/AM58S encoders to
 $\varnothing 90$ mounting.
Fixing screws are supplied.

ROTAPULS • ROTACOD

Accessories

CONNECTOR 1



Example of cordset, EC-M7F-LK-I5-3:

MIL connector 7 pin, standard connection, 5 wires cable, 3 m length

EC

CONNECTOR 1



CONNECTOR 2

Example of extension cable, EXC-M7F-LK-I5-3-M7M-LK:

MIL connector 7 pin, standard connection, 5 wires cable, 3 meters length, 7 pin MIL plug, standard connection

EXC

Order code

Additional code for EXC

| | | | | | | | | | | | |
|-----|---|-------|---|-----|---|-----|---|-----|---|---|---|
| EC | - | XXXXX | - | XXX | - | XXX | - | X | X | - | X |
| EXC | | (a) | | (b) | | (c) | | (d) | | | |

(a) CONNECTOR 1

M7F = MIL connector 7 pin
M7FP = MIL connector 7 pin + PG
M10F = MIL connector 10 pin
M10FP = MIL connector 10 pin + PG
M19F = MIL connector 19 pin
M32F = MIL connector 32 pin
M41F = MIL connector 41 pin
M7M = MIL 7 pin plug
M10M = MIL 10 pin plug
M19M = MIL 19 pin plug
M32M = MIL 32 pin plug
M41M = MIL 41 pin plug
T7M = DIN 7 pin plug
T12M = DIN 12 pin plug
T8F = DIN 8 pin plug
C12F = M23 12 pin connector cw
CR12F = M23 12 pin connector ccw
C12M = M23 12 pin plug cw
CR17F = M23 17 pin connector ccw
D9M = DSub 9 pin plug
D15MV = DSub 15 pin plug, hi-density
D15M = DSub 15 pin plug
D25M = DSub 25 pin plug
D9F = DSub 9 pin connector
D15FV = DSub 15 pin connector, hi-density
D15F = DSub 15 pin plug
D25F = DSub 25 pin plug

(b) ELECTRICAL CONNECTION 1

LK = Standard Lika
Sxx = Specific connections

(c) CABLE SPECIFICATIONS

I5 = 5 wire cable (AB0)
I8 = 8 wire cable (AB0 /AB0)
A8 = 2 x 4 twisted wires cable (AS58, AM58, SSI series)
A19 = 19 wires cable (AS58 Bit parallel series)
A32 = 32 wires cable (AM58 Bit parallel series)
A40 = 40 wires cable (HM58 P Bit parallel series)
M8 = 8 wires hi-flex cable
T12 = 12 wires hi-flex twisted cable

(d) CABLE LENGTH

1 = 1 m
3 = 3 m
5 = 5 m
10 = 10 m
15 = 15 m
... = ...
20 = 20 m

CONNECTOR 2

see connector 1

ELECTRICAL CONNECTIONS 2

see electrical connections 1

Note - connector: female connection
plug: male connection