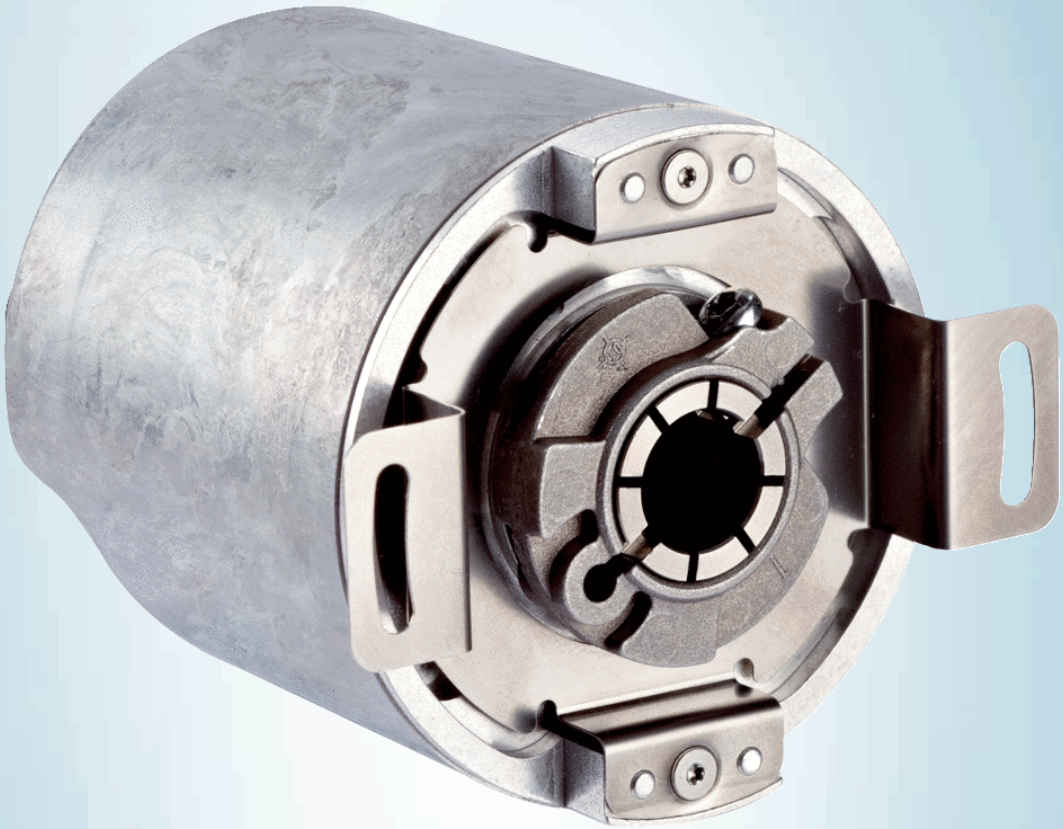
Product data sheet



# AFM60A-BBEB018x12

## AFS/AFM60 Ethernet

ABSOLUTE ENCODERS

SICK
Sensor Intelligence.

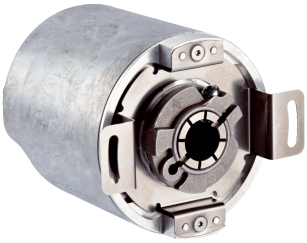


Illustration may differ

## Ordering information

| Type | Part no. |
|---|---|
| AFM60A-BBEB018x12 | 1059059 |

Other models and accessories ➜ www.sick.com/AFS_AFM60_Ethernet

## Detailed technical data

### Performance

| | |
|---|---|
| **Number of steps per revolution (max. resolution)** | 262,144 (18 bit) |
| **Number of revolutions** | 4,096 (12 bit) |
| **Max. resolution (number of steps per revolution x number of revolutions)** | 18 bit x 12 bit (262,144 x 4,096) |
| **Error limits G** | 0.03° [1] |
| **Repeatability standard deviation $\sigma_r$** | 0.002° [2] |

[1] In accordance with DIN ISO 1319-1, position of the upper and lower error limit depends on the installation situation, specified value refers to a symmetrical position, i.e. deviation in upper and lower direction is the same.
[2] In accordance with DIN ISO 55350-13; 68.3% of the measured values are inside the specified area.

### Interfaces

| | |
|---|---|
| **Communication interface** | EtherCAT® |
| **Communication Interface detail** | CoE (CAN over EtherCAT®) |
| **Encoder profile** | CiA DS-406 |
| **Data transmission rate (baud rate)** | 10 Mbit/s, 100 Mbit/s |
| **Transmission medium** | CAT-5e cable |
| **Initialization time** | 6 s |
| **Cycle time** | 125 µs ... 100 ms |
| **Parameterising data** | Number of steps per revolution<br>Number of revolutions<br>PRESET<br>Counting direction<br>Sampling rate for speed calculation<br>Unit for output of the speed value<br>Round axis functionality<br>Singleturn or multiturn access mode<br>Quicker data exchange mode<br>Electronic cams |
| **Available diagnostics data** | Minimum and maximum temperature<br>Maximumspeed<br>Position monitoring<br>Power-on counter<br>Operatinghours counter power-on/motion<br>Counter of direction changes/number of movements cw/number of movements ccw<br>Minimum andmaximum operating voltage |

| | |
|---|---|
| | Signal monitoring for singleturn and multiturn |

## Electrical data

| | |
|---|---|
| **Connection type** | Male connector, Female connector, 1x, 2x, M12, M12, 4-pin, 4-pin, axial, axial [1] [2] |
| **Supply voltage** | 10 ... 30 V |
| **Power consumption** | ≤ 3 W (without load) |
| **Reverse polarity protection** | ✓ |
| **MTTFd: mean time to dangerous failure** | 80 years (EN ISO 13849-1) [3] |

[1] A-coded.
[2] D-coded.
[3] This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

## Mechanical data

| | |
|---|---|
| **Mechanical design** | Blind hollow shaft |
| **Shaft diameter** | 8 mm |
| **Weight** | 0.2 kg |
| **Shaft material** | Stainless steel |
| **Flange material** | Aluminum |
| **Housing material** | Aluminum |
| **Start up torque** | 0.8 Ncm (+20 °C) |
| **Operating torque** | 0.6 Ncm (+20 °C) |
| **Permissible movement static** | ± 0.3 mm (radial)<br>± 0.5 mm (axial) |
| **Permissible movement dynamic** | ± 0.05 mm (radial)<br>± 0.1 mm (axial) |
| **Operating speed** | ≤ 6,000 $min^{-1}$ [1] |
| **Moment of inertia of the rotor** | 40 $gcm^2$ |
| **Bearing lifetime** | 3 x 10^9 revolutions |
| **Angular acceleration** | ≤ 500,000 $rad/s^2$ |

[1] Allow for self-heating of 3.3 K per 1,000 rpm when designing the operating temperature range.

## Ambient data

| | |
|---|---|
| **EMC** | According to EN 61000-6-2 and EN 61000-6-3 [1] |
| **Enclosure rating** | IP65, shaft side (IEC 60529)<br>IP67, housing side (IEC 60529) [2] |
| **Permissible relative humidity** | 90 % (Condensation not permitted) |
| **Operating temperature range** | –40 °C ... +85 °C |
| **Storage temperature range** | –40 °C ... +100 °C, without package |
| **Resistance to shocks** | 100 g, 6 ms (EN 60068-2-27) |
| **Resistance to vibration** | 30 g, 10 Hz ... 2,000 Hz (EN 60068-2-6) |

[1] The EMC according to the standards quoted is achieved if screened cables are used.
[2] With mating connector fitted.

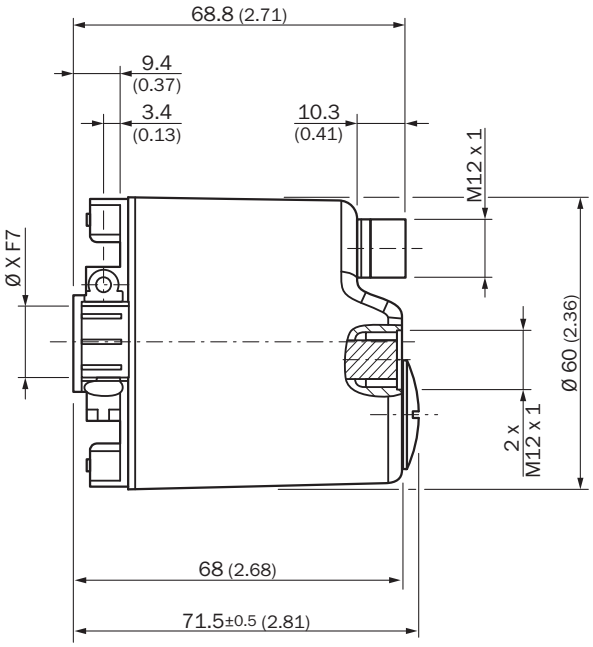
## Classifications

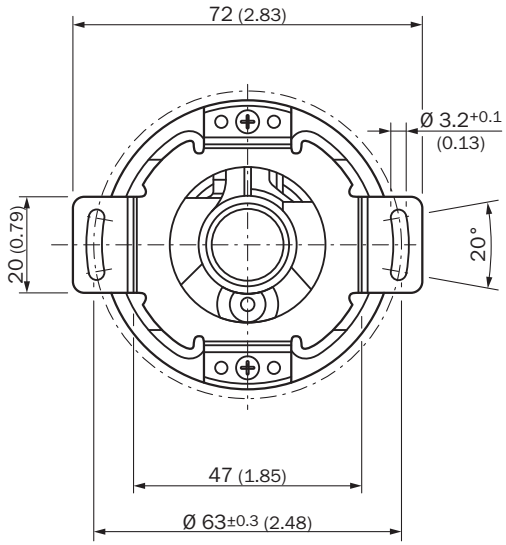
| | |
|---|---|
| **ECLASS 5.0** | 27270502 |

| | |
|---|---|
| **ECLASS 5.1.4** | 27270502 |
| **ECLASS 6.0** | 27270590 |
| **ECLASS 6.2** | 27270590 |
| **ECLASS 7.0** | 27270502 |
| **ECLASS 8.0** | 27270502 |
| **ECLASS 8.1** | 27270502 |
| **ECLASS 9.0** | 27270502 |
| **ECLASS 10.0** | 27270502 |
| **ECLASS 11.0** | 27270502 |
| **ECLASS 12.0** | 27270502 |
| **ETIM 5.0** | EC001486 |
| **ETIM 6.0** | EC001486 |
| **ETIM 7.0** | EC001486 |
| **ETIM 8.0** | EC001486 |
| **UNSPSC 16.0901** | 41112113 |

## Dimensional drawing (Dimensions in mm (inch))

Blind hollow shaft

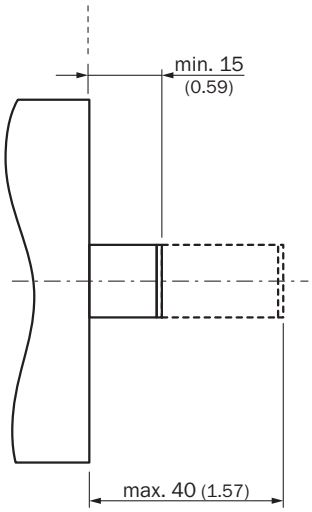



Diameter x f7 corresponds to the shaft diameter

## Attachment specifications

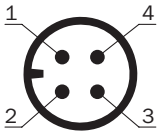
Blind hollow shaft




All dimensions in mm (inch)

## PIN assignment

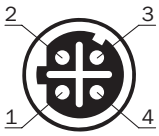
Male connector




Supply voltage

| PIN | Wire color | Signal |
|---|---|---|
| 1 | Brown | $U_S$ 10 V ... 30 V |
| 2 | White | Not assigned |
| 3 | Blue | GND |
| 4 | Black | Not assigned |

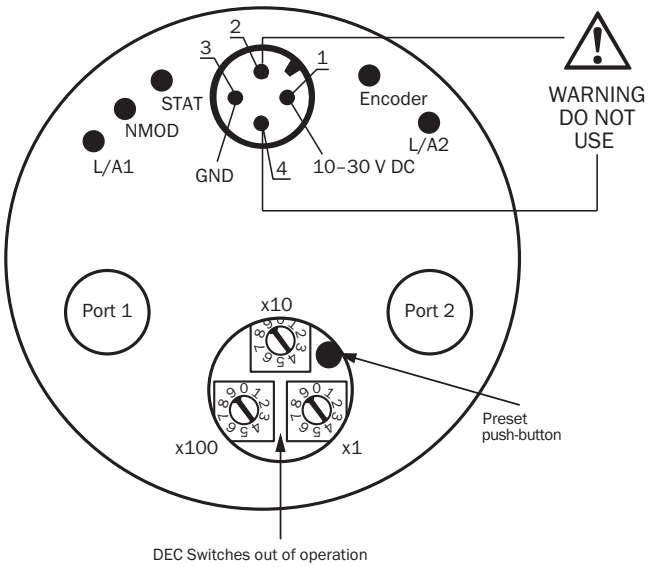
Female connector




Port 1, Port 2

| PIN | Wire color | Signal |
|---|---|---|
| 1 | Yellow | T x D+ |
| 2 | White | R x D+ |
| 3 | Orange | T x D- |
| 4 | Blue | R x D- |

## Connection diagram




## Recommended accessories

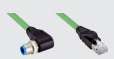
Other models and accessories → www.sick.com/AFS_AFM60_Ethernet

| | Brief description | Type | Part no. |
|---|---|---|---|
| Flanges | | | |
| | One-sided stator coupling, slot, slot radius 33 mm to 211.9 mm, slot width 5.1 mm | BEF-DS03DFS/VFS | 2047431 |
| | Flange adapter, adaptation of face mount flange with 36 mm centering hub to 50 mm servo flange, aluminum, including 3 flat head screws M4 x 10, Aluminum, including 3 countersunk screws M3 x 10 | BEF-FA-036-050 | 2029160 |
| | Flange adapter, adaptation of face mount flange with 36 mm centering hub to 60 mm square mounting plate, aluminum, including 3 flat head screws M4 x 8, Aluminum, including 3 countersunk screws M4 x 8 | BEF-FA-036-060REC | 2029162 |
| | Flange adapter, adaptation of face mount flange with 36 mm centering hub to 58 mm square mounting plate with shock absorbers, aluminum, Aluminum | BEF-FA-036-060RSA | 2029163 |
| | Flange adapter, adaptation of face mount flange with 36 mm centering hub to 63 mm square mounting plate, aluminum, including 3 flat head screws M4 x 10, Aluminum, including 3 countersunk screws M3 x 10 | BEF-FA-036-063REC | 2034225 |
| Other mounting accessories | | | |
| | Plastic measuring wheel with smooth plastic surface (Hytrel), for 10 mm solid shaft, circumference 200 mm | BEF-MR-010020 | 5312988 |
| | Measuring wheel with ridged plastic surface (Hytrel) for 10 mm solid shaft, circumference 200 mm | BEF-MR-010020G | 5318678 |

| | Brief description | Type | Part no. |
|---|---|---|---|
| | Plastic measuring wheel with smooth plastic surface (Hytrel) for 10 mm solid shaft, circumference 500 mm | BEF-MR-010050 | 5312989 |
| | Aluminium measuring wheel with O-ring (NBR70) for 6 mm solid shaft, circumference 200 mm | BEF-MR006020R | 2055222 |
| | Measuring wheel with O-ring (NBR70) for 6 mm solid shaft, circumference 300 mm | BEF-MR006030R | 2055634 |
| | Aluminium measuring wheel with O-ring (NBR70) for 10 mm solid shaft, circumference 200 mm | BEF-MR010020R | 2055224 |
| | Aluminium measuring wheel with O-ring (NBR70) for 10 mm solid shaft, circumference 300 mm | BEF-MR010030R | 2049278 |
| | Measuring wheel with O-ring (NBR70) for 10 mm solid shaft, circumference 500 mm | BEF-MR010050R | 2055227 |
| | O-ring for measuring wheels (circumference 200 mm) | BEF-OR-053-040 | 2064061 |
| | O-ring for measuring wheels (circumference 300 mm), 2x O-ring | BEF-OR-083-050 | 2064076 |
| Others | | | |
| | • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded<br>• **Description:** Unshielded, Head A: female connector, M12, 4-pin, angled, unshielded, for power supply, for cable diameter 3 mm ... 6.5 mm Head B: -<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** ≤ 0.75 mm² | DOS-1204-W | 6007303 |
| | • **Connection type head A:** Female connector, M12, 4-pin, D-coded<br>• **Connection type head B:** Female connector, RJ45, 8-pin<br>• **Signal type:** Ethernet<br>• **Cable:** CAT5, CAT5e<br>• **Description:** Ethernet, shielded<br>• **Note:** Cabinet through | Feedthrough female connector Ethernet RJ45 | 6048180 |
| | • **Connection type head A:** Female connector, M12, 4-pin, straight, D-coded<br>• **Signal type:** PROFINET<br>• **Cable:** CAT5, CAT5e<br>• **Description:** PROFINET, shielded, Head A: female connector, M12, 4-pin, straight, D-coded, shielded, PROFINET, EtherCAT, for cable diameter 4 mm ... 8 mm<br>• **Connection systems:** IDC quick connection<br>• **Permitted cross-section:** 0.14 mm² ... 0.34 mm² | DOS-1204-GZ | 6048263 |
| | • **Connection type head A:** Female connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** PROFINET<br>• **Cable:** CAT5, CAT5e<br>• **Description:** PROFINET, shielded, Head A: female connector, M12, 4-pin, angled, D-coded, shielded, for cable diameter 4 mm ... 8 mm<br>• **Connection systems:** IDC quick connection<br>• **Permitted cross-section:** 0.14 mm² ... 0.34 mm² | DOS-1204-WZ | 6048264 |
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** PROFINET<br>• **Cable:** 5 m, 4-wire, CAT5, CAT5e, PUR, halogen-free<br>• **Description:** PROFINET, shielded, Head A: male connector, M12, 4-pin, angled, D coded Head B: male connector, M12, 4-pin, angled, D coded Cable: PUR, halogen-free, shielded, 4 x 0.34 mm², Ø 6.5 mm | SSL-1204-W05MZ | 6050636 |
| | • **Connection type head A:** Male connector, RJ45, 4-pin, straight<br>• **Connection type head B:** Male connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** PROFINET, EtherCAT®<br>• **Cable:** 30 m, 4-wire, CAT5, CAT5e, PVC<br>• **Description:** PROFINET, EtherCAT®, shielded | SSL-2J04-F30MZ | 6059450 |

| | Brief description | Type | Part no. |
|---|---|---|---|
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, RJ45, 4-pin, straight<br>• **Signal type:** PROFINET<br>• **Cable:** 5 m, 4-wire, CAT5, CAT5e, PVC<br>• **Description:** PROFINET, shielded, Head A: male connector, M12, 4-pin, straight, D coded Head B: male connector, RJ45, 4-pin, straight Cable: PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm | SSL-2J04-G05MZ60 | 6048245 |
| | • **Connection type head A:** Male connector, RJ45, 4-pin, straight<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** CAT5, CAT5e<br>• **Description:** Ethernet, PROFINET, shielded, Head A: male connector, RJ45, 4-pin, straight, shielded, PROFINET, EtherCAT, for cable diameter 4.5 mm ... 8 mm<br>• **Connection systems:** IDC quick connection<br>• **Permitted cross-section:** 4 mm² ... 8 mm² | STE-0J04-GZ | 6048260 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Signal type:** PROFINET<br>• **Cable:** CAT5, CAT5e<br>• **Description:** PROFINET, shielded, Head A: male connector, M12, 4-pin, straight, D coded, shielded, for cable diameter 4 mm ... 8 mm<br>• **Connection systems:** IDC quick connection<br>• **Permitted cross-section:** 0.14 mm² ... 0.34 mm² | STE-1204-GZ | 6048261 |
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** PROFINET<br>• **Cable:** CAT5, CAT5e<br>• **Description:** PROFINET, shielded, Head A: male connector, M12, 4-pin, angled, D coded, shielded, for cable diameter 4 mm ... 8 mm<br>• **Connection systems:** IDC quick connection<br>• **Permitted cross-section:** 0.14 mm² ... 0.34 mm² | STE-1204-WZ | 6048262 |
| | • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-020UB3XLEAX | 2095607 |
| | • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-050UB3XLEAX | 2095608 |
| | • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-100UB3XLEAX | 2095609 |
| | • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 25 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-250UB3XLEAX | 2095615 |
| | • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-020UB3XLEAX | 2095766 |

| | Brief description | Type | Part no. |
|---|---|---|---|
| | • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-050UB3XLEAX | 2095767 |
| | • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-100UB3XLEAX | 2095768 |
| | • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 25 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-250UB3XLEAX | 2095771 |
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 25 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-250PN1XLEAX | 2106180 |
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-100PN1XLEAX | 2106176 |
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-050PN1XLEAX | 2106175 |
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-020PN1XLEAX | 2106174 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-100PN1XLEAX | 2106173 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-050PN1XLEAX | 2106172 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-020PN1XLEAX | 2106171 |

| | Brief description | Type | Part no. |
|---|---|---|---|
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-100PN1N2D24 | 2106170 |
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-020PN1N2D24 | 2106168 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, straight, D-coded<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-100PN1M2D24 | 2106161 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, straight, D-coded<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-020PN1M2D24 | 2106159 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-100PN1N2D24 | 2106167 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-050PN1N2D24 | 2106166 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, angled, D-coded<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-020PN1N2D24 | 2106165 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, RJ45, 4-pin, straight<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-020PN1MRJA4 | 2106182 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, RJ45, 4-pin, straight<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-100PN1MRJA4 | 2106185 |
|  | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Male connector, RJ45, 4-pin, straight<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 10 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-100PN1MRJA4 | 2106164 |

| | Brief description | Type | Part no. |
|---|---|---|---|
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Male connector, RJ45, 4-pin, straight<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-050PN1MRJA4 | 2106163 |
| | • **Connection type head A:** Male connector, M12, 4-pin, angled, D-coded<br>• **Connection type head B:** Male connector, RJ45, 4-pin, straight<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 2 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YN2D24-020PN1MRJA4 | 2106162 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded<br>• **Connection type head B:** Male connector, M12, 4-pin, straight, D-coded<br>• **Signal type:** Ethernet, PROFINET<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Ethernet, PROFINET, shielded<br>• **Application:** Drag chain operation, Zones with oils and lubricants | YM2D24-050PN1M2D24 | 2106160 |

# SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

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