

# BTF08-N1BM0377

HighLine

WIRE DRAW ENCODERS

**SICK**  
Sensor Intelligence.

## Ordering information

| Type           | part no. |
|----------------|----------|
| BTFO8-N1BM0377 | 1150701  |

**Included in delivery:** ANM58B-SANNB0000101000XX018X16 (1), MRA-F080-103D2 (1)

Other models and accessories → [www.sick.com/HighLine](http://www.sick.com/HighLine)



## Detailed technical data

## Safety-related parameters

|                                                          |                                          |
|----------------------------------------------------------|------------------------------------------|
| <b>MTTF<sub>D</sub> (mean time to dangerous failure)</b> | 165 years (EN ISO 13849-1) <sup>1)</sup> |
|----------------------------------------------------------|------------------------------------------|

<sup>1)</sup> 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.

## Performance

|                                         |                                       |
|-----------------------------------------|---------------------------------------|
| <b>Measurement range</b>                | 0 m ... 3 m                           |
| <b>Encoder</b>                          | Absolute encoders                     |
| <b>Resolution (wire draw + encoder)</b> | 0.0011 mm <sup>1)</sup> <sup>2)</sup> |
| <b>Repeatability</b>                    | ≤ 1 mm <sup>3)</sup>                  |
| <b>Linearity</b>                        | ≤ ± 2 mm <sup>3)</sup>                |
| <b>Hysteresis</b>                       | ≤ 2 mm <sup>3)</sup>                  |

<sup>1)</sup> The values shown have been rounded.

<sup>2)</sup> Example calculation based on the BTFO8 with PROFINET: 200 mm (wire draw length per revolution - see Mechanical data): 262,144 (number of steps per revolution) = 0.001 mm (resolution of wire draw + encoder combination).

<sup>3)</sup> Value applies to wire draw mechanism.

## Interfaces

|                                  |          |
|----------------------------------|----------|
| <b>Communication interface</b>   | PROFINET |
| <b>Programmable/configurable</b> | ✓        |

## Electronics

|                          |                                                                                  |
|--------------------------|----------------------------------------------------------------------------------|
| <b>Connection type</b>   | Male connector, 1x, M12, 4-pin, axial<br>Female connector, 2x, M12, 4-pin, axial |
| <b>Supply voltage</b>    | 10 V ... 32 V                                                                    |
| <b>Power consumption</b> | ≤ 3 W (without load)                                                             |

## Mechanics

|                                |                                                           |
|--------------------------------|-----------------------------------------------------------|
| <b>Weight</b>                  | Approx. 2 kg                                              |
| <b>Measuring wire material</b> | Highly flexible stranded steel 1,4401 stainless steel V4A |

<sup>1)</sup> These values were measured at an ambient temperature of 25 °C. There may be variations at other temperatures.

<sup>2)</sup> Average values, which depend on the application.

<sup>3)</sup> The service life depends on the type of load. This is influenced by environmental conditions, the installation location, the measuring range in use, the traversing speed, and acceleration.

|                                                 |                                                         |
|-------------------------------------------------|---------------------------------------------------------|
| <b>Measuring wire diameter</b>                  | 1.35 mm                                                 |
| <b>Weight (measuring wire)</b>                  | 7.1 g/m                                                 |
| <b>Housing material, wire draw mechanism</b>    | Aluminum (anodized), aluminum die cast (nickel-plated)  |
| <b>Spring return force</b>                      | 6 N ... 14 N <sup>1)</sup>                              |
| <b>Length of wire pulled out per revolution</b> | 200 mm                                                  |
| <b>Life of wire draw mechanism</b>              | Typ. 1,000,000 cycles <sup>2) 3)</sup>                  |
| <b>Actual wire draw length</b>                  | 3.2 m                                                   |
| <b>Wire acceleration</b>                        | 40 m/s <sup>2</sup>                                     |
| <b>Operating speed</b>                          | 8 m/s                                                   |
| <b>Mounted encoder</b>                          | ANM58 PROFINET, ANM58B-SANNB0000101000XX018X16, 1145910 |
| <b>Mounted mechanic</b>                         | MRA-F080-103D2, 6030125                                 |

<sup>1)</sup> These values were measured at an ambient temperature of 25 °C. There may be variations at other temperatures.

<sup>2)</sup> Average values, which depend on the application.

<sup>3)</sup> The service life depends on the type of load. This is influenced by environmental conditions, the installation location, the measuring range in use, the traversing speed, and acceleration.

#### Ambient data

|                                    |                                                          |
|------------------------------------|----------------------------------------------------------|
| <b>EMC</b>                         | According to EN 61000-6-2 and EN 61000-6-3 <sup>1)</sup> |
| <b>Enclosure rating</b>            | IP64, mounted mechanic<br>IP65, Encoder (IEC 60529)      |
| <b>Operating temperature range</b> | -30 °C ... +70 °C                                        |

<sup>1)</sup> The EMC according to the standards quoted is achieved if screened cables are used.

#### Certificates

|                                       |   |
|---------------------------------------|---|
| <b>EU declaration of conformity</b>   | ✓ |
| <b>UK declaration of conformity</b>   | ✓ |
| <b>ACMA declaration of conformity</b> | ✓ |
| <b>China-RoHS</b>                     | ✓ |

#### Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270590 |
| <b>ECLASS 5.1.4</b> | 27270590 |
| <b>ECLASS 6.0</b>   | 27270590 |
| <b>ECLASS 6.2</b>   | 27270590 |
| <b>ECLASS 7.0</b>   | 27270590 |
| <b>ECLASS 8.0</b>   | 27270590 |
| <b>ECLASS 8.1</b>   | 27270590 |
| <b>ECLASS 9.0</b>   | 27270590 |
| <b>ECLASS 10.0</b>  | 27270613 |
| <b>ECLASS 11.0</b>  | 27270503 |
| <b>ECLASS 12.0</b>  | 27270503 |
| <b>ETIM 5.0</b>     | EC001486 |
| <b>ETIM 6.0</b>     | EC001486 |
| <b>ETIM 7.0</b>     | EC001486 |

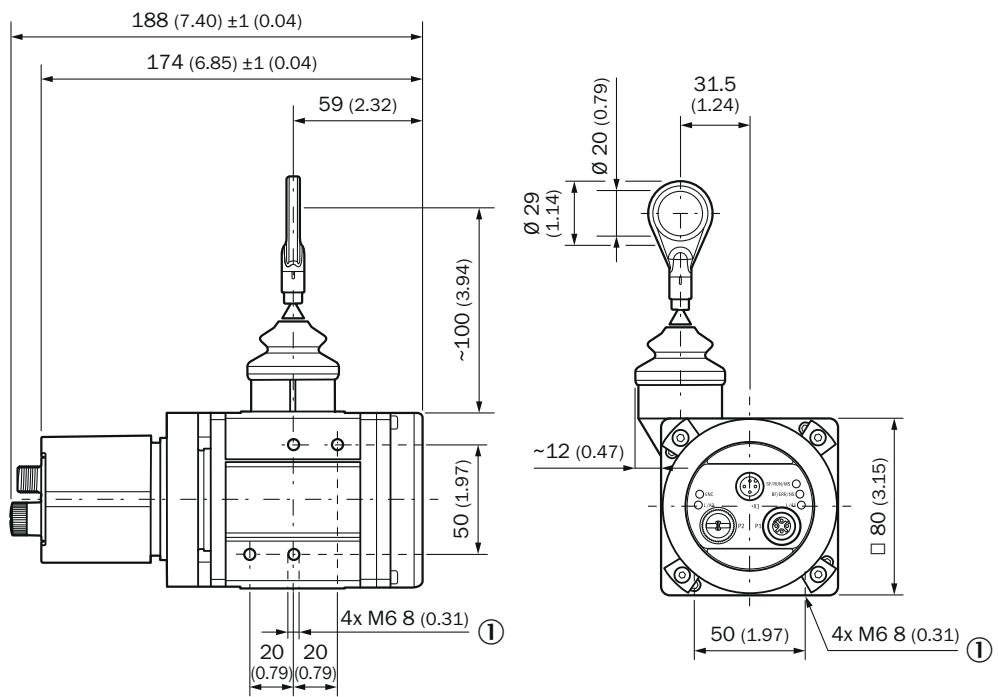
ETIM 8.0

EC001486

UNSPSC 16.0901

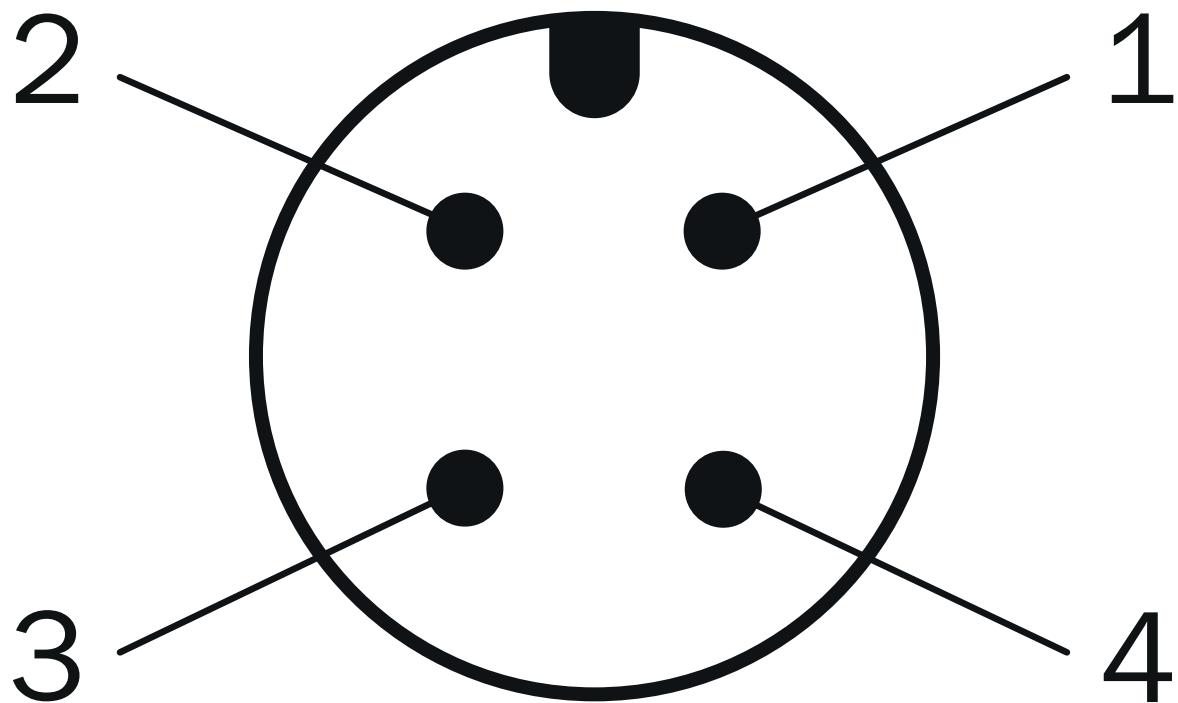
41112113

## Dimensional drawing



Dimensions in mm (inch)

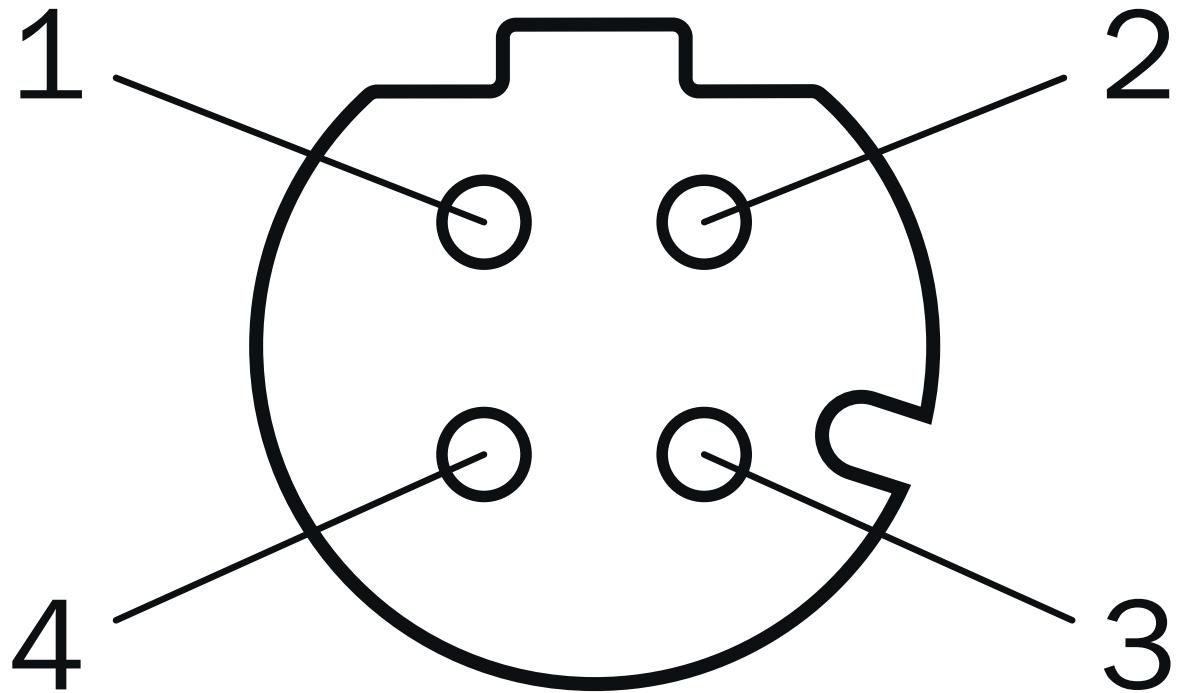
## PIN assignment Male connector



## 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        |

## PIN assignment 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- |

## Recommended accessories

Other models and accessories → [www.sick.com/HighLine](http://www.sick.com/HighLine)

|                                                                                   | Brief description                                                                                                                                                                                                                                                                                                                           | Type                                             | part no. |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------|
| Mounting systems                                                                  |                                                                                                                                                                                                                                                                                                                                             |                                                  |          |
|  | <ul style="list-style-type: none"><li><b>Description:</b> Joint ball for later insertion in wire end ring with 20 mm diameter. The use of this joint ball enables movement in multiple levels of freedom.</li></ul>                                                                                                                         | Joint protection<br>for wire rope<br>BTF/PRF/MRA | 5318683  |
|  | <ul style="list-style-type: none"><li><b>Description:</b> Compressed air attachment for MRA-F080... and MRA-F130... HighLine wire draw mechanism</li></ul>                                                                                                                                                                                  | MRA-F-P                                          | 6073769  |
|  | <ul style="list-style-type: none"><li><b>Description:</b> Flange adapter for HighLine wire draw mechanisms, adaption of face mount flange with centering hub 20 mm to 50 mm servo flange</li><li><b>Material:</b> Aluminum</li><li><b>Details:</b> Aluminum</li><li><b>Items supplied:</b> Including 3 countersunk screws M3 x 10</li></ul> | BEF-FA-020-050WDE                                | 2073776  |

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Type               | part no. |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| connectors and cables                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |          |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Connection type head B:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 30 m, 4-wire, CAT5, CAT5e, PVC</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> </ul>                                                                                                       | SSL-2J04-F30MZ     | 6059450  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Signal type:</b> PROFINET</li> <li><b>Cable:</b> CAT5, CAT5e</li> <li><b>Description:</b> PROFINET, shielded</li> <li><b>Connection systems:</b> IDC quick connection</li> <li><b>Permitted cross-section:</b> 0.14 mm<sup>2</sup> ... 0.34 mm<sup>2</sup></li> </ul>                                                                            | STE-1204-WZ        | 6048262  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 1 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YF2A14-010UB3XLEAX | 2145655  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YF2A14-020UB3XLEAX | 2095607  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 3 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YF2A14-030UB3XLEAX | 2145656  |
|   | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YF2A14-050UB3XLEAX | 2095608  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 10 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>  | YF2A14-100UB3XLEAX | 2095609  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 20 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>  | YF2A14-200UB3XLEAX | 2095611  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 25 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>  | YF2A14-250UB3XLEAX | 2095615  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 0.6 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul> | YF2A14-C60UB3XLEAX | 2145654  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 1 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> </ul>                                                                                                                    | YG2A14-010UB3XLEAX | 2145658  |

|                                                                                     | <b>Brief description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Type</b>         | <b>part no.</b> |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------|
|    | <ul style="list-style-type: none"><li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li><li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Sensor/actuator cable</li><li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Sensor/actuator cable, unshielded</li><li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li></ul> | YG2A14-020UB3XLEAX  | 2095766         |
|    | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Sensor/actuator cable</li><li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Sensor/actuator cable, unshielded</li><li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li></ul>                                                                                                               | YG2A14-050UB3XLEAX  | 2095767         |
|    | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Sensor/actuator cable</li><li><b>Cable:</b> 10 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Sensor/actuator cable, unshielded</li><li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li></ul>                                                                                                              | YG2A14-100UB3XLEAX  | 2095768         |
|    | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Sensor/actuator cable</li><li><b>Cable:</b> 20 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Sensor/actuator cable, unshielded</li><li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li></ul>                                                                                                              | YG2A14-200UB3XLEAX  | 2095770         |
|    | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Sensor/actuator cable</li><li><b>Cable:</b> 25 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Sensor/actuator cable, unshielded</li><li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li></ul>                                                                                                              | YG2A14-250UB3XLEAX  | 2095771         |
|   | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li><li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li><li><b>Signal type:</b> Ethernet, PROFINET</li><li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Ethernet, shieldedPROFINET</li><li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li></ul>                                                                                                                             | YM2D24-020P-N1MRJA4 | 2106182         |
|  | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Ethernet, PROFINET</li><li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Ethernet, shieldedPROFINET</li><li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li></ul>                                                                                                                                                      | YM2D24-020P-N1XLEAX | 2106171         |
|  | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li><li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li><li><b>Signal type:</b> Ethernet, PROFINET</li><li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Ethernet, shieldedPROFINET</li><li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li></ul>                                                                                                                             | YM2D24-050P-N1MRJA4 | 2106184         |
|  | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Ethernet, PROFINET</li><li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Ethernet, shieldedPROFINET</li><li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li></ul>                                                                                                                                                      | YM2D24-050P-N1XLEAX | 2106172         |
|  | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li><li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li><li><b>Signal type:</b> Ethernet, PROFINET</li><li><b>Cable:</b> 10 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Ethernet, shieldedPROFINET</li><li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li></ul>                                                                                                                            | YM2D24-100P-N1MRJA4 | 2106185         |
|  | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Ethernet, PROFINET</li><li><b>Cable:</b> 10 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Ethernet, shieldedPROFINET</li><li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li></ul>                                                                                                                                                     | YM2D24-100P-N1XLEAX | 2106173         |

|                                                                                     | <b>Brief description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Type</b>         | <b>part no.</b> |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------|
|    | <ul style="list-style-type: none"> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul> | YN2D24-020P-N1MRJA4 | 2106162         |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                             | YN2D24-020P-N1N2D24 | 2106168         |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 3 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                                   | YN2D24-030P-N1MRJA4 | 2144265         |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                                   | YN2D24-050P-N1MRJA4 | 2106163         |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                             | YN2D24-050P-N1N2D24 | 2127662         |
|   | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                                                            | YN2D24-050P-N1XLEAX | 2106175         |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 10 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                                  | YN2D24-100P-N1MRJA4 | 2106164         |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 10 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                            | YN2D24-100P-N1N2D24 | 2106170         |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 10 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                                                           | YN2D24-100P-N1XLEAX | 2106176         |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 20 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                                  | YN2D24-200P-N1MRJA4 | 2127664         |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 20 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shieldedPROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>                                                                                                           | YN2D24-200P-N1XLEAX | 2122743         |

|                                                                                   | <b>Brief description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Type</b>                                   | <b>part no.</b> |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------|
|  | <ul style="list-style-type: none"><li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li><li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li><li><b>Connection type head B:</b> Flying leads</li><li><b>Signal type:</b> Ethernet, PROFINET</li><li><b>Cable:</b> 25 m, 4-wire, PUR, halogen-free</li><li><b>Description:</b> Ethernet, shieldedPROFINET</li><li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li></ul> | YN2D24-250P-N1XLEAX                           | 2106180         |
|  | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li><li><b>Description:</b> Unshielded</li><li><b>Connection systems:</b> Screw-type terminals</li><li><b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li></ul>                                                                                                                                                                                                                    | DOS-1204-W                                    | 6007303         |
|  | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Female connector, M12, 4-pin, D-coded</li><li><b>Connection type head B:</b> Female connector, RJ45, 8-pin</li><li><b>Signal type:</b> Ethernet</li><li><b>Cable:</b> CAT5, CAT5e</li><li><b>Description:</b> Ethernet, shielded</li><li><b>Note:</b> Cabinet through</li></ul>                                                                                                                                                         | Feedthrough female connector<br>Ethernet RJ45 | 6048180         |

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