

# YM2D24-020PN1M2D24

Industrial Ethernet cables and fieldbus cables

**PLUG CONNECTORS AND CABLES** 

**SICK**Sensor Intelligence.



### Ordering information

Туре	Part no.
YM2D24-020PN1M2D24	2106159

Other models and accessories  $\Rightarrow$  www.sick.com/Industrial\_Ethernet\_cables\_and\_fieldbus\_cables



#### Detailed technical data

#### Technical specifications

Accessory group         Plug connectors and cables           Accessory family         Connection cables           Connection type head A         Male connector, M12, 4-pin, straight, D-coded           Connector type head B         Male connector, M12, 4-pin, straight, D-coded           Connector material         TPU           Connector material         TPU           Connector color         Black           Locking nut material         Jance (example)           Up (halogen free)         Jance (example)           Width across flats         13           Cable         2 m. 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket material         6-7 mm           Conductor cross section         0.34 mm²           Shielded         5-7 mm           Conductor cross section         5-1 x cable diameter           Shielding         5-1 x cable diameter           Plexible uses Stationary position practical programment         5-1 x cable diameter           Stationary position practical programment	•	
Connection type head B         Male connector, M12, 4-pin, straight, D-coded           Locking plug connector         Screw connection           Connector material         TPU           Connector color         Black           Locking nut material         Zinc die-cast, nickel-plated           Tightening torque         0.6 Nm           Width across flats         13           Cable         2 m, 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Green           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         Flexible use Stationary position         > 12 x cable diameter           Stationary position         > 12 x cable diameter           Drag chain operation         > 12 x cable diameter           Stationary position         4 8 V AC           Good positionary po	Accessory group	Plug connectors and cables
Connection type head B         Male connector, M12, 4-pin, straight, D-coded           Locking plug connector         Screw connection           Connector material         TPU           Connector color         Black           Locking nut material         Zinc die-cast, nickel-plated           Tightening forque         0.6 Nm           Width across flats         13           Cable         2 m, 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket traterial         PUR, halogen-free           Conductor         G-7 mm           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         Flexible use Stationary position Porachin Porachin operation Porachin Porachin Operation Porachin Porachi	Accessory family	Connection cables
Locking plug connector         Screw connection           Connector material         TPU           Connector color         Black           Locking nut material         Zinc die-cast, nickel-plated           Tightening torque         0.6 Nm           Width across flats         13           Cable         2 m, 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Green           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         > 12 x cable diameter           Flexible use         > 12 x cable diameter           Stationary position         > 5 x cable diameter           Drag chain operation         > 12 x cable diameter           Stationary position         > 5 x cable diameter           Bending cycles         3,000,000           Nominal voltage, cable         300 V AC           Test voltage, cable         48 V AC           60 V DC         60 V DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Taversing speed         3,3 m/s	Connection type head A	Male connector, M12, 4-pin, straight, D-coded
Connector color         Black           Locking nut material         Zinc die-cast, nickel-plated           Tightening torque         0.6 Nm           Width across flats         13           Cable         2 m, 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Green           Cable diameter         6.7 mm           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         > 12 x cable diameter           Flexible use Stationary position         > 5 x cable diameter           Drag chain operation         > 22 x cable diameter           Paragenation operation         > 12 x cable diameter           Stationary position         > 22 x cable diameter           Statutage, cable         3,000,000           Nominal voltage, cable         300 V AC           Reference voltage         48 V AC           GoV DC         Rated impulse voltage         1.5 kV           Current loading         4 A           Taversing speed         3.3 m/s	Connection type head B	Male connector, M12, 4-pin, straight, D-coded
Connector color     Black       Locking nut material     Zinc die-cast, nickel-plated       Tightening torque     0.6 Nm       Width across flats     13       Cable     2 m, 4-wire, PUR, halogen-free       Jacket material     PUR, halogen-free       Jacket color     Green       Conductor cross section     0.34 mm²       Shielding     Shielded       Bending radius     Flexible use Stationary position Drag chain operation     5 x cable diameter       Drag chain operation     5 x cable diameter       Possible totage, cable     3,000,000       Nominal voltage, cable     3,000,000       Reference voltage     48 V AC       Go V DC       Rated impulse voltage     4.6       Current loading     4.A       Tiversing speed     3.3 m/s	Locking plug connector	Screw connection
Locking nut material         Zinc die-cast, nickel-plated           Tightening torque         0.6 Nm           Width across flats         13           Cable         2 m, 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Green           Cable diameter         6.7 mm           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         *12 x cable diameter           Flexible use         > 12 x cable diameter           S tationary position         > 5 x cable diameter           Drag chain operation         > 12 x cable diameter           Bending cycles         3.000,000           Nominal voltage, cable         3.000,000           Reference voltage         48 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Taversing speed         3.3 m/s	Connector material	TPU
Tightening torque         0.6 Nm           Width across flats         13           Cable         2 m, 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Green           Cable diameter         6.7 mm           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         > 12 x cable diameter           Flexible use         > 5 x cable diameter           Stationary position         > 5 x cable diameter           Drag chain operation         > 12 x cable diameter           Bending cycles         3,000,000           Nominal voltage, cable         300 ∨ AC           Test voltage, cable         48 ∨ AC           60 ∨ DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Taversing speed         3.3 m/s	Connector color	Black
Width across flats         13           Cable         2 m, 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Green           Cable diameter         6.7 mm           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         > 12 x cable diameter           Stationary position Drag chain operation         > 5 x cable diameter           Drag chain operation         > 12 x cable diameter           Bending cycles         3,000,000           Nominal voltage, cable         300 V AC           Test voltage, cable         2,000 V AC           Reference voltage         48 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Taversing speed         3,3 m/s	Locking nut material	Zinc die-cast, nickel-plated
Cable         2 m, 4-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Green           Cable diameter         6.7 mm           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         > 12 x cable diameter           Stationary position Drag chain operation         > 5 x cable diameter           Drag chain operation         > 12 x cable diameter           Nominal voltage, cable         3,000,000           Nominal voltage, cable         300 V AC           Test voltage, cable         2,000 V AC           Reference voltage         48 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Taversing speed         3.3 m/s	Tightening torque	0.6 Nm
Jacket material         PUR, halogen-free           Cable diameter         6.7 mm           Conductor cross section         0.34 mm²           Shielding         Shielded           Bending radius         Flexible use Stationary position Drag chain operation         > 12 x cable diameter           Drag chain operation         > 12 x cable diameter           Bending cycles         3,000,000           Nominal voltage, cable         300 V AC           Test voltage, cable         2,000 V AC           Reference voltage         48 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Traversing speed         3.3 m/s	Width across flats	13
Jacket colorGreenCable diameter6.7 mmConductor cross section0.34 mm²ShieldingShieldedBending radius* 12 x cable diameterPrag chain operation> 5 x cable diameterDrag chain operation> 12 x cable diameterBending cycles3,000,000Nominal voltage, cable300 V ACTest voltage, cable2,000 V ACReference voltage48 V ACGo V DCActed impulse voltage1.5 kVCurrent loading4 ATaversing speed3.3 m/s	Cable	2 m, 4-wire, PUR, halogen-free
Cable diameter Conductor cross section Shielding Shielded  Bending radius Flexible use Stationary position Drag chain operation Drag chain operation Show AC  Test voltage, cable Reference voltage A8 V AC 60 V DC  Rated impulse voltage Current loading Traversing speed  6.7 mm 0.34 mm²  5.2 k mm² 5. kielded 5.12 x cable diameter 5.5 x cable diam	Jacket material	PUR, halogen-free
Conductor cross section Shielding Shielding Bendling radius  Flexible use Stationary position Drag chain operation  Drag chain operation  Stationary position operation  Drag chain operation  Shool, 000  Nominal voltage, cable  Test voltage, cable  Reference voltage  48 V AC 60 V DC  Rated impulse voltage  Current loading  Traversing speed  0.34 mm²  Shielded  0.34 mm²  Shielded  12 x cable diameter  > 12 x cab	Jacket color	Green
Shielding Bending radius  Flexible use Stationary position Drag chain operation  Drag chain operation  Shielded  Stationary position Stationary position  Drag chain operation  Drag chain operation  Show Ac  Solv Ac  Sol	Cable diameter	6.7 mm
Flexible use Stationary position 5 x cable diameter 6 x cable diameter	Conductor cross section	0.34 mm <sup>2</sup>
Flexible use Stationary position Drag chain operation  Bending cycles Nominal voltage, cable Test voltage, cable  Reference voltage  48 V AC 60 V DC  Rated impulse voltage  4 A  Traversing speed  > 12 x cable diameter > 5 x cable diameter > 12 x cable diameter  > 12 x cable diameter	Shielding	Shielded
Stationary position Drag chain operation Pending cycles  Nominal voltage, cable  Test voltage, cable  Reference voltage  48 V AC 60 V DC  Rated impulse voltage  Current loading  Traversing speed  > 5 x cable diameter > 12 x cable diameter	Bending radius	
Drag chain operation > 12 x cable diameter  3,000,000  Nominal voltage, cable  Test voltage, cable  Reference voltage  48 V AC  60 V DC  Rated impulse voltage  1.5 kV  Current loading  Traversing speed  > 12 x cable diameter  3,000,000  400  400  400  400  400  40	Flexible use	> 12 x cable diameter
Bending cycles  Nominal voltage, cable  2,000 V AC  Reference voltage  48 V AC 60 V DC  Rated impulse voltage  1.5 kV  Current loading  4 A  Traversing speed  3,000,000  3,000,000  400  400  400  4	Stationary position	> 5 x cable diameter
Nominal voltage, cable  Test voltage, cable  Reference voltage  48 V AC 60 V DC  Rated impulse voltage  1.5 kV  Current loading  Traversing speed  300 V AC  2,000 V AC  48 V AC 60 V DC  3.3 m/s	Drag chain operation	> 12 x cable diameter
Test voltage, cable  Reference voltage  48 V AC  60 V DC  Rated impulse voltage  1.5 kV  Current loading  4 A  Traversing speed  2,000 V AC	Bending cycles	3,000,000
Reference voltage  48 V AC 60 V DC  Rated impulse voltage  1.5 kV  Current loading  4 A  Traversing speed  3.3 m/s	Nominal voltage, cable	300 V AC
48 V AC 60 V DC  Rated impulse voltage 1.5 kV  Current loading 4 A  Traversing speed 3.3 m/s	Test voltage, cable	2,000 V AC
60 V DC  Rated impulse voltage 1.5 kV  Current loading 4 A  Traversing speed 3.3 m/s	Reference voltage	
Rated impulse voltage 1.5 kV  Current loading 4 A  Traversing speed 3.3 m/s		48 V AC
Current loading 4 A Traversing speed 3.3 m/s		
Traversing speed 3.3 m/s		
Travelling distance 5 m	Traversing speed	3.3 m/s
	Travelling distance	5 m

Acceleration	≤ 2 m/s²
Signal type	Ethernet, PROFINET
Transmission characteristics	CAT5e
Data transmission rate	≤ 0.1 Gbit/s
Application	Drag chain operation Zones with oils and lubricants
Authorizations	CE UL
Enclosure rating	IP65 / IP66K / IP67
Ambient operating temperature	
Flexible use	-30 °C +70 °C
Stationary position	-40 °C +80 °C
Drag chain operation	-30 °C +70 °C
Head	-25 °C +85 °C
Contamination rating	3
Insulation resistance	> 100 MΩ
Overvoltage category	III
Specific insulation resistance	< 30 mΩ
Thermal resistance, piping	Flame retardant acc. to UL 1581 Section 1090, Section 1100 (FT2), IEC 60332-1-2 Std.

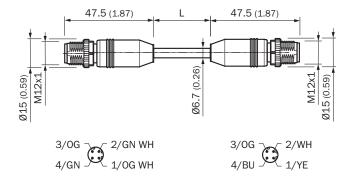
#### Classifications

ECLASS 5.0	27061801
ECLASS 5.1.4	27061801
ECLASS 6.0	27061801
ECLASS 6.2	27061801
ECLASS 7.0	27061801
ECLASS 8.0	27061801
ECLASS 8.1	27061801
ECLASS 9.0	27061801
ECLASS 10.0	27061801
ECLASS 11.0	27061801
ECLASS 12.0	27061801
ETIM 5.0	EC002599
ETIM 6.0	EC002599
ETIM 7.0	EC002599
ETIM 8.0	EC002599
UNSPSC 16.0901	26121604

# YM2D24-020PN1M2D24 | Industrial Ethernet cables and fieldbus cables

PLUG CONNECTORS AND CABLES

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



### 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.

For us, that is "Sensor Intelligence."

## **WORLDWIDE PRESENCE:**

Contacts and other locations -www.sick.com

