

# GETRIEBEBAU NORD

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## SK TIE4-M12-SENC

Part number: 275 274 533

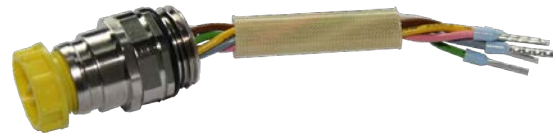
Connection extension "Safe encoder"

M12 system plug connector

### Scope of supply

1 x	M12 female connector	SK TIE4-M12-SENC
1 x	Insulating hose	30 mm
1 x	Cover cap	yellow

As-delivered status with screwed-on connector cover



### Field of use

The M12 Socket connector has open cable ends and wire end sleeves. It is used to make a pluggable connection using normal commercial M12 round plug connectors. It connects the control terminal strip with the Safety-related rotary encoder at the output side.

### Technical data

Version	
Temperature range	-30 ... +90 °C
Contact insert Color / Material	Grey / RAL 1021 Plastic
Round plug connector Material	Metal, CuZn, nickel plated
Connection / Type Round plug connector	M12x1, adjustable M12 female connector with flexible strand M16x1.5, metric screw thread
Contact set Contacts / Coding	8 pin, A - coded

\* Suitable assembly spanner commercially available (see Installation)

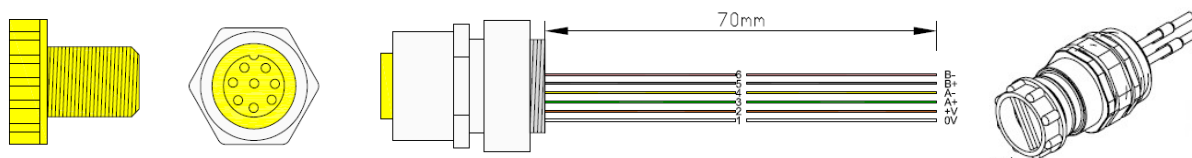
Weight	23 g
Connector cover Color / Material	Yellow / RAL 1021 Plastic
Protection class (screwed)	IP67
Fastening	Hexagonal nut M16x1.5 *
Tightening torques * M12x1 Socket connector M16x1.5 Screw thread	0.6 Nm 1.5 Nm

Cable	
Number of conductors / Cross section	6 x 0.34 mm <sup>2</sup>
Wire strands / colors	according to DIN 47100
Length of wire strands	70 mm
Degree of fouling	3 / 2

Mech. Service life	Min. 100 plugging cycles
Operating voltage	Max. 60 V
Current rating	4 A
Insulation resistance	≥ 10 <sup>8</sup> Ω

Technical Information / Datasheet	SK TIE4-M12-SENC			
Connection extension	TI 275274533	V 1.1	5122	en

### Circuit diagram



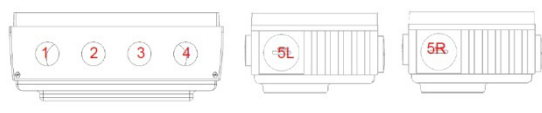
## NOTICE

### Validity of this document

This document is only valid in combination with the operating instructions for the relevant electronic drive technology and under strict compliance with the safety and warning instructions which they contain. Safe commissioning of this module and the electronic drive technology depends on the availability of this information.

### Installation / option locations

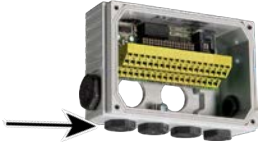




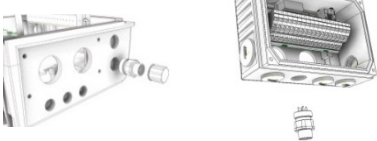
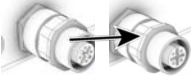

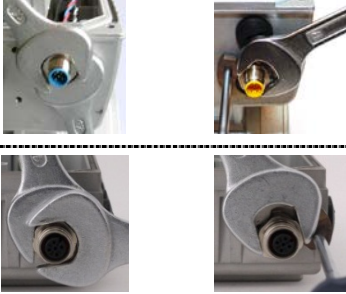

The M12 Receptacle connector are intended for direct installation in a free M16 hole / threaded opening of the device (see below).

Device series	Recommended option location	Option locations
<b>BUS technology box (SAFE)</b> BUS connection unit (SAFE) SK TI4-TU-SAFE (-C)	1 / 2 / 5L	

The installation position and mounting location (coding pin or coding groove on contact carrier) of the Socket connector is freely positionable and should be aligned (see installation step 7) such that angled M12 round connectors can also be connected in a way that avoids collisions.

The installation steps described in the following apply to the installation of the M12 Receptacle connectors in the BUS connecting unit (SAFE) of an external PROFIsafe technology box.

*Installation steps for installation of the M12 Receptable connector*

1.	Remove M16 blind plug from the provided option location hole (bottom) of the BUS connection unit.	
2.	Screw the middle hexagonal nut towards the front using a size 17 open-ended spanner. 	
3.	<b>EMC</b> Twist associated wire pairs together (e. g. bus system, power supply, etc.).	
4.	Pull insulating hose over connecting cables.	
5.	Screw M12 flanges component directly into the affected M12 threaded opening of the housing or connecting unit of the frequency inverter. Screw M12 Receptable connector into the relevant M16 threaded opening of the BUS connecting unit.	
6.	Align coding pin / coding groove vertically to 12 o'clock by rotating the front hexagonal nut.	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Socket connector</p>  </div> <div style="text-align: center;"> <p>Plug connector</p>  </div> </div>
7.	Secure the front hexagonal nut with a 17 mm open-ended spanner. Screw the rear hexagonal nut to the connection unit or the starter or frequency inverter housing using a size 17 open-ended spanner or a special torque / installation wrench. Take the specified <b>tightening torques</b> into consideration, see technical data.	
8.	Ensure that the M12 round plug connector or the cover cap is properly screwed onto the M12 Receptable connector and tightened.	

## NOTICE

### Corrosion

Pay attention to leaktightness during the installation of all components (assembly, connection extension etc.). It must be ensured that all components are correctly seated, and the tightening torques are adhered to when doing this.

Failure to do this will allow moisture to penetrate the device, which will result in the risk of corrosion and short circuiting.

- In order to ensure that protection class **IP66** is complied with (concerns all devices with type key SK ...-C), another pressure - **leaktightness** test must be performed when the assembly work has been completed.

### Information

#### Torque / assembly wrench



In order to provide a secure, sealed and vibration-proof connection, the M12 connection extensions, which are equipped with a hexagonal threaded ring (size 17), should be tightened with special torque / assembly wrenches. For professional installation NORD recommends the use of commercially available assembly tools (M12, size 17) with an adjustable, defined tightening torque (e.g. from Murrelektronik).

### Information

#### NOTE:

When installed, the following **yellow** connection extensions / plugs look identical.

Designation	Part number
SK TIE4-M12-SH-IN	275274519
SK TIE4-M12-ASI	275274502
SK TIE4-M12-ASI-AUX	275274513
SK TIE4-M12-SENC	275274533



Heed the correct assignment to functions when installing the different types in a connection unit / housing and mounting / connecting the function-specific M12 round plug connectors!

### Connections


The open cable ends of the Pin 1 to 6 of the connection extension / M12 Socket connector are connected to the terminal strip of the control terminals in the BUS connection unit (see below).



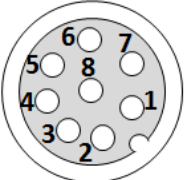
**BUS connection unit**  
SK TI4-TU-SAFE (-C)

**BUS technology box**  
SK TU4-... (-M12) / (-C)

**Electrical connections**



Contact assignments  
8-pole  
**Female connector**  
A - coded



**Connection extension**  
**M12 Male connector**  
**SK TIE4-M12-SENC**

**Connection terminals**  
**BUS connection unit**  
**SK TI4-TU-SAFE (-C)**

Pin	Farbe	Signal	Kontakt	Bezeichnung
1	White	GND SH	7	0 V
2	Brown	+V	9	24 V
3	Green	A+	3	A+
4	Yellow	A-	5	A-
5	Grey	B+	4	B+
6	Pink	B-	6	B-
7	n. c.			
8	n. c.			

**Further documentation** ([www.nord.com](http://www.nord.com))

Document	Designation
<a href="#">TI 275280300</a>	Bus connection unit SK TI4-TU-SAFE
<a href="#">TI 275280800</a>	Bus connection unit SK TI4-TU-SAFE-C

Document	Designation