

SK TI4-TU-NET-C

Part number: 275 280 600

Connection unit

NOTICE

Validity of this document

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

Scope of delivery

1 x	Connection unit	SK TI4-TU-NET-C
1 x	Gasket	2 mm, self-adhesive
2 x	Lead through grommet	22 mm x 9.5 mm
4 x	Hexagonal socket screw	M4 x 20



Field of use

The connection unit forms the basis for the options with integrated 24 V power supply of model SK TU4-. The terminal strip is divided into two potential levels. The connection unit can be mounted on, or in the immediate vicinity of an electronic control technology frequency inverter.

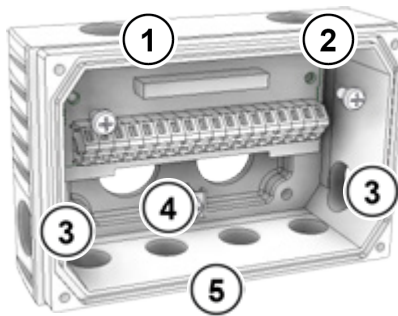
Technical data

Temperature range	-25 °C ... 50 °C
Temperature class	Class 3K4
Protection class	IP66
Vibration resistance	3M7
Dimensions [mm]	H x W x D: 95 x 136 x 55
Current rating	480 mA
Module	
Reference signal AIN	10 V ± 0.2 V, ≤ 5 mA

Cable cross section	AWG 26-14
	rigid 0.14 - 2.5 mm ² flexible with wire end ferrules 0.14 - 1.5 mm ²
Analogue input	0 – 10 V, Accuracy 0.2 V, Resolution 8 bits

Technical Information / Datasheet	SK TI4-TU-NET-C			
Connection unit	TI 275280600	V 1.2	5315	EN

Features

1.	No function, M20 x 1,5	
2.	No function, M20 x 1,5	
3.	Cable entry M20 x 1.5 (1 on left, 1 on right, option location 5L and 5R): e.g. For the connection of control and signal lines.	
4.	Cable entry M25 x 1.5 (2 pcs.): Leadthrough for wiring between optional assembly and device (frequency inverter) with direct attachment.	
5.	Cable entry M16x1.5 (4 pcs., option location 1 to 4): e.g. for the connection of control and signal lines.	

Information

M12 connector

NORD can supply prefabricated M12 connection expansions for manufacturing plug-in connections.

These can be screwed directly into the M16 cable lead-ins. The two existing side cable lead-ins (M20) can be used if a suitable reducer is used ([TI 275274511](#)).

Installation

Installation location	To the left or right of the device. Alternatively: near by the device by using the wall mounting kit SK TIE4-WMK-TU (TI 275274002).
Mounting	Using screw connection (4 x hexagon socket M4 x 20)

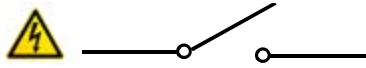
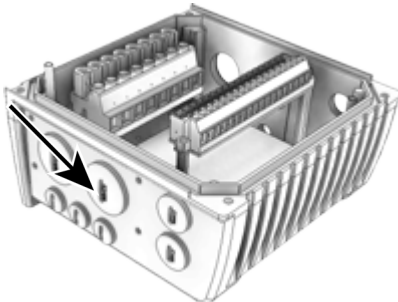
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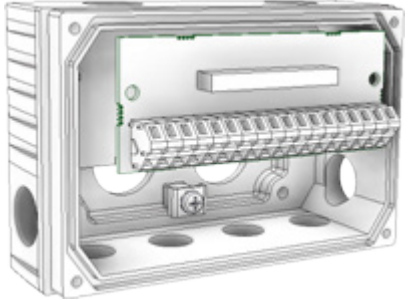
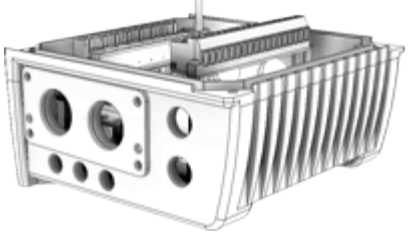
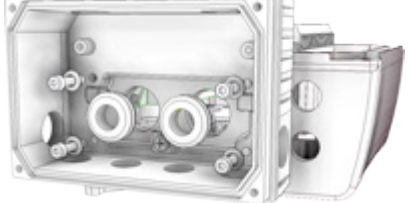

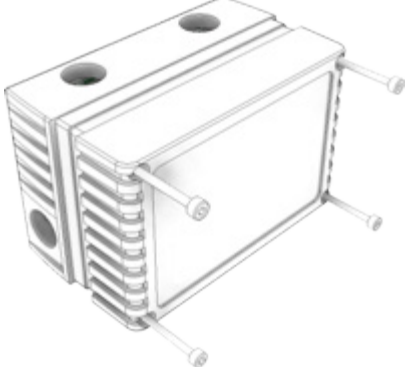
Sealing

Ensure that no leaks are present during installation (assembly, cable leadthroughs, cable glands) in order to avoid penetration by moisture and therefore the risk of corrosion and short circuiting.

Installation steps for attachment to the device



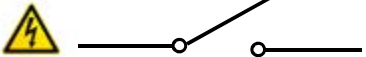


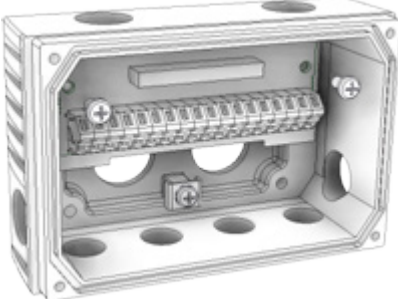
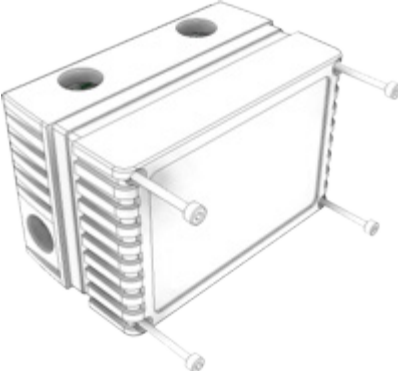
1.	Switch off the mains power.	
2.	Remove the two M25 blind caps from the relevant side of the frequency inverter (right / left).	

3.	Remove circuit board (with terminal strip) from connection unit SK TI4-TU-....	
4.	Fit provided seal to the device..	
5.	Fit SK TI4-TU-.... connection unit to device with the 4 provided screw bolts. Insert both of the provided leadthrough grommets into the M25 leadthroughs (to protect internal wiring between assembly and device).	
6.	Re-install circuit board (see point 3) and make the electrical connection.	
7.	Fit SK TU4- assembly and screw in place.	

Wall mounting assembly steps

(Wall mounting kit SK TIE4-TU-WMK optionally available)



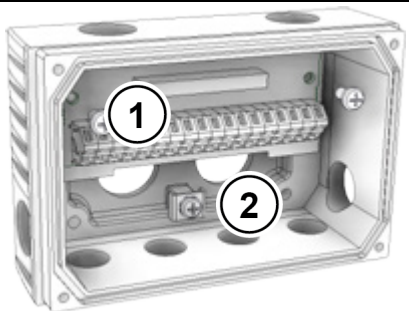
1.	Switch off the mains power.	
2.	Install provided seal to SK TI4-TU-.... connection unit.	
3.	Attach SK TI4-TU-.... connection unit to wall mounting kit. Screw the 2 cheese-head screws (wall mounting kit accessory pack) into the provided holes (countersunk) from the outside.	
4.	Insert the two screw bolts (wall mounting kit accessory pack) into the freely accessible holes in the rear panel from the inside and screw in place.	
5.	Install unit at usage location and make electrical connection (cable length max. 20 m).	
5.	Attach SK TU4- assembly and screw in place.	

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IP66 addition

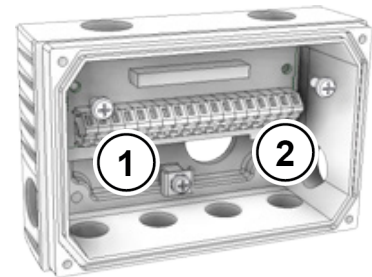
To protect the assembly from condensation, the provided diaphragm valve must be screwed in. In order to do this, remove the uppermost M20 cable screw connection and screw in the reducer that is also included in the scope of delivery.

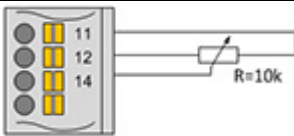
Connections

1	Terminal strip	Double tension spring terminal strip	18 contacts	
2	PE connection	via housing	If fitted to the device (e.g. frequency inverter): make connection to PE of device using the provided cable (green/yellow).	

Connections

Potential	Contact	Designation	Description	
1	24 V DC low voltage	43	24 V	Supply potential (+24 V, ≤ 480 mA)
		40	GND / 0 V	Reference potential (0 V / GND)
		43	24 V	Supply potential (+24 V, ≤ 480 mA)
		40	GND / 0 V	Reference potential (0 V / GND)
		43	24 V	Supply potential (+24 V, ≤ 480 mA)
		40	GND / 0 V	Reference potential (0 V / GND)
		11	10 V	Reference voltage (10 V ± 0.2 V, ≤ 5 mA)
		14	AIN +	Analogue input (0...10 V)
		12	AGND	Reference potential for analogue signals
		B1	FOUT	Pulse output, pulse signal converted from AIN setpoint
		B2	ON-L	Left enable digital output, only with SK TU4-POT-...
		B3	ON-R	Right enable digital output, only with SK TU4-POT-...
	40	GND / 0 V	Reference potential (0 V / GND)	
2	Mains	PE	PE	Earth, internally connected to the module housing.
		L1	L1	Mains supply 1 Phase
		L2/N	L2/N	Mains supply 2 Phase / N



Meaning, Functions		Description / Technical data		
Terminal		Meaning	Parameter	Function of factory setting
No.	Designation		No.	
Analogue inputs		Only in combination with SK TU4-24V-... Connection of an analogue signal (5-10 kΩ potentiometer, external control unit or similar)		
		Resolution 8Bit Accuracy 0.2 V V= 0 ... 10 V I= 0/4 ... 20 mA Burden resistor (500 Ω) enclosed	+ 10 V Reference voltage: 5 mA not short-circuit resistant	
				
11	10V REF	+ 10 V Reference voltage	-	-
12	AGND	Analogue reference potential GND	-	-
14	AIN1+	Analogue input 1	-	-
Control voltage source		For the supply of frequency inverters and accessories with a 24 V control voltage		
		24 V DC ± 10 % 420 mA (total)	Short circuit and limited excess temperature or overload monitoring available.	
43	VO / 24V	Voltage output	-	-
40	GND / 0V	Reference potential GND	-	-
Digital outputs		Digital signals for controlling an electronic drive device		
		PLC-compatible as per EN61131-2 Low: 0 V, High: 24 V Clock frequency: ~1 – 32 kHz	Pulses for evaluation of the digital input functions of an SK 2xxE frequency inverter, size 1 - 3 P420 [-02]/[-03] = 26/27, → Analogue meaning P400 [-06]/[-07].	
B1	FOUT	Frequency output	P400/P420	-
40	GND	Reference potential GND	-	-
Digital outputs		Digital signals for controlling an electronic drive device		
		Only in conjunction with SK TU4-POT Control with the "Left" or "Right" buttons		
B2	ON-L	Enable Left signal	P420	-
B3	ON-R	Enable Right signal	P420	-
Mains connection		Mains voltage connection		
		Mains connection, 100 - 240 V or 380 - 500 V, depending on the module		
L1	L1	Mains supply 1 Phase	-	-
L2	L2/N	Mains supply 2 Phase / N	-	-
PE	PE	PE, Earth	-	-

Additional documentation and software (www.nord.com)

Document	Name	Document	Meaning
TI 275274002	Wall mounting kit for SK TIE4-WMK-TU	Various	Data sheets for M12 - connection expansions