

HTL encoder WK 4/2/4*680 Ω

Part number: 278 910 340

Connection kit

Only qualified electricians are allowed to install and commission the module. An electrician is a person who, because of their technical training and experience, has sufficient knowledge with regard to

- switching on, switching off, isolating, earthing and marking power circuits and devices,
- proper maintenance and use of protective devices in accordance with defined safety standards.

DANGER!

Danger of electric shock

The frequency inverter continues to carry hazardous voltages for up to 5 minutes after it was switched off.

- Work must not be carried out unless the device has been disconnected from the voltage and at least 5 minutes have elapsed since the mains was switched off!

NOTICE

Validity of this document

This document is only valid in combination with the operating instructions for the relevant frequency inverter. Safe commissioning of this module and the frequency inverter depends on the availability of this information.

Scope of delivery

1 x	Labelling strips (1 ... 6)	9705A/6/10B 1-10 horizontal
4 x	Diode plug	680 Ω +/- 11 % / 0.6 W
2 x	Through terminal	WK 4/U/VO
4 x	Insulated base terminal	WK 4 TKG/U/VO
1 x	Cover plate	AP 4 TKVO



Field of use

The connection kit is used to connect a HTL incremental encoder to the TTL encoder input of a frequency inverter \geq SK 520E. This means all commercially available HTL incremental encoders can be connected to terminal block X6 of the frequency inverter.

Technical Information / Datasheet		HTL-Geber WK 4/2/4*680 Ohm			
Connection kit		TI 278910340	V 1.1	4016	EN

Frequency inverter assignment

Permissible frequency inverters \geq SK 520E	Size	Power
SK 5xxE-250-112- ... to SK 5xxE-111-112-...	1	0.25 kW to 1.1 kW
SK 5xxE-250-323- ... to SK 5xxE-182-323-...	1 to 7	0.25 kW to 18.5 kW
SK 5xxE-550-340- ... to SK 5xxE-163-340-...	1 to 11	0.55 kW to 160 kW

Technical Data

General

Version		Series terminals
Tightening torque	Nm	0.5 Terminal
Weight	g	25
Control voltage ¹⁾	V -	10 ... 30

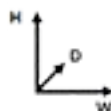
¹⁾ from frequency inverter or external voltage source

Electrical connection	Screw terminals
Cross-section	20-10 AWG ²⁾
Tools	Slot-head screwdriver 0.6 x 3.5

²⁾ 0.5 mm² - 4 mm² fine-wire / - 6 mm² single wire

Dimensions

Envelope dimensions [mm]	D x W x H	48 x 38.5 x 63
Mounting [mm] TS 35 snap-on rail	H	35



Connections

Function / name	HTL encoder Wire colour	Connection kit Terminal number	Frequency inverter \geq SK 520E	
			Terminal bar	Terminal number
Supply voltage 10 – 30 V DC	brown / green	1	X5 X6	42 (VO 15 VDC) 44 (VI/VO 24 VDC) ¹⁾ 49 (VO 12 VDC) ²⁾
0 V (GND)	white / green	2	X5	40 (GND)
Track A	brown	3	X6	51 (ENC A+)
Track A /	green	4	X6	52 (ENC A-)
Track B	grey	5	X6	53 (ENC B+)
Track B /	pink	6	X6	54 (ENC B-)

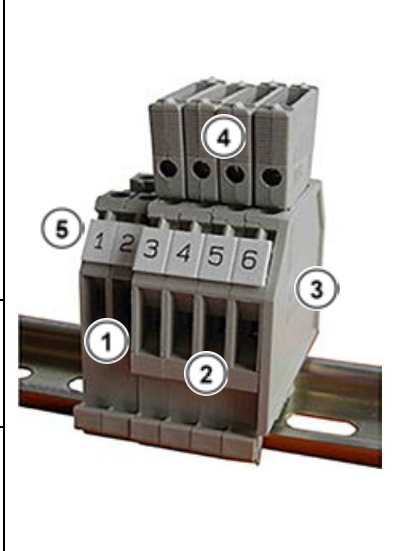
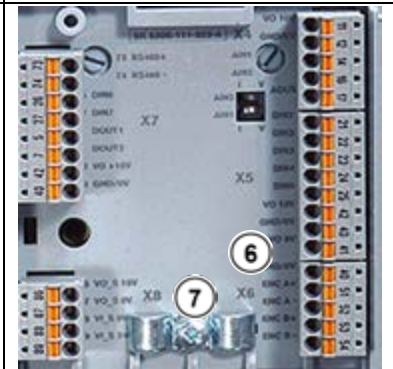
¹⁾ \leq size 4 designated VI
 \leq size 5 designated VO

²⁾ only SK 540E and SK 545E frequency inverters

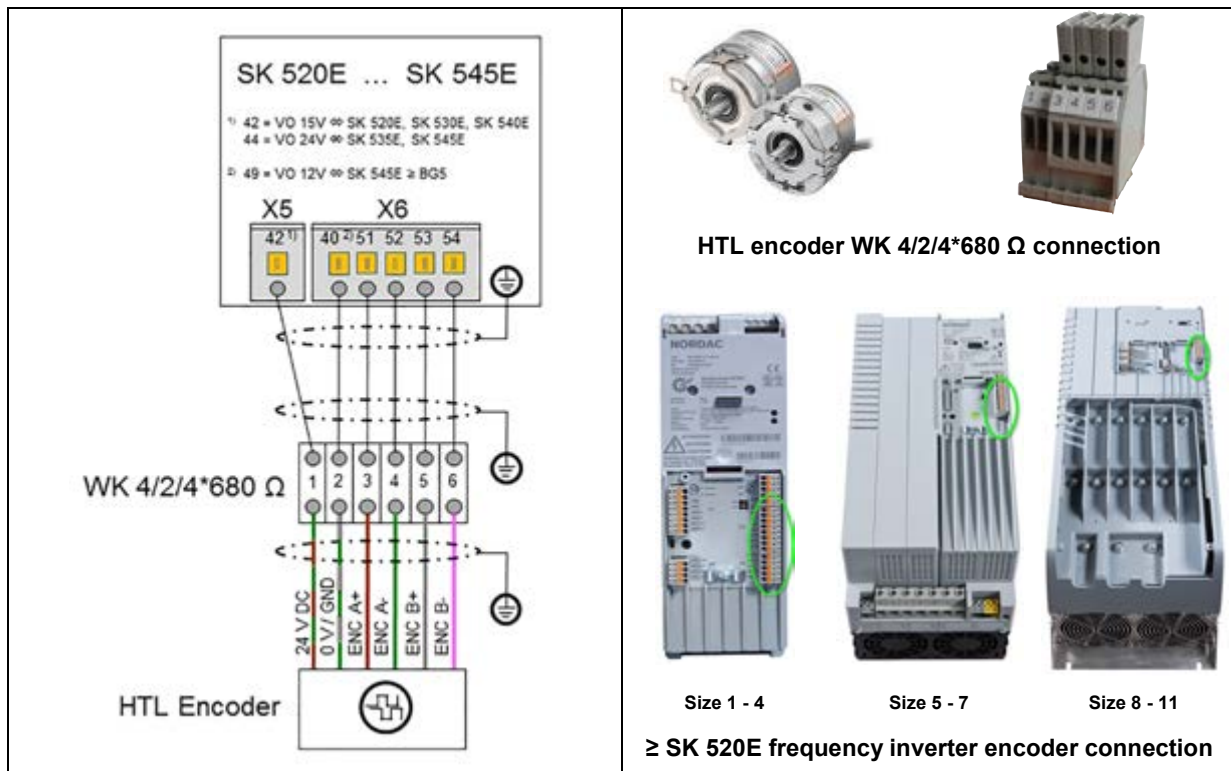
Installation

Installation location	Inside of a control cabinet, in the immediate vicinity of the relevant frequency inverter
Fastening	Standard TS 35 mounting rail (snap-on rail according to EN 50022)

Installation steps

<p>1.</p>	<p>The connection kit is delivered as individual parts and must be correctly mounted on a snap-on DIN rail on site.</p> <p>The following mounting sequence (starting on the left) must be observed:</p> <ul style="list-style-type: none"> ① 2 x through terminal (WK 4/U/VO): fit (snap on) ② 4 x insulated base terminal (WK 4TKG/U/VO): fit (snap on) ③ 1 x cover plate (AP 4 TK/VO): fit (snap on) 	
<p>2.</p>	<p>The 4 x enclosed diode plugs must be mounted directly on the insulated base terminals (snap-on).</p> <ul style="list-style-type: none"> ④ 4 x cover plate (680 Ω): fit (snap on) 	
<p>3.</p>	<p>Attach the enclosed labelling strips on the through and the insulated base terminals.</p> <ul style="list-style-type: none"> ⑤ Attach labelling strips from left (1) to right (6) 	
<p>4.</p>	<p>The use of a shielded connection cable is recommended. The cable shield must be well earthed at both ends.</p> <ul style="list-style-type: none"> ⑥ The cables between the frequency inverter (terminal blocks X5 and X6) and the connection kit should be as short as possible. ⑦ Also connect the shield of the HTL encoder cable to the shield clamp of the frequency inverter or the PE terminal. 	

Wiring diagram



Further documentation and software: www.nord.com

Document	Name
BU_0500	SK 500E – SK 535E frequency inverter manual

Document	Name
BU_0505	SK 54xE frequency inverter manual