

GETRIEBEBAU NORD

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SETPOINT CONVERTER $\pm 10V$

Part number: 278 910 320

Adapter module

NOTICE

Validity of this document

This document is only valid in combination with the operating instructions of the relevant drive unit and under strict compliance with the safety and warning instructions which they contain. All of the information that is relevant for a safe start-up of this module and the drive unit is only available under these conditions.

Scope of delivery

1 x	Module	Setpoint converter
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Usage area

The analog inputs of type SK 5xxE (size 1 to 4) and SK 5xxP frequency inverters can only process unipolar 0 - 10 V signals. If a bipolar analog signal ($\pm 10 V$) is available, this must be previously transformed by the setpoint converter.

Technical data

Module

Ambient temperature	0°C ... +50 °C
Protection class	IP00

Weight	50 g
Dimensions [mm]	L x W x H: 60 x 45 x 40

Electrical data

Electrical connection	Screw terminals
Supply voltage	+15 ... 30 V DC
Analog signal (input)	$\pm 10 V$
Analog signal (output)	0 - 10 V

Cross-section	20-16 AWG
Connection terminals	(0.5 – 1.5 mm ²)
Power consumption	10 mA (own consumption)

Technical Information / Datasheet	Setpoint Converter +- 10V			
Connection extension	TI 278910320	V 1.1	1122	en

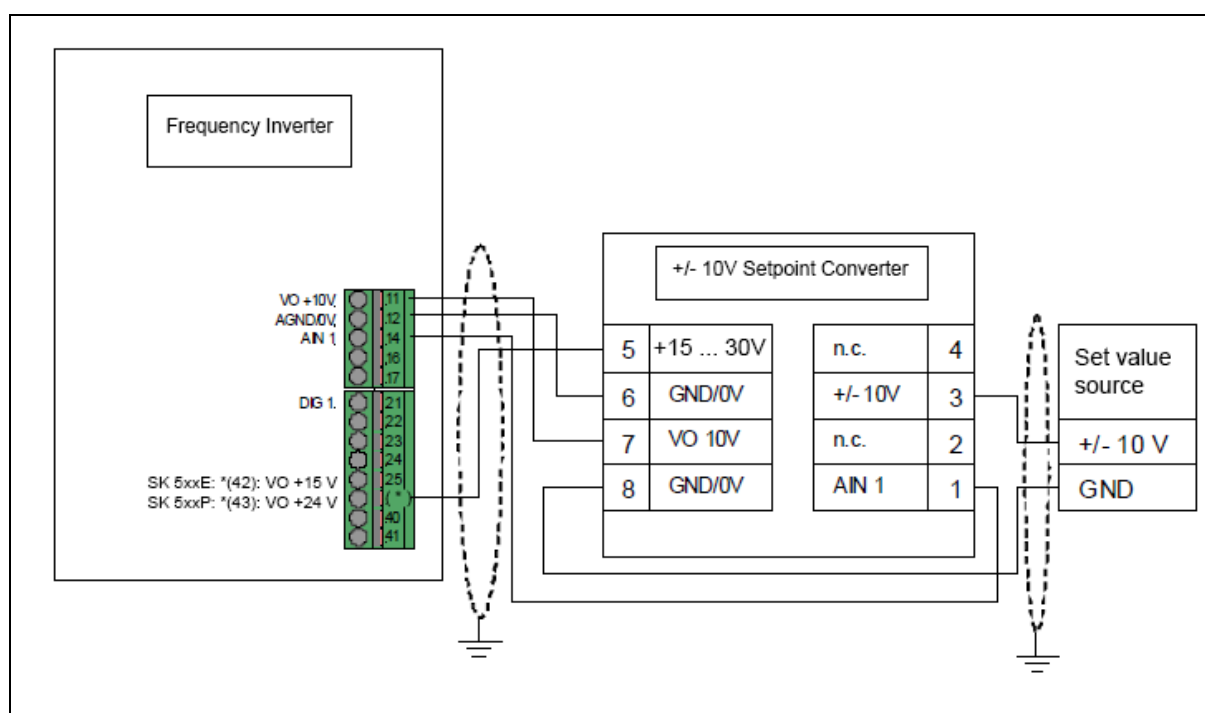
Connections

Connect the signal cables as follows.

Terminal 1:	AIN 1, 0...10 V signal (OUT)
Terminal 2:	n. c.
Terminal 3:	+/- 10 V signal (IN, setpoint source)
Terminal 4:	n. c.
Terminal 5:	15 ... 30 V DC supply voltage
Terminal 6:	GND
Terminal 7:	10 V Reference voltage
Terminal 8:	GND



Electrical connection (example)



Connection should preferably be made with a shielded cable.

The +/- setpoint input is referenced to ground.

Contact 3 and 8 must be bridged if the analog setpoint is not used.

Parameters

The following parameters of the frequency inverter are relevant for adaptation of the analog input function to the particular requirements:

Parameter	Meaning	Remarks	Setting
P400	Function Analogue input	Analog input function *	1
P401	Mode analog input	Definition of working profile	1
P402	Adjustment 1: 0 %	Definition of 0% value	5.0
P403	Adjustment 1: 100 %	Definition of 100% value	0.0

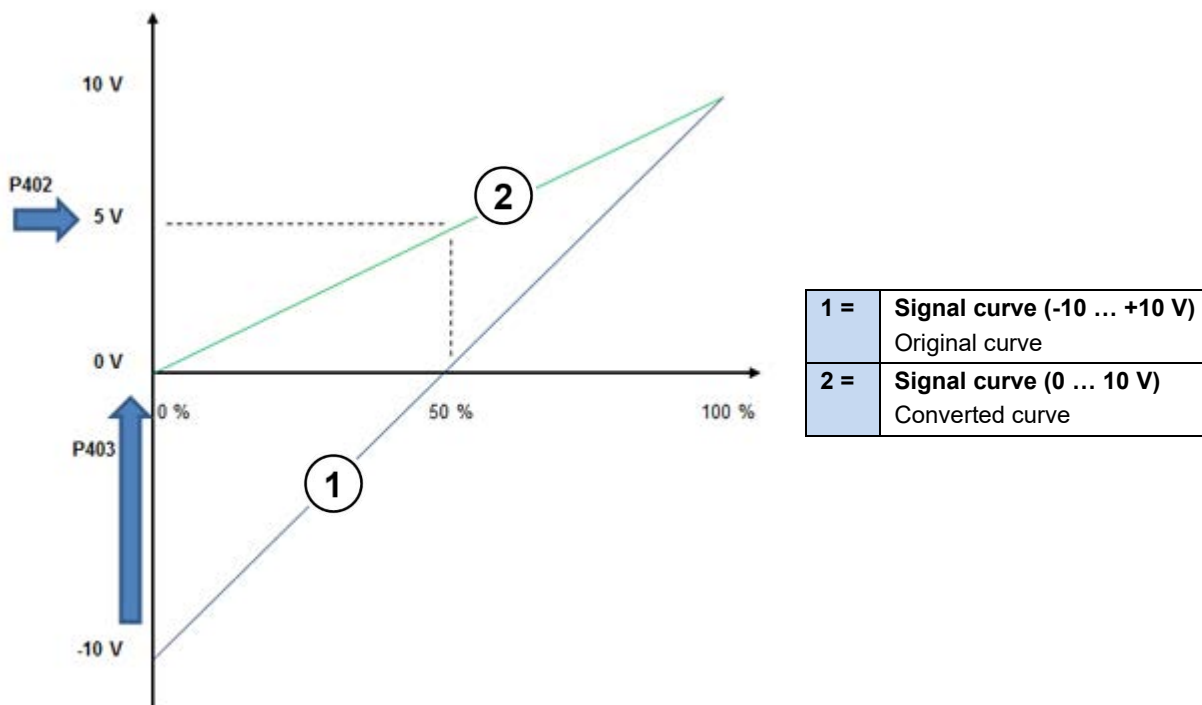
Value	Description*
00	No function
01	Setpoint frequency
...	

* For details, refer to the frequency inverter manual.

Note

The bipolar signal ($\pm 10\text{ V}$) is converted into a unipolar $0 - 10\text{ V}$ signal by the module. The signal is depicted inverted. For correct processing, the parameterisation of the frequency inverter must be adapted accordingly → **P402 therefore corresponds to 100 % adjustment, P403 corresponds to 0 % - adjustment.**

In order to correctly depict the entire setting range in spite of the 50% smaller value range, the 100% value should not be set to 10 V, but rather to 5 V (P402), see diagram below.



Additional documentation and software (www.nord.com)

Document	Designation
BU_0500	SK 500E - SK 535E frequency inverter manual
BU_0505	SK 540E - SK 545E frequency inverter manual

Software	Meaning
NORDCON	Parameterisation and diagnostic software
BU_0600	SK 500P frequency inverter manual