

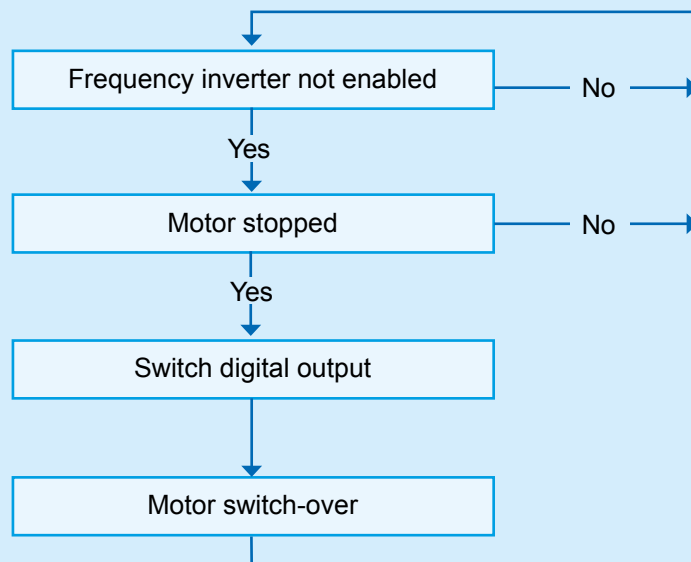
INTEGRATED RELAY BOARD FOR SWITCHING TWO MOTORS

Function description

The relay board is available as an integrated solution for NORDAC LINK. With the aid of the board, two different drives can be controlled with a time shift via a NORDAC LINK. For this, the three power relays on the board switch the motor phases of the two motor outputs on the underside of the field distributor. The relays can be controlled via an external bus system in combination with the internal PLC. For this, a switch-over of the parameter set is initiated depending on the control word of the bus system. The parameter set

switch-over is detected by the internal PLC and the digital output for the control of the relay is switched according to the active parameter set. Switch-over of the parameter sets enables the use of two different motors with different type plate data. The motor output can only be switched over when the device is voltage-free. This is also monitored by the internal PLC. As well as the relay board, two internal customer interfaces can still be used in the NORDAC LINK.


The integrated program sequence of the PLC is illustrated in the following diagram:




Connection scheme

The internal wiring of the relay board to the motor plug connectors as well as to the digital output is complete on delivery. Therefore, customers only need to connect the pre-assembled motor plug connector. As standard, Harting Q8 socket inserts with the following connections are used:

Motor output 1 (MA1):

Socket	1	2	3	4	5	6	7	8	PE
Q8 	U	-	W	BR-	TF+	BR+	V	TF-	PE

Motor output 2 (MA2):

Socket	1	2	3	4	5	6	7	8	PE
Q8 	U	-	W	BR-	TF+	BR+	V	TF-	PE


Other plug connectors are available on request.


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Technical Data

Coil data	24 VDC, 10 mA, 2.25 W
Relay switching power	277 VAC, 17 A
Attraction time	Max. 20 ms
Release time	Max. 10 ms
Service life	Mechanical: 30,000,000 Operations/Electrical: 100,000 Operations

Parameterisation / relevant parameters

Parameter	Meaning	Setting values
P201, Parameter set 1	Motor 1 nominal frequency	 <p>According to type plate for motor 1</p>
P202, Parameter set 1	Motor 1 nominal speed	
P203, Parameter set 1	Motor 1 nominal current	
P204, Parameter set 1	Motor 1 nominal voltage	
P205, Parameter set 1	Motor 1 nominal power	
P206, Parameter set 1	Motor 1 cos phi	
P207, Parameter set 1	Motor 1 motor circuit	
P208, Parameter set 1	Motor 1 stator resistance	
P220, Parameter set 1	Motor 1 parameter identification	

P201, Parameter set 2	Motor 2 nominal frequency	 <p>According to type plate for motor 2</p>
P202, Parameter set 2	Motor 2 nominal speed	
P203, Parameter set 2	Motor 2 rated current	
P204, Parameter set 2	Motor 2 nominal voltage	
P205, Parameter set 2	Motor 2 nominal power	
P206, Parameter set 2	Motor 2 cos phi	
P207, Parameter set 2	Motor 2 motor circuit	
P208, Parameter set 2	Motor 2 stator resistance	
P220, Parameter set 2	Motor 2 parameter identification	

P434 [1]/P434 [2]	Digital output function [1]/[2]	[40] Output via PLC
P480 [11]	Function Bus IO Bits	[0] No function
P480 [12]	Function Bus IO Bits	[0] No function

P509	Source Control Word	[3] System bus
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The type plate data must be entered into parameter set 1 or 2 for both drives. In order for the digital output to be switched by the PLC, the stated parameter changes for parameters P434 and P480 are necessary. P509 is essential for use of a bus system.

NORD DRIVESYSTEMS Group

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