

DD1

DIFFERENTIAL – DIFFERENTIAL ENCODER INTERFACE

1. DESCRIPTION

Differential-differential encoder interface DD1 (Figure 1.1 and Figure 1.2) is used for connection of differential (optionally single-ended) incremental encoder to DC servo driver DCS-3010(-HV) or DCS-100-A.

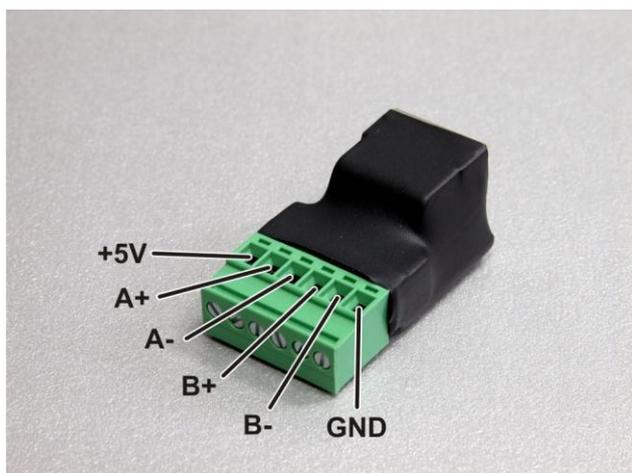


Figure 1.1



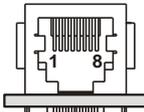
Figure 1.2

2. CONNECTION OF ENCODER INTERFACE DD1

Differential-differential encoder interface DD1 has on it 2 connectors:

- Removable six-pole connector for connection with incremental encoder. Arrangement of pins of this connector is shown in Figure 1.1., and
- Eight-pin RJ45 connector for connection with DC servo drive. Arrangement of pins of this connector is given in Table 2.1.

Table 2.1 Description of pins of eight-pin RJ45 connector

	Pin No.	Name	Description	Function
	1	A+	A encoder channel (pull-up resistor 4k7)	Encoder connection
	2	A-	A\ encoder channel	
	3	B+	B encoder channel (pull-up resistor 4k7)	
	4	B-	B\ encoder channel	
	5	NC	-	
	6	NC	-	
	7	+Ve	Power supply of encoder 5 V / 250 mA max	
	8	GND	GND – Encoder	

Connection of differential or single-ended encoder to DC servo drive DCS-3010(-HV) or DCS-100-A via interface DD1 is shown in Figure 2.1. Incremental encoder connects on adapter DD1 via six-pole connector.

To minimize the influence of electromagnetic interferences, it is recommended to use shielded Cat 5e network cable for connection between encoder interface DD1 and DC servo drive. Cable for connecting the encoder should not exceed the length that the application requires.

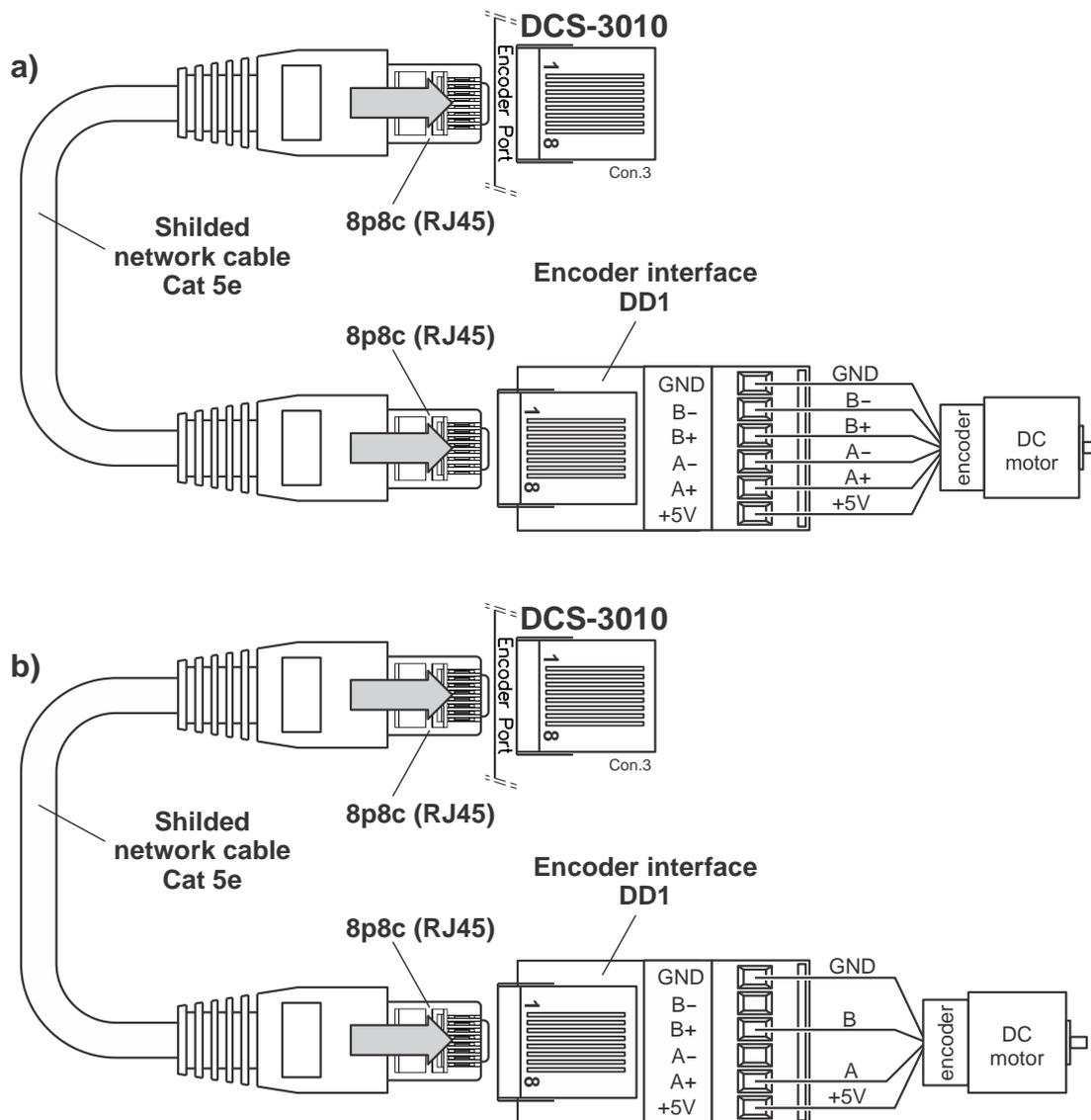


Figure 2.1 Connection of the incremental encoders, a) with differential (complementary) outputs, and b) single-ended outputs, via DD1 encoder interface to DC servo drive

Document revision:

- Ver. 1, February 2014, English version
- Ver. 1.01, March 2014, Minor corrections
- Ver. 1.1, November 2020, Minor revision

