

DCS-3010(-HV)

CONTROL BY INCREMENTAL ENCODER

Input interface of DC servo drive DCS-3010(-HV) offers option to control DC servo motor using additional control encoder (or Manual Pulse Generator–MPG) in encoder follower mode with decoding resolution 1x, 2x and 4x. Control encoder must be quadrature incremental encoder type (with 90° phase separation between outputs). The procedure for assembling and adjusting mentioned system consists of following steps.

Step 1

System should be connected according to schematic shown in the figure 1.

Control encoder should be connected to control connector port - Con.1. It should be noted that for powering control encoder it is necessary to provide additional power supply of +5 VDC.

Note: Detailed video instructions for motor control using MPG in case when power supply for MPG is provided by DC servo drive DCS-3010(-HV) is given on this link:

<https://www.youtube.com/watch?v=RzhE-EK5OYU>

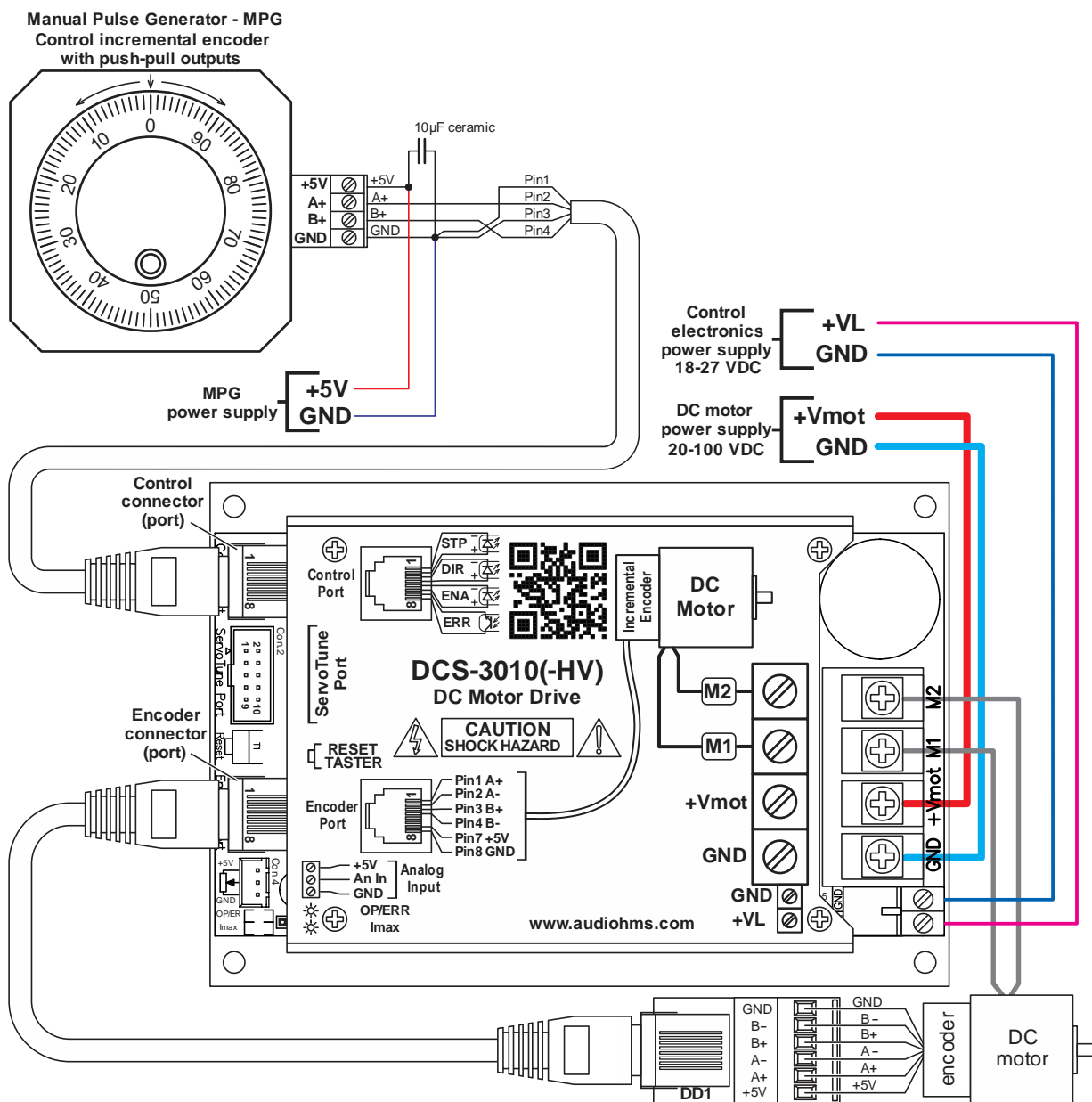


Figure 1

Functions of individual pins on this 8-pin RJ45 control connector (Con.1) are shown in table 1.

Table 1 RJ45 8-pin connector pinout (Con.1)

Pin No.	Digital control modes			INPUT/OUTPUT
	STEP/DIR/ENABLE	CW/CCW/ENABLE	Encoder follower (MPG)	
1	STEP -	CW -	GND	Input 1
2	STEP +	CW +	A +	
3	DIR -	CCW -	GND	Input 2
4	DIR +	CCW +	B +	
5	ENABLE - (GND)			Input 3
6	ENABLE +			
7	Error output (emitter)			Output 1
8	Error output (Track Error - open collector)			

Step 2

Set PID regulator parameters as described in user manual for DC servo drive DCS-3010(-HV).

Step 3

To open dialog box for advanced setup (figure 3) in ServoTune3 software for parameter tuning, click on



button **Adv. Setup** (figure 2) or icon . Choose one of these options for input interface (figure 3):

- Encoder x1 /ENABLE,
- Encoder x2 /ENABLE,
- Encoder x4 /ENABLE.

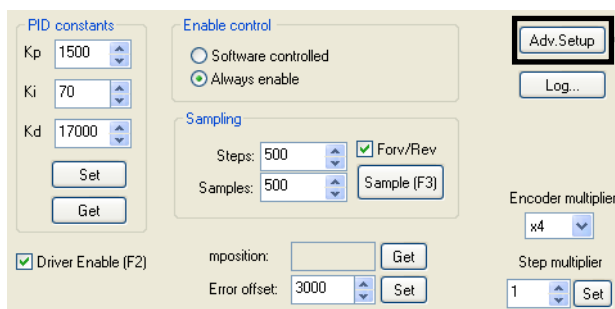


Figure 2

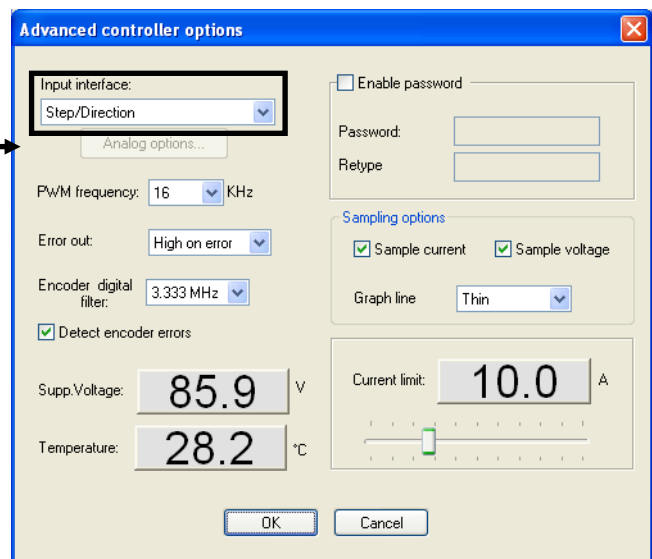


Figure 3

DOCUMENT REVISION:

- Ver. 1, March 2016, Initial version
- Ver. 1.1, November 2020, Minor corrections

