

CD Series 5

Settings for 16Mbps SERCOS

Revision No: 0.1
Date: 29 October 2003

Table Of Contents

1. INTRODUCTION.....	3
2. DRIVE IDENTIFICATION.....	3
3. BAUD RATE SETTING	4
3.1 DIP SWITCH SETTING: GENERAL.....	4
3.2 SERCOS BAUD RATE SETTING.....	4
3.3 FACTORY RESERVED SETTING	5
4. LIGHT POWER SETTING.....	5
4.1 DIP SWITCH	5
4.2 SERCOPOWER.....	5

1. Introduction

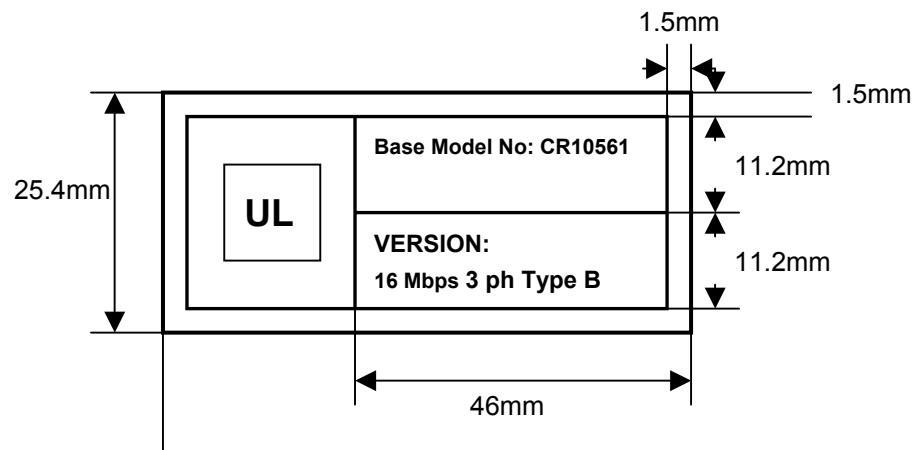
Support for 2, 4, 8 and 16Mbps SERCOS communication has been added to the CD Series 5 servo drives. This document describes the DIP switch and light power controls.

This capability is supported in firmware versions 6.7.0 and higher.

2. Drive Identification

The basic drive model number remains the same as previous versions, since it is backward compatible. However, additional labels on the side of the drive indicate if the drive has the 16Mbps capability. The label is similar to the following:

View B:



3. Baud Rate Setting

3.1 DIP Switch Setting: General

Switch #	Function	Settings
1	SERCOS Address	Bit 0 of address (LSB)
2		Bit 1 of address
3		Bit 2 of address
4		Bit 3 of address
5		Bit 4 of address (MSB)
6	Serial/SERCOS Baud Rate	See table below
7	Hold mode switch	0 = Hold Mode Inactive 1 = Hold Mode Active
8	Drive enable/disabled	0 = Drive Enable 1 = Drive Disabled
9	SERCOS transmit power	0 = Low Power (-11 dBm) 1 = High Power (-4.3 dBm)
10	Serial/SERCOS Baud Rate	See table below

3.2 SERCOS Baud Rate Setting

Switch #6	Switch #10	Serial Baud Rate	SERCOS Baud Rate
0	0	9600 bps	2 Mbps
1	0	19200 bps	4 Mbps
0	1	9600 bps	8 Mbps
1	1	19200 bps	16 Mbps

3.3 Factory Reserved Setting

Note: The following Dip Switch setting is for factory setting / firmware download. Do not use this setting on power up.

Switch #	Settings
1	1
2	1
3	1
4	1
5	0
6	0 or 1
7	1
8	1
9	0
10	1

4. Light Power Setting

The light power is set in one of two ways, either by DIP switch 9, or by a dedicated command, SERCPower.

4.1 DIP Switch

When SERCPower is set to zero (default value), the light power is determined by the state of DIP switch 9, as follows:

Switch State	Power Level (dBm)	Cable Length (meters)
0	-11.00	0 .. 15
1	-4.30	> 45

4.2 SERCPower

The light power can be fine-tuned to one of six discrete levels by using the SERCPower instruction as follows:

SERCPower	Power Level (dBm)	Cable Length (meters)
1	-21.50	
3	-15.50	
7	-11.00	0 .. 15
15	-7.50	15 .. 30
31	-6.00	30 .. 45
63	-4.30	> 45

The values taken by the SERCPower parameter correspond to the bit pattern used in hardware.