

Contrex M Series Controllers

Information Sheet for Crimson v2.0

Compatible Devices

- Contrex M-Rotary
- Contrex M-Cut
- Contrex M-Trim
- Contrex ML-Drive
- Contrex ML-Trim

Verified Devices

- Contrex M-Cut
- Contrex ML-Trim

Driver Selection

- Programmer selects either M-Rotary/M-Cut (16 character frames), or M-Trim/ML-Drive/ML-Trim (12 character frames).

Device Selection

- Programmer selects the device address 0 to 32. The default address is 1.
- Programmer selects the connected device, via the drop-down list.

Accessible Data

Prefix	Description	Information
P	Parameter	Appropriate numeric value is selected
ERR	Response Error	Error Parameter and Value – Note 1
CMD	Command	Issue Command to device – Note 2

General Information:

The programmer is responsible for ensuring only valid parameter numbers are selected. All parameters are Real numbers, but decimal positions are optional. Invalid parameter numbers are never sent to the drive, and return no error.

'data' is the value written to the selection, generally via Data Entry, or an action of a button press.

Note 1. ERR combines a response error with the request causing the error. The high word will contain the parameter number, or CMD number+100, of the error received. The low word will be set to the value of the error received.

ERR = 0 is no error.

Examples: if (ERR>>16) = 60 and (ERR & 0x3F) = 4, then Parameter 60 was sent invalid data. If (ERR>>16) = 110, and (ERR & 0x3F) = 16, then CMD=10 set error bit 4.

A Write to ERR will set ERR to the 'data' value written.

Note 2. CMD is a selection used to send commands to the device by way of serial communications. 'data' is to be set to the value of the desired command. For example, CMD = 1, will send the command for a Stop or F-Stop on the devices listed.

A Read of CMD will return the most recent command written.

WRITING PARAMETER DATA:

When a Parameter Write is requested, the driver first reads the parameter to determine its decimal point setting. When a parameter accepts variable formats, the driver will use the maximum decimal places possible. E.g. if CP-20 in an M-Trim is to be set less than 10, 3 decimal places will be sent.

The driver will pad or round up a value if 'data' and the DP format require it. If the rounded value exceeds 999999 in a 16 character frame, or 9999 in a 12 character frame, the driver sets the sent value to that maximum.

Enables and discrete bits are entered using 1's only.

Examples:

Device/Parameter	'Read' DP's	'data'	Value sent	Send DP's
Rotary/01	0	123.456	000123	0
Rotary/01	2	123	012300 – padded	2
Rotary/01	3	123.45	123450 – padded	3
Rotary/01	3	1234.56	999999 – 1234560 is too big	3
Rotary/01	2	12.5678	001257 – rounded up	2
Cut/03	N/A	123.456	012346 – exactly 2 DP's	0 (req.)
Cut/03	N/A	12	001200 – exactly 2 DP's	0 (req.)
Cut/03	N/A	12345.6	999999 – 1234560 is too big	0 (req.)
Cut/22	Any	1.23456	1.235 – allows up to 3 DPs	3
Cut/22	Any	123456.7	123457 – 6 digit maximum	0

M-Trim, ML-Drive, and ML-Trim work similarly. The value sent, however, is limited to a maximum of 9999.

Cable Information

G3 RS422 – 4 wire	M-Rotary / M-Cut / M-Trim Connector J-1
1 (Tx-)	4 (Rx+)
2 (Tx+)	5 (Rx-)
3 (Rx+)	3 (Tx-)
4 (Rx-)	2 (Tx+)
6 (Common)	6 (Common)

G3 RS485 – 2 wire	ML-Drive / ML-Trim Connector J-1
1 and 4 (Tx- and Rx-)	1 (T/R +)
2 and 3 (Tx+ and Rx+)	2 (T/R -)
6 (Common)	3 (Common)

Terminate a multi-controller network as specified by the manual.