Tel +1 (717) 767-6511
Fax +1 (717) 764-0839
www.redlion.net

Micromod Micro-DCI

Information Sheet for Crimson

Compatible Devices

- Micromod Micro-DCI

Verified Device

- 53MC5212B4BAC3XXXXX

Device Options

Drop Number: Select the node address for the device.

Accessible Data

Prefix	Description	Base	Calculation by Driver	Notes
C	Real – Low Precision	0x600	Base + (Selected Number * 3)	1
H	Real – High Precision	0xF00	Base + (Selected Number * 5)	1
B	Byte	0x200	Base + Selected Number	
L	Bit	0x500	Base + (Selected Number / 8)	
SL	Text: 10 characters	0x1400	Base + (Selected Number * 10)	3
SS	Text: 5 characters	0x1400	Base + (Selected Number * 5)	3
Z	Direct Access Enable	n/a	n/a	2

Note 1: Conversion between Crimson Floating Point numbers and DCI Reals.

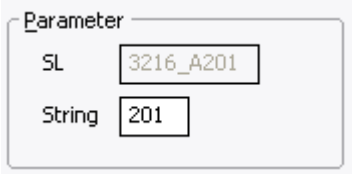
Crimson Bit (-Range)	DCI-C	DCI-H
31	Byte 1, Bit 7	Byte 1, Bit 7
30-23	Low 8 bits of (Byte 3 + 0x7E)	Low 8 bits of (Byte 5 + 0x7E)
22-15 (Bit 31=0)	Byte 1	Byte 1
22-15 (Bit 31=1)	Low 8 Bits of (256 – Byte 1)	Low 8 Bits of (256 – Byte 1)
14-7	Byte 2	Byte 2
6-0	n/a	High 7 Bits of Byte 3

Note there is a loss of nine bits of accuracy/resolution when converting DCI-H to Crimson.

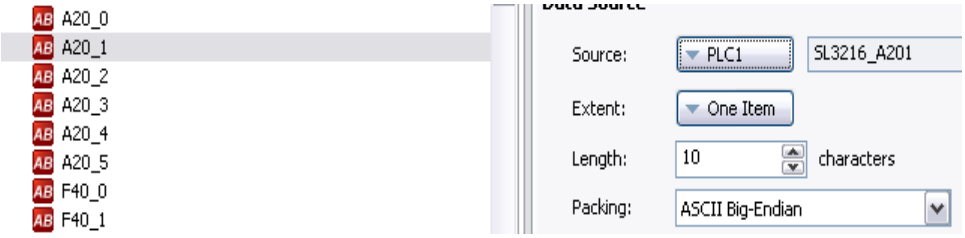
Note 2: Direct Access Enable is provided only for systems that are configured not to add the Base value to the requested selection. There is no verification of the address, or data values. Improper operation of the entire system may occur if data is written to system control bytes. **The programmer is responsible for knowing the configuration of the DCI, so as to use Direct Access Enable only when necessary.**

Note 3: A and F Strings

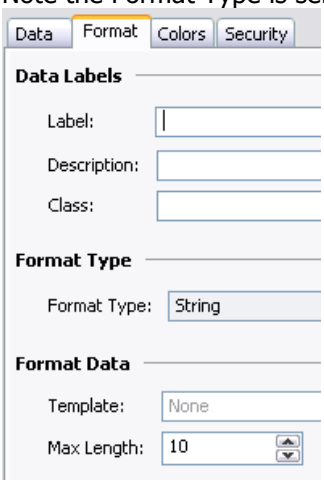
Parameter entry for strings A and F is handled differently, in order to accommodate the multiple data registers required. A typical description for a Long string (A) might be:
SL3216_A01
SL is the prefix for identifying the type of item to access.
3216 is an identifier to ensure no overlapping of strings. Each A string is allocated 16 character spaces, even though it uses only 10. Each F string is allocated 8 character spaces for the 5 characters it uses.
Since A strings and F strings use the same memory, a single _Ann comprises 2 F strings, 2 * nn, and (2 * nn) + 1.
The diagrams below show the settings that must not be left as default.
The String is selected by entering the desired number.



In the next diagram, note the icon shows that a string was selected. On the right, note the Length is set for the string size of the instrument (F = 5 characters). And ASCII Big-Endian must be set in Packing.



Note the Format Type is selected for String.

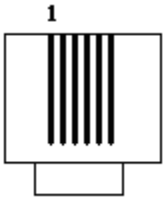


NOTE: For correct operation, the lengths MUST be 10 for the long strings SL, and 5 for the short strings SS.
The Packing MUST be ASCII Big-Endian.
String tags, and String Format Type are mandatory.

RS-422/RS-485 Connections

DCI – J10		G3 – RS485 Port	
Terminal	**Signal**	**Signal**	**Terminal**
1	CGTS	0V	6
2	T+	R+	4
3	T-	R-	3
4	CGTS	0V	6
5	R+	T+	1
6	R-	T-	2

Looking into J10:



Looking into G3: