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REXROTH INDRAMAT ECODRIVE via ASCII

Information Sheet for Crimson v2.0

Compatible Devices

- Ecodrive

Verified Device

- Ecodrive – ECODR3 – SMT – 02VRS – MS

Driver Options

None

Device Options

The programmer enters the desired drive address.

Important Information

The Maximum value displayed in the selection dialog box does not imply the actual number of accessible points for any particular device. The programmer must be aware of the limits of the device that is to be connected.

No attempt is made to verify any data value being written. It is the responsibility of the programmer to ensure valid data are written.

Accessible Data

Prefix	Description	Data Type	Access
PCUR	P-x-Current Value	Real	Read/Write (Note 1)
SCUR	S-x-Current Value		Read/Write (Note 1)
POSL	Position List Item (P-0-4006)	Real	Read/Write (Note 2,3)
VELL	Velocity List Item (P-0-4007)	Real	Read/Write (Notes 2,3)
ACCL	Acceleration List Item (P-0-4008)	Real	Read/Write (Notes 2,3)
JRKL	Jerk List Item (P-0-4009)	Real	Read/Write (Notes 2,3)
RLST	Get List	Byte	Read/Write (Note 4)
WLST	Send List	Byte	Read/Write (Note 5)
LCLR	Clear lists and set new size	Byte	Read/Write (Note 6)
PMIN	P-x-Minimum	Real	Read Only (Note 1)
PMAX	P-x-Maximum	Real	Read Only (Note 1)
SMIN	S-x-Minimum	Real	Read Only (Note 1)
SMAX	S-x-Maximum	Real	Read Only (Note 1)
ERR	Error Display	Long	Read/Write (Note 7)

Note 1: The programmer enters the number of the parameter in the first box, and the number of the parameter set into the second box.
Example: [PLC1.PCUR18(7)] will select the current value of Parameter P-7-0018.

Note 2 (READ): These selections display the data obtained by **RLST** (Note 4), or entered by the user. The programmer enters the desired item number in the box. Example: POSL12 is the twelfth item in the list.

Note 3 (WRITE): These instructions store the data that will be written to the drive when the **WLST** (Note 5) instruction is executed. Min and Max are checked, and out-of-range values are discarded.
The protocol requires the writing of the entire list. Therefore, the programmer should first execute the instruction **RLST** for all lists, in order to initialize the internal data.

Note 4: RLST:
RLST returns zero when read. To execute the read of one or more lists, bits are set in the write data. Set bit 0 for the Position List, bit 1 for the Velocity List, bit 2 for the Acceleration List, bit 3 for the Jerk List. The driver will read all of the selected lists before returning. Example: VarRLST = 5 reads lists A and P.

Note 5: WLST:
WLST returns zero when read. To execute the write of one or more lists, bits are set in the write data. Set bit 0 for the Position List, bit 1 for the Velocity List, bit 2 for the Acceleration List, bit 3 for the Jerk List. The driver will write all of the selected lists before returning. Example: VarWLST = 10 writes lists J and V. It may take up to 8 seconds, at 9600 baud, for **WLST** to complete one list.

IMPORTANT: The driver first saves the current list in the drive. If an error occurs any time during the list write (perhaps the internal list was not initialized), the driver will discard all changes, and attempt to restore the previous list. When performing manual entry, execute **WLST** after each entry, in order not to lose multiple changes.
If an error occurs, **ERR** will contain the address of the list in its higher 16 bits, and the item upon which the error occurred in its lower 16 bits.

Note 6: LCLR
The user enters the required new size for the four lists. No action is taken if the entry is 0, or greater than 64. The driver will zero all of data for all four lists from item 1 to the entry value. After running **LCLR**, the user enters the desired list data, and executes **WLST**.
LCLR is the only way to make the existing lists smaller. To make a list larger, use **LCLR**, or enter data into higher numbered items, and execute **WLST**.
At 9600 baud, allow 16 seconds for this function to set the arrays to 64 items.
The read value of **LCLR** will return to 0 when **LCLR** is finished.

Note 7: The high word of **ERR** will contain the error code. The low word will contain the parameter address that caused the error. A zero may be written to clear the error value.

Cable Information

RS-485

FROM RLC UNIT	X2
1+4 (RXB+TXB)	4
2+3 (RXA + TXA)	5
6 (0V)	7

RS-232

FROM RLC UNIT	X2
2 (RxD)	2 (TxD)
5 (TxD)	3 (RxD)
3/4 (0V)	7