



SLC 500™ M0 and M1 Transfer Tables

For Use with Catalog No. 1400-NVP

Release Notes

Description

Release Notes for SLC 500 M0 and M1 Transfer Tables.

These release notes provide the data map for Cat. No. 1400-PD and Cat. No. 1400-PB information when it is being used in an SLC 500 processor.

These data tables are provided for use with Cat. No. 1400-NVP. Cat. No. 1400-NVP is a pre-programmed prom for the SLC™ Basic Module.

These tables are similar to the ones in the current Bulletin 1400 Powermonitor Display and Block Module manual. Those tables are the map for use with a PLC-5® family processor.



ATTENTION: Use caution if writing to these data tables in the SLC memory. Unexpected control relay operation could occur.

Release Notes

SLC 500 M0 and M1 Transfer Tables
For Use with Catalog No. 1400-NVP

Table A
Read Setup Parameters

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	1	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	1	10 ⁰
2	2 3	Voltage Scale	0-999 0-999	10 ⁰ 10 ³
3	4	Current Scale	0-30000	10 ⁰
4	5	Baudrate	1-6	10 ⁰
5	6	Voltage Mode	0-4	10 ⁰
6	7	Present Password	0-9999	10 ⁰
7	8	Phase Sequence	0-1	10 ⁰
8	9 10	Snapshot Interval (seconds)	0-999 0-999	10 ⁰ 10 ³
9	11	Demand Period	0-99	10 ⁰
10	12	Number of Demand Periods	1-15	10 ³
11	13	Iout Range/Iout Key	0-1/0-26	10 ⁰ /10 ⁰
12	14	Standard Frequency	50, 60, 400	10 ⁰
13	15 16	Iout Scale	0-999 0-999	10 ⁰ 10 ³
14	17	Serial Communications Mode	0-1	10 ⁰
15	18	Log Status Word	0-255	10 ⁰
16	19 20	Vaux Scale	0-999 0-999	10 ⁰ 10 ³
17	21	Neutral Current Scale	0-9999	10 ⁰
18	22	R1 Mode	0-2	10 ⁰
19	23	R1 Value	0-1	10 ⁰
20	24	R2 Mode	0-2	10 ⁰
21	25	R2 Value	0-1	10 ⁰
22	26	R3 Mode	0-2	10 ⁰
23	27	R4 Value	0-1	10 ⁰

Table B
Read Voltage and Current Data

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	2	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰

**Table B (Cont.)
Read Voltage and Current Data**

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	2	10 ⁰
2	2	Year	0-99	10 ⁰
3	3	Month	1-12	10 ⁰
4	4	Day	1-31	10 ⁰
5	5	Hour	0-23	10 ⁰
6	6	Minute	0-59	10 ⁰
7	7	Second	0-59	10 ⁰
8	8 9	L-N Voltage Phase A	0-999 0-999	10 ⁰ 10 ³
9	10 11	L-N Voltage Phase B	0-999 0-999	10 ⁰ 10 ³
10	12 13	L-N Voltage Phase C	0-999 0-999	10 ⁰ 10 ³
11	14 15	Average L-N Voltage	0-999 0-999	10 ⁰ 10 ³
12	16 17	L-L Voltage Phase AB	0-999 0-999	10 ⁰ 10 ³
13	18 19	L-L Voltage Phase BC	0-999 0-999	10 ⁰ 10 ³
14	20 21	L-L Voltage Phase CA	0-999 0-999	10 ⁰ 10 ³
15	22 23	Amperage Phase A	0-999 0-999	10 ⁰ 10 ³
16	24 25	Amperage Phase B	0-999 0-999	10 ⁰ 10 ³
17	26 27	Amperage Phase C	0-999 0-999	10 ⁰ 10 ³
18	28 29	Average Amperage	0-999 0-999	10 ⁰ 10 ³
19	30 31	Vaux	0-999 0-999	10 ⁰ 10 ³
20	32	14 Neutral Current	0-9999	10 ⁰
21	33	Frequency (x10)	0-999	10 ⁰

**Table C
Read Power Data**

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	3	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	3	10 ⁰
2	2	Year	0-99	10 ⁰
3	3	Month	1-12	10 ⁰

AB Spares

Release Notes

SLC 500 M0 and M1 Transfer Tables
For Use with Catalog No. 1400-NVP

**Table C (Cont.)
Read Power Data**

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
4	4	Day	1-31	10 ⁰
5	5	Hour	0-23	10 ⁰
6	6	Minute	0-59	10 ⁰
7	7	Second	0-59	10 ⁰
8	8 9	kW Phase A	± 0-999 ± 0-999	10 ⁰ 10 ³
9	10 11	kW Phase B	± 0-999 ± 0-999	10 ⁰ 10 ³
10	12 13	kW Phase C	± 0-999 ± 0-999	10 ⁰ 10 ³
11	14 15	Total kW	± 0-999 ± 0-999	10 ⁰ 10 ³
12	16 17	kVA Phase A	0-999 0-999	10 ⁰ 10 ³
13	18 19	kVA Phase B	0-999 0-999	10 ⁰ 10 ³
14	20 21	kVA Phase C	0-999 0-999	10 ⁰ 10 ³
15	22 23	Total kVA	0-999 0-999	10 ⁰ 10 ³
16	24 25	kVAR Phase A	± 0-999 ± 0-999	10 ⁰ 10 ³
17	26 27	kVAR Phase B	± 0-999 ± 0-999	10 ⁰ 10 ³
18	28 29	kVAR Phase C	± 0-999 ± 0-999	10 ⁰ 10 ³
19	30 31	Total kVAR	± 0-999 ± 0-999	10 ⁰ 10 ³
20	32 33	kW Hour Total	0-999 0-999	10 ⁰ 10 ³
21	34 35	kW Hour Exported	0-999 0-999	10 ⁰ 10 ³
22	36 37	kVAR Hour Total	0-999 0-999	10 ⁰ 10 ³
23	38 39	kVAR Hour Exported	0-999 0-999	10 ⁰ 10 ³
24	40 41	kVA Hour Total	0-999 0-999	10 ⁰ 10 ³
25	42 43	kW Demand	0-999 0-999	10 ⁰ 10 ³
26	44 45	kVA Demand	0-999 0-999	10 ⁰ 10 ³
27	46	Power Factor	± 0-999	10 ⁰

Table D
Read Setpoint Parameters

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	4	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰
3	3	Setpoint Number	1-17	10 ⁰

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	4	10 ⁰
2	2 3	Setpoint Low Limit	0-999 0-999	10 ⁰ 10 ³
3	4 5	Setpoint High Limit	0-999 0-999	10 ⁰ 10 ³
4	6	Setpoint Release Time Delay	0-3200	10 ⁰
5	7	Setpoint Operate Time Delay	0-3200	10 ⁰
6	8	Setpoint Relay Number	0-3	10 ⁰
7	9	Setpoint Key	0-30	10 ⁰
8	10	Setpoint Number	1-17	10 ⁰

Table E
Read Status Information

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	5	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	5	10 ⁰
2	2	Relay #1 Status		10 ⁰
3	3	Relay #2 Status		10 ⁰
4	4	Relay #3 Status		10 ⁰
5	5	Status Input Byte		10 ⁰
6	6	Setpoint #1 Status		10 ⁰
7	7	Setpoint #2 Status		10 ⁰
8	8	Setpoint #3 Status		10 ⁰
9	9	Setpoint #4 Status		10 ⁰
10	10	Setpoint #5 Status		10 ⁰
11	11	Setpoint #6 Status		10 ⁰
12	12	Setpoint #7 Status		10 ⁰
13	13	Setpoint #8 Status		10 ⁰
14	14	Setpoint #9 Status		10 ⁰
15	15	Setpoint #10 Status		10 ⁰
16	16	Setpoint #11 Status		10 ⁰

Release Notes

SLC 500 M0 and M1 Transfer Tables
 For Use with Catalog No. 1400-NVP

**Table E (Cont.)
 Read Status Information**

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
17	17	Setpoint #12 Status		10 ⁰
18	18	Setpoint #13 Status		10 ⁰
19	19	Setpoint #14 Status		10 ⁰
20	20	Setpoint #15 Status		10 ⁰
21	21	Setpoint #16 Status		10 ⁰
22	22	Setpoint #17 Status		10 ⁰
23	23	Alarm Status Word #1		10 ⁰
24	24	Alarm Status Word #2		10 ⁰
25	25 26	S1 Input Counter	0-999 0-999	10 ⁰ 10 ³
26	27 28	Event Log Counter	0-999 0-65	10 ⁰ 10 ³
27	29 30	Snapshot Log Counter	0-999 0-65	10 ⁰ 10 ³
28	31 32	Max/Min Log Counter	0-999 0-65	10 ⁰ 10 ³

**Table F
 Read Event Log**

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	6	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰
3	3 4	Event Log Number	0-999 0-65	10 ⁰ 10 ³

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	6	10 ⁰
2	2 3	Last Event Log Number	0-999 0-65	10 ⁰ 10 ³
3	4	Year	0-99	10 ⁰
4	5	Month	1-12	10 ⁰
5	6	Day	1-31	10 ⁰
6	7	Hour	0-23	10 ⁰
7	8	Minute	0-59	10 ⁰
8	9	Second	0-59	10 ⁰
9	10	Event Flag Value		10 ⁰
10	11	Event Code Value		10 ⁰
11	12 13	Event Log Value	0-999 0-999	10 ⁰ 10 ³

Table G
Read Max/Min Log
M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	7	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰

First M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	71	10 ⁰
2	2 3	Max/Min Log Counter	0-999 0-65	10 ⁰ 10 ³
3	4 5	Time of Maximum Voltage L-N Phase A (Compressed Format)		10 ⁰ 10 ⁰
4	6 7	Maximum Voltage L-N Phase A	0-999 0-999	10 ⁰ 10 ³
5	8 9	Time of Minimum Voltage L-N Phase A (Compressed Format)		10 ⁰ 10 ⁰
6	10 11	Minimum Voltage L-N Phase A	0-999 0-999	10 ⁰ 10 ³
7	12 13	Time of Maximum Voltage L-N Phase B (Compressed Format)		10 ⁰ 10 ⁰
8	14 15	Maximum Voltage L-N Phase B	0-999 0-999	10 ⁰ 10 ³
9	16 17	Time of Minimum Voltage L-N Phase B (Compressed Format)		10 ⁰ 10 ⁰
10	18 19	Minimum Voltage L-N Phase B	0-999 0-999	10 ⁰ 10 ³
11	20 21	Time of Maximum Voltage L-N Phase C (Compressed Format)		10 ⁰ 10 ⁰
12	22 23	Maximum Voltage L-N Phase C	0-999 0-999	10 ⁰ 10 ³
13	24 25	Time of Minimum Voltage L-N Phase C (Compressed Format)		10 ⁰ 10 ⁰
14	26 27	Minimum Voltage L-N Phase C	0-999 0-999	10 ⁰ 10 ³
15	28 29	Time of Maximum Voltage L-N Average (Compressed Format)		10 ⁰ 10 ⁰
16	30 31	Maximum Voltage L-N Average	0-999 0-999	10 ⁰ 10 ³
17	32 33	Time of Minimum Voltage L-N Average (Compressed Format)		10 ⁰ 10 ⁰
18	34 35	Minimum Voltage L-N Average	0-999 0-999	10 ⁰ 10 ³
19	36 37	Time of Maximum Voltage LL Phase AB (Compressed Format)		10 ⁰ 10 ⁰
20	38 39	Maximum Voltage LL Phase AB	0-999 0-999	10 ⁰ 10 ³
21	40 41	Time of Minimum Voltage LL Phase AB (Compressed Format)		10 ⁰ 10 ⁰
22	42 43	Minimum Voltage L-N Phase AB	0-999 0-999	10 ⁰ 10 ³

Release Notes

SLC 500 M0 and M1 Transfer Tables
 For Use with Catalog No. 1400-NVP

Table G (Cont.)
Read Max/Min Log
First M1 Block

Parameter	Word	Parameter Description	Range	Modulus
23	44	Time of Maximum Voltage LL Phase BC (Compressed Format)		10 ⁰
	45			10 ⁰
24	46	Maximum Voltage LL Phase BC	0-999 0-999	10 ⁰
	47			10 ³
25	48	Time of Minimum Voltage LL Phase BC (Compressed Format)		10 ⁰
	49			10 ⁰
26	50	Minimum Voltage LL Phase BC	0-999 0-999	10 ⁰
	51			10 ³
27	52	Time of Maximum Voltage LL Phase CA (Compressed Format)		10 ⁰
	53			10 ⁰
28	54	Maximum Voltage LL Phase CA	0-999 0-999	10 ⁰
	55			10 ³
29	56	Time of Minimum Voltage LL Phase CA (Compressed Format)		10 ⁰
	57			10 ⁰
30	58	Minimum Voltage LL Phase CA	0-999 0-999	10 ⁰
	59			10 ³

Second M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	72	10 ⁰
2	2	Max/Min Log Counter	0-999 0-65	10 ⁰
	3			10 ³
3	4	Time of Maximum Amperage Phase A (Compressed Format)		10 ⁰
	5			10 ⁰
4	6	Maximum Amperage Phase A	0-999 0-999	10 ⁰
	7			10 ³
5	8	Time of Minimum Amperage Phase A (Compressed Format)		10 ⁰
	9			10 ⁰
6	10	Minimum Amperage Phase A	0-999 0-999	10 ⁰
	11			10 ³
7	12	Time of Maximum Amperage Phase B (Compressed Format)		10 ⁰
	13			10 ⁰
8	14	Maximum Amperage Phase B	0-999 0-999	10 ⁰
	15			10 ³
9	16	Time of Minimum Amperage Phase B (Compressed Format)		10 ⁰
	17			10 ⁰
10	18	Minimum Amperage Phase B	0-999 0-999	10 ⁰
	19			10 ³
11	20	Time of Maximum Amperage Phase C (Compressed Format)		10 ⁰
	21			10 ⁰
12	22	Maximum Amperage Phase C	0-999 0-999	10 ⁰
	23			10 ³
13	24	Time of Minimum Amperage Phase C (Compressed Format)		10 ⁰
	25			10 ⁰
14	26	Minimum Amperage Phase C	0-999 0-999	10 ⁰
	27			10 ³

**Table G (Cont.)
Read Max/Min Log
Second M1 Block**

Parameter	Word	Parameter Description	Range	Modulus
15	28 29	Time of Maximum Amperage Average (Compressed Format)		10 ⁰ 10 ⁰
16	30 31	Maximum Amperage Average	0-999 0-999	10 ⁰ 10 ³
17	32 33	Time of Minimum Amperage Average (Compressed Format)		10 ⁰ 10 ⁰
18	34 35	Minimum Amperage Average	0-999 0-999	10 ⁰ 10 ³
19	36 37	Time of Maximum kW Total (Compressed Format)		10 ⁰ 10 ⁰
20	38 39	Maximum kW Total	± 0-999 ± 0-999	10 ⁰ 10 ³
21	40 41	Time of Minimum kW Total (Compressed Format)		10 ⁰ 10 ⁰
22	42 43	Minimum kW Total	± 0-999 ± 0-999	10 ⁰ 10 ³
23	44 45	Time of Maximum kVA Total (Compressed Format)		10 ⁰ 10 ⁰
24	46 47	Maximum kVA Total	0-999 0-999	10 ⁰ 10 ³
25	48 49	Time of Minimum kVA Total (Compressed Format)		10 ⁰ 10 ⁰
26	50 51	Minimum kVA Total	0-999 0-999	10 ⁰ 10 ³
27	52 53	Time of Maximum kVAR Total (Compressed Format)		10 ⁰ 10 ⁰
28	54 55	Maximum kVAR Total	± 0-999 ± 0-999	10 ⁰ 10 ³
29	56 57	Time of Minimum kVAR Total (Compressed Format)		10 ⁰ 10 ⁰
30	58 59	Minimum kVAR Total	± 0-999 ± 0-999	10 ⁰ 10 ³

Third M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	73	10 ⁰
2	2 3	Max/Min Log Counter	0-999 0-65	10 ⁰ 10 ³
3	4 5	Time of Maximum Power Factor (Compressed Format)		10 ⁰ 10 ⁰
4	6 7	Maximum Power Factor	± 0-999 ± 0-999	10 ⁰ 10 ³
5	8 9	Time of Minimum Power Factor (Compressed Format)		10 ⁰ 10 ⁰
6	10 11	Minimum Power Factor	± 0-999 ± 0-999	10 ⁰ 10 ³
7	12 13	Time of Maximum kVA Demand (Compressed Format)		10 ⁰ 10 ⁰

AB Spares

Release Notes

SLC 500 M0 and M1 Transfer Tables
 For Use with Catalog No. 1400-NVP

Table G (Cont.)
Read Max/Min Log
Third M1 Block

Parameter	Word	Parameter Description	Range	Modulus
8	14	Maximum kVA Demand	0-999	10 ⁰
	15		0-999	10 ³
9	16	Time of Minimum kVA Demand (Compressed Format)		10 ⁰
	17			10 ⁰
10	18	Minimum kVA Demand	0-999	10 ⁰
	19		0-999	10 ³
11	20	Time of Maximum kW Demand (Compressed Format)		10 ⁰
	21			10 ⁰
12	22	Maximum kW Demand	± 0-999	10 ⁰
	23		± 0-999	10 ³
13	24	Time of Minimum kW Demand (Compressed Format)		10 ⁰
	25			10 ⁰
14	26	Minimum kW Demand	± 0-999	10 ⁰
	27		± 0-999	10 ³
15	28	Time of Maximum I4 Neutral Current (Compressed Format)		10 ⁰
	29			10 ⁰
16	30	Maximum I4 Neutral Current	0-999	10 ⁰
	31		0-999	10 ³
17	32	Time of Minimum I4 Neutral Current (Compressed Format)		10 ⁰
	33			10 ⁰
18	34	Minimum I4 Neutral Current	0-999	10 ⁰
	35		0-999	10 ³
19	36	Reserved		10 ⁰
	37			10 ⁰
20	38	Reserved	0-999	10 ⁰
	39		0-999	10 ³
21	40	Reserved		10 ⁰
	41			10 ⁰
22	42	Reserved	0-999	10 ⁰
	43		0-999	10 ³
23	44	Time of Maximum Frequency (x10) (Compressed Format)		10 ⁰
	45			10 ⁰
24	46	Maximum Frequency (x10)	0-999	10 ⁰
	47		0-999	10 ³
25	48	Time of Minimum Frequency (x10) (Compressed Format)		10 ⁰
	49			10 ⁰
26	50	Minimum Frequency (x10)	0-999	10 ⁰
	51		0-999	10 ³
27	52	Time of Maximum Vaux (Compressed Format)		10 ⁰
	53			10 ⁰
28	54	Maximum Vaux	0-999	10 ⁰
	55		0-999	10 ³
29	56	Time of Minimum Vaux (Compressed Format)		10 ⁰
	57			10 ⁰
30	58	Minimum Vaux	0-999	10 ⁰
	59		0-999	10 ³

Release Notes

SLC 500 M0 and M1 Transfer Tables
For Use with Catalog No. 1400-NVP

Table H
Read Snapshot Log
M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	8	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰
3	3	Snapshot Log Number	0-999	10 ⁰
	4		0-65	10 ³

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	8	10 ⁰
2	2	Last Snapshot Log Number	0-999	10 ⁰
	3		0-65	10 ⁰
3	4	Year	00-99	10 ⁰
4	5	Month	1-12	10 ⁰
5	6	Day	1-31	10 ⁰
6	7	Hour	0-23	10 ⁰
7	8	Minute	0-59	10 ⁰
8	9	Second	0-59	10 ⁰
9	10	Average Voltage	0-999	10 ⁰
	11		0-999	10 ³
10	12	Average Amperage	0-999	10 ⁰
	13		0-999	10 ³
11	14	kW	± 0-999	10
	15		± 0-999	10
12	16	kVAR	± 0-999	10
	17		± 0-999	10
13	18	kW Demand	± 0-999	10
	19		± 0-999	10
14	20	kVA Demand	0-999	10
	21		0-999	10
15	22	Power Factor	± 0-999	10 ⁰
16	23	Frequency	0-999	10 ⁰
17	24	kW Hours	0-999	10
	25		0-999	10
18	26	kVAR Hours	0-999	10
	27		0-999	10
19	28	kW Exported	0-999	10
	29		0-999	10
20	30	Alarm Status Word #1		10
21	31	Alarm Status Word #2		10
22	32	Vaux	0-999	10 ⁰
	33		0-999	10 ³

Release Notes

SLC 500 M0 and M1 Transfer Tables
For Use with Catalog No. 1400-NVP

Table I
Analog Waveform Capture
M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	9	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰
3	3	Channel Number	0-7	10 ⁰

First M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	91	10 ⁰
2	2	Number of Data Points	0-128	10 ⁰
3	3	Sample Delay (10 ⁻⁶ seconds)	0-999	10 ⁰
4	4	Sample #1	0-9999	10 ⁰
5	5	Sample #2	0-9999	10 ⁰
6	6	Sample #3	0-9999	10 ⁰
7	7	Sample #4	0-9999	10 ⁰
8	8	Sample #5	0-9999	10 ⁰
9	9	Sample #6	0-9999	10 ⁰
10	10	Sample #7	0-9999	10 ⁰
11	11	Sample #8	0-9999	10 ⁰
12	12	Sample #9	0-9999	10 ⁰
13	13	Sample #10	0-9999	10 ⁰
14	14	Sample #11	0-9999	10 ⁰
15	15	Sample #12	0-9999	10 ⁰
16	16	Sample #13	0-9999	10 ⁰
17	17	Sample #14	0-9999	10 ⁰
18	18	Sample #15	0-9999	10 ⁰
19	19	Sample #16	0-9999	10 ⁰
20	20	Sample #17	0-9999	10 ⁰
21	21	Sample #18	0-9999	10 ⁰
22	22	Sample #19	0-9999	10 ⁰
23	23	Sample #20	0-9999	10 ⁰
24	24	Sample #21	0-9999	10 ⁰
25	25	Sample #22	0-9999	10 ⁰
26	26	Sample #23	0-9999	10 ⁰
27	27	Sample #24	0-9999	10 ⁰
28	28	Sample #25	0-9999	10 ⁰
29	29	Sample #26	0-9999	10 ⁰
30	30	Sample #27	0-9999	10 ⁰
31	31	Sample #28	0-9999	10 ⁰
32	32	Sample #29	0-9999	10 ⁰
33	33	Sample #30	0-9999	10 ⁰
34	34	Sample #31	0-9999	10 ⁰
35	35	Sample #32	0-9999	10 ⁰
36	36	Sample #33	0-9999	10 ⁰

Table I (Cont.)
Analog Waveform Capture
First M1 Block

Parameter	Word	Parameter Description	Range	Modulus
37	37	Sample #34	0-9999	10 ⁰
38	38	Sample #35	0-9999	10 ⁰
39	39	Sample #36	0-9999	10 ⁰
40	40	Sample #37	0-9999	10 ⁰
41	41	Sample #38	0-9999	10 ⁰
42	42	Sample #39	0-9999	10 ⁰
43	43	Sample #40	0-9999	10 ⁰
44	44	Sample #41	0-9999	10 ⁰
45	45	Sample #42	0-9999	10 ⁰
46	46	Sample #43	0-9999	10 ⁰
47	47	Sample #44	0-9999	10 ⁰
48	48	Sample #45	0-9999	10 ⁰
49	49	Sample #46	0-9999	10 ⁰
50	50	Sample #47	0-9999	10 ⁰
51	51	Sample #48	0-9999	10 ⁰

Second M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	92	10 ⁰
2	2	Number of Data Points	0-128	10 ⁰
3	3	Sample Delay (10 ⁻⁶ seconds)	0-999	10 ⁰
4	4	Sample #49	0-9999	10 ⁰
5	5	Sample #50	0-9999	10 ⁰
6	6	Sample #51	0-9999	10 ⁰
7	7	Sample #52	0-9999	10 ⁰
8	8	Sample #53	0-9999	10 ⁰
9	9	Sample #54	0-9999	10 ⁰
10	10	Sample #55	0-9999	10 ⁰
11	11	Sample #56	0-9999	10 ⁰
12	12	Sample #57	0-9999	10 ⁰
13	13	Sample #58	0-9999	10 ⁰
14	14	Sample #59	0-9999	10 ⁰
15	15	Sample #60	0-9999	10 ⁰
16	16	Sample #61	0-9999	10 ⁰
17	17	Sample #62	0-9999	10 ⁰
18	18	Sample #63	0-9999	10 ⁰
19	19	Sample #64	0-9999	10 ⁰
20	20	Sample #65	0-9999	10 ⁰
21	21	Sample #66	0-9999	10 ⁰
22	22	Sample #67	0-9999	10 ⁰
23	23	Sample #68	0-9999	10 ⁰
24	24	Sample #69	0-9999	10 ⁰

Release Notes

SLC 500 M0 and M1 Transfer Tables
 For Use with Catalog No. 1400-NVP

Table I (Cont.)
Analog Waveform Capture
Second M1 Block

Parameter	Word	Parameter Description	Range	Modulus
25	25	Sample #70	0-9999	10 ⁰
26	26	Sample #71	0-9999	10 ⁰
27	27	Sample #72	0-9999	10 ⁰
28	28	Sample #73	0-9999	10 ⁰
29	29	Sample #74	0-9999	10 ⁰
30	30	Sample #75	0-9999	10 ⁰
31	31	Sample #76	0-9999	10 ⁰
32	32	Sample #77	0-9999	10 ⁰
33	33	Sample #78	0-9999	10 ⁰
34	34	Sample #79	0-9999	10 ⁰
35	35	Sample #80	0-9999	10 ⁰
36	36	Sample #81	0-9999	10 ⁰
37	37	Sample #82	0-9999	10 ⁰
38	38	Sample #83	0-9999	10 ⁰
39	39	Sample #84	0-9999	10 ⁰
40	40	Sample #85	0-9999	10 ⁰
41	41	Sample #86	0-9999	10 ⁰
42	42	Sample #87	0-9999	10 ⁰
43	43	Sample #88	0-9999	10 ⁰
44	44	Sample #89	0-9999	10 ⁰
45	45	Sample #90	0-9999	10 ⁰
46	46	Sample #91	0-9999	10 ⁰
47	47	Sample #92	0-9999	10 ⁰
48	48	Sample #93	0-9999	10 ⁰
49	49	Sample #94	0-9999	10 ⁰
50	50	Sample #95	0-9999	10 ⁰
51	51	Sample #96	0-9999	10 ⁰

Third M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	93	10 ⁰
2	2	Number of Data Points	0-128	10 ⁰
3	3	Sample Delay (10 ⁻⁶ seconds)	0-999	10 ⁰
4	4	Sample #97	0-9999	10 ⁰
5	5	Sample #98	0-9999	10 ⁰
6	6	Sample #99	0-9999	10 ⁰
7	7	Sample #100	0-9999	10 ⁰
8	8	Sample #101	0-9999	10 ⁰
9	9	Sample #102	0-9999	10 ⁰
10	10	Sample #103	0-9999	10 ⁰
11	11	Sample #104	0-9999	10 ⁰
12	12	Sample #105	0-9999	10 ⁰

Table I (Cont.)
Analog Waveform Capture
Third M1 Block

Parameter	Word	Parameter Description	Range	Modulus
13	13	Sample #106	0-9999	10 ⁰
14	14	Sample #107	0-9999	10 ⁰
15	15	Sample #108	0-9999	10 ⁰
16	16	Sample #109	0-9999	10 ⁰
17	17	Sample #110	0-9999	10 ⁰
18	18	Sample #111	0-9999	10 ⁰
19	19	Sample #112	0-9999	10 ⁰
20	20	Sample #113	0-9999	10 ⁰
21	21	Sample #114	0-9999	10 ⁰
22	22	Sample #115	0-9999	10 ⁰
23	23	Sample #116	0-9999	10 ⁰
25	24	Sample #117	0-9999	10 ⁰
25	25	Sample #118	0-9999	10 ⁰
26	26	Sample #119	0-9999	10 ⁰
27	27	Sample #120	0-9999	10 ⁰
28	28	Sample #121	0-9999	10 ⁰
29	29	Sample #122	0-9999	10 ⁰
30	30	Sample #123	0-9999	10 ⁰
31	31	Sample #124	0-9999	10 ⁰
32	32	Sample #125	0-9999	10 ⁰
33	33	Sample #126	0-9999	10 ⁰
34	34	Sample #127	0-9999	10 ⁰
35	35	Sample #128	0-9999	10 ⁰

Table J
Write Setup Parameters
M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	10	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰
3	3	Previous Password	0-9999	10 ⁰
4	4	New Unit ID Number	0-9999	10 ⁰
5	5 6	Voltage Scale	0-999 0-999	10 ⁰ 10 ³
6	7	Reserved	0	10 ⁰
7	8	Current Scale	0-30000	10 ⁰
9	9	Baudrate	1-6	10 ⁰
10	10	Voltage Mode	0-4	10 ⁰
11	11	New Password	0-9999	10 ⁰
12	12	Phase Sequence	0-1	10 ⁰
13	13 14	Snapshot Interval (seconds)	0-999 0-999	10 ⁰ 10 ³

AB Spares

Release Notes

SLC 500 M0 and M1 Transfer Tables
For Use with Catalog No. 1400-NVP

**Table J (Cont.)
Write Setup Parameters**

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
14	15	Demand Period	0-99	10 ⁰
15	16	Number of Demand Periods	1-15	10 ³
16	17	Iout Range/Iout Key	0-1/0-25	10 ⁰ /10 ⁰
17	18	Standard Frequency	50,60,400	10 ⁰
18	19 20	Iout Scale	0-999 0-999	10 ⁰ 10 ³
19	21	Reserved	0	10 ⁰
20	22	Reserved	0	10 ⁰
21	23	Log Status Word	0-25	10 ⁰
22	24	Reserved	0	10 ⁰
23	25 26	Vaux Scale	0-999 0-999	10 ⁰ 10 ³
24	27	Neutral Current Scale	0-9999	10 ⁰
25	28	R1 Mode	0-2	10 ⁰
26	29	R1 Value	0-1	10 ⁰
27	30	R2 Mode	0-2	10 ⁰
28	31	R2 Value	0-1	10 ⁰
29	32	R3 Mode	0-2	10 ⁰
30	33	R3 Value	0-1	10 ⁰

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	10	10 ⁰

**Table K
Write Time and Date Parameters**

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	11	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰
3	3	Year	0-99	10 ⁰
4	4	Month	1-12	10 ⁰
5	5	Day	1-31	10 ⁰
6	6	Hour	0-23	10 ⁰
7	7	Minute	0-59	10 ⁰
8	8	Second	0-59	10 ⁰
9	9 10	Number of Second Since 0:00 January 1, 1970	0-999 0-999	10 ⁰ 10 ³

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	11	10 ⁰

Table L
Write Setpoint Parameters

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	12	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰
3	3	Setpoint Number	1-17	10 ⁰
4	4 5	Setpoint Low Limit	0-999 0-999	10 ⁰ 10 ³
5	6 7	Setpoint High Limit	0-999 0-999	10 ⁰ 10 ³
6	8	Setpoint Release Time Delay	0-9999	10 ⁰
7	9	Setpoint Operate Time Delay	0-9999	10 ⁰
8	10	Setpoint Relay Number	0-3	10 ⁰
9	11	Setpoint Key	0-30	10 ⁰

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	12	10 ⁰

Table M
Write Control Request

M0 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	13	10 ⁰
2	2	Unit ID Number	0-9999	10 ⁰
3	3	Clear Status Input #1 Counter	0-1	10 ⁰
4	4	Clear Max/Min Data Log	0-1	10 ⁰
5	5	Clear kW Hours Counter	0-1	10 ⁰
6	6	Clear kvar Hours Counter	0-1	10 ⁰
7	7	Relay Control - Relay Number	0-3	10 ⁰
8	8	Relay Control - Relay Command	0-2	10 ⁰
9	9	Reserved	0	10 ⁰
10	10	Clear kVA Hours Counter	0-1	10 ⁰

M1 Block

Parameter	Word	Parameter Description	Range	Modulus
1	1	Control Word	13	10 ⁰

1. IOUT Key Codes

- 00 = Voltage L1
- 01 = Voltage L2
- 02 = Voltage L3
- 03 = Current L1
- 04 = Current L2
- 05 = Current L3
- 06 = kW L1
- 07 = kW L2
- 08 = kW L3
- 09 = kVA L1
- 10 = kVA L2
- 11 = kVA L3
- 12 = kVAR L1
- 13 = kVAR L2
- 14 = kVAR L3
- 15 = Average Voltage
- 16 = Average Current
- 17 = kW Total
- 18 = kVA Total
- 19 = kVAR Total
- 20 = Power Factor
- 21 = kW Demand
- 22 = kVA Demand
- 23 = Frequency
- 24 = Vaux
- 25 = I 4 Neutral Current
- 26 = IOUT External

2. Log Status Word

Bit Position

15-12	11-8	7-4	3-0
-------	------	-----	-----

- Bits (15-12) Log S4 status changes: 0 = No; 1 = Yes
- Bits (11-8) Log S3 status changes: 0 = No; 1 = Yes
- Bits (7-4) Log S2 status changes: 0 = No; 1 = Yes
- Bits (3-0) Log S1 status changes: 0 = No; 1 = Yes

3. Setpoint Key Codes

00	=	Not Used
01	=	Over Voltage
02	=	Under Voltage
03	=	Voltage Unbalance
04	=	Over Current
05	=	Current Unbalance
06	=	Over kVA
07	=	Over kW Imported
08	=	Over kW Exported
09	=	Over kVAR Imported
10	=	Over kW Demand
11	=	Over kVA Demand
12	=	Over Frequency x10
13	=	Under Frequency x10
14	=	Over Vaux
15	=	Under Vaux
16	=	Phase Reversal
17	=	Under Power Factor Lagging
18	=	Under Power Factor Leading
19	=	Over I4 Neutral Current
20	=	Over kVAR Exported
21	=	S1 Input Normal
22	=	S1 Input Active
23	=	S2 Input Normal
24	=	S2 Input Active
25	=	S3 Input Normal
26	=	S3 Input Active
27	=	S4 Input Normal
28	=	S4 Input Active
29	=	SX Input Normal
30	=	SX Input Active

4. Status Bytes

4.1. Relay Status Bytes

Bit Position

15-2	1-0
------	-----

4.1. Relay Status Bytes (Cont.)

Bits (1-0)	Description
00	Released
01	Operated
10	Forced Released
11	Forced Operated

4.2. Status Input Status Bytes

Bit Position

15-4	3	2	1	0
------	---	---	---	---

Bits	Description
3	Status Input #4: 0 = Normal, 1 = Active
2	Status Input #3: 0 = Normal, 1 = Active
1	Status Input #2: 0 = Normal, 1 = Active
0	Status Input #1: 0 = Normal, 1 = Active

4.3. Setpoint Status Bytes

Bit Position

15-8	7	6-0
------	---	-----

Bit 7 Value	Description
0	Setpoint Status is Normal
1	Setpoint Status is Active

Bits (6-0) Value	Description
00	Not Used
01	Over Voltage
02	Under Voltage
03	Voltage Unbalance
04	Over Current
05	Current Unbalance
06	Over kVA
07	Over kW Imported
08	Over kW Exported
09	Over kVAR Imported
10	Over kW Demand
11	Over kVA Demand
12	Over Frequency x10
13	Under Frequency x10
14	Over Vaux
15	Under Vaux
16	Phase Reversal
17	Under Power Factor Lagging

4.3. Setpoint Status Bytes (Cont.)

Bits (6-0) Value	Description
18	Under Power Factor Leading
19	Over I4 Neutral Current
20	Over kVAR Exported
21	S1 Input Normal
22	S1 Input Active
23	S2 Input Normal
24	S2 Input Active
25	S3 Input Normal
26	S3 Input Active
27	S4 Input Normal
28	S4 Input Active
29	SX Input Normal
30	SX Input Active

4.4. Alarm Word 1 Status Bytes

Bit Position															
15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00
Bit Value	Description														
00	Setpoint #17 Status (0 = Normal, 1 = Active)														
01	Reserved														
02	Relay #1 Status (0 = Normal, 1 = Active)														
03	Relay #2 Status (0 = Normal, 1 = Active)														
04	Relay #3 Status (0 = Normal, 1 = Active)														
05	Status Input #1 Status (0 = Normal, 1 = Active)														
06	Status Input #2 Status (0 = Normal, 1 = Active)														
07	Status Input #3 Status (0 = Normal, 1 = Active)														
08	Status Input #4 Status (0 = Normal, 1 = Active)														
09	Alarm Status Change Flag (0 = Unchanged, 1 = Changed)														
10	New Event Flag (0 = Old Event, 1 = New Event)														
11	New Max/Min Flag (0 = Old Max/Min, 1 = New Max/Min)														
12	Diagnostics Failure Flag (0 = Good, 1 = Failed)														
13	New Snapshot Flag (0 = Old Snapshot, 1 = New Snapshot)														
14	Reserved														
15	Reserved														

4.5. Alarm Word 2 Status Bytes

Bit Position															
15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00
Bit Value		Description													
00		Setpoint #1 Status (0 = Normal, 1 = Active)													
01		Setpoint #2 Status (0 = Normal, 1 = Active)													
02		Setpoint #3 Status (0 = Normal, 1 = Active)													
03		Setpoint #4 Status (0 = Normal, 1 = Active)													
04		Setpoint #5 Status (0 = Normal, 1 = Active)													
05		Setpoint #6 Status (0 = Normal, 1 = Active)													
06		Setpoint #7 Status (0 = Normal, 1 = Active)													
07		Setpoint #8 Status (0 = Normal, 1 = Active)													
08		Setpoint #9 Status (0 = Normal, 1 = Active)													
09		Setpoint #10 Status (0 = Normal, 1 = Active)													
10		Setpoint #11 Status (0 = Normal, 1 = Active)													
11		Setpoint #12 Status (0 = Normal, 1 = Active)													
12		Setpoint #13 Status (0 = Normal, 1 = Active)													
13		Setpoint #14 Status (0 = Normal, 1 = Active)													
14		Setpoint #15 Status (0 = Normal, 1 = Active)													
15		Setpoint #16 Status (0 = Normal, 1 = Active)													

5. Event Log Bytes

5.1. Event Flag Value

Bit Position								
15-8	7	6	5	4	3	2	1	0
Bits		Description						
7		Relay #3 Status: 0 = Released, 1 = Operated						
6		Relay #2 Status: 0 = Released, 1 = Operated						
5		Relay #1 Status: 0 = Released, 1 = Operated						
4, 3		Relay Number: 00 = Relay #0 01 = Relay #1 10 = Relay #2 11 = Relay #3						
2		Setpoint Status: 0 = Normal, 1 = Active						

5.1. Event Flag Value (Cont.)

Bits	Description
1, 0	General Information: 00 = No Data 01 = Front Panel Event 10 = Comm Packet Event 11 = Forced Relay Operation

5.2. Event Code Value

Bit Position

15	14	13-0
----	----	------

Bit	Description
15	Pulse Flag: 0 = Normal, 1 = Pulsed Relay Operation
14	Reserved

Bit Value (13-0)	Description
00	Reserved
01	Setpoint Over Voltage
02	Setpoint Under Voltage
03	Setpoint Voltage Unbalance
04	Setpoint Over Amperage
05	Setpoint Amperage Unbalance
06	Setpoint Over kVA
07	Setpoint Over kW Imported
08	Setpoint Over kW Exported
09	Setpoint Over kVAR Imported
10	Setpoint Over kW Demand
11	Setpoint Over kVA Demand
12	Setpoint Over Frequency x10
13	Setpoint Under Frequency x10
14	Setpoint Over Vaux
15	Setpoint Under Vaux
16	Setpoint Phase Reversal
17	Setpoint Under Power Factor Lagging
18	Setpoint Under Power Factor Leading
19	Setpoint Over I4 Neutral Current
20	Setpoint Over kVAR Exported
21	Setpoint S1 Input Normal
22	Setpoint S1 Input Active

5.2. Event Code Value (Cont.)

Bit Value (13-0)	Description
23	Setpoint S2 Input Normal
24	Setpoint S2 Input Active
25	Setpoint S3 Input Normal
26	Setpoint S3 Input Active
27	Setpoint S4 Input Normal
28	Setpoint S4 Input Active
29	Setpoint SX Input Normal
30	Setpoint SX Input Active
31	Reserved
32	Setpoint Over Voltage L1
33	Setpoint Over Voltage L2
34	Setpoint Over Voltage L3
35	Reserved
36	Setpoint Under Voltage L1
37	Setpoint Under Voltage L2
38	Setpoint Under Voltage L3
39	Reserved
40	Setpoint Voltage Unbalance L1
41	Setpoint Voltage Unbalance L2
42	Setpoint Voltage Unbalance L3
43	Reserved
44	Setpoint Over Amperage L1
45	Setpoint Over Amperage L2
46	Setpoint Over Amperage L3
47	Reserved
48	Setpoint Amperage Unbalance L1
49	Setpoint Amperage Unbalance L2
50	Setpoint Amperage Unbalance L3
51-256	Reserved
257	Time Set
258	Setup Changed
259	Alarms Changed
260	Power Up/Reset
261	Relay Control
262	Cleared Max/Min
263	Cleared Hours
264-267	Reserved

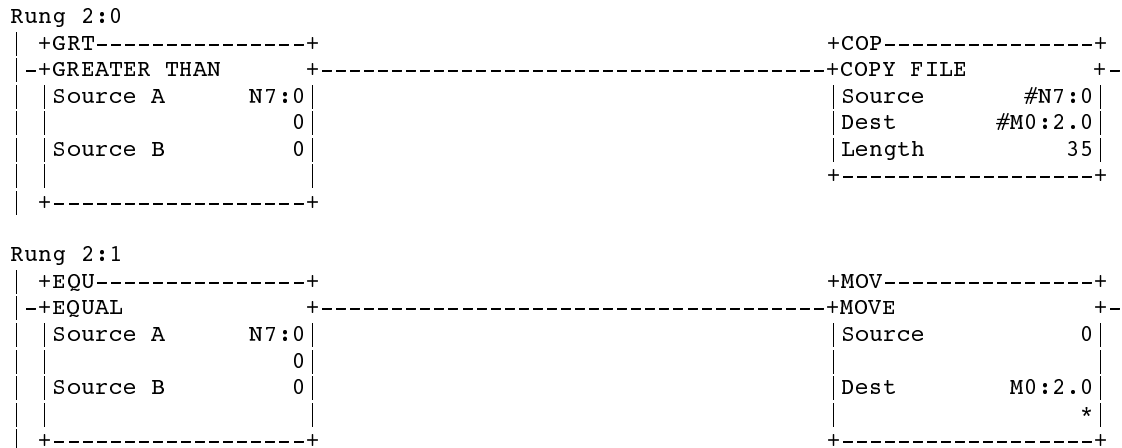
5.2. Event Code Value (Cont.)

Bit Value (13-0)	Description
268	Factory Clear
269	Firmware Revision
270	NV Failure
271	Frequency Failure
272	Hydro Failure
273	Setpoint Failure
274	Front Panel Failure
275	Propack Failure
276	ISR Failure
277	Init Failure
278	Calc Failure
279	Timer Failure
280	Status Input Failure
281	Status Input #1 Normal
282	Status Input #2 Normal
283	Status Input #3 Normal
284	Status Input #4 Normal
285	Status Input #1 Active
286	Status Input #2 Active
287	Status Input #3 Active
288	Status Input #4 Active

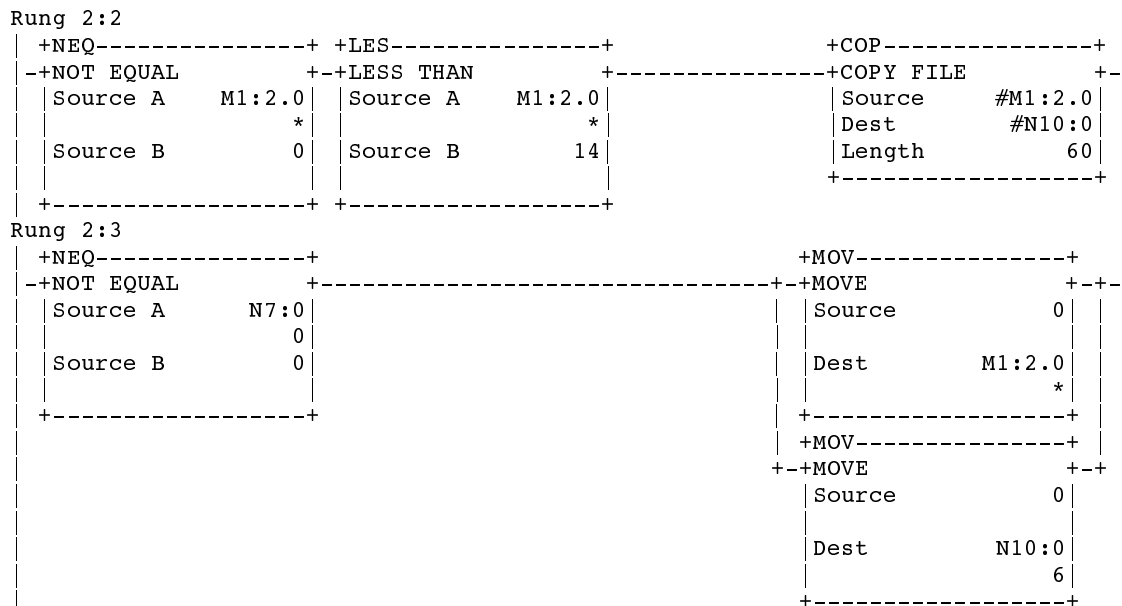
Appendix B contains the sample ladder file that needs to be running in the SLC 500 in order for the CV-PMO option to run correctly when configured for a SLC 500.

Ladder Diagram Explanation

Rung 2:0 and 2:1 Values written to the control block represent the function to be performed by the BASIC module to the Powermonitor.

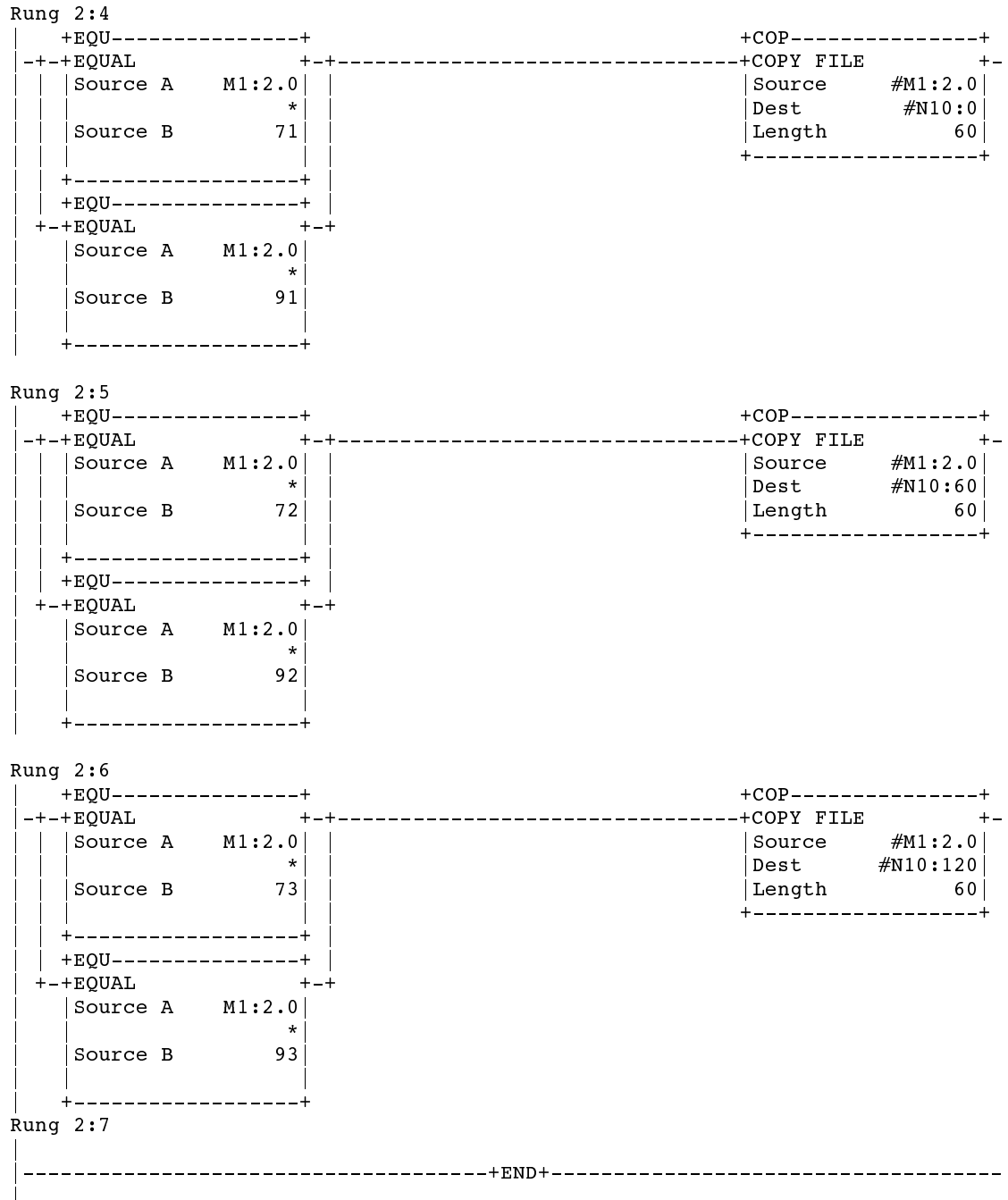


Rung 2:2 and 2:3 Get the information from the BASIC Module and store it in an area of memory.



**Ladder Diagram
Explanation (Cont.)**

Rung 2:4, Rung 2:5, Rung 2:6, and Rung 2:7 Get the information from the BASIC Module and store it in an area of memory.





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