

COMMAND = 00 READ "PV" PROCESS VARIABLE VALUE W/STATUS

DATA = 1st CHAR (BINARY)

AUTO	COMM	ENTER	ERROR
ON/OFF	REM/LOC	@1600 MADE	PRESENT
1=ON	1=REMOTE	1=ENTER	1=ERROR
0=OFF,MANUAL	0=LOCAL	0=NONE	0=NONE,OK

2nd CHAR (BINARY)

ALARM RELAY	NU	SP TYPE	NU
	not used	CFSV/LOCAL	not used
1=ENERGIZED		1=CFSV	
0=DEENERGIZED		0=LOCAL	

3rd CHAR (BINARY) 4 Stage Set Point

NU	NU	0	0	= 1SP1
not used	not used	0	1	= 2SP1
		1	0	= 3SP1
		1	1	= 4SP1

4th CHAR (BINARY)

NU	NU	NO ACTIVITY	PV SIGN
not used	not used	TIMER nAt	NEG/POS
		1=TIMEOUT	1=NEGATIVE
		0=NORMAL,OK	0=POSITIVE

5th CHAR MSD PROCESS VARIABLE VALUE
 6th CHAR PROCESS VARIABLE VALUE
 7th CHAR PROCESS VARIABLE VALUE
 8th CHAR LSD PROCESS VARIABLE VALUE

NOTES:

IF ERROR PRESENT BIT = "1" ISSUING A FULL STATUS READ COMMAND "05" CAN BE USED TO DETERMINE WHAT THE SPECIFIC ERROR IS.

READ COMMANDS

01 00 1SP1 VALUE
01 01 2SP1 VALUE
01 2D 3SP1 VALUE
01 2E 4SP1 VALUE

03 39 1tun SELF/Pid/SLO/nor/FASt
03 3B 2tun SELF/Pid/SLO/nor/FASt
03 3C 3tun SELF/Pid/SLO/nor/FASt
03 3D 4tun SELF/Pid/SLO/nor/FASt

03 12 Strt YES/no 1SP1
03 3E Strt YES/no 2SP1
03 3F Strt YES/no 3SP1
03 40 Strt YES/no 4SP1

03 38 LErn Cont/End 1SP1
03 41 LErn Cont/End 2SP1
03 42 LErn Cont/End 3SP1
03 43 LErn Cont/End 4SP1

03 2D dFAC VALUE 1SP1
03 44 dFAC VALUE 2SP1
03 45 dFAC VALUE 3SP1
03 46 dFAC VALUE 4SP1

01 0C 1Pb1 VALUE
01 2F 2Pb1 VALUE
01 30 3Pb1 VALUE
01 31 4Pb1 VALUE

03 2C 1rES RESET AUTO/OFS MODE
03 47 2rES RESET AUTO/OFS MODE
03 48 3rES RESET AUTO/OFS MODE
03 49 4rES RESET AUTO/OFS MODE

01 0E 1rES RESET VALUE
01 32 2rES RESET VALUE
01 33 3rES RESET VALUE
01 34 4rES RESET VALUE

01 0F 1rte RATE VALUE
01 35 2rte RATE VALUE
01 36 3rte RATE VALUE
01 37 4rte RATE VALUE

03 4B SPSA rE/Int

WRITE COMMANDS

02 00 1SP1 VALUE
02 01 2SP1 VALUE
02 11 3SP1 VALUE
02 12 4SP1 VALUE

04 03 1tun MODE = SELF
04 0E 2tun MODE = SELF
04 0F 3tun MODE = SELF
04 10 4tun MODE = SELF
04 04 1tun MODE = FULL Pid
04 11 2tun MODE = FULL Pid
04 12 3tun MODE = FULL Pid
04 13 4tun MODE = FULL Pid

02 08 1Pb1 VALUE
02 13 2Pb1 VALUE
02 14 3Pb1 VALUE
02 15 4Pb1 VALUE

02 0A 1rES VALUE AUTO MODE
02 16 2rES VALUE AUTO MODE
02 17 3rES VALUE AUTO MODE
02 18 4rES VALUE AUTO MODE

02 0B 1OFS VALUE OFFSET MODE
02 19 2OFS VALUE OFFSET MODE
02 1A 3OFS VALUE OFFSET MODE
02 1B 4OFS VALUE OFFSET MODE

02 0C 1rte RATE VALUE
02 1C 2rte RATE VALUE
02 1D 3rte RATE VALUE
02 1E 4rte RATE VALUE

04 14 SP = 1SP1
04 15 SP = 2SP1
04 16 SP = 3SP1
04 17 SP = 4SP1

COMMAND = 0100 READ "1SP1" VALUE
COMMAND = 0101 READ "2SP1" VALUE
COMMAND = 012D READ "3SP1" VALUE
COMMAND = 012E READ "4SP1" VALUE

DATA = 1st CHAR SIGN 0 = POSITIVE, NOT 0 = NEGATIVE
 2nd CHAR SIGN 0 = POSITIVE, NOT 0 = NEGATIVE
 3rd CHAR MSD VALUE BOTH 1st & 2nd CHARS
 4th CHAR VALUE MUST BE "0" FOR SIGN
 5th CHAR VALUE TO BE POSITIVE.
 6th CHAR LSD VALUE

COMMAND = 010C READ "1Pb1" VALUE under 1SP1
COMMAND = 012F READ "2Pb1" VALUE under 2SP1
COMMAND = 0130 READ "3Pb1" VALUE under 3SP1
COMMAND = 0131 READ "4Pb1" VALUE under 4SP1

COMMAND = 010E READ "1rES" RESET VALUE under 1SP1
COMMAND = 0132 READ "2rES" RESET VALUE under 2SP1
COMMAND = 0133 READ "3rES" RESET VALUE under 3SP1
COMMAND = 0134 READ "4rES" RESET VALUE under 4SP1

COMMAND = 010F READ "1rTE" RATE VALUE under 1SP1
COMMAND = 0135 READ "2rTE" RATE VALUE under 2SP1
COMMAND = 0136 READ "3rTE" RATE VALUE under 3SP1
COMMAND = 0137 READ "4rTE" RATE VALUE under 4SP1

DATA = 1st CHAR NU not used
 2nd CHAR NU not used
 3rd CHAR MSD VALUE
 4th CHAR VALUE
 5th CHAR VALUE
 6th CHAR LSD VALUE

COMMAND = 032D READ "dFAC" VALUE under 1SP1
COMMAND = 0344 READ "dFAC" VALUE under 2SP1
COMMAND = 0345 READ "dFAC" VALUE under 3SP1
COMMAND = 0346 READ "dFAC" VALUE under 4SP1

DATA = 1st CHAR MSD VALUE
 2nd CHAR LSD VALUE

COMMAND = 0339 READ "1tun" TUNE MODE under 1SP1
COMMAND = 033B READ "2tun" TUNE MODE under 2SP1
COMMAND = 033C READ "3tun" TUNE MODE under 3SP1
COMMAND = 033D READ "4tun" TUNE MODE under 4SP1

DATA = 1st CHAR 0 = SELF
 1 = Pid (FULL)
 2 = SLO
 3 = nor
 4 = FAST
 2nd CHAR NU not used

COMMAND = 0312	READ "Strt"	YES	no	under 1SP1
COMMAND = 033E	READ "Strt"	YES	no	under 2SP1
COMMAND = 033F	READ "Strt"	YES	no	under 3SP1
COMMAND = 0340	READ "Strt"	YES	no	under 4SP1
COMMAND = 0338	READ "LErn"	Cont	End	under 1SP1
COMMAND = 0341	READ "LErn"	Cont	End	under 2SP1
COMMAND = 0342	READ "LErn"	Cont	End	under 3SP1
COMMAND = 0343	READ "LErn"	Cont	End	under 4SP1
COMMAND = 032C	READ "1rES"	AUTO	OFS	under 1SP1
COMMAND = 0347	READ "2rES"	AUTO	OFS	under 2SP1
COMMAND = 0348	READ "3rES"	AUTO	OFS	under 3SP1
COMMAND = 0349	READ "4rES"	AUTO	OFS	under 4SP1
				OFS=OFFSET MODE
COMMAND = 034B	READ "SPSA"	rE	Int	Option 992 forces 948 SPSA=Int Menu is not affected
DATA = 1st CHAR		NOT 0	0	BOTH 1st & 2nd
2nd CHAR		NOT 0	0	CHARS MUST BE "0"

COMMAND = 034A READ "SP " CURRENT SET POINT SELECTION

DATA = 1st CHAR NU not used

2nd CHAR 0 = 1SP1 IS CURRENTLY SELECTED

 1 = 2SP1 IS CURRENTLY SELECTED

 2 = 3SP1 IS CURRENTLY SELECTED

 3 = 4SP1 IS CURRENTLY SELECTED

NOTE:

Option 948, 4 Stage Set Point, is forced into the Internal mode of operation, when Option 992, RS-485 Serial Communication, is present. When reading "SPSA" state, "rE" or "Int", the data read back, will be what use last entered. The "SPSA" menu item choice will have no effect on the Option 948's operation, while Option 992 is present.

COMMAND = 0200 [DATA] CHANGE "1SP1" VALUE
COMMAND = 0201 [DATA] CHANGE "2SP1" VALUE
COMMAND = 0211 [DATA] CHANGE "3SP1" VALUE
COMMAND = 0212 [DATA] CHANGE "4SP1" VALUE

1st CHAR WRITE COMMAND
2nd CHAR WRITE COMMAND
3rd CHAR WRITE COMMAND
4th CHAR WRITE COMMAND

DATA = 5th CHAR MSD VALUE
6th CHAR VALUE
7th CHAR VALUE
8th CHAR LSD VALUE
9th CHAR SIGN 0 = POSITIVE, NOT 0 = NEGATIVE
10th CHAR SIGN 0 = POSITIVE, NOT 0 = NEGATIVE

BOTH 9th & 10th CHARS MUST BE "0"
FOR SIGN TO BE ACCEPTED AS POSITIVE.

COMMAND = 0208 [DATA] CHANGE "1Pb1" VALUE under 1SP1
COMMAND = 0213 [DATA] CHANGE "2Pb1" VALUE under 2SP1
COMMAND = 0214 [DATA] CHANGE "3Pb1" VALUE under 3SP1
COMMAND = 0215 [DATA] CHANGE "4Pb1" VALUE under 4SP1

RESET VALUE & SET IN AUTO MODE
COMMAND = 020A [DATA] CHANGE "1rES" RESET VALUE IN AUTO under 1SP1
COMMAND = 0216 [DATA] CHANGE "2rES" RESET VALUE IN AUTO under 2SP1
COMMAND = 0217 [DATA] CHANGE "3rES" RESET VALUE IN AUTO under 3SP1
COMMAND = 0218 [DATA] CHANGE "4rES" RESET VALUE IN AUTO under 4SP1

RESET VALUE & SET IN OFFSET MODE
COMMAND = 020B [DATA] CHANGE "1OFS" RESET VALUE IN OFS under 1SP1
COMMAND = 0219 [DATA] CHANGE "2OFS" RESET VALUE IN OFS under 2SP1
COMMAND = 021A [DATA] CHANGE "3OFS" RESET VALUE IN OFS under 3SP1
COMMAND = 021B [DATA] CHANGE "4OFS" RESET VALUE IN OFS under 4SP1

COMMAND = 020C [DATA] CHANGE "1rtE" RATE VALUE under 1SP1
COMMAND = 021C [DATA] CHANGE "2rtE" RATE VALUE under 2SP1
COMMAND = 021D [DATA] CHANGE "3rtE" RATE VALUE under 3SP1
COMMAND = 021E [DATA] CHANGE "4rtE" RATE VALUE under 4SP1

1st CHAR WRITE COMMAND
2nd CHAR WRITE COMMAND
3rd CHAR WRITE COMMAND
4th CHAR WRITE COMMAND

DATA = 5th CHAR MSD VALUE
6th CHAR VALUE
7th CHAR VALUE
8th CHAR LSD VALUE

9th CHAR NU not used, set to 0
10th CHAR NU not used, set to 0

----- WRITE COMMAND DESCRIPTION ----- 4-29-92 -- 20 -
--- Option 948 4 Stage Set Point ---

COMMAND = 0403	CHANGE "1tun" MODE = SELF under 1SP1
COMMAND = 040E	CHANGE "2tun" MODE = SELF under 2SP1
COMMAND = 040F	CHANGE "3tun" MODE = SELF under 3SP1
COMMAND = 0410	CHANGE "4tun" MODE = SELF under 4SP1
COMMAND = 0404	CHANGE "1tun" MODE = Pid (FULL) under 1SP1
COMMAND = 0411	CHANGE "2tun" MODE = Pid (FULL) under 2SP1
COMMAND = 0412	CHANGE "3tun" MODE = Pid (FULL) under 3SP1
COMMAND = 0413	CHANGE "4tun" MODE = Pid (FULL) under 4SP1
COMMAND = 0414	CHANGE "SP " CURRENT SET POINT = 1SP1
COMMAND = 0415	CHANGE "SP " CURRENT SET POINT = 2SP1
COMMAND = 0416	CHANGE "SP " CURRENT SET POINT = 3SP1
COMMAND = 0417	CHANGE "SP " CURRENT SET POINT = 4SP1

1st CHAR	WRITE COMMAND
2nd CHAR	WRITE COMMAND
3rd CHAR	WRITE COMMAND
4th CHAR	WRITE COMMAND

NOTE:

DATA IS NOT REQUIRED FOR THESE COMMANDS. THEY ARE SPECIFIC AS TO THEIR FUNCTION.
