

MICROFUSION PARAMETER LIST



MicroFUSION controllers contain nonvolatile EEPROMs, and writing too frequently to an individual parameter may wear out the EEPROM and cause the controller to fail.

Control Concepts recommends allowing an average of five minutes between consecutive writes to an individual parameter within the range of 1-199, with the exception of digital setpoint commands 100-107 and the digital system command 129. Digital setpoints and digital system command may be written continually.

SP 1 Feedback Type

Units: N/A
 Minimum: 1
 Maximum: 7
 Default: 1 (2 for High Performance)

Selections:

- 1 = Voltage feedforward
- 2 = RMS Voltage
- 3 = AVG Voltage
- 4 = RMS Current
- 5 = AVG Current
- 6 = Real Power
- 7 = Apparent Power

SP 2 Firing Mode

Units: N/A
 Minimum: 1
 Maximum: 3
 Default: 2

Selections:

- 1 = Zero Cross
- 2 = Phase Angle
- 3 = Zero Cross Transformer (ZCT) Mode

SP 3 Control Loop

Units: N/A
 Minimum: 0
 Maximum: 1
 Default: 1

Selections:

- 0 = Open Loop
- 1 = Closed Loop

SP 4 Ramp Time

Units: Seconds
 Decimal Places: 0
 Minimum: 0
 Maximum: 300
 Default: 0

SP 5 Slew Rate (Control Response)

Units: N/A
 Minimum: 1
 Maximum: 100
 Default: 10

SP 6 Reserved

SP 7 ZCT Phase Angle to ZC Switch Threshold

Units: AC Line Cycles
 Minimum: 5
 Maximum: 20
 Default: 20

SP 8 Full Scale Voltage

Units: Volts
 Minimum: 5.0
 Maximum: 600.0
 Default: 480.0

SP 9 Full Scale Current

Units: Amps
 Minimum: 1.0
 Maximum: 80.0
 Default: 80.0 (Set to Amp size)

SP 10 Full Scale Power

Units: kW
 Minimum: 0.1
 Maximum: 158.4
 Default: 115.2 (Set according to Amp size and default voltage)

SP 11 Voltage Limit

Units: Volts (RMS or AVG)
 Minimum: 1.0
 Maximum: 84.0
 Default: 84.0 (Set according to 105% Amp size)

SP 12 Current Limit Zone 1

Units: Amps (RMS or AVG)
 Minimum: 1.0
 Maximum: 84.0
 Default: 84.0 (Set according to 105% Amp size)

SP 13 Current Limit Type

Units: N/A
 Minimum: 1
 Maximum: 2
 Default: 1

Selections: 1 = RMS
 2 = AVG

SP 14 Current Trip

Units: Amps RMS
 Minimum: 1
 Maximum: 360
 Default: 140 (Set according to 175% Amp size, 400% for zero cross)

SP 15 Power Limit

Units: kW
 Minimum: 0.1
 Maximum: 166.4
 Default: 76.9 (Set 105% according to Amp size and default voltage)

SP 16 Relay Alarm Mask 1

Units: N/A
 Minimum: 0000_0000_0000_0000
 Maximum: 1111_1111_1111_1111
 Default: 24576 = 6000_{hex} (0110_0000_0000_0000)
 Representation:

Bit: 15 = TBD
 14 = Heatsink Over Temp
 13 = Current Trip
 12 = Heatsink High Temp Warning
 11 = AC Line Phase Loss
 10 = Shorted SCR
 9 = Power Limit
 8 = Current Limit
 7 = Voltage Limit
 6 = Digital RUN Enable (RUN State Request)
 5 = TBD
 4 = 3 Phase Load Imbalance
 3 = Low Output
 2 = TBD
 1 = TBD
 0 = TBD

SP 17 Reserved

SP 18 Deviation Band

Units: Percent
 Minimum: 0.00
 Maximum: 100.00
 Default: 100.00

SP 19 Feedback Source

Units: N/A
 Minimum: 1
 Maximum: 4
 Default: 1

Selections: 1 = Internal Feedback Signal (V, I, P)
 2 = Analog Setpoint 1
 3 = Analog Setpoint 2
 4 = Transducer Card

SP 20-83 Reserved

SP 84 Hero Mode Enable

Units: N/A (**Voids MFG Warranty when enabled**)
 Minimum: 0
 Maximum: 1 (Ignore temperature alarms)
 Default: 0

Selections: 0 = OFF
 1 = ON

SP 85 System Relay Mask

Units: N/A
 Minimum: 0000_0000_0000_0000
 Maximum: 1111_1111_1111_1111
 Default: 0 (0000_0000_0000_0000)
 Representation:

Bit: 15 = TBD
 14 = TBD
 13 = TBD
 12 = TBD
 11 = TBD
 10 = TBD
 9 = TBD
 8 = TBD
 7 = TBD
 6 = RUN Enable (Switch terminals OPEN)
 5 = Controller is in RUN State
 4 = PLL Lock Loss
 3 = Watchdog Timeout
 2 = Memory Error
 1 = Communications Error
 0 = Processor Error Trap

SP 86 Reserved**SP 87 3 Phase Load Current Imbalance Threshold**

Units: %
 Minimum: 0
 Maximum: 200
 Default: 0 [Disabled]

SP 88-89 Reserved**SP 90 Analog Setpoint 1 Type**

Units: N/A
 Minimum: 1
 Maximum: 2
 Default: 2 (Current)

Selections: 1 = Voltage Input
 2 = Current Input

SP 91 Analog Setpoint 1 Lo Command

Units: V, mA
 Minimum: -5.00
 Maximum: 25.00
 Default: 4.00

SP 92 Analog Input 1 Lo Output

Units: % (Based on full scale value)
 Minimum: 0.00
 Maximum: 100.00
 Default: 0.00

SP 93 Analog Input 1 Hi Command

Units: V, mA
 Minimum: -5.00
 Maximum: 25.00
 Default: 20.00

SP 94 Analog Input 1 Hi Output

Units: & (Based on full scale value)
 Minimum: 0.00
 Maximum: 100.00
 Default: 100.00

SP 95 Analog Input 2 Type

Units: N/A
 Minimum: 1
 Maximum: 2
 Default: 1 [Voltage]

Selections: 1 = Voltage Input
 2 = Current Input

SP 96 Analog Input 2 Lo Command

Units: V, mA
 Minimum: -5.00
 Maximum: 25.00
 Default: 0.00

SP 97 Analog Input 2 Lo Output

Units: % (Based on full scale value)
 Minimum: 0.00
 Maximum: 100.00
 Default: 0.00

SP 98 Analog Input 2 Hi Command

Units: V, mA
 Minimum: -5.00
 Maximum: 25.00
 Default: 5.00

SP 99 Analog Input 2 Hi Output

Units: % (Based on full scale value)
 Minimum: 0.00
 Maximum: 100.00
 Default: 100.00

SP 100 Fieldbus Setpoint [RAM]

Units: NONE (counts)
 Minimum: 0
 Maximum: 64000 (see SP-115 Setpoint Resolution Select)
 Default: 0

SP 101 Keypad Setpoint [RAM]

Units: NONE (counts)
 Minimum: 0
 Maximum: 64000 (see SP-115 Setpoint Resolution Select)
 Default: 0

SP 102 Setpoint 1 Source

Units: N/A
 Minimum: 1
 Maximum: 5
 Default: 1

NOTE: Default = 3 when digital fieldbus option is Modbus TCP, EtherNet/IP, or PROFINET

Selections: 1 = Analog Input 1
 2 = Analog Input 2
 3 = Fieldbus Setpoint
 4 = Keypad Setpoint
 5 = PWM Setpoint

SP 103 Setpoint 2 Source

Units: N/A
 Minimum: 1
 Maximum: 5
 Default: 1

NOTE: Default = 1 when digital fieldbus option is Modbus TCP, EtherNet/IP, or PROFINET.

Default = 4 if Analog Setpoint 2 feature is not enabled

Selections: 1 = Analog Input 1
 2 = Analog Input 2
 3 = Fieldbus Setpoint
 4 = Keypad Setpoint
 5 = PWM Setpoint

SP 104 Control Setpoint Select

Units: N/A
 Minimum: 1
 Maximum: 2
 Default: 1

Selections: 1 = Setpoint 1 Source
 2 = Setpoint 2 Source

SP 105-107 Reserved

SP 108 Network Timeout Setpoint

Units: NONE (counts)
 Minimum: 0.00
 Maximum: 64000 (see SP-115 Setpoint Resolution Select)
 Default: 0

SP 109 Clear Error Latch [RAM]

Units: N/A
 Minimum: 0
 Maximum: 1
 Default: 0

Selections: 0 = Do Not Clear
 1 = Clear the Latch Bits to 0

SP 110 Clear Fault [RAM]

Units: N/A
 Minimum: 0
 Maximum: 1
 Default: 0

Selections: 0 = Do Not Clear
 1 = Clear the Fault State

SP 111-114: Reserved

SP 115 Setpoint Resolution Select

***NOTE: Locked out during RUN state

Units: N/A
 Minimum: 1
 Maximum: 2
 Default: 1

Selections: 1 = Low = 10000
 2 = High = 64000

SP 116 Display Auto Scroll Enable

Units: N/A
 Minimum: 0
 Maximum: 1
 Default: 1

Selections: 0 = Disabled
 1 = Enabled

SP 117 Reserved

SP 118 MAC ID (CCI Bus)

Units: N/A
 Minimum: 0
 Maximum: 63
 Default: 63

SP 119 Auto Configuration

Units: N/A
 Minimum: 0
 Maximum: 1
 Default: 0

Selections: 0 = Disabled
 1 = Enabled

SP 120-124 Reserved

SP 125 Communications Heartbeat Time

Units: Seconds
 Minimum: 0
 Maximum: 65535
 Default: 0

SP 126 IP Address HI

Units: N/A
 Minimum: 0
 Maximum: 65535
 Default: 65535 [255.255]

SP 127 IP Address LO

Units: N/A
 Minimum: 0
 Maximum: 65535
 Default: 65535 [255.255]

SP 128 Network Timeout Action

Units: N/A
 Minimum: 0
 Maximum: 2
 Default: 0

Selections

- 0 = NONE, Continue
- 1 = STOP, Fault Shutdown
- 2 = Use network timeout setpoint (SP-108)

SP 129 Digital RUN/STOP [RAM]

Units: N/A
 Minimum: 0
 Maximum: 1
 Default: See XP-3401

Selections

- 0 = STOP
- 1 = RUN

SP 130 Reserved**SP 131 Sync Guard Enable**

Units: N/A
 Minimum: 0
 Maximum: 1
 Default: 0 (1 if SYNC-GUARD feature is enabled)

Selections

- 0 = OFF
- 1 = ON

SP 132 Shorted SCR Check Enable

Units: N/A
 Minimum: 0
 Maximum: 1
 Default: 1 [0 for Three Phase]

- Selections: 0 = OFF
 1 = ON

SP 133 GP Digital Input Function

Units: N/A
 Minimum: 0
 Maximum: 2
 Default: 0

- Selections: 0 = NONE
 1 = SP-104 Control Setpoint Select
 2 = SP-3 Control Loop

SP 134-135 Reserved**SP 136 Analog Input 1 Monitor Full Scale Value**

Units: N/A
 Minimum: 0.0
 Maximum: 3200.0
 Default: 1000.0

SP 137 Analog Input 2 Monitor Full Scale Value

Units: N/A
 Minimum: 0.0
 Maximum: 3200.0
 Default: 1000.0

SP 138-139 Reserved**SP 140 Meter 1 Output Type**

Units: N/A
 Minimum: 1
 Maximum: 2
 Default: 1

- Selections: 1 = Voltage Output
 2 = Current Output

SP 141 Meter 1 Signal Select

Units: N/A
 Minimum: 1
 Maximum: 9
 Default: 1

- Selection: 1 = Load Voltage A
 2 = Load Current A
 3 = Load Voltage B
 4 = Load Current B
 5 = Load Voltage C
 6 = Load Current C
 7 = Load Power
 8 = 3 Phase Load Power
 9 = Direct Out [SP-146]

SP 142 Meter 1 Command Lo Value

Units: %, Based on full scale values
 Minimum: 0.00
 Maximum: 100.00
 Default: 0.00

SP 143 Meter 1 Signal Lo Output

Units: V, mA
 Minimum: 0.00
 Maximum: 20.00
 Default: 0.00

SP 144 Meter 1 Command Hi Value

Units: N/A, Based on Full Scale Values
 Minimum: 0.00
 Maximum: 100.00
 Default: 100.00

SP 145 Meter 1 Signal HI Output

Units: V, mA
 Minimum: 0.00
 Maximum: 20.00
 Default: 5.00

SP 146 Meter 1 Out Direct

Units: V, mA
 Minimum: 0.00
 Maximum: 20.00
 Default: 0.00

SP 147 Meter 2 Output Type

Units: N/A
 Minimum: 1
 Maximum: 2
 Default: 1

Selections: 1 = Voltage Output
 2 = Current Output

SP 148 Meter 2 Signal Select

Units: N/A
 Minimum: 1
 Maximum: 9
 Default: 2

Selection: 1 = Load Voltage A
 2 = Load Current A
 3 = Load Voltage B
 4 = Load Current B
 5 = Load Voltage C
 6 = Load Current C
 7 = Load Power
 8 = 3 Phase Load Power
 9 = Direct Out [SP-153]

SP 149 Meter 2 Command Lo Value

Units: N/A, Based on Full Scale Values
 Minimum: 0.00
 Maximum: 100.00
 Default: 0.00

SP 150 Meter 2 Signal Lo Output

Units: V, mA
 Minimum: 0.00
 Maximum: 20.00
 Default: 0.00

SP 151 Meter 2 Command HI Value

Units: N/A, Based on Full Scale Values
 Minimum: 0.00
 Maximum: 100.00
 Default: 100.00

SP 152 Meter 2 Signal HI Output

Units: V, mA
 Minimum: 0.00
 Maximum: 20.00
 Default: 5.00

SP 153 Meter 2 Out Direct

Units: V, mA
 Minimum: 0.00
 Maximum: 20.00
 Default: 0.00

SP 154 Reserved

SP 155 PWM Input LO Duty Cycle

Units: %
 Minimum: 0.00
 Maximum: 100.00
 Default: 0.00

SP 156 PWM Input LO Command Output

Units: %
 Minimum: 0.00
 Maximum: 100.00
 Default: 0.00

SP 157 PWM Input HI Duty Cycle

Units: %
 Minimum: 0.00
 Maximum: 100.00
 Default: 100.00

SP 158 PWM Input HI Command Output

Units: %
 Minimum: 0.00
 Maximum: 100.00
 Default: 100.00

SP 159 Reserved

SP 160 Transducer MAC ID (CCI Link Server Node)

Units: N/A
 Minimum: 0
 Maximum: 63
 Default: 0

SP 161 Transducer Feedback Select

Units: N/A
Minimum: 1
Maximum: 10
Default: 1

Selection:

- 1 = V1
- 2 = I1
- 3 = V2
- 4 = I2
- 5 = V3
- 6 = I3
- 7 = P1
- 8 = P2
- 9 = P3
- 10 = 3ph Power

SP 162-199 Reserved

MP 200 Setpoint Selected

Units: N/A
Minimum: 1
Maximum: 10

Note: S1 = Setpoint 1 source, S2 = Setpoint 2 source

Representation:

- 1 = S1 Analog Input 1
- 2 = S1 Analog Input 2
- 3 = S1 Fieldbus Setpoint
- 4 = S1 Keypad Setpoint
- 5 = S1 PWM Setpoint
- 6 = S2 Analog Input 1
- 7 = S2 Analog Input 2
- 8 = S2 Fieldbus Setpoint
- 9 = S2 Keypad Setpoint
- 10 = S2 PWM Setpoint

MP 201 PWM Setpoint

Units: %
Minimum: -100.00
Maximum: 100.00

MP 202 Analog Input 1

Units: %, Based on full scale values
Minimum: -100.00
Maximum: 100.00

MP 203 Analog Input 1 Command Value

Units: N/A
Minimum: -99999.9
Maximum: 99999.9

MP 204 Analog Input 1 Signal

Units: V, mA
Minimum: -99.99
Maximum: 99.99

MONITOR PARAMETERS

User List, Range: 200 to 389

MP 205 Analog Input 2

Units: %, Based on Full Scale Values
 Minimum: -100.00
 Maximum: 100.00

MP 206 Analog Input 2 Command Value

Units: N/A
 Minimum: -99999.9
 Maximum: 99999.9

MP 207 Analog Input 2 Signal

Units: V, mA
 Minimum: -99.99
 Maximum: 99.99

MP 208 Analog Input 1 Monitor Value

Units: N/A
 Minimum: -9999.9
 Maximum: 9999.9

MP 209 Analog Input 2 Monitor Value

Units: N/A
 Minimum: -9999.9
 Maximum: 9999.9

MP 210 Inhibit Alarm Status

Units: N/A
 Minimum: 0000_0000
 Maximum: 1111_1111
 Representation
 Bit:
 MSB 7 = Watchdog Timeout
 6 = Memory Error (Not Active)
 5 = Not Used
 4 = Not Used
 3 = Line Phase Loss
 2 = PLL Lock Loss
 1 = Heatsink Over-Temp
 LSB 0 = Current Trip

MP 211 Controller Status

Units: N/A
 Minimum: 0
 Maximum: 4
 Representation: 0 = Disabled
 1 = Enabled
 2 = Diagnostic
 3 = Calibration
 4 = Program Mode

MP 212: Reserved

MP 213 Digital I/O Status

Units: N/A
 Minimum: 0000_0000
 Maximum: 1111_1111
 Representation: 0 = open/not active, 1 = closed/active
 Bit:
 MSB 7 = Not Used
 6 = Not Used
 5 = Not Used
 4 = Relay
 3 = Not Used
 2 = Not Used
 1 = GP I/O
 LSB 0 = Run/Stop-Reset

MP 214-217 Reserved

MP 218 AC Line Phase

Units: Coded: AC Line Phasing for Phases C, B
 Minimum: 00 = Not Determined
 Maximum: EE

Phase	Positive	Negative
0 Degrees	1	9
30 Degrees	2	A
60 Degrees	3	B
90 Degrees	4	C
120 Degrees	5	D
150 Degrees	6	E

MP 219 AC Line Frequency

Units: Hz
 Minimum: 0.0
 Maximum: 99.9

MP 220 Line Voltage A

Units: RMS Volts
Minimum: 0.0
Maximum: 999.9

MP 221 Load Voltage A

Units: Volts RMS or AVG
Minimum: 0.0
Maximum: 999.9

MP 222 Load Current A

Units: Amps RMS or AVG
Minimum: 0.0
Maximum: 9999.9

MP 223 Load Resistance A

Units: Ohm
Minimum: 0.00
Maximum: 999.99

MP 224 Heatsink Temp A

Units: °C
Minimum: 0.0
Maximum: 999.9

MP 225 Line Voltage B

Units: RMS Volts
Minimum: 0.0
Maximum: 999.9

MP 226 Load Voltage B

Units: Volts RMS or AVG
Minimum: 0.0
Maximum: 999.9

MP 227 Load Current B

Units: Amps RMS or AVG
Minimum: 0.0
Maximum: 9999.9

MP 228 Load Resistance B

Units: Ohm
Minimum: 0.00
Maximum: 999.99

MP 229 Reserved

MP 230 Line Voltage C

Units: RMS Volts
Minimum: 0.0
Maximum: 999.9

MP 231 Load Voltage C

Units: Volts RMS or AVG
Minimum: 0.0
Maximum: 999.9

MP 232 Load Current C

Units: Amps RMS or Average
Minimum: 0.0
Maximum: 9999.9

MP 233 Load Resistance C

Units: Ohm
Minimum: 0.00
Maximum: 999.99

MP 234-244 Reserved

MP 245 Load Power HI (MSW)

Units: Watts or VA
Minimum: 0
Maximum: 32767

MP 246 Load Power LO (LSW)

Units: Watts or VA
Minimum: 0
Maximum: 65535

MP 247 Line Power Factor

Units: N/A
Minimum: 0.00
Maximum: 9.99

MP 248 Controller State

Units: N/A
Minimum: 0
Maximum: 3

Representation: 0 = STOP
1 = RUN
2 = FAULT
3 = FAULT RESET

MP 249 Output Duty Cycle %

Units: % of Full ON
Minimum: 0.0
Maximum: 999.9

MP 250 Setpoint Reference HI (MSW)

Units: V, A, W
Minimum: -99
Maximum: 99

MP 251 Setpoint Reference LO (LSW)

Units: V, A, W
Minimum: 0
Maximum: 65535

MP 252 Feedback HI (MSW)

Units: V, A, W
 Minimum: -99
 Maximum: 99

MP 253 Feedback LO (LSW)

Units: V, A, W
 Minimum: 0
 Maximum: 65535

MP 254 Control Loop Error HI (MSW)

Units: V, A, W
 Minimum: -99
 Maximum: 99

MP 255 Control Loop Error LO (LSW)

Units: V, A, W
 Minimum: 0
 Maximum: 65535

MP 256 Warning Alarm Status

Units: N/A
 Minimum: 0000_0000
 Maximum: 1111_1111

Representation:

Bit:

- MSB 7 = Not Used
- 6 = Low Output
- 5 = Load Imbalance
- 4 = Shorted SCR
- 3 = Heatsink Tmp
- 2 = Power Limit
- 1 = Current Limit
- LSB 0 = Voltage Limit

MP 257 Load Power Factor

Units: N/A
 Minimum: 0.00
 Maximum: 9.99

MP 258-304: Reserved

MP 305 KWh Consumption HI (MSW) (Not yet activated)

Units: KWH
 Minimum: 0
 Maximum: 32767

MP 306 KWh Consumption LO (LSW) (Not yet activated)

Units: KWH
 Minimum: 0
 Maximum: 65535

MP 307 Power-up Count

Units: Counts
 Minimum: 0
 Maximum: 65535

MP 308 Low Power Count

Units: Counts
 Minimum: 0
 Maximum: 65535

MP 309 In Service Time HI (MSW)

Units: Hour
 Minimum: 0
 Maximum: 32767

MP 310 In Service Time LO (LSW)

Units: Hour
 Minimum: 0
 Maximum: 65535

MP 311-321 Reserved

MP 322 USB Status

Units: N/A
 Minimum: 0000_0000
 Maximum: 1111_1111

Representation

Bit:

- MSB 7 = CRC or LRC Error
- 6 = Not Used
- 5 = Not Used
- 4 = Not Used
- 3 = Parity Error
- 2 = Framing Error
- 1 = Receive Buffer Overrun
- LSB 0 = Address received, Message Error encountered

MP 323 Network Status (CCI Link)

Units: N/A
 Minimum: 0000_0000
 Maximum: 1111_1111

Representation

Bit:

- MSB 7 = Bus OFF State
- 6 = Bus Passive State
- 5 = Duplicate MAC ID Detected
- 4 = Connection Timeout
- 3 = Cyclic Connection Established
- 2 = Reserved
- 1 = Explicit Connection Established
- LSB 0 = ON Line

MP 324 Slave Connection Status (CCI Link)

Units: N/A
 Minimum: 0000_0000
 Maximum: 1111_1111

Representation

Bit:

- MSB 7 = Connection 2 Timeout
- 6 = Connection 2 Cyclic or Poll
- 5 = Connection 2 Explicit
- 4 = Connection 2 Allocated/Connected
- 3 = Connection 1 Timeout
- 2 = Connection 1 Cyclic or Poll
- 1 = Connection 1 Explicit
- LSB 0 = Connection 1 Allocated/Connected

Minimum: 0
Maximum: 65535

MP 329 Live Calibration Bits In HI (MSW)

Units: ADC Bits
Minimum: -32768
Maximum: 32767

MP 330 Live Calibration Bits In LO (LSW)

Units: ADC Bits
Minimum: 0
Maximum: 65535

MP 331 Firmware ID

Units: N/A
Minimum: 0
Maximum: 32767

MP 332 Firmware Version

Units: N/A
Minimum: 0.00.01
Maximum: 99.99.99

MP 333 Minor Revision (Appended to Firmware Version)

Units: N/A
Minimum: 01
Maximum: 99

MP 334 Reserved

MP 335 Misc Status

Units: N/A
Minimum: 0000_0000_0000_0000
Maximum: 1111_1111_1111_1111
Representation:

- Bit:
- MSB 15 = Not Used
 - 14 = Not Used
 - 13 = Not Used
 - 12 = Not Used
 - 11 = Not Used
 - 10 = Not Used
 - 9 = Not Used
 - 8 = Not Used
 - 7 = Load Trace is ON, Collecting Data
 - 6 = AC Line Trace is ON, Collecting Data
 - 5 = Load Trace is Enabled, Waiting for Trigger
 - 4 = AC Line Trace is Enabled, Waiting for Trigger
 - 3 = Waiting for the Enter Key during Initialization
 - 2 = USER Unlock, Access Code Successfully Entered

MP 325 Master Connection Status (CCI Link)

Units: N/A
Minimum: 0000_0000
Maximum: 0000_1111

Representation

- Bit:
- MSB 7 = Not used
 - 6 = Not used
 - 5 = Not used
 - 4 = Not used
 - 3 = Connection 1 Timeout
 - 2 = Connection 1 Cyclic or Poll
 - 1 = Connection 1 Explicit
 - LSB 0 = Connection 1 Allocated/Connected

MP 326 Comm Status (Communications Module)

Units: N/A
Minimum: 0000_0000
Maximum: 1111_1111

Representation

- Bit:
- MSB 7 = Heartbeat Timer Timeout
 - 6 = Module Not Responding = Timeout
 - 5 = Module Reset
 - 4 = IP Address Query
 - 3 = Configuration Error
 - 2 = Configuration Mode
 - 1 = IP Address Is Set Correctly
 - LSB 0 = Communicating (Active)

MP 327 EE Calibration Bits, Stored HI (MSW)

Units: ADC Bits
Minimum: -32768
Maximum: 32767

MP 328 EE Calibration Bits, Stored LO (LSW)

Units: ADC Bits

- 1 = Not Used
- LSB 0 = MFG Unlock, Access Code Successfully Entered

- 6 = Control Loop Timing OK
- 5 = Phase Rotation 3-2-1 (0 = Phase Rotation 1-2-3)
- 4 = Phase Rotation Determined (Three Phase)
- 3 = Not Used
- 2 = Line Voltage C Present
- 1 = Line Voltage B Present
- LSB 0 = Line Voltage A Present

MP 336 EEPROM Status

- Units: N/A
 Minimum: 0000_0000_0000_0000
 Maximum: 1111_1111_1111_1111
 Representation:
 Bit:
- MSB 15 = Not Used
 - 14 = Not Used
 - 13 = EEPROM SP Definition Table update required
 - 12 = EEPROM is write-protected
 - 11 = Backup User SP V-table checksum failure
 - 10 = Not Used
 - 9 = Not Used
 - 8 = Repair record checksum failure
 - 7 = Error Code Record checksum failure
 - 6 = MFG Data Table checksum failure
 - 5 = Calibration Data Table checksum failure
 - 4 = CAL Parameter V-Table checksum failure
 - 3 = MFG SP V-Table checksum failure
 - 2 = User SP V-Table checksum failure
 - 1 = Blank, Initialization required
 - LSB 0 = Read/Write failure

MP 337-341 Reserved

MP 342 AC Line Status

- Units: N/A
 Minimum: 0000_0000
 Maximum: 1111_1111
 Representation:
 Bit:
- MSB 7 = Feedback ADC Timing OK

MP 343 Load Status

- Units: N/A
 Minimum: 0000_0000
 Maximum: 1111_1111
 Representation:
 Bit:
- MSB 7 = Not Used
 - 6 = Open Load C
 - 5 = Open Load B
 - 4 = Open Load A
 - 3 = Not Used
 - 2 = Shorted SCR C
 - 1 = Shorted SCR B
 - LSB 0 = Shorted SCR A

MP 344 Zone Status

- Units: N/A
 Minimum: 0000_0000_0000
 Maximum: 0000_0001_0000
 Representation:
 Bit:
- MSB 15 = Not Used
 - 14 = Not Used
 - 13 = Not Used
 - 12 = Not Used
 - 11 = Not Used
 - 10 = Not Used
 - 9 = Not Used
 - 8 = Not Used
 - 7 = Not Used
 - 6 = Not Used
 - 5 = Not Used
 - 4 = Zone 1: (0 = Not at Setpoint, 1 = at Setpoint)
 - 3 = Not Used
 - 2 = Not Used
 - 1 = Not Used
 - LSB 0 = Zone 1: (0 = Normal, 1 = FAULT)

MP 345 Error Latch

Units: N/A
Minimum: 0000_0000_0000_0000
Maximum: 1111_1111_1111_1111
Representation:

Bit:
MSB 15 = (0) Reserved
14 = (0) Reserved
13 = (0) Reserved
12 = (0) Reserved
11 = (0) Reserved
10 = (0) Reserved
9 = (0) Reserved
8 = (0) Reserved
7 = (0) Reserved
6 = (0) Reserved
5 = (0) Reserved
4 = ADC/DMA Feedback "Re-Sync"
performed
3 = AC Line "Re-Sync" performed
2 = AC Line Frequency check failure
1 = Phase Loss or Missing AC Line
cycle detected
LSB 0 = AC Line Phase Lock Loss

MP 346 Alarms

Units: N/A
Minimum: 0000_0000_0000_0000
Maximum: 1111_1111_1111_1111
Representation:

Bit:
MSB 15 = Not Used
14 = Watchdog Timeout
13 = Not Used
12 = Severe Load Imbalance
11 = Line Phase Loss
10 = PLL Lock Loss
9 = Heatsink Overtemp
8 = Current Trip
7 = Not Used
6 = Low Output (at MAX Output)
5 = Load Imbalance
4 = Shorted SCR
3 = Heatsink Close to Overtemp
2 = Power Limiting
1 = Current Limiting
LSB 0 = Voltage Limiting

MP 347 Reserved

MP 348 Network Message Error Count (CCI Link)

Units: Counts
Minimum: 0
Maximum: 65535

MP 349 Firmware Update Code

Units: N/A
Minimum: 0
Maximum: 65535

MP 350-369 Reserved

MP 370 Network Heartbeat Timer

Units: Seconds
Minimum: 0
Maximum: 65535

MP 371-378: Reserved

MP 379 Bootloader Version

Units: N/A
Minimum: 1.00
Maximum: 99.99

MP 380 PGA Gain AC Line

Units: N/A
Minimum: 1
Maximum: 32

MP 381 PGA Gain Load Voltage

Units: N/A
Minimum: 1
Maximum: 32

MP 382 Load Voltage Range

Units: N/A
Minimum: 1
Maximum: 3

MP 383-384 Reserved

MP 385 PGA Gain Load Current

Units: N/A
Minimum: 1
Maximum: 32

MP 386-388 Reserved

MP 389 PGA Gain Message Count

Units: PGA Gain Update Message Count per
AC Line 1/2 Cycle
Minimum: 0
Maximum: 65535

SPECIAL PARAMETERS

User List, Range: 3400 to 3401

XP 3400 Digital RUN/STOP Configuration

Units: N/A
Minimum: 0
Maximum: 2
Default: 1

Selections:

- 0 = Never use Digital RUN/Stop, use switch
- 1 = Analog use switch only, Digital use Dig Sys RUN/Stop and switch
- 2 = Always use Digital RUN/Stop and switch

XP 3401 Digital RUN/Stop Power-Up Default

Units: N/A
Minimum: 0
Maximum: 1
Default: 0

Selections:

- 0 = STOP
- 1 = RUN