Omron Process Suite Driver Help

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Omron Process Suite Driver Help

Help version 1.015

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Overview

What is the Omron Process Suite Driver?

Device Setup

How do I configure a device for use with this driver?

Data Types Description

What data types does this driver support?

Address Descriptions

How do I address a data location on an Omron temperature controller?

Error Descriptions

What error messages does this driver produce?

Overview

The Omron Process Suite Driver provides an easy and reliable way to connect Omron Process Suite controllers to OPC Client applications, including HMI, SCADA, Historian, MES, ERP and countless custom applications. It is intended for use with Omron temperature controllers.

Device Setup

Supported Devices

E5AX-A, E5AX-AH, E5AX-DAA, E5AX-PRR, E5AX-VAA

E5AF-A

E5AJ-A

E5EJ-A

E5CN (thermocouple), E5CN (platinum resistance thermometer)

E5GN (thermocouple), E5GN (platinum resistance thermometer)

Communication Protocol

Sysway

Supported Communication Parameters

Baud Rate: 300, 600, 1200, 2400, 9600

Parity: Even Data Bits: 7 Stop Bits: 2

Note: Not all devices support the listed configurations.

Ethernet Encapsulation

This driver supports Ethernet Encapsulation, which allows the driver to communicate with serial devices attached to an Ethernet network using a terminal server. It may be invoked through the COM ID dialog in Channel Properties. For more information, refer to the OPC server's help documentation.

Device IDs

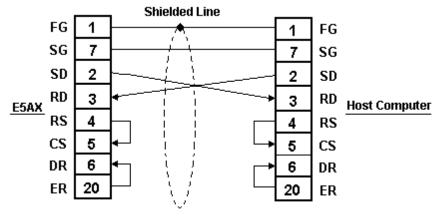
This parameter specifies the unique ID that will be used in order to communicate with other devices. The valid range is 0-99.

Flow Control

When using an RS232/RS485 converter, the type of flow control that is required depends on the needs of the converter. Some converters do not require any flow control whereas others require RTS flow. Consult the converter's documentation in order to determine its flow requirements. An RS485 converter that provides automatic flow control is recommended.

Note: When using the manufacturer's supplied communications cable, it is sometimes necessary to choose a flow control setting of **RTS** or **RTS Always** under the Channel Properties.

Cable Connections



Symbol	Pin
FG	1
SG	7
SD	2
RD	3
RS	4
CS	5
DR	6
dy ER	20
	FG SG SD RD RS CS

RS-232C

- * Electrical Characteristics: Conform to EIA RS-232C
- * Synchronization Clock: Internal Clock
- * Transmission Length: 15 m max.
- * Connector: D-Subminiature (25 contacts)
- * Connection (with RS-232C); Point-to-Point (1-to-1 Connection)

Modem Setup

This driver supports modem functionality. For more information, please refer to the topic "Modem Support" in the OPC Server Help documentation.

Data Types Description

Data Type	Description
Boolean	Single bit
Word	Unsigned 16 bit value
	bit 0 is the low bit
	bit 15 is the high bit
Short	Signed 16 bit value
	bit 0 is the low bit
	bit 14 is the high bit
	bit 15 is the sign bit
DWord	Unsigned 32 bit value
	bit 0 is the low bit
	bit 31 is the high bit
Long	Signed 32 bit value
	bit 0 is the low bit
	bit 30 is the high bit
	bit 31 is the sign bit
Float	32 bit floating point value.
	The driver interprets two consecutive 16 bit registers as a floating-point value by making the second register the high word and the first register the low word.

Address Descriptions

The following models are supported by this driver.

E5AF-A E5AF-AH E5AJ-A E5AX-A E5AX-AH E5AX-DAA E5AX-PRR E5AX-VAA E5CN-PT E5CN-TC E5EJ-A

Notes:

E5GN-PT E5GN-TC

- ${\bf 1.}\ {\bf E5CN\text{-}PT}\ is\ for\ platinum\ resistance\ thermometer.\ The\ actual\ model\ number\ will\ differ.$
- 2. E5CN-TC is for thermocouple. The actual model number will differ.
- 3. E5GN-PT is for platinum resistance thermometer. The actual model number will differ.
- 4. E5GN-TC is for thermocouple. The actual model number will differ.

E5AF-A Address Description

Mnemonic	Description	Data type	Access
AL-1	Alarm 1 set temperature.	Float , DWord, Long	Read/Write
	(-999-9999 deg TC)*(-99.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC) (-99.9-999.9 deg Pt)		
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
	TRUE = alarm on FALSE = alarm off		
AT	Auto tuning in progress.	Bool	Read/Write
	Write TRUE to start AT. Write FALSE to stop AT. AT will remain TRUE until the device completes the auto tuning pro-		
	cedure (or the user terminates it). Driver will not accept any write commands other than AT=FALSE		
BACKUP	during auto tuning. Backup RAM to non-volatile memory.	Bool	Read/Write
DACKUF	Write: Anything to initiate backup procedure.	5001	ixeau/ write

	Read:		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms during backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected		
	FALSE = heater OK		
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE NO. /Offi		
	TRUE = "On/Off" FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
		·	
DOD! LINET	(0-3999 s)		
DSPL-UNIT	Display unit.*	Bool	Read Only
	TRUE = degrees F		
	FALSE = degrees C		
FU	Fuzzy intensity.	Short, Word	Read/Write
	(0-99%)		
FU-S-1	Fuzzy scale 1.	Float, DWord, Long	Read/Write
	(0.2.000.0.4)		
FU-S-2	(0.2-999.9 deg) Fuzzy scale 2.	Float, DWord, Long	Read/Write
1032	i uzzy ścale z.	l loat, Dword, Long	Read/ Write
	(0.2-99.9 deg)		
I	Reset time set value.	Short , Word	Read/Write
	(0-3999 s)		
IN-S	Input shift set value.	Float, DWord, Long	Read/Write
	(000 0000 70)		
	(-999-9999 deg TC) (-99.9-999.9 deg Pt)		
IN-S DSPL	Input shift display enable.*	Bool	Read Only
_			,
	TRUE = enabled FALSE = disabled		
IN-T	Input (sensor) type.*	Short, Word	Read Only
			1.000 0,
	(0-9)		
INITIALSTATUS	Initial Status tag	Short, Word	Read Only
	For information on the INITIALSTATUS value, refer to the image		
	below.		
	Note: The INITIALSTATUS value is read during initial device setup		
	communications and when reading the following addresses:		
	AL 1 MD		
	AL-1-MD AL-2-MD		
	CTR-MD		
	DSPL-UNIT		
	IN-S_DSPL IN-T		
	O-TYPE		
	O-OP		
0	PID-DSPL Output value.	Float, DWord, Long	Read Only
0	Output value.	I Toat, Dword, Long	Read Offig

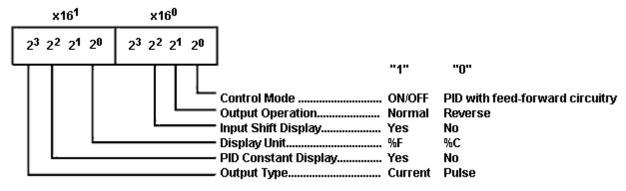
	(0.0-100.0%)		
O-TYPE	Output type.*	Bool	Read Only
	TDUE survent		
	TRUE = current FALSE = pulse		
O-OP	Output mode of operation.*	Bool	Read Only
0 01	output mode of operation.	5001	Tredu Omy
	TRUE = normal (cooling)		
	FALSE = reverse (heating)		
P	Proportional band set value.	Float , DWord, Long	Read/Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
TID DSIL	Tib display enable.	Booi	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
	(000 0000 des TC)		
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
	(22.2 22.2 23 23,		
	Note: Since hardware status information is passed back to the		
	driver with the PV value, it is important that this memory location be		
	monitored. If a hardware failure should occur (device failure, heater		
	burnout, sensor failure), it will be detected and reported by the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
101111111111111111111111111111111111111	To a rinode chaster		Titeda omy
	TRUE = RAM mode		
	FALSE = backup mode		
	I The driver will automatically torce the device into DAM mode to pro-		
	The driver will automatically force the device into RAM mode to pre-		
	vent wear on non-volatile memory. Users may backup the contents		
	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command.		
	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel,		
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REMOTE	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel.	Bool	Read Only
REMOTE	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the	Bool	Read Only
REMOTE	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel.	Bool	Read Only
REMOTE	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable.	Bool	Read Only
REMOTE	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode	Bool	Read Only
REMOTE	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote	Bool	Read Only
	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel.		·
SL-H	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).***	Float , DWord, Long	Read Only
	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).** Set point limit (low).**		Read Only Read Only
SL-H SL-L	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).***	Float, DWord, Long Float, DWord, Long	Read Only
SL-H SL-L	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).** Set point shift input state. TRUE = shift enabled	Float, DWord, Long Float, DWord, Long	Read Only Read Only
SL-H SL-L	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).** Set point shift input state.	Float, DWord, Long Float, DWord, Long	Read Only Read Only
SL-H SL-L	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).** Set point shift input state. TRUE = shift enabled FALSE = shift disabled	Float, DWord, Long Float, DWord, Long	Read Only Read Only
SL-H SL-L SP-S-IN	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).** Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device.	Float, DWord, Long Float, DWord, Long Bool	Read Only Read Only Read Only
SL-H SL-L SP-S-IN	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).** Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device. Set value temperature.	Float, DWord, Long Float, DWord, Long	Read Only Read Only Read Only
SL-H SL-L SP-S-IN	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).** Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device. Set value temperature. Setting range: SL-L-SL-H	Float, DWord, Long Float, DWord, Long Bool Float, DWord, Long	Read Only Read Only Read Only Read Only
SL-H SL-L	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel. Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel. Set point limit (high).** Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device. Set value temperature.	Float, DWord, Long Float, DWord, Long Bool	Read Only Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

**This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

Note: TC denotes temperature range for thermocouple sensor types. Pt denotes temperature range for platinum resistance thermometer sensor types. All stated temperature ranges are numerically equal for degrees F and C.

INITIALSTATUS Value Format



E5AF-AH Address Description

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC)*(-99.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on FALSE = alarm off		
AT	Auto tuning in progress.	Bool	Read/Write
	Write TRUE to start AT. Write FALSE to stop AT.		
	AT will remain TRUE until the device completes the auto tuning procedure (or the user terminates it).		
	Driver will not accept any write commands other than AT=FALSE during auto tuning.		
BACKUP	Backup RAM to non-volatile memory.	Bool	Read/Write
	Write: Anything to initiate backup procedure		
	Read:		
	TRUE = non-volatile memory is not current FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms during backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected FALSE = heater OK		
СТ	Heater current.	Float, DWord, Long	Read Only
	(0.0-50 A)		

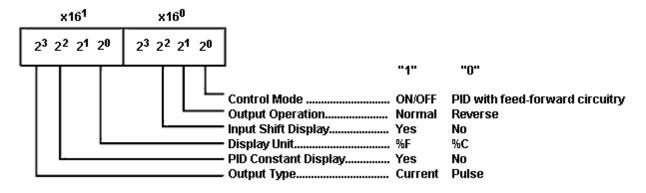
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE = "On/Off"		
	FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
	(0-3999 s)		
DSPL-UNIT	Display unit.*	Bool	Read Only
	TRUE = degrees F FALSE = degrees C		
FU	(0-99%)	Short, Word	Read/Write
	Fuzzy intensity.		
FU-S-1	Fuzzy scale 1.	Float, DWord, Long	Read/Write
	(0.2-999.9 deg)		1
FU-S-2	Fuzzy scale 2.	Float, DWord, Long	Read/Write
	(0.2-99.9 deg)		
НВ	Heater burnout set temperature.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
I	Reset time set value.	Short, Word	Read/Write
	(0-3999 s)		
IN-S	Input shift set value.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TRUE = enabled		
IN-T	FALSE = disabled Input (sensor) type.*	Short, Word	Read Only
1111-1		Siloit, Word	Read Only
INITIAL CTATUS	(0-9) Initial Status tag	Short, Word	Bood Only
INTIALSTATOS	For information on the INITIALSTATUS value, refer to the image below.	Short, word	Read Only
	Note: The INITIALSTATUS value is read during initial device setup communications and when reading the following addresses:		
	AL-1-MD		
	CTR-MD		
	DSPL-UNIT		
	IN-S_DSPL IN-T		
	O-TYPE		
	O-OP		
0	PID-DSPL Output value.	Float, DWord, Long	Read Only
	(0.0-100.0%)		
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current		
	FALSE = pulse		
O-OP	Output mode of operation.*	Bool	Read Only

	TRUE = normal (cooling)		
	FALSE = reverse (heating)		
Р	Proportional band set value.	Float, DWord, Long	Read/Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
	(-999-9999 deg TC)		
	(00 0 000 0 dog Dt)		
	(-99.9-999.9 deg Pt)		
	Note: Since hardware status information is passed back to the driver		
	with the PV value, it is important that this memory location be mon-		
	itored. If a hardware failure should occur (device failure, heater burn-		
	out, sensor failure), it will be detected and reported by the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
ואוויווט	NAME THOUSE CHASTE.		Read Offiny
	TRUE = RAM mode		
	FALSE = backup mode		
	The driver will puternatically force the device into DAM made to any		
	The driver will automatically force the device into RAM mode to prevent wear on non-volatile memory. Users may backup the contents of		
	RAM by issuing a BACKUP command.		
	Note: If "Remote Mode" is not selected on the device's front panel, the		
	driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front		
	panel.		
REMOTE	Remote Mode enable.	Bool	Read Only
			,
	TRUE = device in Remote Mode		
	FALSE = device in Local Mode		
	The driver will not be able to write to the device unless Remote Mode is		
	selected on the device front panel.		
SL-H	Set point limit (high).**	Float, DWord, Long	Read Only
SL-L	Set point limit (low).**	Float, DWord, Long	Read Only
SP-S-IN	Set point shift input state.	Bool	Read Only
	TRUE 1/6 11 1		
	TRUE = shift enabled FALSE = shift disabled		
	TALSE - Still disabled		
	State is forced TRUE by shorting appropriate terminals on device.		
SV	Set value temperature.	Float, DWord, Long	Read/Write
	Setting range: SL-L-SL-H.		
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

INITIALSTATUS Value Format

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.



E5AJ-A Address Description

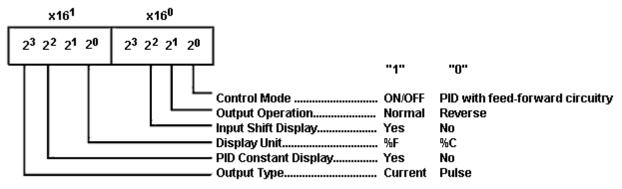
Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float, DWord, Long	Read/Write
	(-1999-9999 deg TC)*(-199.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float, DWord, Long	Read/Write
AL 2	Add III 2 Set temperature.	Tiout, Dword, Long	redu/ Write
	(-1999-9999 deg TC)		
	((((((((((((((((((((
AL 2 MD	(-199.9-999.9 deg Pt)		
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
	TRUE = alarm on FALSE = alarm off		
BACKUP	Backup RAM to non-volatile memory.	Bool	Dood (Mysite
BACKUP	Backup RAM to non-voiatile memory.	BOOI	Read/Write
	Write: Anything to initiate backup procedure.		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms		
	during backup.	<u> </u>	ļ
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected		
	FALSE = heater OK		
СТ	Heater current.	Float, DWord, Long	Read Only
	(0.0.70.0.)		
	(0.2-50.0 A)		1
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE = "On/Off"		
	FALSE = "2-degree of freedom PID"		

D	Rate time set value.	Short, Word	Read/Write
	(0-3999 s)		
DSPL-UNIT	Display unit.*	Bool	Read Only
	TRUE		
	TRUE = degrees F FALSE = degrees C		
НВ	Heater burnout set temperature.	Float, DWord, Long	Read/Write
	(-1999-9999 deg TC)		
I	(-199.9-999.9 deg Pt) Reset time set value.	Short, Word	Read/Write
•		Shore, word	ricady write
	(0-3999 s)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
IN-T	Input (sensor) type.*	Short , Word	Read Only
	(0-9)		
INITIALSTATUS	Initial Status tag	Short, Word	Read Only
	For information on the INITIALSTATUS value, refer to the image		
	below.		
	Note:The INITIALSTATUS value is read during initial device		
	setup communications and when reading the following		
	addresses:		
	AL-1-MD		
	AL-2-MD		
	CTR-MD		
	DSPL-UNIT IN-S_DSPL		
	IN-T		
	O-TYPE		
	O-OP		
0	PID-DSPL Output value.	Float , DWord, Long	Read Only
		Trode, Briona, Long	Ticad Omy
O TVDE	(0.0-100.0%)		
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current		
0.00	FALSE = pulse	D. al	Deed Oak
O-OP	Output mode of operation.*	Bool	Read Only
	TRUE = normal (cooling)		
P	FALSE = reverse (heating)	Floor DW and Long	Dond (Muito
r	Proportional band set value.	Float , DWord, Long	Read/Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
D) (FALSE = disabled		D 10:
PV	Process value (measured temperature).	Float , DWord, Long	Read Only
	(-1999-9999 deg TC)		
	(-199.9-999.9 deg Pt)		
	,		

	Note: Since hardware status information is passed back to the driver with the PV value, it is important that this memory location be monitored. If a hardware failure should occur (device failure, heater burnout, sensor failure), it will be detected and reported by the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode FALSE = backup mode The driver will subamptically force the device into DAM mode to		
	The driver will automatically force the device into RAM mode to prevent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command.		
	Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the		
	device into RAM mode. The RMT button and RMT status indicator are located on the front panel.		
REMOTE	Remote Mode enable.	Bool	Read Only
	TRUE = device in Remote Mode		
	FALSE = device in Local Mode		
	The driver will not be able to write to the device unless Remote Mode is selected on the device front panel.		
SP-S-IN	Set point shift input state.	Bool	Read Only
	TRUE = shift enabled FALSE = shift disabled		
	State is forced TRUE by shorting appropriate terminals on device.		
SV	Set value temperature.	Float, DWord, Long	Read/Write
	(setting range: SL-L-SL-H)		
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

INITIALSTATUS Value Format



E5AX-A Address Description

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

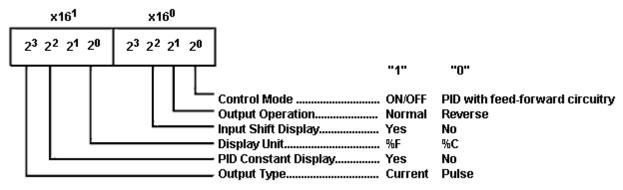
Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC)*(-99.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
7.2 1 110	·	Justic, Word	Tiedd Omy
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float , DWord, Long	Read/Write
	(-999-9999 deg TC)		
	(
	(-99.9-999.9 deg Pt)	101 - 111	
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
	TDUE Player on		
	TRUE = alarm on FALSE = alarm off		
AT	Auto tuning in progress.	Bool	Read/Write
	Write TRUE to start AT. Write FALSE to stop AT.		
	Write FALSE to Stop AT.		
	AT will remain TRUE until the device completes the auto tun-		
	ing procedure (or the user terminates it).		
	Driver will not accept any write commands other than		
	AT=FALSE during auto tuning.		
BACKUP	Backup RAM to non-volatile memory.	Bool	Read/Write
	Write: Anything to initiate backup procedure .		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms		
	during backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TDUE hostor house out detected		
	TRUE = heater burnout detected FALSE = heater OK		
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE NO (OSSI		
	TRUE = "On/Off" FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
		,	,
DOD!	(0-3999 s)		10.10.
DSPL-UNIT	Display unit.*	Bool	Read Only
	TRUE = degrees F		
	FALSE = degrees C		

I	Reset time set value.	Short, Word	Read/Write
	Reset time set value.	Siloit, Word	Redu/ Write
	(0-3999 s)		
IN-S	Input shift set value.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TRUE = enabled FALSE = disabled		
IN-T	Input (sensor) type.*	Short, Word	Read Only
			1.1000 0,
	(0-9)		
INITIALSTATUS	Initial Status tag	Short, Word	Read Only
	For information on the INITIALSTATUS value, refer to the image below. Note: The INITIALSTATUS value is read during initial device setup communications and when reading the following		
	addresses:		
	AL-1-MD		
	AL-2-MD CTR-MD		
	DSPL-UNIT		
	IN-S_DSPL		
	IN-T		
	O-TYPE O-OP		
	PID-DSPL		
0	Output value.	Float, DWord, Long	Read Only
	(0.0-100.0%)	1	ļ
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current		
	FALSE = pulse		
O-OP	Output mode of operation.*	Bool	Read Only
	TRUE = normal (cooling) EALSE = royerse (heating)		
P	FALSE = reverse (heating) Proportional band set value.	Float, DWord, Long	Read/Write
•	11 oportional band Set value.	Tioat, Dword, Long	Nedd/ Wille
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TDUE		
	TRUE = enabled FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
. •	Troccos value (measurea temperature).	Tiout, Dword, Long	Thead Offin
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
	Note: Since hardware status information is passed back to the driver with the PV value, it is important that this memory location be monitored. If a hardware failure should occur (device failure, heater burnout, sensor failure), it will be detected and		
	reported by the driver only during a PV read operation.		

RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode		
	FALSE = backup mode		
	The driver will automatically force the device into RAM mode to prevent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command.		
	Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel.		
REMOTE	Remote Mode enable.	Bool	Read Only
	TRUE = device in Remote Mode FALSE = device in Local Mode		
	The driver will not be able to write to the device unless Remote Mode is selected on the device front panel.		
SL-H	Set point limit (high).**	Float, DWord, Long	Read Only
SL-L	Set point limit (low).**	Float, DWord, Long	Read Only
SP-S-IN	Set point shift input state. TRUE = shift enabled FALSE = shift disabled	Bool	Read Only
	State is forced TRUE by shorting appropriate terminals on device.		
SV	Set value temperature.	Float, DWord, Long	Read/Write
	Setting range: SL-L-SL-H.		
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

INITIALSTATUS Value Format



E5AX-AH Address Description

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float , DWord, Long	Read/Write

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

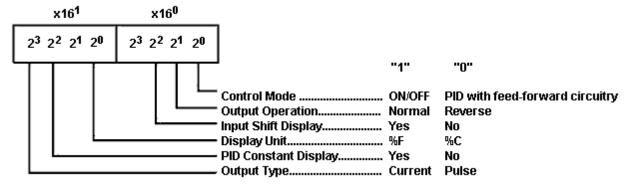
	(-999-9999 deg TC)*(-99.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AT	Auto tuning in progress.	Bool	Read/Write
	Write TRUE to start AT.		
	Write FALSE to stop AT.		
	AT will remain TRUE until the device completes the auto tuning pro-		
	cedure (or the user terminates it).		
	Driver will not accept any write commands other than AT=FALSE		
BACKUP	during auto tuning. Backup RAM to non-volatile memory.	Bool	Read/Write
DACKUP	Backup Kam to non-volatile memory.	Воог	Read/ Write
	Write: Anything to initiate backup procedure.		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms dur-		
	ing backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected		
СТ	FALSE = heater OK Heater current.	Float, DWord, Long	Read Only
.		11000, 2110.0, 201.9	,
CTR-MD	(0.0-50.0 A) Control mode of operation.*	Bool	Read Only
CIK-ND	Control mode of operation.	Bool	Read Offing
	TRUE = "On/Off" FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
	(0.2000.)	,	,
DSPL-UNIT	(0-3999 s) Display unit.*	Bool	Read Only
20.2 0.11.			,
	TRUE = degrees F FALSE = degrees C		
НВ	Heater burnout set temperature.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC)		
т	(-99.9-999.9 deg Pt)	Charle Ward	Dood ///wite
I	Reset time set value.	Short , Word	Read/Write
TNL C	(0-3999 s)	FI DW 1	D1/14/ ''
IN-S	Input shift set value.	Float , DWord, Long	Read/Write
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only

	TRUE = enabled FALSE = disabled		
IN-T	Input (sensor) type.*	Short, Word	Read Only
	(0-9)	·	,
INITIALSTATUS	Initial Status tag	Short, Word	Read Only
	For information on the INITIALSTATUS value, refer to the image below.		
	Note: The INITIALSTATUS value is read during initial device setup communications and when reading the following addresses:		
	AL-1-MD		
	CTR-MD DSPL-UNIT		
	IN-S DSPL		
	IN-T		
	O-TYPE		
	O-OP PID-DSPL		
0	Output value.	Float, DWord, Long	Read Only
	(0.0-100.0%)	Tioat, Dword, Long	Read Only
O-TYPE	Output type.*	Bool	Read Only
			Ticad Olliy
	TRUE = current		
0.00	FALSE = pulse		D 101
O-OP	Output mode of operation.*	Bool	Read Only
	TRUE = normal (cooling) FALSE = reverse (heating)		
Р	Proportional band set value.	Float, DWord, Long	Read/Write
DTD D CDI	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float , DWord, Long	Read Only
	(-999-9999 deg TC) (-99.9-999.9 deg Pt)		
	Note: Since hardware status information is passed back to the		
	driver with the PV value, it is important that this memory location be monitored. If a hardware failure should occur (device failure,		
	heater burnout, sensor failure), it will be detected and reported by		
	the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode		
	FALSE = backup mode		
	The driver will automatically force the device into RAM mode to prevent wear on non-volatile memory. Users may backup the contents		
	of RAM by issuing a BACKUP command.		
	Note: If "Pomoto Modo" is not solected on the device's front and		
	Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM		
	mode. The RMT button and RMT status indicator are located on the		
	front panel.		
REMOTE	Remote Mode enable.	Bool	Read Only

	TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel.		
SL-H	Set point limit (high).**	Float , DWord, Long	Read Only
SL-L	Set point limit (low).**	Float , DWord, Long	Read Only
SP-S-IN	Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device.	Bool	Read Only
SV	Set value temperature. Setting range: SL-L-SL-H.	Float , DWord, Long	Read/Write
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

INITIALSTATUS Value Format



E5AX-DAA Address Description

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float , DWord, Long	Read/Write
	(-999-9999 deg TC)*(-99.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float , DWord, Long	Read/Write
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

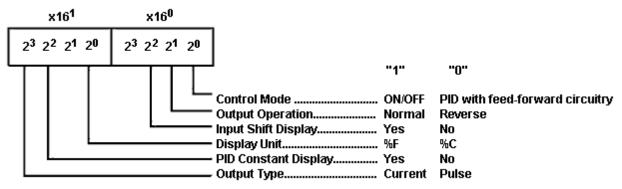
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
			,
	TRUE = alarm on FALSE = alarm off		
AT	Auto tuning in progress.	Bool	Read/Write
,	riate turning in progressi		Ticady Write
	Write TRUE to start AT.		
	Write FALSE to stop AT.		
	AT will remain TRUE until the device completes the auto tuning		
	procedure (or the user terminates it).		
	Driver will not accept any write commands other than		
	AT=FALSE during auto tuning.		
BACKUP	Backup RAM to non-volatile memory.	Bool	Read/Write
	Write: Anything to initiate backup procedure.		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms		
	during backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected		
	FALSE = heater OK		
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE = "On/Off"		
	FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
	(0-3999 s)		
DSPL-UNIT	Display unit.*	Bool	Read Only
	TDUE degrees 5		
	TRUE = degrees F FALSE = degrees C		
I	Reset time set value.	Short, Word	Read/Write
	(0.2000 -)		
IN-S	(0-3999 s) Input shift set value.	Float, DWord, Long	Read/Write
		- 10as, b Word, Long	Ticaa, Wille
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TDUE		
	TRUE = enabled FALSE = disabled		
IN-T	Input (sensor) type.*	Short, Word	Read Only
INITIALSTATUS	(0-9) Initial Status tag	Short, Word	Read Only
INTITALSTATUS	Tinual Status tay	SHOLL, WOLU	Read Offig
	For information on the INITIALSTATUS value, refer to the image		

	below.		
	Note: The INITIALSTATUS value is read during initial device setup communications and when reading the following addresses:		
	AL-1-MD AL-2-MD CTR-MD		
	DSPL-UNIT IN-S_DSPL IN-T O-TYPE		
	O-OP PID-DSPL		
0	Output value.	Float , DWord, Long	Read Only
	(0.0-100.0%)		
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current FALSE = pulse		
O-OP	Output mode of operation.*	Bool	Read Only
	TRUE = normal (cooling) FALSE = reverse (heating)		
Р	Proportional band set value.	Float , DWord, Long	Read/Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
	Note: Since hardware status information is passed back to the driver with the PV value, it is important that this memory loca-		
	tion be monitored. If a hardware failure should occur (device failure, heater burnout, sensor failure), it will be detected and		
	reported by the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode FALSE = backup mode		
	The driver will automatically force the device into RAM mode to prevent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command.		
	Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel.		

REMOTE	Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel.	Bool	Read Only
SL-H	Set point limit (high).**	Float , DWord, Long	Read Only
SL-L	Set point limit (low).**	Float, DWord, Long	Read Only
SP-S-IN	Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device.	Bool	Read Only
SV	Set value temperature. Setting range: SL-L-SL-H.	Float , DWord, Long	Read/Write
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

INITIALSTATUS Value Format



E5AX-PRR Address Description

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC)*(-99.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float , DWord, Long	Read/Write
	(-999-9999 deg TC)		

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

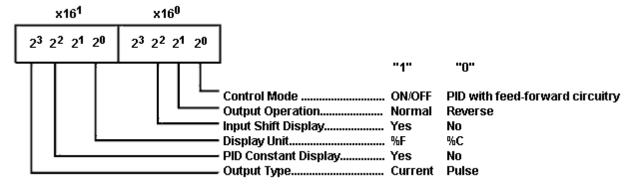
	(-99.9-999.9 deg Pt)		
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AT	Auto tuning in progress.	Bool	Read/Write
	Write TRUE to start AT.		
	Write FALSE to stop AT.		
	AT will represent TRUE while the device consulator the suite true in a new		
	AT will remain TRUE until the device completes the auto tuning procedure (or the user terminates it).		
	Driver will not accept any write commands other than AT=FALSE during auto tuning.		
BACKUP	Backup RAM to non-volatile memory.	Bool	Read/Write
	Write: Anything to initiate backup procedure.		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Nata - Davida - Will be a reconstruction for a reconstruction FOO and down		
	Note: Device will be unresponsive for approximately 500 ms during backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected		
	FALSE = heater OK		
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE = "On/Off"		
	FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short , Word	Read/Write
	(0-3999 s)		
DSPL-UNIT	Display unit.*	Bool	Read Only
	TRUE = degrees F		
	FALSE = degrees C		
I	Reset time set value.	Short, Word	Read/Write
	(0-3999 s)		
IN-S	Input shift set value.	Float, DWord, Long	Read/Write
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
IN-T	Input (sensor) type.*	Short, Word	Read Only
	(0-9)		
INITIALSTATUS	Initial Status tag	Short, Word	Read Only

	For information on the INITIALSTATUS value, refer to the image		
	below.		
	Note: The INITIALSTATUS value is read during initial device setup communications and when reading the following addresses:		
	AL-1-MD		
	AL-2-MD CTR-MD		
	DSPL-UNIT		
	IN-S_DSPL		
	IN-T O-TYPE		
	O-OP		
	PID-DSPL		
0	Output value.	Float , DWord, Long	Read Only
	(0.0-100.0%)		
O-MD-S	Output mode shift.	Bool	Read/Write
	TRUE = manual		
	FALSE = auto		
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current		
O-OP	FALSE = pulse Output mode of operation.*	Bool	Read Only
			,
	TRUE = normal (cooling) FALSE = reverse (heating)		
Р	Proportional band set value.	Float, DWord, Long	Read/Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
	(-999-9999 deg TC)		
	(-99.9-999.9 deg Pt)		
	Note: Since hardware status information is passed back to the		
	driver with the PV value, it is important that this memory location be		
	monitored. If a hardware failure should occur (device failure, heater burnout, sensor failure), it will be detected and reported by		
	the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode		
	FALSE = backup mode		
	The driver will automatically force the device into RAM mode to pre-		
	vent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command.		
	Note:If "Remote Mode" is not selected on the device's front panel,		
	the driver will not be able to automatically force the device into RAM		
	mode. The RMT button and RMT status indicator are located on the		
REMOTE	front panel. Remote Mode enable.	Bool	Read Only

	TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel.		
SL-H	Set point limit (high).**	Float, DWord, Long	Read Only
SL-L	Set point limit (low).**	Float, DWord, Long	Read Only
SP-S-IN	Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device.	Bool	Read Only
SV	Set value temperature. Setting range: SL-L-SL-H.	Float , DWord, Long	Read/Write
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

INITIALSTATUS Value Format



E5AX-VAA Address Description

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float , DWord, Long	Read/Write
	(-999-9999 deg TC)*(-99.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AT	Auto tuning in progress.	Bool	Read/Write
	Write TRUE to start AT.		
	Write FALSE to stop AT.		

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

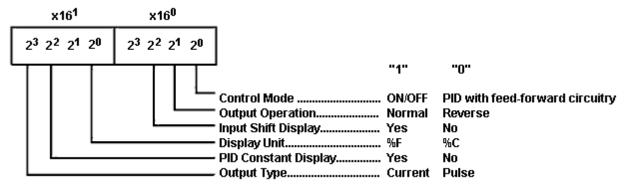
ccept any write commands other than grauto tuning. con-volatile memory. co initiate backup procedure. co initiate backup	Bool Float, DWord, Long Bool Float, DWord, Long	Read/Write Read Only Read Only Read/Write
atile memory is not current atile memory is current be unresponsive for approximately 500 ms etected. urnout detected DK mperature. TC) g Pt) peration.* ree of freedom PID"	Bool Float, DWord, Long Bool Float, DWord, Long	Read Only Read/Write Read Only
atile memory is not current atile memory is current be unresponsive for approximately 500 ms etected. urnout detected DK mperature. TC) g Pt) peration.* ree of freedom PID"	Float, DWord, Long Bool Float, DWord, Long	Read/Write
atile memory is current be unresponsive for approximately 500 ms etected. urnout detected DK mperature. TC) g Pt) peration.* ree of freedom PID" it.	Float, DWord, Long Bool Float, DWord, Long	Read/Write
atile memory is current be unresponsive for approximately 500 ms etected. urnout detected DK mperature. TC) g Pt) peration.* ree of freedom PID" it.	Float, DWord, Long Bool Float, DWord, Long	Read/Write
etected. urnout detected DK mperature. TC) g Pt) peration.* ree of freedom PID" it.	Float, DWord, Long Bool Float, DWord, Long	Read/Write
urnout detected DK mperature. TC) g Pt) peration.* ree of freedom PID"	Float, DWord, Long Bool Float, DWord, Long	Read/Write
DIK mperature. TC) g Pt) peration.* ree of freedom PID"	Bool Float, DWord, Long	Read Only
g Pt) peration.* ree of freedom PID"	Bool Float, DWord, Long	Read Only
g Pt) peration.* ree of freedom PID" it.	Float , DWord, Long	
peration.* ree of freedom PID" it.	Float , DWord, Long	
ree of freedom PID" it.	Float , DWord, Long	
t.		Read/Write
t.		Read/Write
0		
Δ		
C.	Short, Word	Read/Write
	Bool	Read Only
		Í
F s C		
ue.	Short, Word	Read/Write
lue.	Float, DWord, Long	Read/Write
TC)		
g Pt)		
y enable.*	Bool	Read Only
t d		
pe.*	Short, Word	Read Only
	Short, Word	Read Only
n the INITIALSTATUS value, refer to the image		
/	on the INITIALSTATUS value, refer to the image	Short, Word Short, Word

	L AL 1 MD		
	AL-1-MD CTR-MD		
	DSPL-UNIT		
	IN-S_DSPL		
	IN-T		
	O-TYPE		
	O-OP		
	PID-DSPL		
0	Output value.	Float, DWord, Long	Read Only
	(0.0-100.0%)	<u> </u>	
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current		
	FALSE = pulse		
O-OP	Output mode of operation.*	Bool	Read Only
	output mode of operation.	Bool	Read Only
	TRUE = normal (cooling)		
	FALSE = reverse (heating)		
Р	Proportional band set value.	Float, DWord, Long	Read/Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float , DWord, Long	Read Only
	(-999-9999 deg TC)		
	(-555-5555 deg 1C)		
	(-99.9-999.9 deg Pt)		
	(
	Note: Since hardware status information is passed back to the		
	driver with the PV value, it is important that this memory location		
	be monitored. If a hardware failure should occur (device failure,		
	heater burnout, sensor failure), it will be detected and reported		
	by the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode		
	FALSE = backup mode		
	Tribbe Backap mode		
	The driver will automatically force the device into RAM mode to		
	prevent wear on non-volatile memory. Users may backup the		
	contents of RAM by issuing a BACKUP command.		
	Note: If "Remote Mode" is not selected on the device's front		
	panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are		
	located on the front panel.		
REMOTE	Remote Mode enable.	Bool	Read Only
KENOTE	Remote Place eliable.	5001	Redu Only
	TRUE = device in Remote Mode		
	FALSE = device in Local Mode		
	The driver will not be able to write to the device unless Remote		
	Mode is selected on the device front panel.		
SL-H	Set point limit (high).**	Float, DWord, Long	Read Only
SL-L	Set point limit (low).**	Float, DWord, Long	Read Only
SP-S-IN	Set point shift input state.	Bool	Read Only
	TDUE skift soulded		
	TRUE = shift enabled FALSE = shift disabled		
	I ALOL - SHIIL UISADIEU		

	State is forced TRUE by shorting appropriate terminals on device.		
SV	Set value temperature.	Float , DWord, Long	Read/Write
	Setting range: SL-L-SL-H.		
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

INITIALSTATUS Value Format



E5CN-PT Address Description

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float , DWord, Long	Read/Write
	(100 0 000 0 1 00)		
	(-199.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float , DWord, Long	Read/Write
	(-199.9-999.9 deg Pt)		
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
BACKUP	Backup RAM to non-volatile memory.	Bool	Read/Write
	Multi- And this of the initiate banks of the second of		
	Write: Anything to initiate backup procedure.		
	Read:		
	roud.		

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

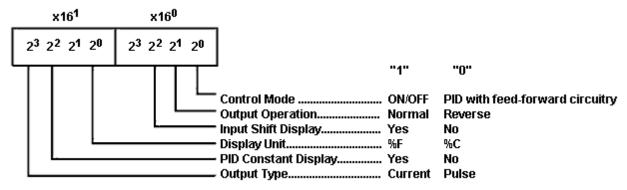
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms during backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected FALSE = heater OK		
СТ	Heater current.	Float, DWord, Long	Read Only
	(0.2-50.0 A)		
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE = "On/Off" FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
	(0-3999 s)		
DSPL-UNIT	Display unit.*	Bool	Read Only
	TRUE = degrees F FALSE = degrees C		
НВ	Heater burnout set temperature.	Float, DWord, Long	Read/Write
	(-1999-9999 deg TC)		
	(-199.9-999.9 deg Pt		
I	Reset time set value.	Short, Word	Read/Write
	(0-3999 s)		
IN-S	Input shift set value.	Float, DWord, Long	Read/Write
	(-1999-9999 deg TC)		
	(-199.9-999.9 deg Pt)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TRUE = enabled FALSE = disabled		
IN-T	Input (sensor) type.*	Short, Word	Read Only
	(0-4)		
INITIALSTATUS	Initial Status tag	Short, Word	Read Only
	For information on the INITIALSTATUS value, refer to the image below.		
	Note: The INITIALSTATUS value is read during initial device setup communications and when reading the following addresses:		
	AL-1-MD AL-2-MD		
	CTR-MD DSPL-UNIT IN-S_DSPL		
	IN-T O-TYPE O-OP		
	PID-DSPL		
0	Output value.	Float, DWord, Long	Read Only

	(0.0-100.0%)		
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current		
O-OP	FALSE = pulse Output mode of operation.*	Bool	Read Only
0-04	Output mode of operation.	BOOI	Read Only
	TRUE = normal (cooling)		
	FALSE = reverse (heating)		
Р	Proportional band set value.	Float, DWord, Long	Read/Write
	(0.0-999.9 deg)	ļ	
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
			, , , , , ,
	(-199.9-999.9 deg Pt)		
	Note: Since hardware status information is passed back to the		
	driver with the PV value, it is important that this memory location be monitored. If a hardware failure should occur (device failure,		
	heater burnout, sensor failure), it will be detected and reported		
	by the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
			,
	TRUE = RAM mode		
	FALSE = backup mode		
	The driver will automatically force the device into RAM mode to		
	prevent wear on non-volatile memory. Users may backup the con-		
	tents of RAM by issuing a BACKUP command.		
	, ·		
	Note: If "Remote Mode" is not selected on the device's front panel,		
	the driver will not be able to automatically force the device into		
	RAM mode. The RMT button and RMT status indicator are located on the front panel.		
REMOTE	Remote Mode enable.	Bool	Read Only
KLMOTL	Remote Mode enable.	BOOI	Read Offiy
	TRUE = device in Remote Mode		
	FALSE = device in Local Mode		
	The driver will not be able to write to the device unless Remote		
CLU	Mode is selected on the device front panel.	Floor DWard Lang	Dand Only
SL-H SL-L	Set point limit (high).** Set point limit (low).**	Float, DWord, Long	Read Only
SP-S-IN	Set point shift input state.	Float, DWord, Long Bool	Read Only
3F-3-1IV	Set point sinit input state.	BUUI	Read Only
	TRUE = shift enabled		
	FALSE = shift disabled		
G) /	State is forced TRUE by shorting appropriate terminals on device.		1
SV	Set value temperature.	Float, DWord, Long	Read/Write
	Setting range: SL-L-SL-H.		
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only
IVALIENT	IV II I Data LITOI	Doolcan	redu Offiy

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

**This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

INITIALSTATUS Value Format



E5CN-TC Address Description

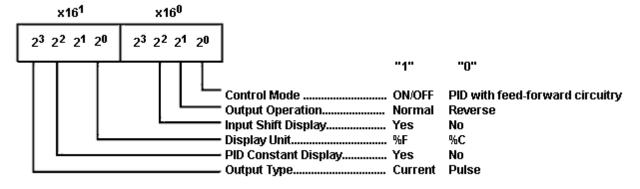
Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float, DWord, Long	Read/Write
	(-1999-9999 deg TC)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
			,
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float, DWord, Long	Read/Write
	(-1999-9999 deg TC)		
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
BACKUP	Backup RAM to non-volatile memory.	Bool	Read/Write
	Write: Anything to initiate backup procedure.		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms during backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected FALSE = heater OK		
СТ	Heater current.	Float, DWord, Long	Read Only
		, , , , , , , , ,	,
	(0.2-50.0 A)		
CTR-MD	Control mode of operation.*	Bool	Read Only

	TRUE = "On/Off" FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
	Tate time set value.		Tieda, Write
	(0-3999 s)		
DSPL-UNIT	Display unit.*	Bool	Read Only
	TRUE = degrees F		
	FALSE = degrees C		
НВ	Heater burnout set temperature.	Float , DWord, Long	Read/Write
	(-1999-9999 deg TC)		
I	Reset time set value.	Short, Word	Read/Write
	(4.500.)		
TN C	(0-3999 s)	Floor DWard Lang	Dond ///wite
IN-S	Input shift set value.	Float , DWord, Long	Read/Write
	(-1999-9999 deg TC)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
IN-T	Input (sensor) type.	Short, Word	Read Only
	(0-16)*		
INITIALSTATUS	Initial Status tag	Short, Word	Read Only
		,	<i>'</i>
	For information on the INITIALSTATUS value, refer to the image below.		
	below.		
	Note: The INITIALSTATUS value is read during initial device setup		
	communications and when reading the following addresses:		
	AL-1-MD		
	AL-2-MD		
	CTR-MD DSPL-UNIT		
	IN-S_DSPL		
	IN-T		
	O-TYPE O-OP		
	PID-DSPL		
0	Output value.	Float, DWord, Long	Read Only
	(0.0-100.0%)		
O-TYPE	Output type.*	Bool	Read Only
0			1.000 01,
	TRUE = current		
O-OP	FALSE = pulse Output mode of operation.*	Bool	Read Only
0 01	output mode of operation.	B001	Redd Offiy
	TRUE = normal (cooling)		
P	FALSE = reverse (heating) Proportional band set value.	Float DWord Long	Read/Write
	i i opoi dollai ballu set value.	Float , DWord, Long	reau/ Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
		Float , DWord, Long	

	(-1999-9999 deg TC)		
	Note: Since hardware status information is passed back to the driver with the PV value, it is important that this memory location be monitored. If a hardware failure should occur (device failure, heater burnout, sensor failure), it will be detected and reported by the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode FALSE = backup mode The driver will automatically force the device into RAM mode to prevent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command. Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the		
	front panel.		
REMOTE	Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel.	Bool	Read Only
SL-H	Set point limit (high).**	Float, DWord, Long	Read Only
SL-L	Set point limit (low).**	Float, DWord, Long	Read Only
SP-S-IN	Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device.	Bool	Read Only
SV	Set value temperature.	Float, DWord, Long	Read/Write
	Setting range: SL-L-SL-H.		
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

INITIALSTATUS Value Format



^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

E5EJ-A Address Description

The default data types are shown in $\boldsymbol{bold}.$

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float, DWord, Long	Read/Write
	(1000 0000 deg TC)*(100 0 000 0 deg Pt)		
AL-1-MD	(-1999-9999 deg TC)*(-199.9-999.9 deg Pt) Alarm 1 mode of operation.*	Short, Word	Read Only
AL I MD	Add III I mode of operation.	Siloit, Word	iteda Omy
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float , DWord, Long	Read/Write
	(-1999-9999 deg TC)		
	(-1999-9999 deg 1C)		
	(-199.9-999.9 deg Pt)		
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
			, ,
	TRUE = alarm on		
BACKUP	FALSE = alarm off Backup RAM to non-volatile memory.	Bool	Read/Write
DACKUP	Backup RAM to non-volatile memory.	BOOI	Read/ Write
	Write: Anything to initiate backup procedure		
	Read:		
	Redu.		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms dur-		
	ing backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected		
	FALSE = heater OK		
СТ	Heater current.	Float, DWord, Long	Read Only
	(0.0.50.0.1)		
CTD MD	(0.2-50.0 A)	Book	Dond Only
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE = "On/Off"		
	FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
	(0-3999 s)		
DSPL-UNIT	Display unit.*	Bool	Read Only
	TOUS		
	TRUE = degrees F FALSE = degrees C		
НВ	Heater burnout set temperature.	Float, DWord, Long	Read/Write
		2, = 11 3. 4, 233	1333, 11116
	(-1999-9999 deg TC)		
	(-199.9-999.9 deg Pt)		
I	Reset time set value.	Short, Word	Read/Write
		,	,

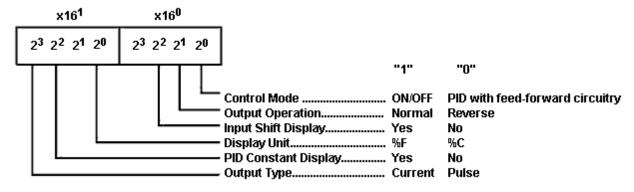
	(0-3999 s)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
IN-T	Input (sensor) type.*	Short, Word	Read Only
INITIAL CTATUC	(0-9)	Ch art Ward	Daniel Only
INTITIALSTATUS	Initial Status tag	Short, Word	Read Only
	For information on the INITIALSTATUS value, refer to the image below.		
	Note: The INITIALSTATUS value is read during initial device setup communications and when reading the following addresses:		
	AL-1-MD AL-2-MD CTR-MD DSPL-UNIT IN-S_DSPL IN-T O-TYPE		
	O-OP PID-DSPL		
0	Output value.	Float, DWord, Long	Read Only
ŭ		Trout, 5 trong, cong	ricua omy
O-TYPE	(0.0-100.0%) Output type.*	Bool	Read Only
0 1112	TRUE = current	5001	Read Only
O-OP	FALSE = pulse Output mode of operation.*	Bool	Read Only
0 01	TRUE = normal (cooling) FALSE = reverse (heating)	5001	Read Only
Р	Proportional band set value.	Float, DWord, Long	Read/Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled FALSE = disabled		7.000 5,
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
	(-1999-9999 deg TC)		
	(-199.9-999.9 deg Pt)		
	Note: Since hardware status information is passed back to the driver with the PV value, it is important that this memory location be monitored. If a hardware failure should occur (device failure, heater burnout, sensor failure), it will be detected and reported by the driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode FALSE = backup mode The driver will automatically force the device into RAM mode to		
	The driver will automatically force the device into RAM mode to prevent wear on non-volatile memory. Users may backup the contents of RAM by issuing a BACKUP command.		

	Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM mode. The RMT button and RMT status indicator are located on the front panel.		
REMOTE	Remote Mode enable. TRUE = device in Remote Mode FALSE = device in Local Mode The driver will not be able to write to the device unless Remote Mode is selected on the device front panel.	Bool	Read Only
SP-S-IN	Set point shift input state. TRUE = shift enabled FALSE = shift disabled State is forced TRUE by shorting appropriate terminals on device.	Bool	Read Only
SV	Set value temperature. Setting range: SL-L-SL-H.	Float, DWord, Long	Read/Write
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

Note: TC denotes temperature range for thermocouple sensor types. Pt denotes temperature range for platinum resistance thermometer sensor types. All stated temperature ranges are numerically equal for degrees F and C.

INITIALSTATUS Value Format



E5GN-PT Address Description

The default data types are shown in **bold**.

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float, DWord, Long	Read/Write
	(-199.9-999.9 deg Pt)		
AL-1-MD	Alarm 1 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float, DWord, Long	Read/Write

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

	(-199.9-999.9 deg Pt)		
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0.0)		
AL-2-OUT	(0-9) Alarm 2 output status.	Bool	Read Only
,	That is a compart status.		Tread only
	TRUE = alarm on		
BACKUP	FALSE = alarm off Backup RAM to non-volatile memory.	Bool	Read/Write
BACKUP	Backup RAM to non-volatile memory.	Воог	Read/ Write
	Write: Anything to initiate backup procedure		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		
	Note: Device will be unresponsive for approximately 500 ms during		
	backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected		
	FALSE = heater OK		
СТ	Heater current.	Float, DWord, Long	Read Only
	(0.2-50.0 A)		
CTR-MD	Control mode of operation.*	Bool	Read Only
	·		,
	TRUE = "On/Off" FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
	Take time see value.	January Word	Tready Write
DOD! LINET	(0-3999 s)	<u> </u>	
DSPL-UNIT	Display unit.*	Bool	Read Only
	TRUE = degrees F		
	FALSE = degrees C		
НВ	Heater burnout set temperature.	Float, DWord, Long	Read/Write
	(-199.9-999.9 deg Pt		
I	Reset time set value.	Short, Word	Read/Write
	(0-3999 s)		
IN-S	Input shift set value.	Float, DWord, Long	Read/Write
		110 ut , 2110iu, 2011g	1.000,
	(-199.9-999.9 deg Pt)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
IN-T	Input (sensor) type.*	Short, Word	Read Only
	(0-4)		
INITIALSTATUS		Short, Word	Read Only
	For information on the INITIALSTATUS value, refer to the image		
	below.		
	Note: The INITIALSTATUS value is read during initial device setup		
	communications and when reading the following addresses:		
	communications and when reading the ronowing addresses.		
	AL-1-MD		

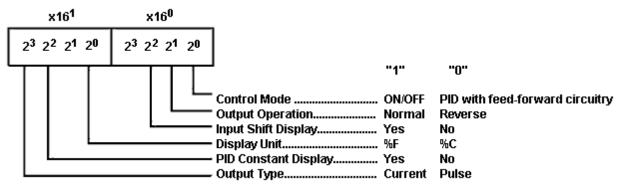
	AL 2 MD	1	
	AL-2-MD		
	CTR-MD DSPL-UNIT		
	IN-S DSPL		
	IN-T		
	O-TYPE		
	0-OP		
	PID-DSPL		
0	Output value.	Float, DWord, Long	Read Only
	(0.0-100.0%)		
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current		
	FALSE = pulse		
O-OP	Output mode of operation.*	Bool	Read Only
	TRUE = normal (cooling) FALSE = reverse (heating)		
P	Proportional band set value.	Float, DWord, Long	Read/Write
	4		
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
	(-199.9-999.9 deg Pt)		
	Note: Since hardware status information is passed back to the		
	driver with the PV value, it is important that this memory location be		
	monitored. If a hardware failure should occur (device failure, heater		
	burnout, sensor failure), it will be detected and reported by the		
	driver only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TDUE - DAM mode		
	TRUE = RAM mode FALSE = backup mode		
	TALSE - Buckup Houce		
	The driver will automatically force the device into RAM mode to pre-		
	vent wear on non-volatile memory. Users may backup the contents		
	of RAM by issuing a BACKUP command.		
	Note: If "Demote Mede" is not selected on the device's front nanel		
	Note: If "Remote Mode" is not selected on the device's front panel, the driver will not be able to automatically force the device into RAM		
	mode. The RMT button and RMT status indicator are located on the		
	front panel.		
REMOTE	Remote Mode enable.	Bool	Read Only
	TRUE = device in Remote Mode		
	FALSE = device in Local Mode		
	The driver will not be able to write to the device unless Remote		
	Mode is selected on the device front panel.		
SL-H	Set point limit (high).**	Float, DWord, Long	Read Only
SL-L	Set point limit (low).**	Float, DWord, Long	Read Only
SP-S-IN	Set point shift input state.	Bool	Read Only
	TRUE = shift enabled		
	FALSE = shift disabled		
	State is forced TRUE by shorting appropriate terminals on device.		

SV	Set value temperature.	Float, DWord, Long	Read/Write
	Setting range: SL-L-SL-H.		
ADCERR	A/D Converter Error/Failure	Boolean	Read Only
SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only
RAMERR	RAM Data Error	Boolean	Read Only

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

Note: TC denotes temperature range for thermocouple sensor types. Pt denotes temperature range for platinum resistance thermometer sensor types. All stated temperature ranges are numerically equal for degrees F and C.

INITIALSTATUS Value Format



E5GN-TC Address Description

The default data types are shown in **bold**.

Mnemonic	Description	Data Type	Access
AL-1	Alarm 1 set temperature.	Float, DWord, Long	Read/Write
	(1000 0000 des TC)		
	(-1999-9999 deg TC)	120 - 111	
AL-1-MD	Alarm 1 mode of operation.*	Short , Word	Read Only
	(0-9)		
AL-1-OUT	Alarm 1 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off		
AL-2	Alarm 2 set temperature.	Float, DWord, Long	Read/Write
	(-1999-9999 deg TC)		
AL-2-MD	Alarm 2 mode of operation.*	Short, Word	Read Only
	(0-9)		
AL-2-OUT	Alarm 2 output status.	Bool	Read Only
	TRUE = alarm on		
	FALSE = alarm off	-	
BACKUP	Backup RAM to non-volatile memory.	Bool	Read/Write
	Write: Anything to initiate backup procedure		
	Read:		
	TRUE = non-volatile memory is not current		
	FALSE = non-volatile memory is current		

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.

	Note: Device will be unresponsive for approximately 500 ms during		
	backup.		
BURNOUT	Heater burnout detected.	Bool	Read Only
	TRUE = heater burnout detected		
	FALSE = heater OK		
СТ	Heater current.	Float, DWord, Long	Read Only
			,
	(0.2-50.0 A)		
CTR-MD	Control mode of operation.*	Bool	Read Only
	TRUE = "On/Off"		
	FALSE = "2-degree of freedom PID"		
D	Rate time set value.	Short, Word	Read/Write
	(0.0000.)		
DCDL LINIT	(0-3999 s) Display unit.*	Bool	Dood Only
DSPL-UNIT	Display unit.**	BOOI	Read Only
	TRUE = degrees F		
	FALSE = degrees C		
НВ	Heater burnout set temperature.	Float , DWord, Long	Read/Write
	(-1999-9999 deg TC)		
I	Reset time set value.	Short, Word	Read/Write
•	reset time set value.	Short, Word	reddy Write
	(0-3999 s)		
IN-S	Input shift set value.	Float , DWord, Long	Read/Write
	(-1999-9999 deg TC)		
IN-S_DSPL	Input shift display enable.*	Bool	Read Only
111 0_001 2	anpaconine display chaster		ricad omy
	TRUE = enabled		
	FALSE = disabled		
IN-T	Input (sensor) type.	Short , Word	Read Only
	(0-16)*		
INITIALSTATUS	Initial Status tag	Short, Word	Read Only
	For information on the INITIALSTATUS value, refer to the image below.		
	below.		
	Note: The INITIALSTATUS value is read during initial device setup		
	communications and when reading the following addresses:		
	AL-1-MD		
	AL-2-MD		
	CTR-MD		
	DSPL-UNIT		
	IN-S_DSPL IN-T		
	O-TYPE		
	O-OP		
	PID-DSPL	FI DW 11	D10 1
0	Output value.	Float, DWord, Long	Read Only
	(0.0-100.0%)		
O-TYPE	Output type.*	Bool	Read Only
	TRUE = current		
O-OP	FALSE = pulse Output mode of operation.*	Bool	Read Only
	output mode of operation.	500.	redu Only
	TRUE = normal (cooling)		

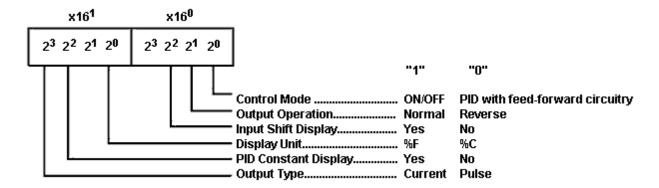
	FALSE = reverse (heating)		
Р	Proportional band set value.	Float, DWord, Long	Read/Write
	(0.0-999.9 deg)		
PID-DSPL	PID display enable.*	Bool	Read Only
	TRUE = enabled		
	FALSE = disabled		
PV	Process value (measured temperature).	Float, DWord, Long	Read Only
			Í
	(-1999-9999 deg TC)		
	Note: Since hardware status information is passed back to the driver		
	Note: Since hardware status information is passed back to the driver with the PV value, it is important that this memory location be mon-		
	itored. If a hardware failure should occur (device failure, heater burn-		
	out, sensor failure), it will be detected and reported by the driver		
	only during a PV read operation.		
RAM-MD	RAM mode enable.	Bool	Read Only
	TRUE = RAM mode		
	FALSE = backup mode		
	These - suckup mode		
	The driver will automatically force the device into RAM mode to pre-		
	vent wear on non-volatile memory. Users may backup the contents of		
	RAM by issuing a BACKUP command.		
	Note: If "Remote Mode" is not selected on the device's front panel,		
	the driver will not be able to automatically force the device into RAM		
	mode. The RMT button and RMT status indicator are located on the		
	front panel.		
REMOTE	Remote Mode enable.	Bool	Read Only
	TDUE device in Demote Mede		
	TRUE = device in Remote Mode FALSE = device in Local Mode		
	TALSE - device in Escal Flode		
	The driver will not be able to write to the device unless Remote Mode		
	is selected on the device front panel.		
SL-H	Set point limit (high).**	Float , DWord, Long	Read Only
SL-L	Set point limit (low).**	Float , DWord, Long	Read Only
SP-S-IN	Set point shift input state.	Bool	Read Only
	TRUE = shift enabled		
	FALSE = shift disabled		
	State is forced TRUE by shorting appropriate terminals on device.		
SV	Set value temperature.	Float , DWord, Long	Read/Write
	Softing ranger SL L SL H		
ADCERR	Setting range: SL-L-SL-H. A/D Converter Error/Failure	Boolean	Road Only
ADCERR SENSERR	Abnormal Input/Sensor Error	Boolean	Read Only Read Only
RAMERR	RAM Data Error	Boolean	Read Only
NAMERK	ויואיז Data בוו טו	Doolean	Read Offiy

^{*}This is a hardware setting. For more information, refer to the device's help documentation.

Note: TC denotes temperature range for thermocouple sensor types. Pt denotes temperature range for platinum resistance thermometer sensor types. All stated temperature ranges are numerically equal for degrees F and C.

INITIALSTATUS Value Format

^{**}This value must be set on device front panel. For information on the valid ranges, refer to the device's help documentation.



Error Descriptions

The following error/warning messages may be generated. Click on the link for a description of the message.

Address Validation

Missing address

Device address '<address>' contains a syntax error

Address '<address>' is out of range for the specified device or register

Device address '<address>' is not supported by model '<model name>'

Data Type '<type>' is not valid for device address '<address>'

Device address '<address>' is Read Only

Serial Communications

COMn does not exist

Error opening COMn

COMn is in use by another application

Unable to set comm parameters on COMn

Communications error on '<channel name>' [<error mask>]

Device Status Messages

Device '<device name>' is not responding

Unable to write to '<address>' on device '<device name>'

Omron Process Suite Messages

Bad address in block [<start address> to <end address>] on device '<device name>'

COMMUNICATIONS ERROR (device in Local Mode or auto tuning) - <device name>.<address>

COMMUNICATIONS ERROR (parity) - <device name>.<address>

COMMUNICATIONS ERROR (framing) - <device name>.<address>

COMMUNICATIONS ERROR (register overrun) - <device name>.<address>

COMMUNICATIONS ERROR (check sum) - <device name>.<address>

COMMUNICATIONS ERROR (format) - <device name>.<address>

COMMUNICATIONS ERROR (device rejected data) - <device name>.<address>

DEVICE ERROR - Overflow error - <device name>.<address>

DEVICE ERROR - Underflow error - <device name>.<address>

DEVICE ERROR - RAM data error - <device name>.<address>

DEVICE ERROR - A to D converter error - <device name>.<address>

DEVICE ERROR - Sensor error - <device name>.<address>

Address Validation

The following error/warning messages may be generated. Click on the link for a description of the message.

Address Validation

Missing address

Device address '<address>' contains a syntax error

Address '<address>' is out of range for the specified device or register

Device address '<address>' is not supported by model '<model name>'

Data Type '<type>' is not valid for device address '<address>'

Device address '<address>' is Read Only

Missing address

Error Type:

Warning

Possible Cause:

A tag address that has been specified statically has no length.

Solution:

Re-enter the address in the client application.

Device address '<address>' contains a syntax error

Error Type:

Warning

Possible Cause:

A tag address that has been specified statically contains one or more invalid characters.

Solution:

Re-enter the address in the client application.

Address '<address>' is out of range for the specified device or register

Error Type:

Warning

Possible Cause:

A tag address that has been specified statically references a location that is beyond the range of supported locations for the device.

Solution:

Verify that the address is correct; if it is not, re-enter it in the client application.

Device address '<address>' is not supported by model '<model name>'

Error Type:

Warning

Possible Cause:

A tag address that has been specified statically references a location that is valid for the communications protocol but not supported by the target device.

Solution:

Verify that the address is correct; if it is not, re-enter it in the client application. Also verify that the selected model name for the device is correct.

Data Type '<type>' is not valid for device address '<address>'

Error Type:

Warning

Possible Cause:

A tag address that has been specified statically has been assigned an invalid data type.

Solution:

Modify the requested data type in the client application.

Device address '<address>' is Read Only

Error Type:

Warning

Possible Cause:

A tag address that has been specified statically has a requested access mode that is not compatible with what the device supports for that address.

Solution:

Change the access mode in the client application.

Serial Communications

The following error/warning messages may be generated. Click on the link for a description of the message.

Serial Communications

COMn does not exist

Error opening COMn

COMn is in use by another application

Unable to set comm parameters on COMn

Communications error on '<channel name>' [<error mask>]

COMn does not exist

Error Type:

Fatal

Possible Cause:

The specified COM port is not present on the target computer.

Solution:

Verify that the proper COM port has been selected in the Channel Properties.

Error opening COMn

Error Type:

Fatal

Possible Cause:

The specified COM port could not be opened due to an internal hardware or software problem on the target computer.

Solution:

Verify that the COM port is functional and may be accessed by other Windows applications.

COMn is in use by another application

Error Type:

Fatal

Possible Cause:

The serial port assigned to a channel is being used by another application.

Solution:

- 1. Verify that the correct port has been assigned to the channel.
- 2. Close the other application that is using the requested COM port.

Unable to set comm parameters on COMn

Error Type:

Fatal

Possible Cause:

The serial parameters for the specified COM port are not valid.

Solution:

Verify the serial parameters and make any necessary changes.

Communications error on '<channel name>' [<error mask>]

Error Type:

Warning

Error Mask Definitions:

B = Hardware break detected.

 $\mathbf{F} = \text{Framing error.}$

 $\mathbf{E} = I/O$ error.

O = Character buffer overrun.

 $\mathbf{R} = \mathsf{RX}$ buffer overrun.

P = Received byte parity error.

T = TX buffer full.

Possible Cause:

- 1. The serial connection between the device and the Host PC is bad.
- 2. The communication parameters for the serial connection are incorrect.
- 3. There is a noise source disrupting communications somewhere in the cabling path between the PC and the device.

Solution:

- 1. Verify the cabling between the PC and the device.
- 2. Verify that the specified communication parameters match those of the device.
- 3. Reroute cabling to avoid sources of electrical interference such as motors, generators or high voltage lines.

Device Status Messages

The following error/warning messages may be generated. Click on the link for a description of the message.

Device Status Messages

<u>Device '<device name>' is not responding</u> Unable to write to '<address>' on device '<device name>'

Device '<device name>' is not responding

Error Type:

Serious

Possible Cause:

- 1. The serial connection between the device and the Host PC is broken.
- 2. The communication parameters for the serial connection are incorrect.
- 3. The named device may have been assigned an incorrect Network ID.
- 4. The response from the device took longer to receive than the amount of time specified in the "Request Timeout" device setting.

Solution:

- 1. Verify the cabling between the PC and the device.
- 2. Verify that the specified communication parameters match those of the device.
- 3. Verify that the Network ID given to the named device matches that of the actual device.
- 4. Increase the Request Timeout setting so that the entire response can be handled.

Unable to write to '<address>' on device '<device name>'

Error Type:

Serious

Possible Cause:

- 1. The serial connection between the device and the Host PC is broken.
- 2. The communication parameters for the serial connection are incorrect.
- 3. The named device may have been assigned an incorrect Network ID.

Solution:

- 1. Verify the cabling between the PC and the device.
- 2. Verify that the specified communication parameters match those of the device.
- 3. Verify that the Network ID given to the named device matches that of the actual device.

Omron Process Suite Messages

The following error/warning messages may be generated. Click on the link for a description of the message.

Omron Process Suite Messages

Bad address in block [<start address> to <end address>] on device '<device name>'

COMMUNICATIONS ERROR (device in Local Mode or auto tuning) - <device name>.<address>

COMMUNICATIONS ERROR (parity) - <device name>.<address>

COMMUNICATIONS ERROR (framing) - <device name>.<address>

COMMUNICATIONS ERROR (register overrun) - <device name>.<address>

COMMUNICATIONS ERROR (check sum) - <device name>.<address>

COMMUNICATIONS ERROR (format) - <device name>.<address>

COMMUNICATIONS ERROR (device rejected data) - <device name>.<address>

DEVICE ERROR - Overflow error - <device name>.<address>

DEVICE ERROR - Underflow error - <device name>.<address>

DEVICE ERROR - RAM data error - <device name>.<address>

DEVICE ERROR - A to D converter error - <device name>.<address>

DEVICE ERROR - Sensor error - <device name>.<address>

Bad address in block [<start address> to <end address>] on device '<device name>'

Error Type:

Serious

Possible Cause:

An attempt has been made to reference a nonexistent location in the specified device.

Solution:

Verify that the tags assigned to addresses in the specified range on the device are valid. Eliminate ones that reference invalid locations.

COMMUNICATIONS ERROR (device in Local Mode or auto tuning) - <device name>.<address>

Error Type:

Warning

Possible Cause:

An attempt was made to write to the device while it is in Local Mode (or is auto tuning).

Solution:

- 1. If the device is in Local Mode, switch it to Remote Mode from the front panel.
- 2. If the device is auto tuning, either wait for the procedure to complete automatically or terminate it. Auto tuning can be terminated from the device front panel or remotely by issuing a write AT=FALSE command.

COMMUNICATIONS ERROR (parity) - <device name>.<address>

Error Type:

Warning

Possible Cause:

The device received a frame of information containing an incorrect parity bit. This means that there is either noise in the cabling or faulty connections.

Solution:

Make sure that cables are properly shielded and that maximum length has not been exceeded (15 m for RS-232C, 500 m for RS-485). Make sure that cables and connectors are electrically sound.

COMMUNICATIONS ERROR (framing) - <device name>.<address>

Error Type:

Warning

Possible Cause:

The device received a frame of information with a stop bit of "0". This means that there is either noise in the cabling or faulty connections.

Solution:

Make sure that cables are properly shielded and that maximum length has not been exceeded (15 m for RS-232C, 500 m for RS-485). Make sure that cables and connectors are electrically sound.

COMMUNICATIONS ERROR (register overrun) - <device name>.<address>

Error Type:

Warning

Possible Cause:

An attempt was made to send new data to the device when its receive data register is already full.

Solution:

Re-enter the data.

COMMUNICATIONS ERROR (check sum) - <device name>.<address>

Error Type:

Warning

Possible Cause:

The frame check sequence is in error. This means that there is either noise in the cabling or faulty connections.

Solution:

Make sure that cables are properly shielded and that maximum length has not been exceeded (15 m for RS-232C, 500 m for RS-485). Make sure that cables and connectors are electrically sound.

COMMUNICATIONS ERROR (format) - <device name>.<address>

Error Type:

Warning

Possible Cause:

The device received a frame of information that is of the wrong length. This means that there is either noise in the cabling or faulty connections.

Solution:

Make sure that cables are properly shielded and that maximum length has not been exceeded (15 m for RS-232C, 500 m for RS-485). Make sure that cables and connectors are electrically sound.

COMMUNICATIONS ERROR (device rejected data) - <device name>.<address>

Error Type:

Warning

Possible Cause:

Invalid data has been sent to the device. The device will reject all data it does not recognize as valid, leaving the contents of the memory location unchanged.

Solution:

Make sure the value that will be written makes sense for the memory location. Re-enter the correct value. For example, the device would reject a write request for SV=100 if SL-H=50 had been previously set since SV must be less than SL-H.

DEVICE ERROR - Overflow error - <device name>.<address>

Error Type:

Warning

Possible Cause:

- 1. Sensor failure.
- 2. The temperature being measured is higher than the upper limit of the device, or its shifted value is beyond the range of the device display.

Solution:

- 1. Check the sensor connection and replace the sensor if needed.
- 2. Consider changing the input shift value or employing other hardware that would be more suitable for the application.

DEVICE ERROR - Underflow error - <device name>.<address>

Error Type:

Warning

Possible Cause:

The temperature being measured is lower than the lower limit of the device, or its shifted value is beyond the range of the device display.

Solution:

If the problem is persistent, consider changing the input shift value or employing other hardware that would be more suitable for the application.

DEVICE ERROR - RAM data error - <device name>.<address>

Error Type:

Serious

Possible Cause

There was an error in writing to RAM.

Solution:

Re-enter the data. If the problem persists, repair the device.

DEVICE ERROR - A to D converter error - <device name>.<address>

Error Type:

Serious

Possible Cause:

The device detected an analog to digital converter failure.

Solution:

Repair the device.

DEVICE ERROR - Sensor error - <device name>.<address>

Error Type:

Serious

Possible Cause:

The device has detected a sensor failure.

Solution:

Ensure that the sensor is in working order and is connected to the device properly.

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