

# Application Note 7:

## Honeywell X-Series Recorder Troubleshooting Error Messages

### QX, SX and QXe Recorders

#### Message Type – Diagnostic

Error Message	Code	LED Flash code	Description/Cause	Type
Cannot read board hardware identity	0	1,1	An invalid/unsupported I/O card has been identified. Error reading board ID (type) - invalid board type configuration	Diagnostics Message
Incompatible hardware ID	0	1,1	The number of channels reported by I/O board was invalid. Error reading board ID (type) can't determine how many channels	Diagnostics Message
Incompatible hardware ID	1	1,1	An invalid/unsupported I/O card has been identified Invalid board type (setting up working variables)	Diagnostics Message
Incompatible hardware ID	2	1,1	An invalid/unsupported I/O card has been identified Invalid board type (getting board capability)	Diagnostics Message
Incompatible hardware ID	3	1,1	An invalid/unsupported I/O card has been identified. Invalid board type (AcqTimer_OnInterrupt)	Diagnostics Message
Incompatible hardware ID	4	1,1	An invalid/unsupported I/O card has been identified. Invalid board type on board initialisation	Diagnostics Message
Incompatible hardware ID	5	1,1	An invalid/unsupported I/O card has been identified whilst reading life stats. Invalid board type when reading stats	Diagnostics Message
Incompatible hardware ID	6	1,1	An invalid/unsupported I/O card has been identified whilst resetting life stats. Invalid board type resetting Life stats	Diagnostics Message
Incompatible hardware ID	7	1,1	An invalid/unsupported I/O card has been identified Invalid board type resetting Session stats.	Diagnostics Message
Incompatible hardware ID	8	1,1	An invalid/unsupported I/O card has been identified. Invalid board type finding history size	Diagnostics Message
Incompatible hardware ID	9	1,1	An invalid/unsupported I/O card has been identified whilst getting life history. Invalid board type getting life history	Diagnostics Message
Incompatible hardware ID	10	1,1	An invalid/unsupported I/O card has been identified whilst getting session history.	Diagnostics Message
Incompatible hardware ID	11	1,1	An invalid/unsupported I/O card has been identified during writing life stats operation.	Diagnostics Message
Incompatible hardware ID	12	1,1	An invalid/unsupported I/O card has been identified whilst in diagnostic mode. Invalid board type writing FieldPortDiagOutput	Diagnostics Message
Unable to read board revision	0	1,1	Invalid or unsupported board revision for I/O board firmware. Error reading board revision: conversion request or reading value	Diagnostics Message
Invalid board revision	0	1,1	Invalid or unsupported board revision for I/O board firmware. Error reading board revision: value read was not recognised	Diagnostics Message

Error Message	Code	LED Flash code	Description/Cause	Type
Unable to read valid configuration from E2	N/A	N/A	Could not read a valid I/O board configuration	Diagnostics Message
Unable to read history/stats from E2	0	3,3	Could not read history or stats information from I/O card. Error reading board statistics.	Diagnostics Message
H/W error prevents execution of command	0	1,1	AI board could not be initialized; suspect AI board. Failed to set acquisition interrupt timer, AI board	Diagnostics Message
H/W error prevents execution of command	0	1,1	AI board could not be initialized; suspect AI board. Failed to set acquisition interrupt timer, AI board	Diagnostics Message
H/W error prevents execution of command	1	1,1	PI board could not be initialized; suspect pulse board. Failed to set acquisition interrupt timer, PI board	Diagnostics Message
H/W error prevents execution of command	2	1,1	DIO/AR board could not be initialized; suspect I/O board. Failed to set acquisition interrupt timer, DIO/AR boards	Diagnostics Message
H/W error prevents execution of command	3	1,1	AO board could not be initialized; suspect AO board. Failed to set acquisition interrupt timer, AO board	Diagnostics Message
H/W error prevents execution of command	4	1,1	Internal I/O card failure. Triggered Clock Monitor Failure	Diagnostics Message
Function code received unknown	N/A	N/A	I/O card did not recognize the command sent to it.	Diagnostics Message
The 2 fn code bytes failed validation test	N/A	N/A	I/O card did not recognize the command sent to it because the code and inverse code were different.	Diagnostics Message
Slave still processing previous message	0	2,2	I/O board communications error. Character received from SPI when host should be waiting	Diagnostics Message
Slave still processing previous message	1	2,2	I/O board field port/diagnostic communications error. Character received from FieldPort before ready for next command	Diagnostics Message
Cannot execute this command in present state	N/A	N/A	The command could not currently be executed, because the I/O card is in the wrong state to accept the command.	Diagnostics Message
Wrong number of arguments for this message	N/A	N/A	The message sent to the I/O card was invalid: it had the wrong number of arguments	Diagnostics Message
Arguments of the message were invalid	0	4,4	AI board could not be initialized; suspect AI board. Invalid frequency sent to SetAcqFreq	Diagnostics Message
Arguments of the message were invalid	1	4,4	AI board could not be initialized; suspect AI board. Invalid frequency sent to GetAcqFreq	Diagnostics Message
Arguments of the message were invalid	2	4,4	DIO board could not be initialized; suspect I/O board. Invalid mode sent to FlagIntPulseChan	Diagnostics Message
Arguments of the message were invalid	3	4,4	Illegal channel number requested in message. Invalid channel number sent to SetAcqTimerFreq	Diagnostics Message
Arguments of the message were invalid	4	4,4	Configuration change message can not change to raw mode acquisition. Attempted to set raw mode via configuration change use SetRawMode	Diagnostics Message
Arguments of the message were invalid	5	4,4	Active burnout was selected on a channel configured as a RT. Attempted to set active burnout with RT input	Diagnostics Message
The message had an invalid CRC	N/A	N/A	The message sent to the I/O does not match its CRC.	Diagnostics Message
The message was incomplete	N/A	N/A	A incomplete message was detected by the I/O card	Diagnostics Message
The configuration operation was not successful	N/A	N/A	General failure of an operation that queried or changed configuration	Diagnostics Message

Error Message	Code	LED Flash code	Description/Cause	Type
Unable to identify firmware version number	N/A	N/A	Unable to determine the firmware revision number, so some functions may not operate correctly	Diagnostics Message
Unable to identify firmware build number	N/A	N/A	Unable to determine the firmware build number.	Diagnostics Message
Unable to identify the firmware serial number	N/A	N/A	Unable to determine the firmware serial number.	Diagnostics Message
Unable to identify the board's GUID	N/A	N/A	Unable to determine the firmware revision number given when first ATE tested.	Diagnostics Message
Unable to identify the life history	N/A	N/A	The life history is not available from card.	Diagnostics Message
Failure writing output value	0	1,1	There was an error setting the specified AO channel output value. Note that subsequent writes may succeed. Problem writing AO value detected: first attempt to send failed.	Diagnostics Message
Failure writing output value	1	1,1	There was an error setting the specified AO channel output value (on the second occasion). Note that subsequent writes may succeed. Problem writing AO value detected: second attempt also failed.	Diagnostics Message
Failure writing output value	2	1,1	There was an error setting the specified AO channel output value because the last selected channel was not deselected first. Problem writing AO value detected: last channel wasn't deselected	Diagnostics Message
Failure writing output value	3	1,1	Failed to set the identified AI channel correctly for acquisition in ChangeRange command. Failed writing AI ADC values	Diagnostics Message
Failure writing output value	4	1,1	Failed to set the identified AI channel correctly for acquisition in ChangeAcqFreq command. Failed writing AI ADC values	Diagnostics Message
Failure writing output value	5	1,1	Failed to set the identified AI channel correctly for acquisition in SetMainsF command. Failed writing AI ADC values	Diagnostics Message
Failure writing output value	6	1,1	Failed to set the identified AI channel correctly for acquisition (attempting restore in ChangeAcqFreq).	Diagnostics Message
Failure writing output value	7	1,1	Failed to set the identified AI channel correctly for acquisition (attempting restore in ChangeRange).	Diagnostics Message
Failure writing output value	8	1,1	Failed to set the identified AI channel correctly for acquisition in WriteAIConfig command. Failed writing AI ADC values	Diagnostics Message
Failure writing output value	9	1,1	Failed to set the identified AI channel correctly for acquisition in WriteAIChanConfig command. Failed writing AI ADC values	Diagnostics Message
Failure writing output value	10	1,1	Failed to set the identified AI channel correctly for acquisition in SetActiveBurnout command. Failed writing AI ADC values	Diagnostics Message
Failure writing output value	11	1,1	Cannot turn ohms measurement current off; suspect AI board. Failed writing AI ADC values in TurnRTCurrOff command	Diagnostics Message
An error has occurred during calibration	N/A	N/A	An error has occurred during factory or user calibration.	Diagnostics Message
Unable to return all or part of cal - may be corrupt	N/A	N/A	Some or all of the calibration data was corrupt, so none could be returned	Diagnostics Message
Error during I/O board startup	N/A	N/A	An error occurred during I/O card startup	Diagnostics Message

Error Message	Code	LED Flash code	Description/Cause	Type
The reply message larger than buffer	N/A	N/A	The I/O card reply was longer than allowed and so overflowed the buffer.	Diagnostics Message
Unable to read configuration	0	3,3	General error; one or more values could not be read from the EEPROM. Error reading long value from EEPROM	Diagnostics Message
Unable to read configuration	1	3,3	The stored AI configuration could not be read on power-up. Error reading AI configuration from EEPROM on power-up	Diagnostics Message
Unable to read configuration	2	3,3	The stored AO configuration could not be read on power-up. Error reading AO configuration from EEPROM on power-up	Diagnostics Message
Unable to read configuration	3	3,3	The stored digital/pulse configuration could not be read on power-up. Error reading DIG configuration from EEPROM on power-up	Diagnostics Message
Unable to write configuration	0	3,3	The default board configuration could not be written on power-up. Error writing Board Setup to EEPROM on power-up	Diagnostics Message
Unable to write configuration	1	3,3	The AI configuration could not be written to EEPROM on configuration change. Error writing AI configuration to EEPROM	Diagnostics Message
Unable to write configuration	2	3,3	The AO configuration could not be written to EEPROM on configuration change. Error writing AO configuration to EEPROM	Diagnostics Message
Unable to write configuration	3	3,3	The digital configuration could not be written to EEPROM on configuration change. Error writing DIG configuration to EEPROM	Diagnostics Message
Unable to write configuration	4	3,3	The AI configuration could not be written on configuration change. Error writing AI configuration to EEPROM	Diagnostics Message
Unable to write configuration	5	3,3	The AO configuration could not be written on configuration change. Error writing AO configuration to EEPROM	Diagnostics Message
Unable to write configuration	6	3,3	The digital/pulse configuration could not be written on configuration change. Error writing DIG configuration to EEPROM	Diagnostics Message
Unable to write configuration	7	3,3	The AI configuration could not be written on configuration change after ChangeRange command. Error writing AI configuration to EEPROM	Diagnostics Message
Unable to write configuration	8	3,3	The AI configuration could not be written on configuration change after ChangeAcqFreq command. Error writing AI configuration to EEPROM	Diagnostics Message
Unable to write configuration	9	3,3	The AI configuration could not be written on configuration change after SetDiagInterval command. Error writing AI setup to EEPROM	Diagnostics Message
Unable to write configuration	10	3,3	The AI configuration could not be written on configuration change after SetBdTestData command. Error writing AI setup to EEPROM	Diagnostics Message
Unable to write configuration	11	3,3	The AI configuration could not be written on configuration change after SetBdGuid command. Error writing AI setup to EEPROM	Diagnostics Message
Unable to write configuration	12	3,3	The AI configuration could not be written on configuration change after WrAIConfig command. Error writing AI configuration to EEPROM	Diagnostics Message
Unable to write configuration	13	3,3	The AI configuration could not be written on configuration change after WrAIChanConfig command. Error writing AI configuration to EEPROM	Diagnostics Message
Unable to write configuration	14	3,3	The AI configuration could not be written on configuration change after WrBoardSetup command. Error writing AI setup to EEPROM	Diagnostics Message
Unable to write configuration	15	3,3	The AI configuration could not be written on configuration change after SetMainsF command Error writing AI setup to EEPROM	Diagnostics Message

Error Message	Code	LED Flash code	Description/Cause	Type
Unable to write configuration	16	3,3	The digital configuration could not be written on configuration change after WrDigConfig command. Error writing DIG Cfg to EEPROM	Diagnostics Message
Unable to write configuration	17	3,3	The AO configuration could not be written on configuration change after WrAOConfig command. Error writing AO Cfg to EEPROM	Diagnostics Message
Unable to write configuration	18	3,3	The AI configuration could not be written on configuration change after SetActiveBurnout command. Error writing AI Cfg to EEPROM	Diagnostics Message
Watchdog timer timed out	0	4,4	COP I/O Watchdog timer timeout; I/O board has failed. COP Failure was triggered	Diagnostics Message
Error reading NV (EEPROM)	0	3,3	The I/O board serial number could not be identified by the I/O firmware. Error reading Board ID(serial number): couldn't read EEPROM	Diagnostics Message
Error reading NV (EEPROM)	1	3,3	I/O board setup information could not be read. Error reading Board Setup: couldn't read EEPROM	Diagnostics Message
Error reading NV (EEPROM)	2	3,3	The AI card calibration history could not be read on power-up. Error reading AI calibration history from EE on power-up	Diagnostics Message
Error reading NV (EEPROM)	3	3,3	The AO card calibration history could not be read on power-up. Error reading AO calibration from EEPROM on power-up	Diagnostics Message
Error reading NV (EEPROM)	4	3,3	The AO card calibration history could not be read. Error reading AO calibration history from EEPROM	Diagnostics Message
Error reading NV (EEPROM)	5	3,3	I/O board could not correctly determine whether this is the first time this board has been powered up, so could not default the values. Error reading FirstPower-up signature from EEPROM	Diagnostics Message
Error reading NV (EEPROM)	6	3,3	Could not read the initial resistance held for active burnout. Error reading Initial loop resistance from EEPROM	Diagnostics Message
Error reading NV (EEPROM)	7	3,3	Could not read the current resistance held for active burnout. Error reading Current loop resistance from EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	0	3,3	General error writing persistent data (EEWriteLong). Error writing data to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	1	3,3	I/O board has completed first-time power-up defaulting; however could not log the fact. Error writing FirstPower-up signature to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	2	3,3	Life stats could not be persisted on I/O card. Error writing to Life Stats in EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	3	3,3	Board stats could not be persisted on AI card. Error writing to AI Board Stats in EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	4	3,3	Board calibration could not be persisted on AI card (ReadDefaultAICal). Error writing AI calibration to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	5	3,3	Board calibration history could not be persisted on AI card (MakeEmptyAICalHist). Error writing AI calibration history to EE	Diagnostics Message
Error writing to NV (EEPROM)	6	3,3	Board calibration history could not be persisted on AI card. Error writing AI calibration history to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	7	3,3	Board stats could not be persisted on AO card. Error writing to AO Board Stats in EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	8	3,3	Board calibration could not be persisted on AO card (ReadDefaultAOCal). Error writing AO calibration data to EE	Diagnostics Message
Error writing to NV (EEPROM)	9	3,3	Board calibration could not be persisted on AO card (MakeEmptyAOCalHist). Error writing AO calibration history to EE	Diagnostics Message

Error Message	Code	LED Flash code	Description/Cause	Type
Error writing to NV (EEPROM)	10	3,3	Board calibration history could not be persisted on AO card. Error writing AO calibration history to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	11	3,3	Board stats could not be persisted on digital I/O card. Error writing to DIO Board Stats in EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	12	3,3	Board stats could not be persisted on alarm card Error writing to AR Board Stats in EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	13	3,3	Board stats could not be persisted on pulse card Error writing to PI Board Stats in EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	14	3,3	The I/O board serial number could not be saved Error writing Board ID to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	15	3,3	The I/O board calibration information could not be saved. Error writing Board Calibration to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	16	3,3	The I/O board stats information could not be saved. Error writing Stats to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	17	3,3	The AO board calibration information could not be saved. Error writing AO Cal values to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	18	3,3	The AO board calibration defaults could not be saved. Error writing defaults to AO cal history in EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	19	3,3	Could not write the initial resistance held for active burnout. Error writing AI loop resistance to EEPROM at start-up	Diagnostics Message
Error writing to NV (EEPROM)	20	3,3	Could not write the current resistance held for active burnout. Error writing AI Current loop resistance to EEPROM	Diagnostics Message
Error writing to NV (EEPROM)	21	3,3	Could not write the initial resistance held for active burnout. Error writing AI Initial loop resistance to EEPROM	Diagnostics Message
No board serial number on power-up	0	3,3	The I/O board serial number could not be confirmed as correct. Error reading Board ID(serial number): failed CRC check	Diagnostics Message
CRC error on reading setup from NV memory (EEPROM)	1	3,3	The setup file stored on the I/O board has become corrupted. Error reading Board Setup: failed CRC check	Diagnostics Message
There are readings missing from channel	0	4,4	50Hz acquisition is not possible whilst active burnout is selected. 10Hz operation is the maximum. 50Hz acquisition with active burnout caused lost readings - use 10Hz max	Diagnostics Message
More data than buffer can hold; some overwritten	N/A	N/A	More data than buffer can hold, only part returned; but some has also been overwritten	Diagnostics Message
Can't execute: invalid state	0	4,4	The stored calibration is for an illegal range Invalid gain in ReadWorkingCals	Diagnostics Message
Can't execute: invalid state	1	4,4	The I/O card internal state is unable to take a CJC reading. Invalid state in CJC state machine on AI board	Diagnostics Message
Can't execute: invalid state	2	4,4	The I/O card internal state is unable to take read/operate a digital. Invalid state relating to DIG board pointer update	Diagnostics Message
Can't execute: invalid state	3	4,4	The I/O card internal state is unable to take a reading for all AI channels. Invalid state of AdcStatus for SPI master (AI board)	Diagnostics Message
Can't execute: invalid state	4	4,4	The I/O card internal state is unable to update for all AO channels. Invalid state of DacStatus - SPI master (AO board)	Diagnostics Message
Can't execute: invalid state	5	4,4	The I/O card internal state is unable to take a reading for all AI channels. Invalid state of ReadingType (AI board)	Diagnostics Message
Can't execute: invalid state	6	4,4	The communications to the I/O card have failed due to the I/O cards internal state. Invalid state of MessageStatus (Host or FieldPort)	Diagnostics Message
Can't execute: invalid state	7	4,4	Error whilst making an active burnout measurement. Invalid state of Active Burnout measurement type	Diagnostics Message

Error Message	Code	LED Flash code	Description/Cause	Type
Can't execute: invalid state	8	4,4	Error whilst making an active burnout measurement. Invalid state of gain in Active Burnout calculation	Diagnostics Message
Unable to execute: unspecified reason	0	4,4	The measured pulse frequency is too high for the digital I/O board; try using a dedicated pulse card channel.	Diagnostics Message
Unable to execute: unspecified reason	1	4,4	The command referenced an illegal/invalid board channel number on the DIO board	Diagnostics Message
Unable to execute: unspecified reason	2	4,4	I/O card is not able to operate on SPI bus Invalid board type for SPI master function	Diagnostics Message
Unable to execute: unspecified reason	3	4,4	An illegal operation on the I/O board firmware was found.	Diagnostics Message
Unable to execute: unspecified reason	4	4,4	Error sending data to SPI for AI Active Burnout readings	Diagnostics Message
Unable to execute: unspecified reason	5	4,4	Data received for AI Active Burnout indicates an error condition	Diagnostics Message
Unable to execute: unspecified reason	6	4,4	Error ADC not ready while taking Active Burnout readings	Diagnostics Message
Unable to execute: unspecified reason	7	4,4	Could not initialize active burnout – will try again next power-up	Diagnostics Message
Unspecified error has occurred	N/A	N/A	I/O card failure: An unspecified error has occurred	Diagnostics Message
Unable to enable or disable timer interrupts	N/A	N/A	I/O card failure: Unable to enable or disable timer interrupts	Diagnostics Message
Error with RS232 port	0	2,2	Diagnostic FieldPort OverRun error	Diagnostics Message
Error with RS232 port	1	2,2	Diagnostic FieldPort Framing error	Diagnostics Message
Error with RS232 port	3	2,2	Diagnostic FieldPort Receive Buffer	Diagnostics Message
Error with RS232 port	4	2,2	Diagnostic FieldPort Noise error	Diagnostics Message
Error with RS232 port	5	2,2	Diagnostic FieldPort Idle error	Diagnostics Message
Error with Host SPI	0	2,2	Host SPI Port OverRun error	Diagnostics Message
Error with Host SPI	1	2,2	Host SPI Port Receive Buffer Overflow error	Diagnostics Message
Error with Host SPI	2	2,2	Host SPI Port Software Receive Buffer Overflowed	Diagnostics Message
Master SPI (ADC or DAC) Receive buffer overflowed	0	1,1	Master SPI (Adc or Dac) Receive Buffer overflowed and was reset	Diagnostics Message
Clock monitor failure occurred	N/A	N/A	The I/O card clock monitor failed.	Diagnostics Message
Error with master SPI (ADC or DAC)	0	1,1	Master SPI (Adc or Dac) Over-run error	Diagnostics Message
Error with master SPI (ADC or DAC)	1	1,1	Master SPI (Adc or Dac) Receive Buffer Overflow error	Diagnostics Message
Waited too long without response	0	4,4	I/O card has timed out waiting for SPITransfer	Diagnostics Message
Waited too long without response	1	4,4	I/O card has timed out waiting for AdcSpiSend	Diagnostics Message
Waited too long without response	2	4,4	I/O card has timed out waiting for ResetADC	Diagnostics Message
Waited too long without response	3	4,4	I/O card has timed out waiting for CheckSelectedAD	Diagnostics Message
An error has occurred with channel	N/A	N/A	General error that the I/O card channel specified has failed to make a measurement or set the output.	Diagnostics Message

Error Message	Code	LED Flash code	Description/Cause	Type
Calib vals not written properly in factory or field cal	0	3,3	The calibration values written in factory or field calibration could not be read. Reading EEPROM calibrations failed, so did attempted default read	Diagnostics Message
CJC port error detected	0	1,1	Communications to the CJC failed, subsequent retries may have succeeded. CJC driver OverRun error	Diagnostics Message
CJC port error detected	1	1,1	Communications to the CJC failed, subsequent retries may have succeeded. CJC driver Framing error	Diagnostics Message
CJC port error detected	2	1,1	Communications to the CJC failed, subsequent retries may have succeeded. CJC driver Parity error	Diagnostics Message
CJC port error detected	3	1,1	Communications to the CJC failed, subsequent retries may have succeeded. CJC driver Receive Buffer Overflow error	Diagnostics Message
CJC port error detected	4	1,1	Communications to the CJC failed, subsequent retries may have succeeded. CJC driver Noise error	Diagnostics Message
CJC port error detected	5	1,1	Communications to the CJC failed, subsequent retries may have succeeded. CJC driver Idle error	Diagnostics Message
Cannot enable ADC chip	0	4,4	The I/O card internal and/or external communications have failed to be initialized correctly. Failed to configure and enable SPI master	Diagnostics Message
Cannot enable ADC chip	1	4,4	Failed to initialize the CJC driver. Failed to enable CJC Driver	Diagnostics Message
Can't Initialize the SPI for ADCs	N/A	N/A	General error that the I/O card channel specified has failed to make a measurement.	Diagnostics Message
Can't Initialize ADC speeds, ranges, etc	0	1,1	One or more measurements on an AI channel have failed. Error selecting input pair on initializing of AI board	Diagnostics Message
Can't Initialize ADC speeds, ranges, etc	1	1,1	One or more measurements on an AI channel have failed. Error setting relays (P1, P2) on initializing of AI board	Diagnostics Message
Can't Initialize ADC speeds, ranges, etc	2	1,1	An invalid configuration has been sent to the AI board. Error setting filter value on initializing of AI board	Diagnostics Message
Can't Initialize ADC speeds, ranges, etc	3	1,1	An AI channel could not be reset on the AI board. Error while resetting ADCs – more detail on channel specific faults	Diagnostics Message
Can't Initialize ADC speeds, ranges, etc	4	1,1	An AI channel could not be initialized on the AI. Error initializing an ADC channel	Diagnostics Message
Can't Initialize the CJC	0	1,2	CJC failed to initialize. Check that CJC is fitted. Failed several attempts to initialize CJC device on AI board	Diagnostics Message
ADC not ready for requested op chan	0	4,4	ADC conversion timed out – perhaps ADC filter value too slow for acquisition. Rate. ADC not ready	Diagnostics Message
Failed to reset ADC converters	0	1,1	An AI channel cannot be reset correctly. Failed to reset ADC on AI board	Diagnostics Message
Factory cal read from EEPROM was corrupt on power-up	0	3,3	An error occurred whilst reading the factory calibration on power-up; return to factory or try user calibrating. Error reading AI factory calibration from EEPROM on power-up	Diagnostics Message
Factory RT cal read from EEPROM was corrupt on power-up	1	3,3	An error occurred whilst reading the RT calibration on power-up; return to factory. Error reading AI RT calibration from EEPROM on power-up	Diagnostics Message
User cal read from EEPROM was corrupt on power-up	0	3,3	An error occurred whilst reading the user calibration on power-up ; try re-user calibrating Error reading an AI user calibration from EEPROM on power-up	Diagnostics Message
User cal read from EEPROM was corrupt on power-up	1	3,3	Several errors occurred whilst reading the user calibration on power-up ; try re-user calibrating Multiple errors reading AI user cal on power-up : factory calibrations set	Diagnostics Message
Both calcs read from EEPROM were corrupt	N/A	N/A	Both factory and user calibrations read from EEPROM were corrupt	Diagnostics Message
There is no CJC reading available	N/A	N/A	There is no CJC reading available	Diagnostics Message

<b>Error Message</b>	<b>Code</b>	<b>LED Flash code</b>	<b>Description/Cause</b>	<b>Type</b>
The last CJC value was not read correctly	N/A	N/A	The last CJC value was not read correctly	Diagnostics Message
ADC chip failed self test chan	0	1,1	Did not pass the self test – value read wasn't the expected default on given channel.	Diagnostics Message
Detected open circuit load on an enabled AO channel	N/A	N/A	The AO channel has an O/C load i.e. load has been removed.	Diagnostics Message
Requested more than 21mA output	N/A	N/A	The AO channel has been requested to retransmit >21mA.	Diagnostics Message
Ambient temperature out of limits	N/A	N/A	The AI card ambient temperature is outside of operating limits	Diagnostics Message
DPPQ - FATAL ERROR - DATA LOSS	N/A	N/A	Acquired DI/O card data has been lost	Diagnostics Message
APPQ - FATAL ERROR - DATA LOSS	N/A	N/A	Acquired AI card data has been lost	Diagnostics Message

## Message Type – System

Error Message	Code	LED Flash code	Description/Cause	Type
Active burnout almost failed on chan; <*>	N/A	N/A	The T/C on the specified AI channel has almost burnout, however a value can still be measured (T/C almost failed O/C).	System Message
Active burnout S/C detected on chan; <*>	N/A	N/A	The T/C on the specified AI channel has burnout (failed O/C) whilst set to active burnout mode.	System Message
Active burnout degraded on chan; <*>	N/A	N/A	The T/C on the specified AI channel has degraded performance; however a value can still be measured.	System Message
Out of burnout on chan; <*>	N/A	N/A	The T/C on the specified AI channel has recovered from a burnout condition. Suspect a bad connection/failing T/C.	System Message
Upscale burnout on chan; <*>	N/A	N/A	The T/C on the specified AI channel has burnout (failed O/C). The pen has gone upscale as stated in the setup.	System Message
Downscale burnout on chan; <*>	N/A	N/A	The T/C on the specified AI channel has burnout (failed O/C). The pen has gone downscale as stated in the setup.	System Message
Active burnout failing on chan; <*>	N/A	N/A	The T/C on the specified AI channel is failing, however a value can still be measured (T/C almost failed O/C).	System Message
AI channel dual point compensation error, using single point 1	N/A	N/A	Dual point compensation was specified, but one or more points were invalid therefore setup has been defaulted to single point compensation using point 1.	
AI channel: User analogue high and low limits are same	N/A	N/A	User limits were required for the specified analogue channel; however both limits were incorrectly detected with the value.	System Message
AI channel; removing fast scanning support	N/A	N/A	Fast scanning option is disabled or is illegal for board/channel, but was specified in the setup file	System Message
AI channel; updating illegal acquisition rate	N/A	N/A	The acquisition rate specified in the setup for an AI channel was not allowed for board and option selected. T/C only	System Message
AO channel; incorrect retransmit pen	N/A	N/A	The setup for the given AO channel specified an invalid pen to retransmit.	System Message
Chan; <*> user: Analogue high and low limits are the same	N/A	N/A	The high and low limits for this channel are set to the same value. High and low limits must have different values set	System Message
Slot number of channels changed – x channels previously; currently y channels	N/A	N/A	The I/O card is the same type as that run previously; however it has a different number of channels. This will be as a result of a board upgrade /downgrade.	System Message
Slot setup mismatch: AO in setup; updating to AI	N/A	N/A	An AO board was detected on the previous run, but now an AI board has been detected, therefore the AI setup will be used instead of the AO.	System Message
Slot setup mismatch: AO in setup; updating to Pulse	N/A	N/A	An AO board was detected on the previous run, but now a pulse board has been detected, therefore the pulse setup will be used instead of the AO.	System Message
Slot setup mismatch: AI in setup; updating to AO	N/A	N/A	An AI board was detected on the previous run, but now an AO board has been detected, therefore the AO setup will be used instead of the AI.	System Message
Slot setup mismatch: AI in setup; updating to Pulse	N/A	N/A	An AI board was detected on the previous run, but now a pulse board has been detected, therefore the pulse setup will be used instead of the AI.	System Message
Slot setup mismatch: Pulse in setup; updating to AI	N/A	N/A	A pulse board was detected on the previous run, but now an AI board has been detected, therefore the AI setup will be used instead of the pulse.	System Message
Slot setup mismatch: Pulse in setup; updating to AO	N/A	N/A	A pulse board was detected on the previous run, but now an AO board has been detected, therefore the AO setup will be used instead of the pulse.	System Message

Error Message	Code	LED Flash code	Description/Cause	Type
Slot setup mismatch: DIO in setup; updating to Alarm	N/A	N/A	A DIO board was detected on the previous run, but now an alarm board has been detected, therefore the alarm setup will be used instead of the DIO.	System Message
Slot setup mismatch: Alarm in setup; updating to DIO	N/A	N/A	An alarm board was detected on the previous run, but now a DIO board has been detected, therefore the DIO setup will be used instead of the alarm.	System Message
Slot setup unspecified for AI card	N/A	N/A	A warning that a new AI board has been fitted.	System Message
Slot setup unspecified for AO card	N/A	N/A	A warning that a new AO board has been fitted.	System Message
Slot setup unspecified for pulse card	N/A	N/A	A warning that a new pulse board has been fitted.	System Message
Slot setup unspecified for DIO card	N/A	N/A	A warning that a new DIO board has been fitted.	System Message
Slot setup unspecified for Alarm card	N/A	N/A	A warning that a new alarm board has been fitted.	System Message
Firmware upgrade	N/A	N/A	Notification that the recorder has just detected that the software has been upgraded from the last successful run	System Message
Configuration Loaded	N/A	N/A	Notification that the configuration has been successfully loaded	System Message
Setup Changed	N/A	N/A	Notification that the user has changed one or more items on the recorder setup	System Message
Pen x using scripts but option not available	N/A	N/A	Scripts are selected on Pen X, but the recorder options disables scripts	System Message
Failed transfer setup to recorder	N/A	N/A	Configuration remote download has failed	System Message
Configuration remotely loaded	N/A	N/A	Configuration has been remotely downloaded successfully.	System Message
FTP transfer operation failed	N/A	N/A	The requested FTP operation has failed.	System Message
FTP setup transfer complete	N/A	N/A	The requested FTP operation has completed successfully.	System Message
FTP transfer complete after <*>	N/A	N/A	The requested FTP operation has completed after a stated time	System Message
FTP transfer timed out after	N/A	N/A	The requested FTP operation has timed out after a stated amount of time	System Message
FTP setup transfer to recorder timed out after	N/A	N/A	The requested FTP operation has timed out after a stated amount of time	System Message
Time changed from <> to <>	N/A	N/A	The Time on the recorder has been changed from (the times stated) to (the time stated)	System Message
Trendbus RS485 not available, selected ethernet	N/A	N/A	RS485 is not available on recorder, so default of Ethernet has been enabled	System Message
Modbus RS485 not available, selected ethernet	N/A	N/A	RS485 is not available on recorder, so default of Ethernet has been enabled	System Message
Scheduled Export data performed	N/A	N/A	The scheduled data export completed successfully	System Message
Scheduled export failed - media removed during export	N/A	N/A	The scheduled export failed because the media was removed during transfer operation.	System Message

Scheduled export failed – unknown media error	N/A	N/A	The scheduled export failed because of an unknown cause	System Message
Scheduled export failed - could not create export folder	N/A	N/A	The scheduled export failed because the export folder was not present and could not be created.	System Message
Scheduled export failed - no media present	N/A	N/A	The scheduled export has failed because no media is present	System Message
Media space too low for next scheduled data transfer	N/A	N/A	The space available on the media is too little for the next scheduled operation	System Message
Unable to load	N/A	N/A	Unable to load requested file	System Message
Power On	N/A	N/A	The recorder has been powered up	System Message
Factory Reset	N/A	N/A	A Factory Reset has been performed on the recorder	System Message
Layout not valid or incorrect recorder type	N/A	N/A	Layout specified is invalid or invalid for the recorder type that it is trying to be used on	System Message
Recorder now operating in daylight saving time	N/A	N/A	Notification that the recorder is now operating in daylight saving mode	System Message
Recorder now operating in standard time	N/A	N/A	Notification that the recorder is now operating in standard time mode	System Message
Data reset has been performed	N/A	N/A	The data held internally has been deleted	System Message

## Message Type – Security

<b>Error Message</b>	<b>Code</b>	<b>LED Flash code</b>	<b>Description/Cause</b>	<b>Type</b>
Access Denied to Area	N/A	N/A	Access to the area that the operator tried to access is refused because the operator has not got the authority level necessary	Security Message
Password Failure	N/A	N/A	User has tried to login and has failed.	Security Message
Inactivity Timeout	N/A	N/A	Recorder inactivity has timed the current user out; so the user must re-log on.	Security Message
Unknown Password Error	N/A	N/A	Password system has failed to start-up correctly for an unknown reason	Security Message
Login Successful	N/A	N/A	Login to the Password System has been successful	Security Message
Temporary User Login Successful	N/A	N/A	Temporary User Login valid for one day only. Allows access to the system if Admin is unavailable/corrupt	Security Message
First Time User Login Successful	N/A	N/A	For user with ESS. First time user using default access has been successful	Security Message
Login Attempt with default Password	N/A	N/A	New User Login using the default Password	Security Message
Logoff Successful	N/A	N/A	Logoff from the Password System has been successful	Security Message
Invalid Username	N/A	N/A	In valid user name has been entered. Check and re-enter	Security Message
Access Denied for the Day	N/A	N/A	Administrator restrictions specify what days the recorder can be accessed.	Security Message
Restricted Login Time	N/A	N/A	Administrator restrictions specify how long the user can be logged in for without any activity.	Security Message
Insufficient Privileges	N/A	N/A	Administrator restrictions specify what areas of the recorder the user can access	Security Message
Password Expired	N/A	N/A	Administrator restrictions specify how many days a Password is valid for	Security Message
Password Locked	N/A	N/A	Administrator restrictions specify how many Password attempts are permitted	Security Message
Valid Access to Area	N/A	N/A	Permission access valid for this area	Security Message

## Message Type – SMTP

<b>Error Message</b>	<b>Code</b>	<b>LED Flash code</b>	<b>Description/Cause</b>	<b>Type</b>
Connected	N/A	N/A	Connected to the Server OK	SMTP Status
Attempting to connect	N/A	N/A	Connection unsuccessful. Could be there is no network connection or the SMTP server name is incorrect	SMTP Status
Attempting to re-connect	N/A	N/A	Connection unsuccessful. A problem has occurred on a previous attempt	SMTP Status
Fail to send email; too many re-connection attempts	N/A	N/A	Operation unsuccessful. Possibly there is no authentication setup	SMTP Status
Receive Error	N/A	N/A	Contact technical support with your error number	SMTP Status
Send Error	N/A	N/A	Contact technical support with your error number	SMTP Status
SMTP/Email Error on server probably requires Authentication	N/A	N/A	Operation unsuccessful. Check that authentication has been set up.	SMTP Status

## Message Type - Scripting

Error Message	Description/Cause	Type
Invalid file contents	This error indicates that external script file [.sf] contents are corrupted or not in expected format.	Pop up
Invalid name	The function name is empty.	
Invalid variable type	The variable type declared at the specified line and position does not exist. Please refer to the manual for available variables types.	
Script source is null	The script buffer is empty or invalid.	
Invalid variable name:	The variable declared at the specified line and position does not exist. Please refer to the manual for available variables.	
Invalid function :	The function declared at the specified line and position does not exist. Please refer to the manual for available variables.	
Invalid no of Params	The specified function has been passed <X> no. of parameters when it expected <Y>.	
Syntax error at Line No : %d, Offset : %d, Token: %s	The code at the specified line and position is incorrect. Possibly this error could have been caused by an error earlier in the script - typically this could be a missing ')', '(', ';', '{' or '}'	
Invalid script block id %s	Each script block is given a unique ID and this error shows up if the script engine does not recognize a script block by ID because the script block referred was never compiled.	
Invalid operator encountered	One of the mathematical/logical operators used in the script expression is not valid or supported.	
Divide by zero encountered in script execution	A specified maths function has caused a divide by zero error. An example could be 'return 1 / A1;' where A1 is 0. In this situation the script should be rewritten to test to A1 == 0 and return an appropriate value i.e. if( A1 == 0 ) { return -1; } else { return 1 / A1; }	
Not all paths returns value	A part within a multiline script does not return a value i.e. if( A1 < 10 ) { return 10; } else { A1; } - The keyword 'return' should preceded A1 within the else statement	
Invalid State variable index %s	3 state variables are supported like SV_SETUPCHANGED, SV_TIMECHANGE, SV_FIRSTRUN and they are denoted by VAR_STATEn where n= 0, 1 & 2. This error pops up if a different state variable index (n) is mentioned.	
Script Block compilation failed as function %1 failed to compile : %2	There was an error compiling the script in the function <function name>	
Variable is read only %s Line No : %d, Offset : %d	This error is caused when the script tries to assign or write a value to a read only variable. Like A1, A2,..An, analogue variables are read only. For e.g. you can not have A1=1;	

The return values within the script are not consistent	This error occurs if the script function returns a value of a specific data type other than what is expected. For e.g. If the script function is expected to return a float value but there is no return statements with in the script then you will get this error.	
Invalid return type %s. Valid values are : void, float	The return type of script function can be either void or float; any other declaration will throw this error.	
Incompatible data encountered during execution	This error is thrown while executing a script if the script engine evaluating gets a value of different data type other than what it expected.	
Function %s doesn't return a value Line No : %d, Offset : %d	This error is thrown when a script function returns a value but its declaration dictates no return value.	
The source size (%1) exceeded max size %2	This error code is not used. This error means that the script size exceeds the maximum value, because of which the script buffer may overrun.	
Script not found. Invalid script source file	This error occurs if the script file does not have a [source] section.	
The argument %1 to the function %2 is invalid	This error occurs when no NV memory allocated for script engine use.	
Insufficient memory size %1. Required %2	The error occurs when enough NV memory is not available for script engine.	
Script service is not initialised	This error occurs when script engine is not initialised properly before using its service.	
Arguments are not allowed for Script blocks	A script block does not support taking arguments.	
Script services is already initialised	This error occurs when the script engine is initialized more the once.	
Invalid macro encountered	Invalid MACRO encountered in the script.	
Invalid Script encountered	Generic/unknown error encountered.	