HEXACON MODEL ll SCADA SPECIFICATIONS

REVISIONS

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1. Introduction

This document provides specifications for the optional Supervisory Control And Data Acquisition (SCADA) output of the Hexacon Model II system. This RS232 serial unidirectional data stream is intended to be connected to a serial port on the SCADA computer

2. Serial Port Configuration

The serial output port is designed to be directly connected to a serial port on the SCADA computer. Table 1 documents the configuration of the serial port.

Parameter	Data
Direction	Unidirectional - Data out only
BAUD Rate	9600
Data Bits	8
Start Bits	1
Stop Bits	1
Parity	None

Table 1: Serial Port Configuration

3. Connector Configuration

Parameter	Data
Connector Type	DB
Equipment Type	DCE
Number of Pins	9
Polarity	Sockets
Pins 1,4,6,7,8,9	Not used
Pin 2	Transmit Data (Tx)
Pin 3	reserved
Pin 5	Return

Table 2: Serial Connector Parameters

4. Electrical Parameters

Parameter	Data
Signal Levels	RS232
Max. Drive Distance	100 feet
Recommended Cable Type	Belden 1421A

Table 3: Electrical Parameters

5. Output Messages

Table 4 documents each possible code that is transmitted by the Hexacon Model II System, the definition of the code, and the rate at which it is repeated. Fault codes are repeated as long as the fault persists. All codes are followed by a carriage return (ASCII: 0x0D) and a line feed (ASCII: 0x0A); these are the delimiting characters for each fault code.

For example:
A system that has two actuators attached to the A and B Terminal Blocks and is 100% operational will report the following message string once per hour:

OA0D0AOB0D0A

ASCII Characters	Definition	Repetition Rate
OA - OF	Valve Armed and Ready	once per hour
EC	Emergency Close Initiated	at occurrence
ES	Valve Closure Complete	at occurrence
TI	Test Close Initiated	at occurrence
TS	Test Close Complete	at occurrence
VA - VF	Valve Has Closed and Was Torqued Properly	at occurrence
TA - TF	Valve Timed Out While Closing	at occurrence
BF	Battery Is Disconnected Or The 30 Amp Fuse Is Blown	at occurrence
BL	Battery Voltage Is Less Than 12.4 Volts	once per minute
BH	Battery Voltage Is Greater Than 15.0 Volts	once per minute
CF	Charger Voltage Is Less Than 13.9 Volts Or There Is An AC Power Fault	once per minute
CH	Charging Supply Voltage Is Greater Than 16.3 Volts	once per minute
+5	+5 Volt Logic Supply Is Out Of Range (4.6 to 5.3 Volts)	once per minute
RS	System Needs To Be Reset	once per minute
CD	Charger Is Off	once per minute
SA - SF	Valve Shorted During The Last Activation	at occurrence
SR	System Reset - A Hardware Or Software Reset Occurred	at occurrence

Table 4: SCADA Codes and Definitions

Note: System faults will continue to be reported at a once per minute rate until the fault is cleared. If multiple system faults exist at the same time, they will be reported in the order that they were received by the system. Multiple fault codes will also be separated by the same delimiting characters: a carriage return (ASCII: 0x0D) and a line feed (ASCII: 0x0A).