Syvecs LTD

V1.2

X10 Expander Gen1

This document is intended for use by a technical audience and describes a number of procedures that are potentially hazardous. Installations should be carried out by competent persons only.

Syvecs and the author accept no liability for any damage caused by the incorrect installation or configuration of the equipment.

Please Note that due to frequent firmware changes certain windows might not be the same as the manual illustrates. If so please contact the Syvecs Tech Team for Assistance.

Support@Syvecs.com

Syvecs X10

Outputs

10 Low side Outputs (circa 15A each, Surge to 30A)

4 Half Bridge Outputs (combinable for 2 Full Bridges and a lose of 2 inputs)

Inputs

10 Analogue or switch inputs (0-5V, Thermistor or switch)

6 of the inputs capable of speed measurement (Bipolar, Unipolar)

Interfaces

Ethernet for pc configuration and monitoring connection

CAN 2.0B interface for communication with other controllers or logging systems

Power Supply

6 to 26V input voltage range

Physical

35 way AMP Ampseal male connector

PCB 130 x 115mm

Syvecs X10 Pinouts

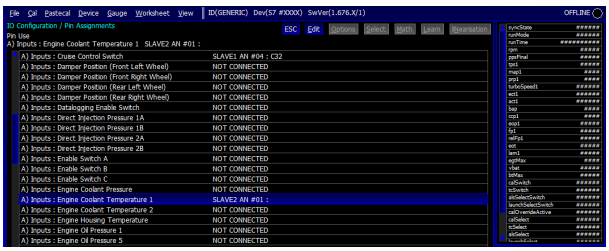
Pin1	Output1	
Pin2	Output 1 (Linked to pin1)	
Pin3	Output 2	
Pin4	H Bridge 1	
Pin5	Output 3	
Pin6	Output 4	
Pin7	Output 5	
Pin8	Output 6	
Pin9	Output 7	
Pin10	Output 8	
Pin11	Output 9	
Pin12	Output10	
Pin13	Input 1	- BIpolar
Pin14	Input 2	- BIpolar
Pin15	Input 3	- BIpolar
Pin16	Input 4	- BIpolar
Pin17	Input 5	- BIpolar
Pin18	Input 6	- BIpolar
Pin19	Input 7	
Pin20	Input 8	
Pin21	Input 9	Or Half Bridge3
Pin22	Input 10	Or Half Bridge4
Pin23	LAN RX+	White/Orange
Pin24	AN Ground	
Pin25	5V Out	
Pin26	Can H1	
Pin27	Can L1	
Pin28	Can H2	
Pin29	Can L2	
Pin30	H Bridge 2	
Pin31	LAN TX -	Green/White
Pin32	LAN TX +	White/Green
Pin33	LAN RX -	Orange/White
Pin34	12V Supply	VBAT
Pin35	Power Ground	

Requires termination resistor of 120ohm at X10 Can-Bus pins if the length of Canbus between ECU and X10 is greater than 500mm.

<u>Connection to ECU</u>

S6GP – Can H1 X10 to CanH On S6, Can L1 on X10 to CanL on S6
S6I, S7-I or S6Plus – Not Supported
S7Plus – Can H1 X10 to Can2H On S7, Can L1 on X10 to Can2L on S7
S8 – Can H1 X10 to Can2H On S8, Can L1 on X10 to Can2L on S8
S12 – Can H1 X10 to Can2H On S12, Can L1 on X10 to Can2L on S12

Assignments in Scal for X10 items is done via Slave Channels, With S6, S8 and S12 you use Slave 1, if fitted to S7Plus, use assignments Slave 2



<u>H Bridge assigning in Scal when using X10 Expander</u>

- Slave1 /Slave2 Fuel11 is H Bridge1 (pin4 on x10)
- Slave1 /Slave2 Fuel12 is H Bridge2 (Pin30 on X10)
- Slave1 /Slave2 Fuel13 is H Bridge3 (Pin21 on X10)
- Slave1 /Slave2 Fuel14 is H Bridge4 (Pin22 on X10)

<u>Full Bridge Assigning in Scal when using X10 Expander</u>

- Slave1 /Slave2 Fuel11 is for Full Bridge1 (H Bridge 1&2)
- Slave1 /Slave2 Fuel13 is for Full Bridge2 (H Bridge 3&4)

X10 - S7 Fixed Stream Can Forwarding

The X10 has the ability to do Can forwarding of the Fixed S7 Can frames which are sent on the Slave bus.

This Can Data can be used for sending to a External Dash. The X10 - Can2 Bus runs at a Fixed 1MB Speed

Wire as shown below: