# Product Engineering Guide

OSM v20 ExerTherm v10

Introduction

The *ExerTherm* OSM links a network of ExerTherm modules to ObServer. Up to 60 modules on the ExerTherm network can be accessed from the OSM. Information available from each ExerTherm modules includes current values and high and low alarm limits for inputs, and a module summaries.

ObServer Platform

RS232/485 converter
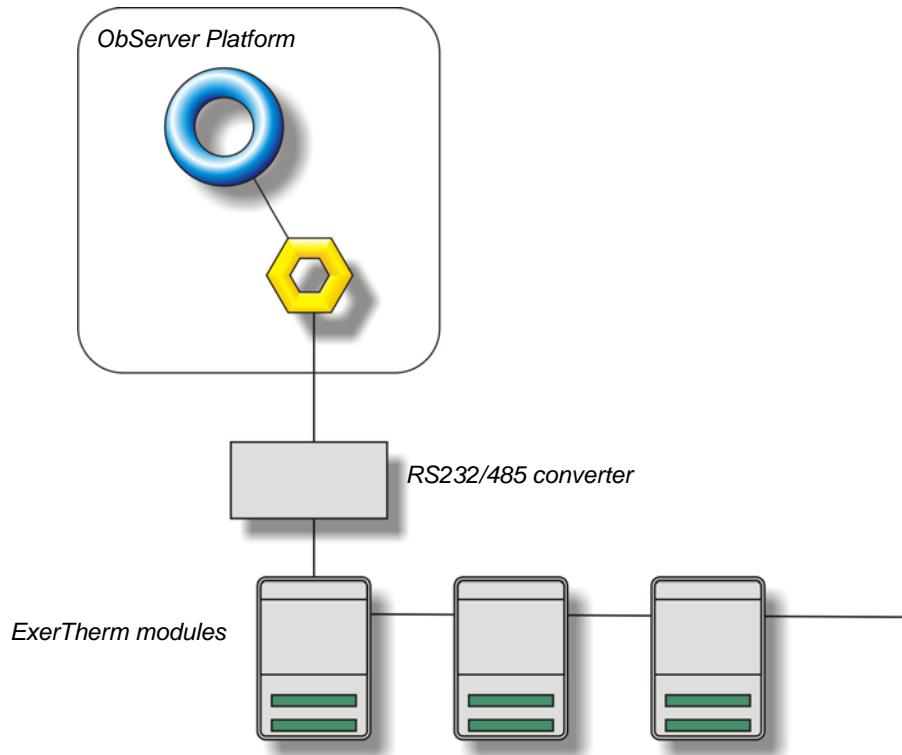
ExerTherm modules

Supported Range

- ExerTherm I/O Module 8 Thermocouple Analogue Inputs module.

Notes

The ExerTherm system does not provide logging facilities to ObServer. If logging of values is needed then a Data Manager application will be required.

Engineering

Step 1 – Install OSM

The ExerTherm OSM is installed automatically with all ObSys editions. Refer to the 'ObSys CD sleeve' for details on how to install ObSys.

Step 2 – Connect COM Port to ExerTherm System

Using cable, connect the ExerTherm network, via a 232 to 485 converter, to a COM port of the PC. Refer to the section 'Cable' below for details of the cable.

Step 3 – Plug in ExerTherm OSM to ObServer

Use object engineering software to locate the ObServer Setup object. Assign the ExerTherm OSM to an available channel. *Refer to 'ObServer v20 Application Engineering Guide'.*

Note: After inserting the OSM, your engineering software may need to re-scan the ObServer object in order to view the OSM.

Step 4 – Configure ExerTherm OSM

The COM port, baudrate and alarm destination are configured using objects. Use object engineering software to view and modify the module objects within the OSM. Ensure you match the baudrate to that of the device.

Step 5 – Configure ExerTherm Modules

Use object engineering software Configure each of the ExerTherm modules with a unique address. A new module attached to the ExerTherm network will reply with a 'New Module Address' of 127, this address must be changed a unique address and then the module needs to be reset. Once reset the module can then be enabled via the corresponding address entry.

Note: the ExerTherm network can support up to 64 modules, however the OSM will only allow access to addresses 1 to 60 (inclusive). New Modules must be power on individually and re-addressed before powering on the next module.

Once a Module is addressed and enabled individual inputs within the module can be specified and enabled, and their alarm limits set.

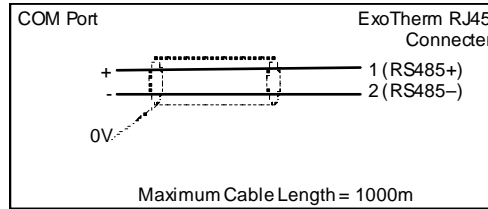### Step 7 – Access Objects within the Exertherm System

Values from the Exertherm system are made available as objects from ObServer. Any object software that is connected to the ObServer can access these objects.

Engineering Reference

Cable Specification

The ExerTherm network is connected to ObServer using a RS232 to RS485 converter. The COM port is connected to the converter, which is then connected to the network. The earthing screen or braid of the RS485 cable should be connected **as close as possible** to the 0V terminal at one end only. **Do not connect the earthing braid of a single cable run to more than one unit, be it converter or device.**

The cable between COM port and the Autometers network is as follows:

COM Port
ExoTherm RJ45 Connecter
+   1 (RS485+)
-    2 (RS485−)
0V

Maximum Cable Length = 1000m

Objects

When the OSM is loaded the following objects are created within ObServer, use object software to access these objects.

Object[1]	Label	R/W	Type
S*c*	ExerTherm System connected to channel *c*	-	*[ExerTherm v10]*[2]
M*c*	ExerTherm Module connected to channel *c*	-	*[OSM v20\ExerTherm v10]*

Notes

[1]   The ObServer channel number, *c*, is a number in the range 1…40.

[2]   This object has a variable content and as such requires scanning.