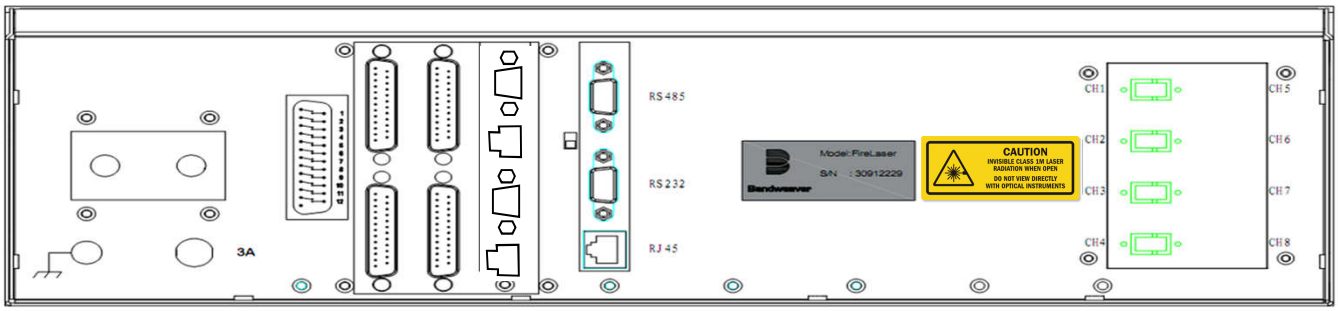
FireLaser – Redundant Modbus Interface

The Kifta Modbus option enables a 3rd party system to be able to establish and maintain an interface with the FireLaser system using the Modicon Modbus protocol. The standard interface card enables a dual redundant connection between the DTS system and the Modbus Master.

In order to achieve this, an optional Modbus communications card is installed inside the DTS system thereby enabling redundant communications via an RS232 port or an RJ45 port on the rear of the DTS system.

Modbus data is communicated in RTU mode for the RS232 link and Modbus TCP/IP over the RJ45 Ethernet connection.

Rear View of FireLaser DTS system



Modbus card location

The FireLaser system behaves as a Modbus Slave device and shall be routinely interrogated by the Modbus master. The default slave address is set to 1, but can be altered to any value up to 255. The default IP address for each system is set to 192.168.111.100, and can be altered to meet site conditions as required.

The data that can be accessed over the Modbus link includes the DTS system alarm status, zonal alarm map, fiber break status, position of alarm event and type of alarm event, including Max., Min., Rate of change and deviation alarms. The DTS makes its temperature measurement across all connected channels and then updates the modbus communication card.

The register status for each channel and zone data is available to a third party Modbus master

Feature	Value
Modbus serial RTU communications	19.2 kbps, 8 data bits, 1 stop bit, null parity
Minimum interrogation interval	100 ms
Supported Modbus commands	
65 (41Hex)	Inquire alarm state of DTS
66 (42Hex)	Read alarm status of each zone
67 (43 Hex)	Read broken fiber information of each channel
68 (44Hex)	Read detailed alarm information of a specific zone
69 (45Hex)	Read current temperature information of specific zone
70 (46Hex)	DTS alarm reset and alarm mute
71 (47Hex)	Start/stop automatic measurement mode
72 (48Hex)	Reserved