

PERTRONIC INDUSTRIES LTD

DATASHEET

Modbus Interface for Fibre-Optic Linear Heat Detectors

SPIB-LIOS, SPIB-PWF8000



*Connect Fibre-Optic LHD Controller to Pertronic fire alarm control panel
Support Modbus ASCII, RTU, or TCP
PC configurable via USB cable*

Overview

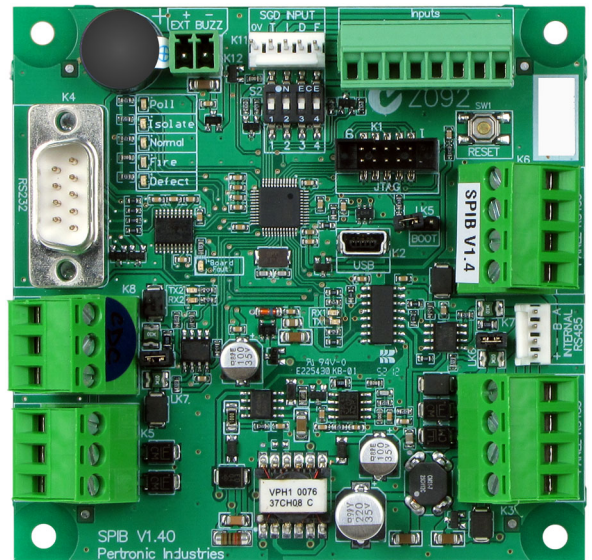
These Pertronic Modbus interface units allow fibre-optic linear heat detection systems (LHD) to be integrated into Pertronic F220 fire systems.

- The Pertronic SPIB-LIOS connects a LIOS DE.TECT system with an F220 fire system
- The Pertronic SPIB-PWF8000 connects a Protectowire Fibre System 8000 with an F220 fire system

Both interface units connect to the fire alarm control panel's RS-485 bus and communicate with the LHD via Modbus. They can be mounted inside the fire panel, or at a remote location.

These interfaces utilise the fire alarm control panel's loop emulation capability. Each zone on the LHD cable is mapped to a device on an emulated analogue addressable loop.

The Modbus connection is galvanically isolated from the fire alarm control panel's RS-485 bus.



**Pertronic Modbus Interface for Fibre-Optic
Linear Heat Detectors
SPIB-LIOS and SPIB-PWF8000**

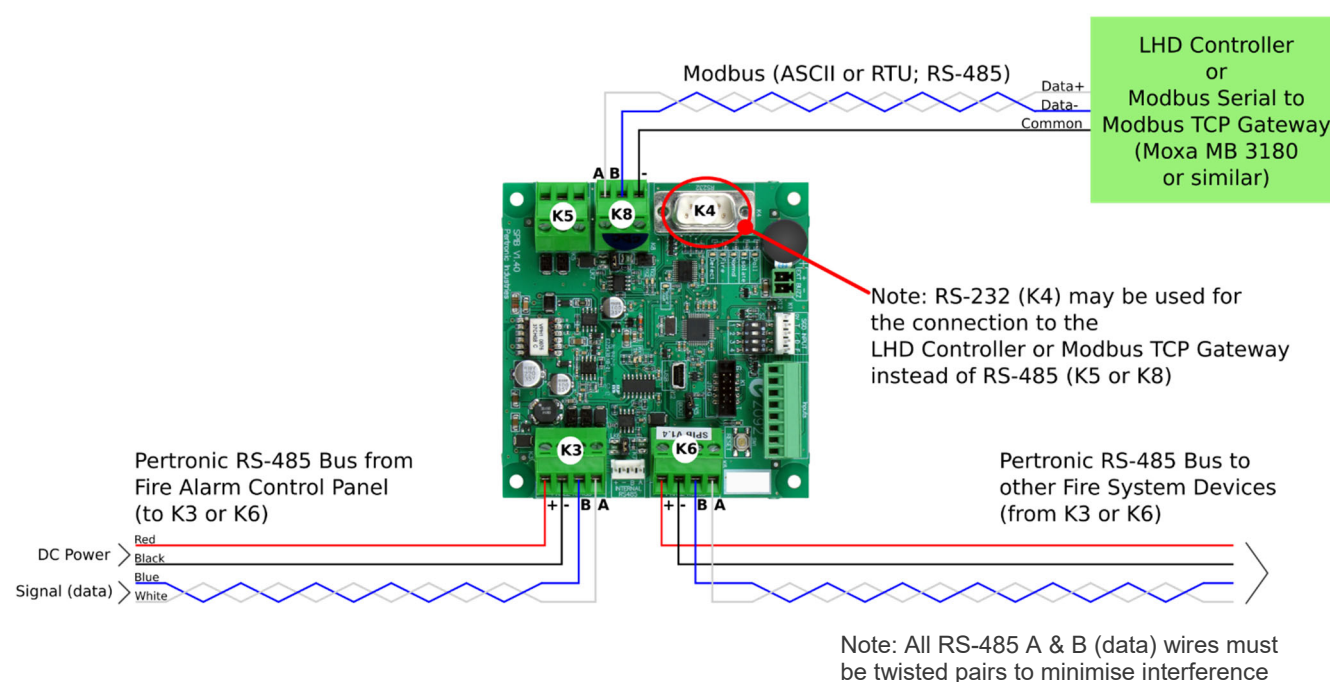
Features

- Compatible with Pertronic F220 fire alarm control panels
- Function as Modbus master devices
- Modbus connection configurable RS-232 or RS-485, 300 bit/s to 115,200 bit/s
- Support Modbus TCP when connected to a Modbus Serial to Modbus TCP Gateway
- Emulate up to four analogue addressable loops. (Note that the total number of actual and emulated loops cannot exceed the panel's maximum loop capacity)
- SPIB-PWF8000 supports up to 100 fibre-optic LHD detection zones per emulated loop (maximum 4 x 100)
- SPIB-LIOS supports
 - Up to 159 fibre-optic LHD detection zones per emulated loop (maximum 4 x 159)
 - Two module addresses representing the LHD controllers global *Alarm* and *Fault* indications on the base loop only
- Each zone on the LHD cable is mapped to a device on an emulated analogue addressable loop
- Each emulated heat detector can report *pre-alarm* and *fibre break* as well as *alarm* signals
- Optional fault supervision between the fibre-optic LHD interface and fire alarm control panel
- Configurable with a PC running a terminal emulation program via USB mini-B cable
- On-board LEDs provide diagnostic information
- Electrically isolated from the fire alarm control panel's RS-485 bus
- Also compatible with F120A fire panels with v5.0 or later firmware

Specification

Compatible Panel		F220 (all) F120A (v5.0 or later)	Base Hardware	Pertronic SPIB board
Supply Voltage		11 Vdc to 30 Vdc	Current	21 mA @ 24 Vdc (typical)
Cable	to Panel	2-Core (twisted pair) Data + 2-Core Power	Panel RS-485 Bus Connection	9600 bit/s, isolated (functional insulation only)
	To LHD	2-Core (twisted pair) Data + Common	Modbus Connection	Configurable RS-485 or RS-232 300 bit/s to 115,200 bit/s
Cable Termination		0.5 mm ² to 2.5 mm ² stranded cable	Modbus Mode	ASCII, RTU, or TCP (with gateway)
PCB Dimensions		94H x 96.5W x 30D mm	Weight	86 g
Operating Temperature		-10 °C to +50 °C	Humidity	10 to 95% RH non-condensing

Typical Connections



Ordering Information

Product Code	Description
SPIB-LIOS	Modbus Interface for LIOS DE.TECT Linear Heat Detection Controller
SPIB-PWF8000	Modbus Interface for Protectowire Fibre8000 Linear Heat Detection Controller

The information in this document must not be treated as partial or complete instructions for the design, construction, installation, commissioning, or maintenance of fire detection, fire alarm, or building evacuation systems. Fire and evacuation systems must be designed and installed by properly qualified persons, in accordance with all regulatory requirements.

Unless explicitly stated otherwise, this document provides typical specifications and nominal dimensions. Actual product performance and dimensions may vary.

All information in this document is subject to change. Please consult Pertronic Industries or visit our web site for up to date information.

PERTRONIC® is a registered trademark of Pertronic Industries Limited.