



## ATS1743

ATS RS485 Databus to Multimode Optical Fiber interface

### Product Overview

The ATS1743 is a RS485 to optical fibre interface for directly extending the Advisor MASTER data bus with optical fibre.

The maximum fibre distance can be up to 1 km the next ATS1743 and a maximum of 2 pairs can be cascaded when the "normal copper" data bus wiring length is not extending more than 1.5 km to the panel.

The great advantage of using optical fibre is that in general optical fibre is not subject to electromagnetic interference and there is less need to retransmit signals.

The ATS1743 is only designed for multimode optical fibre and can operate in 2 modes:

Uni-direction - two fibres

Bi-directions - one fibre

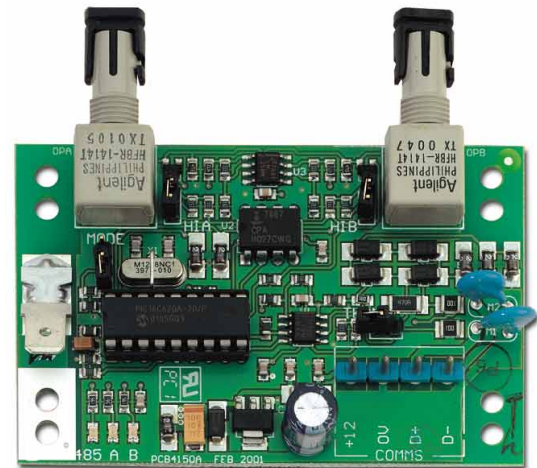
There are two independent optical channels on the unit, which can be used (with two fibers) when you need a bit more power in case of signal loss by junctions etc.

The most economical connection is the bi-directions fiber connection. Only one fiber is necessary in this situation.

### Optical Fibre Explanation

Optical fibre (or "fibre optic") refers to the medium and the technology associated with the transmission of information as light pulses along a glass or plastic wire or fibre.

Optical fibre carries much more information than conventional copper wire and is in general not subject to electromagnetic interference and the need to retransmit signals.



### Standard Features

- RS485 to optical fibre interface
- Maximum fibre distance can be up to 1.5 km
- Maximum 2 units can be cascaded
- Uni-direction (two fibres) or Bi-directions (one fibre) mode can be used
- Multimode optical fibre only



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### Specifications

Supply voltage	10.5 - 13.8 VDC
Operating current	60 mA max.
Specified cable	Aritech WCAT 52/54 or equivalent
Max. distance from panel	1.5 km
Specified optical fibre	Multimode optical fibre
Max. distance to next ATS1743	1 km
Dimensions (W x H)	90 x 80 mm
Operating temperature	-10° to +50°C

### Ordering Information

Part No.	Description
ATS1743	ATS RS485 Databus to Multimode Optical Fiber interface
ATS1740	ATS RS485 bus isolator/repeater
ATS1741	ATS RS485 to RS232 interface
ATS1742	ATS RS485 closed loop module

### Single mode vs. Multimode fibre

Single mode fibre is used for longer distances and most telephone company long-distance lines are now of optical fibre. Transmission on optical fibre wire requires repeater at distance intervals.

Multimode fibre carries light according to several propagation modes and is used for shorter distances. It presents some significant advantages for LANs, especially for multi-building administrative complexes. Since multimode provides a multi-lane information highway between switches to servers, switches to switches and the backbone it is ideal for handling complex systems. Moreover, connection of multimode is easier and faster, requiring simpler tools familiar to both technicians and managers. Finally, multimode is flexible, user-friendly and cost-effective.

