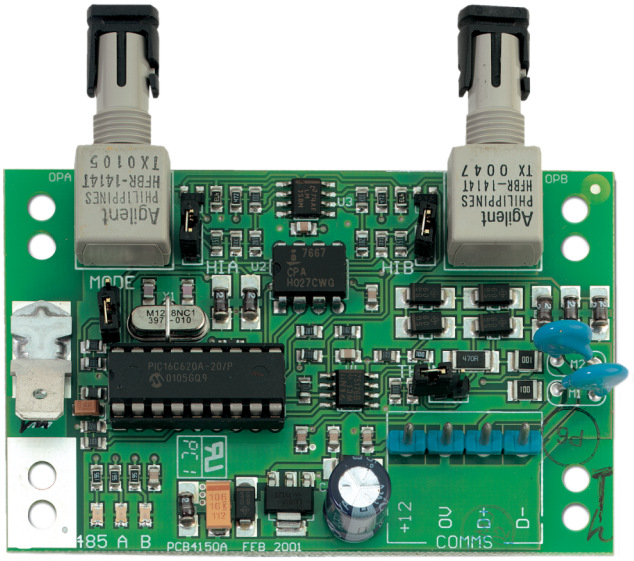
# ATS1743

## RS485 Databus to Multimode Optical Fiber interface

### Product Overview

The ATS1743 is a RS485 to Multimode optical fibre interface for directly extending the Advisor MASTER or Advisor Advanced data bus with optical fibre.
The maximum fibre distance is specified with an optical budget of 15 dB. The ATS1743 can be used with up to 1.5 km ATS databus using specified  RS485 cable.
The greatest advantage of using optical fibre is that in general optical fibre is not subject to electromagnetic interference and there is less need to re-transmit signals.

The ATS1743 is only designed for multimode optical fibre and can operate in 2 modes: Uni-direction - two fibres and Bi-directions - one fibre




### 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.

### 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.

### Details

- RS485 to optical fibre interface
- Maximum distance depending on optical budget of 15 dB
- Compatible with Axon and Advisor Advanced panels
- Maximum 14 units can be cascaded in bi-directional mode or 15 in uni-directional mode
- Uni-direction (two fibres) or Bi-directions (one fibre) mode can be used
- Multimode optical fibre only

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## Technical specifications

### General

| | |
|---|---|
| Accessory group | Advisor Advanced, ATS Master, Kommunikationsenheder |
| Type | Modul |

### Electrical

| | |
|---|---|
| Power supply type | VCC |
| Operating voltage | 10.5 - 13.8 V |
| Current consumption | 60 mA max |
| Specified cable | Aritech WCAT 52/54 or equivalent |
| Max. distance from panel | 1.5 km |

### Physical

| | |
|---|---|
| Physical dimensions | 90 x 80 mm (W x H) |

### Environmental

| | |
|---|---|
| Operating temperature | 0 to 50°C |
| Relative humidity | 95% maximum |

### Optical fibre

| | |
|---|---|
| Specified optical fibre type | 62.5/125 um multimode |
| Wavelength | 820 nm |
| Emitter type | AlGaAs LED |
| Optical budget | 15 dB typical |

### Rx sensitivity

| | |
|---|---|
| | -27 dBm typical |

### Tx power

| | |
|---|---|
| Minimum | -21 to -15 dBm |
| Typical | -17 to -12 dBm |
| Maximum | -14 to -10 dBm |

### Max units cascaded

| | |
|---|---|
| Bi-directional/Dual fibre mode | 14 |
| Uni-directional/Single fibre mode | 15 |

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