

ATA150 series, AC voltage or current

INPUT WIRING

Single channel

These units will respond to the amplitude of an AC voltage or current input.

No external transformers are required when monitoring mains supplies. Voltages between 150V and 600V or currents between 1A and 10A are isolated and converted by appropriate transformers mounted on the back plate.

Models available

INPUT	Single trip	Double trip
Current	ATA151a	ATA151b
Voltage	ATA152a	ATA152b

	TB1
Input	1
Input	2
Screen	3

ATA151TX, supply monitor

This unit is designed to monitor the mains supply and will go into a trip condition when the supply exceeds the level set on the upper dial.

A timer is fitted to allow a delay to be set between the overvoltage condition occurring and the relay contacts changing state. This time delay is adjusted by the lower dial.

No separate input is used. A transformer is mounted on the back plate to isolate the supply from the electronics and reduce it to a safe level.

In operation, when the supply exceeds the trip level, the upper LED lights, indicating that overvoltage has occurred. If the condition persists until the timer has timed out, the relay will change state and the lower LED will light.

If normal conditions are restored before the timer has timed out, the unit resets and both LEDs turn off. The same will occur if the voltage returns to normal when the unit is already in trip. There is no time delay; reset is immediate.

There is no separate input wiring on this product

Mounting and wiring

All the units in the range are supplied in an Anodised or Achromed extruded aluminium enclosure which may be surface or panel mounting, single end access or 7 way 19" rack. Alternatively, some 2-wire transmitters are supplied in a diecast or plastic IP65 enclosure.

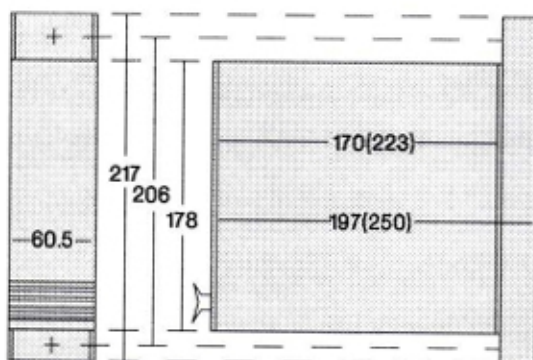
When a unit is fitted into an enclosure, the edge connector at the rear of the main printed circuit board mates with a socket which is wired to the terminal blocks. The unit is retained in the enclosure by two M3 screws which pass through countersunk holes in the front panel and into tapped holes at the front of the enclosure.

The 'U' channel terminal cover is supplied in two sizes to suit different mounting requirements. For surface mounting units, the 217mm length is supplied and includes the fixing holes. For panel, single end access or rack mounting, the 178mm length is supplied but only when options 'K' or 'EXI' are specified. When supplied, they must be replaced after wiring.

Units may be mounted at any orientation although they would normally be mounted with the front panel vertical. Surface or single end access units should not be mounted closer than 61mm horizontally or 218mm vertically. Panel units should not be mounted closer than 70mm horizontally or 234mm vertically and racks should not be mounted closer than 485mm horizontally or 189mm vertically. All types would normally be mounted further apart than this to ease wiring. At least 180mm must be left at the front of all enclosures to allow for unit withdrawal.

In the following drawings, all dimensions are in mm. Figures in brackets show the added depth of the 'K' enclosures to house the RFI protection components.

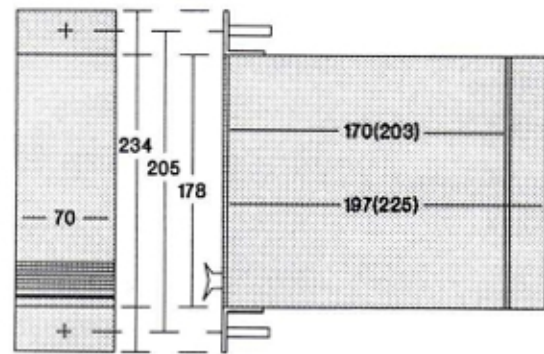
Surface mounting



Before wiring, the unit must be withdrawn from the case, which may then be removed from the 'U' channel by undoing the M4 screw at the top rear of the case, hinging the case downwards and unhooking it from the fixed peg at the lower rear of the case. This exposes the terminal blocks for wiring.

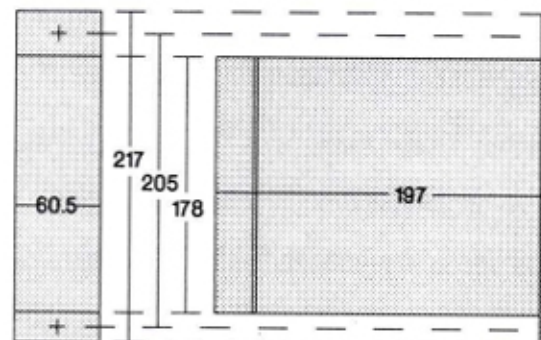
Slots are provided in the terminal plate which allow cables to be passed along the 'U' channel, through the slots and into the terminal blocks. After wiring, the enclosure may be reassembled by reversing these instructions.

Panel mounting



A 65mm wide by 190mm high aperture must be cut in the front panel with 6mm fixing holes above and below. The brackets and front panel are wider than the aperture to obscure any cut edges.

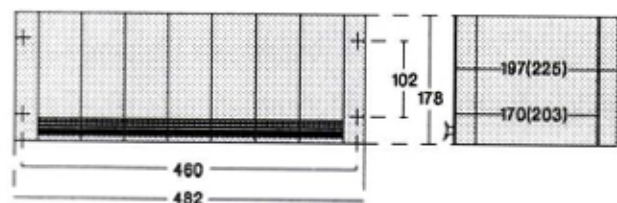
Single end access



This enclosure is not recommended for use with option 'K'

In this arrangement the terminal blocks are mounted on the front panel, although the enclosure is surface mounted. Since the terminals are on the removable part of the unit, allowance must be made, when wiring, to allow for unit withdrawal without disturbing the wiring to adjacent units or the main loom.

19" Rack mounting



Up to seven units may be mounted in a 19" rack, although other widths may be supplied to suit special requirements.

The rack is normally supplied with fixing brackets to suit panel mounting (as shown above) but may also be supplied for single end access if required.

A 179mm high by 440mm wide aperture must be cut in the panel with fixing holes on 102mm by 460mm centres.

Mounting and wiring

WIRING

Input, output and supply connections are made via leaf type terminal blocks which are mounted on the front of single end access enclosures and at the rear on all other 'A' series types. These terminal blocks will accept cables up to 2.5mm².

On most enclosures, other than panel mount, the terminals are separated into two groups by an earthed barrier which is part of the terminal mounting plate.

This barrier, together with the 'U' section terminal cover, ensures that input cables must enter from the top of the unit and supply/output cables from below. This helps meet the requirements of 'N' protection for intrinsically safe installations.

Input wiring

This is given in the individual specification sheets for the various instrument types.

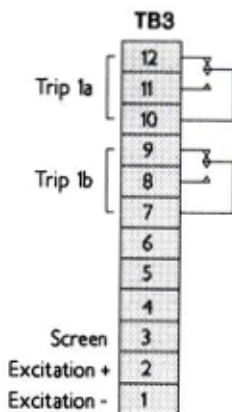
Input access

This is almost invariably from the left, except where shown otherwise. This convention has been followed on input wiring drawings.

Relay wiring

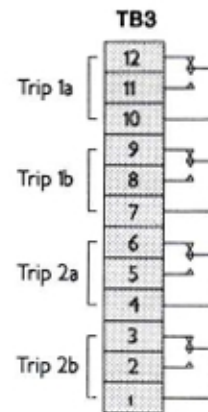
The following drawings show the outputs available for the standard range of products. Where output wiring differs from these, details are given in the individual specification sheet.

Single channel single trip



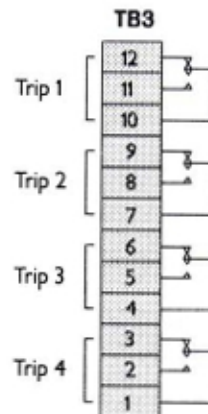
The excitation supply shown in the above drawing is the alternative wiring when option 'M' is fitted. The single relay has double pole changeover contacts.

Single channel double trip
Double channel single trip



The two relays have double pole changeover contacts

Double channel single trip
Single channel quadruple trip



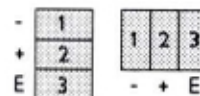
On single channel double trip units, Trips 1 and 2 are operated by the first channel; trips 3 and 4 by the second. On quadruple trip units, all four operate from the single input. The four relays have single pole changeover contacts.

Output access

For panel, single end access or rack mounting units, output wiring access is from the right. For surface mounting units, wiring access is from the left, as shown above.

Supply wiring

DC Supply



AC Supply



Supply access

For panel, single end access or rack mounting units, output wiring access is from below. For surface mounting units, wiring access is from the left.