Overview

The Challenger LAN utilises an RS485 bus for its communication. To prevent earth loops and eliminate voltage differentials there may be a need to electrically isolate signals between two points. It may be necessary to achieve distances to remote devices exceeding 1.5km, or provide self-monitoring loops and higher noise immunity with intrinsic prevention against cable breaks. For these reasons GE has developed the Challenger LAN devices range.

The TS0844 Power Distribution Board provides a simple means of star connecting Challenger LAN devices. Fitted with a single input port and five paralleled output ports, either power and LAN communications or power alone can be connected. The Power Distribution Board is a versatile unit for keeping wiring in place and easily traceable back to its source

The TS0893 is a LAN isolator and repeater. As an isolator it is used to electrically isolate the Challenger LAN where voltage differentials may exist. Typically, this would be used to isolate devices where the LAN extends across two separate buildings that may be subject to two separate earthing conditions. As a LAN repeater each TS0893 connected to the Challenger LAN can extend it a further 1.5 kms. Up to three TS0893's can be connected to a single Challenger LAN extending its maximum distance up to 6kms.

The TS0894 RS232 to RS485 interface module converts a standard RS232 serial connection to the Challenger LAN. This is typically used to allow a PC to be connected from up to 1.5kms rather than just the short distance possible with a standard RS232 serial connection. The TS0894 is also used to extend the Challenger LAN over PSTN or leased line via two serial modems that can connect to the Challenger LAN via this converter.

The TS0895 LAN Loop Interface provides redundancy to the Challenger LAN. It allows a cable to start from one point and end at the same point. If a break should occur in the looped cable at any point, communication continues around the two branches created ensuring security devices continue operating. Breaks in the loop can, via relay, generate an alarm in the Challenger system.

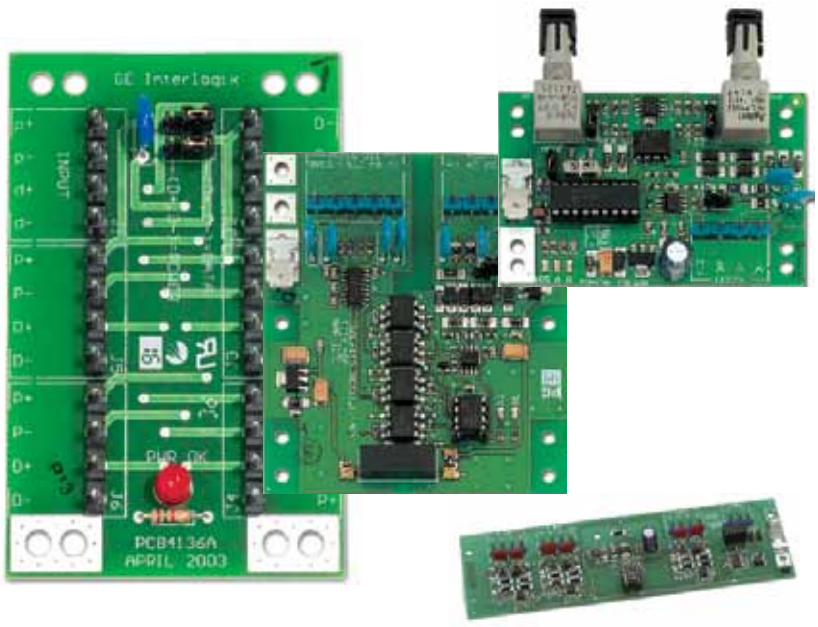
The TS0896 RS485 to optical fibre converter allows the Challenger LAN to run over an optical Fibre network. It allows either multi-dropped connection when using a single optical fibre or point-to-point connection when using two fibres.

Features

- More traceable connection of power to devices along the Challenger LAN
- Electrically isolate either side of the LAN to prevent problems caused by voltage differentiation
- Extend the Challenger LAN beyond 1.5 kms.
- Increase the distance of a serial PC connection to the panel up to 1.5 kms.
- Extend the Challenger LAN across a leased line or PSTN network.
- Extend the Challenger LAN across an optical fibre network.
- Provide redundancy cable path in case of a cable breakage along the LAN or deliberate cut
- Generate an alarm if cable breaks

TS0844
TS089/3/4/5

Power Distribution and LAN interface boards



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Specifications

TS0844	
Supply voltage	9 to 14 VDC
Dimensions	50mm x 79mm
Operating temperature	0 to 50°C
TS0893	
Supply voltage	9 to 14VDC
Operating current	90 mA
Isolation voltage	1,500 V
Maximum distance from panel	1.5km
Dimensions	89mm x 79mm
Operating temperature	0 to 50°C
TS0894	
Supply voltage	9 to 14 VDC
Operating current	100 mA
Maximum distance from panel	1.5km
Dimensions	89mm x 79mm
Operating temperature	0 to 50°C
TS0895	
Input Voltage	10.5 to 13.8 VDC
Operating Current	90 mA maximum (no peripheral devices)
Max. distance from panel	1.5km
Specified Cable for Challenger & Access Controller LAN	Belden 8723 or equivalent
Connection	Fault change over relay
Operating Temperature	0 to +70°C
TS0895 LAN Loop Interface	'BB' size board
TS0896	
Supply voltage	9 to 14 VDC
Operating current	60 mA
Maximum distance from panel	1.5km over RS-485
Dimensions	89mm x 79mm
Operating temperature	0 to 50°C
Mode	Multimode
Fiber size	62.5 / 125 micrometer
Wavelength	820 nm wavelength technology
Distance	1.5km

Ordering Information

TS0844	Data/power distribution module
TS0893	Data bus isolator/repeater
TS0894	RS-232 to RS-485 interface module
TS0895	RS485 LAN Loop Interface with fault relay
TS0896	Data bus to fiber optic module