

7SG18 Solkor N

Numeric Differential Protection

Document Release History

This document is issue 2010/02. The list of revisions up to and including this issue is:
Pre release

2010/02	Document reformat due to rebrand

Software Revision History

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1 Unpacking, Storage And Handling

On receipt, remove the relay from the container in which it was received and inspect it for obvious damage. Check that the relay is the correct model number and the rating information is correct. It is recommended that the relay is not removed from the case. To prevent the possible ingress of dirt, the sealed polythene bag should not be opened until the relay is to be used. If damage has been sustained a claim should immediately be made against the carrier and Siemens should be informed.

When not required for immediate use the relay should be returned to its original carton and stored in a clean, dry place. The relay contains static sensitive devices, which are susceptible to damage due to static discharge and for this reason it is essential that the correct handling procedure is followed. The relays' electronic circuits are protected from damage by static discharge when it is housed in its case. When it has been withdrawn from the case, static handling procedures should be observed.

- Before removing the relay from its case the operator must first ensure that he is at the same potential as the relay by touching the case.
- The relay must not be handled by any of the relay terminals on the rear of the chassis.
- Relays must be packed for transport in an anti-static container.
- Ensure that anyone else handling the relays is at the same potential as the relay.

As there are no user serviceable parts in the relay, then there should be no requirement to remove any modules from the chassis. If any modules have been removed or tampered with, then the guarantee will be invalidated. Siemens reserves the right to charge for any subsequent repairs.

2 Recommended Mounting Position

The relay uses a liquid crystal display (LCD) which displays setting and metering information. It has a viewing angle of $\pm 70^\circ$ and an internal back light. The recommended viewing position is at eye level.

The relay should be mounted onto the circuit breaker or panel at a level which allows the user easiest access to the relay functions.

3 Relay Dimensions

The relay is supplied in an Epsilon size E8 case. Mechanical diagrams of the case dimensions and panel cut-out requirements are shown in Figure 1.

4 Fixings

4.1 Crimps

Amp Pidg or Plasti Grip Funnel entry ring tongue

Size	AMP Ref	Reyrolle Ref
0.25-1.6mm ²	342103	2109E11602
1.0-2.6mm ²	151758	2109E11264

4.2 Panel Fixing Screws

Kit – 2995G10046 comprising:

- Screw M4 X10TT 2106F14010 – 4 off
- Lock Washers 2104F70040 – 4 off
- Nut M4 2103F11040 – 4 off

Note Two Mounting screws for the Pilot wire Interface are not supplied as this is mounted inside the protection panel. The Pilot wire modem has two 5mm diameter holes on a mounting bracket - see figure 2.

4.3 Communications

The communications connection types supplied are:

IEC60870-5-103 Communication Interface

BFOC/2.5 (ST[®]) bayonet-style connectors – 2 per relay.

Protection Signalling Communication Interface

Any one of the following internal communication interfaces may be supplied with the relay.

RS485 Cable - Screen twisted pair electrical link - 5 way screw terminal – 1 per relay.

RS232C and Pilot wire Modem - 4 way screw to 1.9m RS232 cable – 1 per relay.

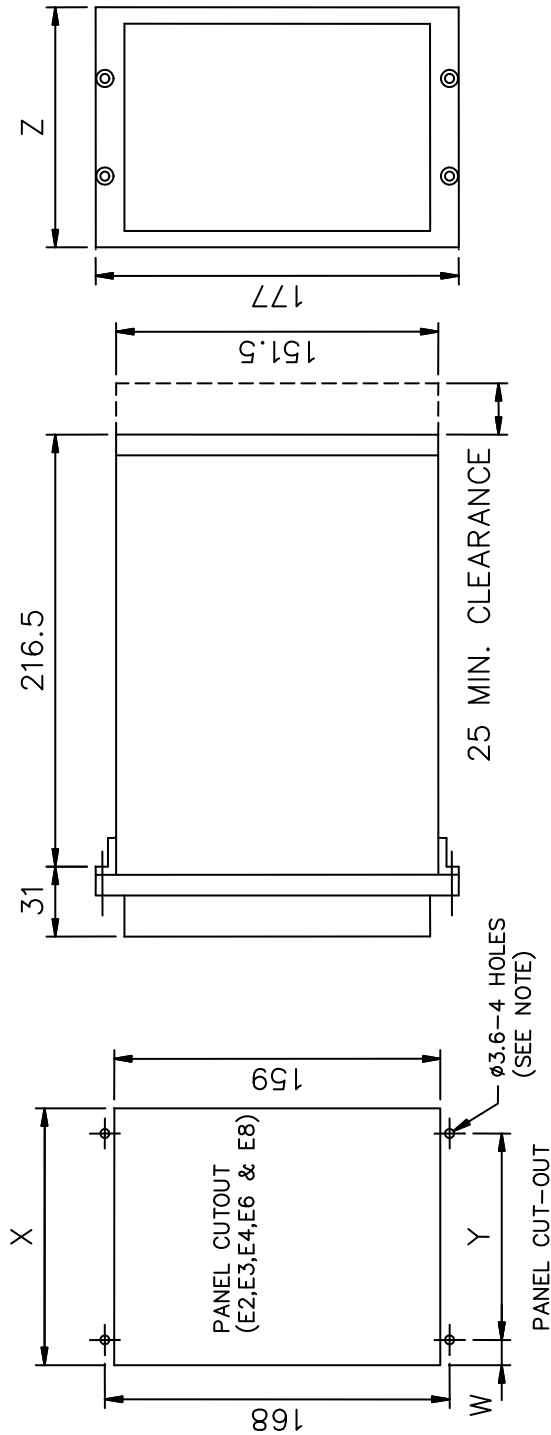
1300nm LED Multimode optical fibre link - BFOC/2.5 (ST[®]) bayonet-style connectors – 2 per relay.

1300nm LED Single mode optical fibre link - BFOC/2.5 (ST[®]) bayonet-style connectors – 2 per relay.

(Refer to Section 4 of this manual – Communications Interface).

5 Ancillary Equipment

The relay can be interrogated locally or remotely by making connection to the fibre optic terminals on the rear of the relay. For local interrogation a portable PC with a fibre to RS232 modem (Sigma 4) is required. The PC must be capable of running Microsoft Windows Ver 3.1 or greater, and it must have a standard RS232 port in order to drive the modem. For remote communications more specialised equipment is required. Refer to Section 4 of this manual – Communications Interface.



NOTE:
 THE $\phi 3.6$ HOLES ARE FOR M4 THREAD FORMING (TRILOBULAR) SCREWS. THESE ARE SUPPLIED AS STANDARD AND ARE SUITABLE FOR USE IN FERROUS/ALUMINIUM PANELS 1.6mm THICK AND ABOVE. FOR OTHER PANELS, HOLES TO BE M4 CLEARANCE (TYPICALLY $\phi 4.5$) AND RELAYS MOUNTED USING M4 MACHINE SCREWS, NUTS AND LOCKWASHERS (SUPPLIED IN PANEL FIXING KIT).

EPSILON CASE SIZE					
	E2	E3	E4	E6	E8
W	10.5	10.4	10.25	10	9.75
X	47	72.75	98.5	150	201.5
Y	26	52	78	130	182
Z	51.5	77.5	103.5	155.5	207.5

Figure 1 - Overall Mounting Dimensions (E8 size Case)

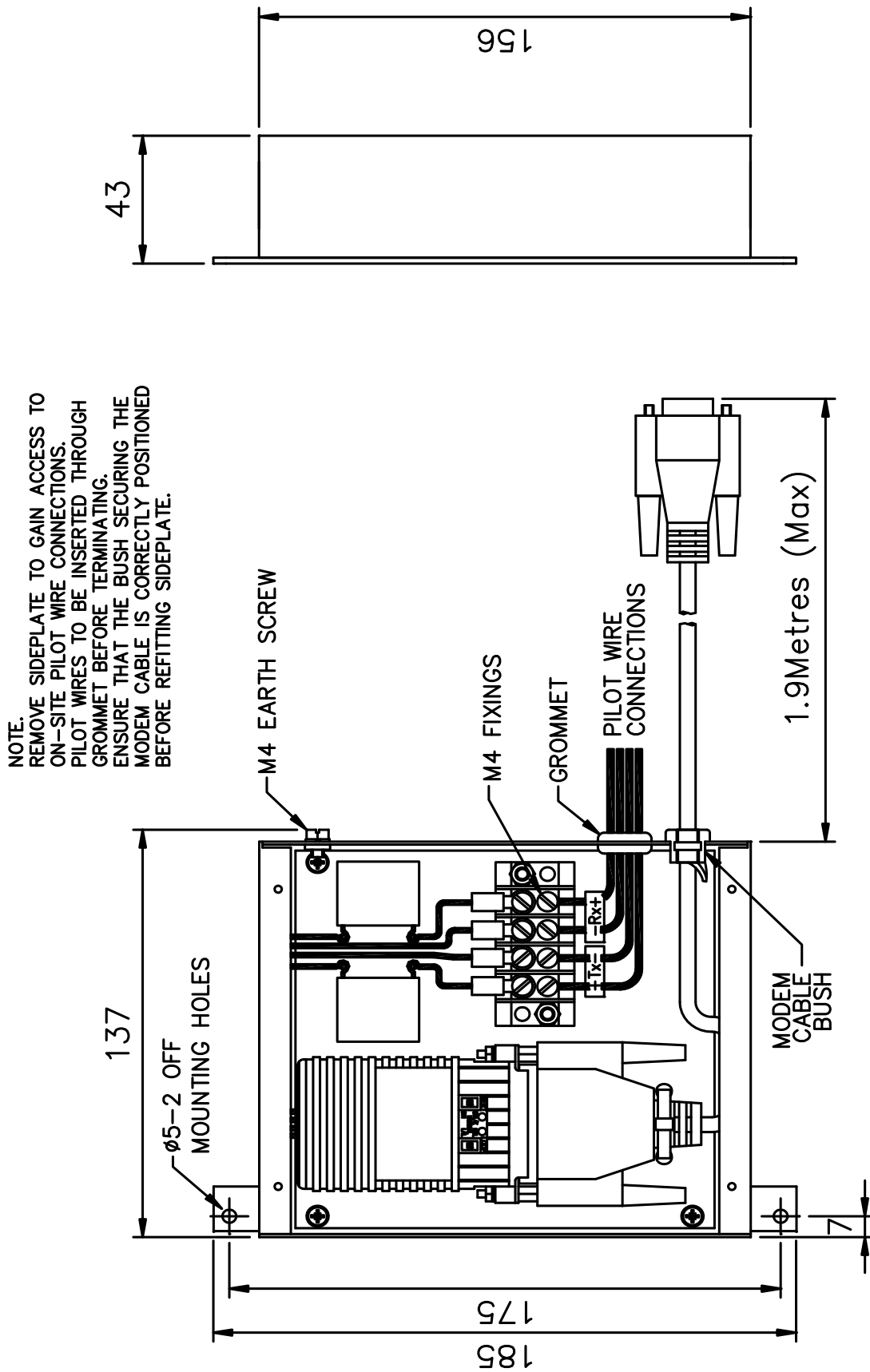


Figure 2 - Mounting Dimensions of Pilotwire Modem

The pilot wire connections are shown in Section 4 – Communications Interface.