



FEPDS PCLM/ERM Earth Monitors



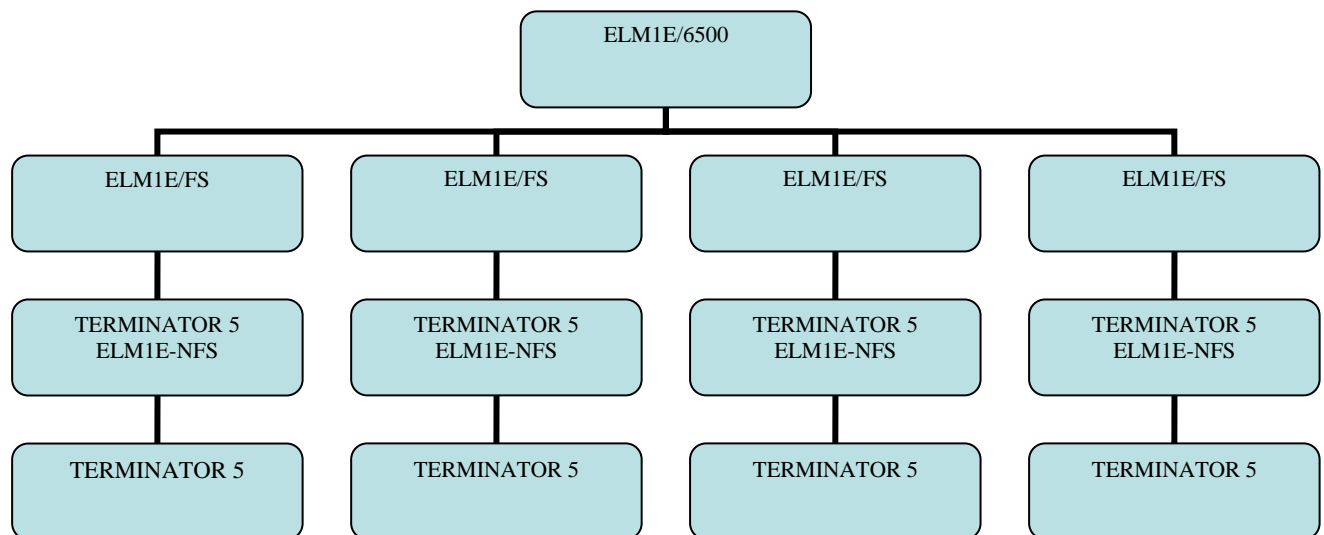
The PCLM has been designed especially for application in modular electrical systems as used by military or quasi-military organisations for temporary bases, field hospitals, mobile communications centres, forward command centres etc.

The PCLM (Pilot Core Loop Monitor – also known as an earth resistance monitor – ERM) measures the impedance of earth connections within Field Electrical Power Distribution Systems (FEPDS) and is designed for rough usage including air drop insertion (withstanding 1000G Shock) to operate in temperatures -40°C to $+80^{\circ}\text{C}$ and to withstand the bombardment of Neutron & Gamma rays in the event of a nuclear attack.



Installation involves fitting to a mobile generator and to each of the associated modular distribution modules. The new datasheet provides installation/operation data including information on the TER5 terminator unit used in conjunction with the PCLM.

Typical FEPDS Distribution System from Generator fitted with Earth Resistance Monitor ELM1E/6500 checking Input Earth & Four Output PCLM ELM1E/FS supplying distribution boxes fitted with End of Line device Terminator 5 & subsequent multiples of PCLM ELM1E-NFS supplying further circuits.



ELM1E-FS Nato Stock No X2/6150-99-832-8111

ELM1E-NFS Nato Stock No X2/6150-99-765-9582

The ELM1E is fitted at the power supply source;

Terminator 5, Nato Stock No X2/6150-99-729-4066.

The Terminator is fitted at the remote end of the Pilot Earth wire loop.



EARTH RESISTANCE MONITOR

Type ELM1E/6500 -Earth Resistance Monitor

OPERATION When levels of Earth Loop exceed 6.5Kohms \pm 5%, N/O contact closes.

TRIPPING MODE Non Fail-safe (Contact state not affected by loss of Control Voltage)

SPECIFICATION:

CONTROL POWER

Non-isolated from 20 to 50 Volts AC/DC
Power consumption: No Trip 0.5W
Tripped 1.0W
Back-up time: More than 8 hours
Pull In time: 3 seconds

RELAY CONTACTS

8 Amps @ 275V (Varistor protected)
2000VA - 150W
1 pair N/O contacts (Closed on fault condition)

TEMPERATURE RANGE

-40° to +70°C

SPECIAL TESTS

1000g shock Test (Non operating)

If power is removed after a trip has occurred, the trip will be latched for over eight hours.

On return of the control power, the relay will pull back into the tripped state. The trip can be reset during the time the power is off.



ELM1E/FS & NFS Dimensions

| Description | Specification |
|------------------------|------------------------|
| Box Material | Grey ABS |
| Width | 68mm±0.5mm |
| Height | 57mm±0.5mm |
| Depth | 35mm±0.5mm |
| Pitch | 56mm±0.5mm |
| Pitch | 47mm±0.5mm |
| Fixing Hole Dia | 4.5mm Clearance |

End of Line Terminator NSNX2/6150-99-729-4066

Terminator

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| Description | Specification |
|-------------------------|------------------------|
| Box Material | Grey ABS |
| Width | 53mm ±0.5 |
| Height | 44mm ±0.5 |
| Depth | 22mm ±0.5 |
| Pitch | 41mm ±0.5 |
| Pitch | 34mm ±0.5 |
| Fixing hole dia. | 4.5mm clearance |

