

Do you need INSTRUMENTS for measuring electrical parameters?

THE cost effective instrument for condition monitoring of earth resistance on cable armoring

SURETECH EARTH-LOSS MONITOR

The SURETECH Earth-Loss Monitor (ELM) measures the resistance to earth of cable armoring in such a way that the user can actually LOCATE the earth loss. This resistance should normally be very low value. If however an earth becomes disconnected due to theft, or corrosion, or a fault, then the SURETECH ELM will detect this. System voltages from mains (380 / 220V) as well as higher voltage MV systems can have their earth resistance continuously monitored. A range of output formats are available, such as relay contact, 4-20mA, RS232 etc.

General Features:

- Each device / transformer / motor feed cable can be individually monitored for earth continuity
- Up to 16 separate resistance channels can be monitored
- Earth resistance is displayed and output to a LCD panel (from 1ohm to 1000ohm)
- Differentiates between earth sense cable loss and actual earthing / armoring loss
- Low voltage DC measuring signals are used to perform measurement, and so will not damage other sensitive equipment
- Sensing inputs are protected against earth fault voltages appearing across the earth (up to 270Volts)
- Options include RS232 output for direct input to a PLC or SCADA
- Standard operations: threshold relay output has normally open and closed contact
- Earth channel's resistance threshold is pre-settable by means of simple three key user interface
- Alarms are raised when earth resistance exceeds the pre-set threshold
- Thresholds are settable at 2, 5, 10, 20, 50, 100, 200, 500 ohms
- Easy interface to multiple cables
- Transient suppression on inputs and outputs
- Wide range of auxiliary Power Supply options available, from 90-260V ac/dc, and battery supplies
- Inputs, outputs, and auxiliary power supply are galvanically isolated (optional)
- Backup to provide you support for design, application, installation, and maintenance information
- Interface wiring spaced ready for standard industrial wiring terminals (6mm pitch)
- Patent pending

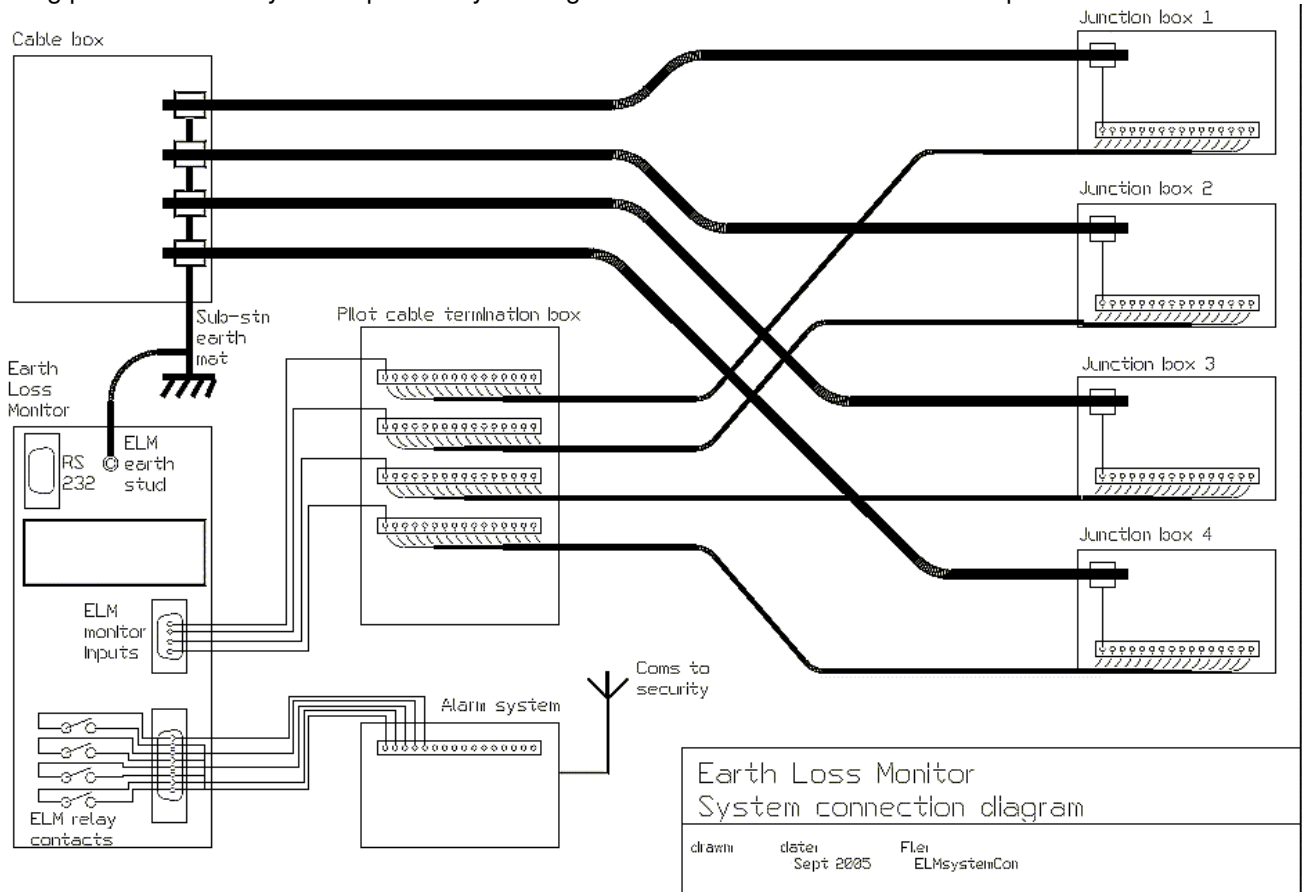


Why should you use an ELM?

- Reduce cable theft
- Reduce danger to humans from earth loss
- Finding earthing problems is easily done by simply reading the earth resistance at each ELM. The Earth-Loss is between the high reading ELM unit and the low resistance reading ELM unit
- Reduce time to locate earth faults and save production time
- Detect unearthed motors
- On-line condition monitoring of earthing integrity throughout your electrical system
- ELM can be directly networked into a PC, PLC or SCADA system for better plant management

Earth-Loss Monitor system description:

At each cable box or mini-substation on the network, an Earth-Loss sense cable is fitted. The ELM is supplied with auxiliary power from a 220Vac or 110Vac source. When a section of earthing / armouring becomes disconnected, then all of the ELM's furthest away from the feed transformer all will read a high resistance to earth. Locating earthing problems is easily accomplished by reading earth resistance on the ELM's LCD panel meter.



ELM Specifications:

PARAMETER	CONDITIONS	MIN	NOM	MAX	UNIT
Measuring voltage			3.3		V dc
Measuring current				0.033	A dc
Detection time	for Earth Loss		250		ms
Relay contact rating	220Vac			5	Amps
Aux PSU isolation				2	kV
AC voltage on inputs	50Hz noise to be filtered			5	Volts ac
Fault voltage on inputs	Sustained			250	Volts ac/dc
Number of channels	(Order from factory)	1		16	Channels
Resistance threshold settings	2, 5, 10, 20, 50, 100, 200, 500				Ohms
Resistance Measurement accuracy			2		% fsd
Temperature	Operating range	0		50	Deg C
Aux Power Supply Voltage range		90		260	V ac / dc
Aux Power Supply - VA requirement		2		10	VA



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