# Multilin 750/760

## Feeder protection system

The 750/760 Feeder Protection System is a digital relay intended for the management and primary protection and control of distribution feeders. This easy to use relay provides comprehensive protection functions for feeders and back up protection for bus, transformers and transmission lines in a draw out construction and at a reduced product life cycle cost.

### Key Benefits

- Easy to use Feeder Protection System supported by industry leading suite of software tools
- Accurate built-in metering functions - Eliminates auxiliary metering devices and reduces cost
- Improve uptime of auxiliary equipment - I/O monitoring
- Reduce troubleshooting time and maintenance costs - IRIG-B time synchronization, event reports, waveform capture, data logger
- Minimize replacement time - Draw-out construction
- Simplify testing - Built in simulation features
- Cost effective access to information. Supports industry protocols such as DNP & Modbus. Includes an optional 10MB Ethernet port for system integration
- Complete asset monitoring - Analog I/O, Full metering including demand & energy
- Leading edge technology - Flash memory for product field upgrade
- Extended life - Optional conformal coating for chemically corrosive and humid environments
- Globally accepted ensuring adherence to international codes and standards

### Applications

- Primary protection and control for distribution feeders on solidly grounded, high impedance grounded or resonant (Peterson Coil) grounded systems
- Bus blocking/Interlocking schemes
- High-speed fault detection for arc flash mitigation
- Throw over schemes (bus transfer scheme applications)
- Load shedding schemes based on voltage and frequency elements
- Back-up protection for transmission lines, feeders and transformers
- Distributed Generation (DG) interconnect protection

## Protection and Control

- Directional time, instantaneous phase & ground overcurrent protection
- Directional sensitive ground and Restricted Earth Fault protection
- Reverse power protection
- Synchro Check - V, f, Hz, & dead-source
- Automatic bus transfer or manual control
- 4 shot recloser (760 only)

## Communications

- Networking interfaces - 10Mbps Ethernet, RS232, RS485 and RS422 ports
- Ethernet port, 10Mbps
- Multiple protocols - ModBus™ RTU, TCP/IP, DNP 3.0 Level 2

## Monitoring & Metering

- Metering - current, voltage, sequence components, power, energy, voltage
- Breaker operation & trip failure
- Total breaker arcing current
- Ambient temperature /analog transducer input
- Oscillography & Data Logger - 10 records up to 32 power cycles
- Simulation mode and playback capability

## EnerVista Software

- State of the art software for configuration and commissioning Multilin products
- Document and software archiving toolset to ensure reference material and device utilities are up-to-date
- EnerVista™ Integrator providing easy integration of data in the 750/760 into new or existing monitoring and control systems

# Technical Specifications

## PROTECTION

### PHASE/NEUTRAL/GROUND/NEGATIVE SEQUENCE TIME OVERCURRENT PROTECTION

| | |
|---|---|
| Pickup level: | 0.05 to 20.00 in steps of 0.01 × CT |
| Dropout level: | 97 to 98% of Pickup |
| Curve shape: | ANSI extremely/very/moderately/ normally inverse |
| | Definite time (0.1 s base curve) |
| | IEC curve A/B/C and short |
| | FlexCurve™ A/B (programmable curves) |
| | IAC extreme/very/inverse/short |
| Curve multiplier: | 0.00 to 100.00 in steps of 0.01 |
| Reset type: | Instantaneous/linear |
| Level accuracy: | Per current input ($I_2$ is 3 × input error) |
| Timing accuracy: | |
| | at1.03 × PU: ±3% of trip time or ±40 ms (whichever is greater) |

### SENSITIVE GROUND TIME OVERCURRENT PROTECTION

| | |
|---|---|
| Pickup level: | 0.005 to 1.000 in steps of 0.001 × CT |
| Dropout level: | 97 to 98% of pickup |
| Curve shape: | ANSI extremely/very/moderately/ normally inverse |
| | Definite time (0.1 s base curve) |
| | IEC Curve A/B/C and short |
| | FlexCurve™ A/B (programmable curves)  IAC extreme/vary/ inverse/short |
| Curve multiplier: | 0.00 to 100.00 in steps of 0.01 |
| Reset type: | Instantaneous/linear |
| Level accuracy: | Per current input ($I_2$ is 3 × input error) |
| Timing accuracy: | at1.03 × PU: ±3% of trip time or ±40 ms (whichever is greater) |

### PHASE/NEUTRAL/GROUND/NEGATIVE SEQUENCE INSTANTANEOUS OVERCURRENT PROTECTION

| | |
|---|---|
| Pickup level: | 0.05 to 20.00 in steps of 0.01 × CT |
| Dropout level: | 97 to 98% of pickup |
| Time delay: | 0.00 to 600.00 in steps of 0.01s |
| Level accuracy: | Per phase/neutral/ground current input ($I_2$ is 3 × phase input error) |
| Timing accuracy: | |
| **At 0 ms time delay (no intentional delay):** | |
| | Relay contacts = 50 ms max |
| | solid state output = 45 ms max |
| **At non-zero time delay:** | |
| | Delay accuracy = 0 to +20 ms |
| Phases: | Any one/any two/all three (programmable) |
| | phases have to operate for output (not for $I_2$) |

### PHASE DIRECTIONAL

| | |
|---|---|
| Relay Connection: | 90° (quadrature) |
| Polarizing Voltage: | Vbc (phase A); Vca (phase B); Vab (phase C) |
| MTA: | 0 to 359° in steps of 1 |
| Angle Accuracy: | ±2° |
| Operation Delay: | 25 to 40 ms |

### NEUTRAL DIRECTIONAL

**NOTE:** Polarized by voltage, current, or both voltage and current. For voltage element polarizing, the source VTs must be connected in Wye.

| | | | |
|---|---|---|---|
| | | Polarizing voltage: | .Vo |
| | | Polarizing current: | Ig |
| | | MTA: | |
| 0 to 359° in steps of 1 | | Angle accuracy: ±2° | |
| | | Operation delay: 25 | |
| to 40 ms | | | |

### GROUND / SENSITIVE GROUND DIRECTIONAL

**NOTE:** Polarized by voltage, current, or both voltage and current. For voltage element polarizing, the source VTs must be connected in Wye.

| | |
|---|---|
| Polarizing voltage: | - Vo |
| Polarizing current: | Ig |
| MTA: | 0 to 359° in steps of 1 |
| Angle accuracy: | ±2° |
| Operation delay: | 25 to 40 ms |

### BUS UNDERVOLTAGE 1/2 AND LINE UNDERVOLTAGE 3/4

| | |
|---|---|
| Minimum voltage: | > programmable threshold from 0.00 to1.25 × VT in steps of 0.01 |
| Pickup level: | 0.00 to 1.25 in steps of 0.01 × VT |
| Dropout level: | 102 to 103% of pickup |
| Curve: | Definite time or inverse time |
| Time delay: | 0.0 to 6000.0 in steps of 0.1 s |
| Phases: | Any one/any two/all three (programmed) |
| | to operate for output (bus undervoltage only) |
| Level accuracy: | Per voltage input |
| Timing accuracy: | ±100 ms |

### OVERVOLTAGE 1/2

| | |
|---|---|
| Pickup level: | 0.00 to 1.25 in steps of 0.01 × VT |
| Dropout level: | 97 to 98% of pickup |
| Time delay: | 0.0 to 6000.0 in steps of 0.1 s (definite time) |
| Phases: | Any one/any two/all three (programmable) |
| | phases have to operate for output |
| Level accuracy: | Per voltage input |
| Timing accuracy: | ±100 ms |

## PROTECTION

### NEGATIVE SEQUENCE VOLTAGE

| | |
|---|---|
| Pickup level: | 0.00 to 1.25 in steps of 0.01 × VT |
| Dropout level: | 97 to 98% of pickup |
| Time delay: | 0.0 to 6000.0 in steps of 0.1 (definite or inverse time) |
| Level accuracy: | 3 × voltage input error |
| Timing accuracy: | ±100 ms |

### UNDERFREQUENCY 1/2

| | |
|---|---|
| Minimum voltage: | 0.00 to 1.25 in steps of 0.01 × VT in phase A |
| Pickup level: | 20.00 to 65.00 in steps of 0.01 Hz |
| Dropout level: | Pickup + 0.03 Hz |
| Time delay: | 0.00 to 600.00 in steps of 0.01 s (definite time) |
| Level accuracy: | ±0.02 Hz |
| Timing accuracy: | |
| At 60 Hz: | ±25 ms |
| At 50 Hz: | ±30 ms |

### NEUTRAL DISPLACEMENT

| | |
|---|---|
| Pickup level: | 0.00 to 1.25 × VT in steps of 0.01 |
| Dropout level: | 97 to 98% of pickup |
| Curves: | ANSI Extremely/ Very/ Moderately/ Normally Inverse, Definite Time (0.1 s base curve), IEC Curve A/B/C and Short, FlexCurve. A/B (programmable curves), IAC Extreme/ Very/ Inverse/Short |
| Curve multiplier: | 0 to 100.00 in steps of 0.01 |
| Reset type: | Instantaneous/Linear |
| Level accuracy: | 3 × voltage input error |
| Timing accuracy: | ±50 ms |

### REVERSE POWER (IF ENABLED)

| | |
|---|---|
| Pickup level: | 0.015 to 0.600 × rated power |
| Dropout level: | 94 to 95% of pickup |
| Reset time: | less than 100 ms |
| Level accuracy: | see 3φ Real Power metering |
| Time delay: | 0.0  to 6000.0 s in steps of 0.1 |
| Timing accuracy: | ±200 ms (includes Reverse Power pickup time) |

### BREAKER FAILURE

| | |
|---|---|
| Pickup level: | 0.05 to 20.0 × CT in steps of 0.01 |
| Dropout level: | 97 to 98% of pickup |
| Time delay: | 0.03 to 1.00 s in steps of 10 |
| Timing accuracy: | ±20 ms error |
| Level accuracy: | per CT input |

## METERING

### CURRENT

| | |
|---|---|
| Phasors: | Phase A RMS current |
| | Phase B RMS current |
| | Phase C RMS current |
| % of load-to-trip accuracy: | |
| | ±0.5% of fullscale |

### VOLTAGE

| | | |
|---|---|---|
| Phasors: | | Phase A-N (A-B) voltage |
| | | Phase B-N (B-C) voltage |
| | | Phase C-N (C-A) voltage |
| | Accuracy: | ±0.25% of full scale |

### FREQUENCY

| | | |
|---|---|---|
| Measured: | | A-N (A-B) bus and line voltage |
| Range: | | 16 to 65 Hz |
| | Accuracy: | ±0.02 Hz |

### SYMMETRICAL COMPONENTS

| | |
|---|---|
| Current level accuracy: | |
| | ±1.5% of full scale |
| Voltage level accuracy: | |
| | ±0.75% of full scale |
| Current and voltage angle accuracy: | |
| | ±2° |

### 3φ POWER FACTOR

| | |
|---|---|
| Range: | 0.00 Lag to 1.00 to 0.00 Lead |
| Accuracy: | ±0.02 |

### 3φ REAL POWER

| | |
|---|---|
| Range: | -3000.0 to 3000.0 MW |
| Accuracy: | ±1% of full scale |

### 3φ REACTIVE POWER

| | |
|---|---|
| Range: | -3000.0 to 3000.0 Mvar |
| Accuracy: | ±1% of full scale |

### 3φ APPARENT POWER

| | |
|---|---|
| Range: | -3000.0 to 3000.0 MVA |
| Accuracy: | ±1% of full scale |

### WATT-HOURS

| | |
|---|---|
| Range: | $-2.1 \times 10^8$ to $2.1 \times 10^8$ MWh |
| Accuracy: | ±2% of full scale per hour |

### VAR-HOURS

| | |
|---|---|
| Range: | $-2.1 \times 10^8$ to $2.1 \times 10^8$ Mvarh |
| Accuracy: | ±2% of full scale per hour |

### DEMAND RANGE

| | |
|---|---|
| Phase A/B/C current: | 0 to 65535 A |
| 3φ real power: | -3000.0 to 3000.0 MW |
| 3φ reactive power: | -3000.0 to 3000.0 Mvar |
| 3φ apparent power: | -3000.0 to 3000.0 MVA |

### DEMAND MEASUREMENT

| | |
|---|---|
| Thermal exponential, 90% response time (programmed): | 5, 10, 15, 20, 30, or 60 min. |
| Block interval / rolling demand, time interval (programmed):` | 5, 10, 15, 20, 30, or 60 min. |
| Accuracy: | ±2% of full scale |

## MONITORING

### PHASE/NEUTRAL CURRENT

| | |
|---|---|
| Pickup level: | 0.05 to 20.00 × CT in steps of 0.01 |
| Dropout level: | 97 to 98% of pickup |
| Time delay: | 0 to 60000 s in steps of 1 (Definite Time) |
| Level accuracy: | per current input |
| Timing Accuracy: | ±100 ms |

### POWER FACTOR

| | |
|---|---|
| Required voltage: | >30% of nominal in all phases |
| Pickup level: | 0.50 lag to 0.50 lead in steps of 0.01 |
| Dropout level: | 0.50 lag to 0.50 lead in steps of 0.01 |
| Time delay: | 0 to 60000 s in steps of 1 (Definite Time) |
| Level accuracy: | ±0.02 |
| Timing Accuracy: | ±100 ms |

### ANALOG IN THRESHOLD

| | |
|---|---|
| Pickup level: | 0 to 65535 units in steps of 1 |
| Dropout level: | 2 to 20% of Pickup (programmable, under/over) |
| Time delay: | 0 to 60000 s in steps of 1 |
| Level accuracy: | ±1% |
| Timing Accuracy: | ±100 ms |

### ANALOG IN RATE

| | |
|---|---|
| Pickup level: | –1000 to 1000 mA/hour in steps of 0.1 |
| Dropout level: | 97 to 98% of Pickup |
| Time delay: | 0 to 60000.0 s in steps of 1 |
| Level accuracy: | ±1% |
| Timing Accuracy: | ±100 ms |

### OVERFREQUENCY

| | |
|---|---|
| Required voltage: | >30% of nominal, phase A |
| Pickup level: | 20.01 to 65.00 Hz in steps of0.01 |
| Dropout level: | Pickup – 0.03 Hz |
| Time delay: | 0.0 to 6000.0 s in steps of 0.1 |
| Level accuracy: | ±0.02 Hz |
| Timing Accuracy: | ±34 ms at 60 Hz;±40 ms at 50 Hz |

### DEMAND

Demand accuracies are based on less than 2 × CT and 50 to 130 V inputs.

| | |
|---|---|
| Measured values: | Phase A/B/C current (A), 3φ real power (MW), 3φ reactive power (Mvar), 3φ apparent power (MVA) |
| Measurement type: | |
| Thermal Exponential, 90% response time (programmed): | 5, 10, 15, 20, 30, or 60 min. |
| Block Interval / Rolling Demand, time interval (programmed): | 5, 10, 15, 20, 30, or 60 min. |
| Block Interval with Start Demand Interval Logic Input pulses | |
| Amps pickup level: | 10 to 10000 in steps of 1 |
| MW pkp level: | 0.1 to 3000.0 in steps of 0.1 |
| Mvar pkp level: | 0.1 to 3000.0 in steps of 0.1 |
| MVA pkp level: | 0.1 to 3000.0 in steps of 0.1 |
| Level accuracy: | ±2% |

### VT FAILURE
Programmable to inhibit features.

### TRIP / CLOSE COIL MONITORS
Detect open trip and close circuits.

### PULSE OUTPUT
Pulse output is 1 second on time and one second off time after the programmed interval.

### LAST TRIP DATA
Records cause of most recent trip, 4 RMS currents, and 3 RMS voltages with a 1 ms time stamp.

### TRIP COUNTERS
Accumulates all ground, sensitive ground, neutral, negative sequence, and phase overcurrent trips.

### EVENT RECORDER (256 EVENTS)
Records event cause, 3-phase current phasors, 1 ground current phasor, sensitive ground current phasors, 3 voltage phasors, system frequency, synchronizing voltage, synchronizing frequency, and analog input level with a 1 ms time stamp.

### WAVEFORM CAPTURE

| | |
|---|---|
| Data channels: | 4 currents, 3 voltages, 14 logic input states and 8 output relays |
| Sample rate: | 16 per cycle |
| Trigger source: | Element pickup/trip/dropout, control/alarm event, logic input or manual command |
| Trigger position: | 0 to 100% |
| Storage capacity: | 2 to 16 events with 4096 to 512 samples of data respectively |

### DATA LOGGER

| | |
|---|---|
| Data channels: | 8 channels; same parameters as for analog outputs available |
| Sample rate: | Per Cycle / Per second / Per Minute / Every 5,10,15, 20, 30, or 60 min |
| Trigger source: | Pickup/trip/dropout, control/alarm event, logic input, manual command, or continuous |
| Trigger position: | 0 to 100% |
| Storage capacity: | 2 to 16 events with 2048 to 256 samples of data respectively (4096 if continuous) |

# Technical Specifications (Cont'd)

## INPUTS

### PHASE CURRENT INPUT
| | |
|---|---|
| Source CT: | 1 to 50000 A primary / 1 or 5 A secondary |
| Relay input: | 1 A or 5 A (specified when ordering) |
| Burden: | Less than 0.2 VA at 1 or 5 A |
| Conversion range: | 0.01 to 20 × CT (fundamental frequency only) |
| Accuracy: | at <2 × CT: ±0.5% of 2 × CT at ≥2 × CT: ±1% of 20 × CT |
| Overload withstand: | 1 second @ 80 times rated current continuous @ 3 times rated current |
| Calculated neutral current errors: | 3 × phase inputs |

### GROUND CURRENT INPUT
| | |
|---|---|
| Source CT: | 1 to 50000 A primary / 1 or 5 A secondary |
| Relay input: | 1 A or 5 A (specified when ordering) |
| Burden: | Less than 0.2 VA at 1 or 5 A |
| Conversion range: | 0.01 to 20 × CT (fundamental frequency only) |
| Accuracy: | at <2 × CT: ±0.5% of 2 × CT at ≥2 × CT: ±1% of 20 × CT |
| Overload withstand: | 1 second @ 80 times rated current continuous @ 3 times rated current |

### SENSITIVE GROUND CURRENT INPUT
| | |
|---|---|
| Source CT: | 1 to 50000 A primary / 1 or 5 A secondary |
| Relay input: | 1 A or 5 A (specified when ordering) |
| Burden: | Less than 0.2 VA at 1 or 5 A |
| Conversion range: | 0.005 to 1.000 × CT (fundamental frequency only) |
| Accuracy: | at <0.1 × CT: ±0.2% of 1 × CT at ≥0.1 × CT: ±1% of 1 × CT |
| Overload withstand: | 1 second @ 80 times rated current continuous @ 3 times rated current |

### BUS AND LINE VOLTAGE INPUTS
| | |
|---|---|
| Source VT: | 0.12 to 600 kV / 50 to 240 V |
| Source VT ratio: | 1 to 5000 in steps of 0.1 |
| Relay input: | 50 V to 240 V phase-neutral |
| Burden: | Less than 0.025 VA at 120 V or >576 K |
| Max continuous: | 273 V phase-neutral (full scale) CT (fundamental frequency only) |
| Accuracy (0° – 40° C): | ±0.205% of full scale (10 to 130 V) ±0.8% of full scale (130 to 273 V) (for open delta, the calculated phase has errors 2 times those shown above) |

### LOGIC INPUTS
| | |
|---|---|
| Inputs: | 14 contact and / or virtual, 6 virtual only (functions assigned to logic inputs) |
| Dry contacts: | 1000    maximum ON resistance (32 VDC @ 2 mA provided by relay) |
| Wet contacts: | 30 to 300 VDC @ 2.0 mA (external DC voltage only) |

### ANALOG INPUT
| | |
|---|---|
| Current input: | 0 – 1 mA, 0 – 5 mA, 0 – 10 mA, 0 – 20 mA, or 4 – 20 mA (programmable) |
| Input impedance: | 375    ±10% |
| Conversion range: | 0 to 21 mA |
| Accuracy: | ±1% of full scale |

### TRIP AND CLOSE COIL MONITORING INPUTS
| | |
|---|---|
| Acceptable voltage range: | 20 to 250 VDC |
| Trickle current: | 2 mA to 5 mA |

### IRIG-B INPUT
| | |
|---|---|
| Amplitude-modulated: | 2.5 to 6 Vp-p @ 3:1 signal ratio |
| DC shift: | TTL |

## CONTROL

### UNDERVOLTAGE RESTORATION
| | |
|---|---|
| Initiated by: | Trip from undervoltage 1, 2, 3 or 4 |
| Minimum voltage level: | 0.00 to 1.25 × VT in steps of 0.01 |
| Time delay: | 0.1 to 100.0 in steps of 0.1 s |
| Incomplete sequence time: | 1 to 10000 in steps of 1 min. |
| Phases: | Any one/any two/all three (programmable) phases have to operate for output |
| Level accuracy: | Per voltage input |
| Timing accuracy: | ±100 ms |

### UNDERFREQUENCY RESTORATION
| | |
|---|---|
| Initiated by: | Trip from underfrequency 1 or 2 |
| Minimum voltage level: | 0.00 to 1.25 × VT in steps of 0.01 |
| Minimum frequency level: | 20.00 to 60.00 in steps of 0.01 Hz |
| Time delay: | 0.1 to 100.0 in steps of 0.1 s |
| Incomplete sequence time: | 1 to 10000 in steps of 1 min. |
| Level accuracy: | Per voltage and frequency input |
| Timing accuracy: | ±100 ms |

*Specifications subject to change without notice.

## OUTPUTS

### ANALOG OUTPUTS
| | |
|---|---|
| Type: | Active |
| Outputs: | 8 channels; specify one of the following output ranges when ordering: |

| Output range | Maximum load |
|---|---|
| 0 – 1 mA | 12 kç |
| 0 – 5 mA | 2.4 kç |
| 0 – 10 mA | 1.2 kç |
| 4 – 20 mA | 600ç |

| | |
|---|---|
| Isolation: | Fully isolated |
| Accuracy: | ±1% of full scale |
| Response time: | 100% indication in less than 3 power system cycles (50 ms @ 60 Hz) |

### SOLID STATE TRIP
| | |
|---|---|
| Make and carry: | 15 A @ 250 VDC for 500 ms |

| Output relays: | | |
|---|---|---|
| Configuration: | 1 TRIP: | Form A |
| | 2 CLOSE: | Form A |
| | 3 – 7 AUXILIARY: | Form C |
| | 8 SELF-TEST WARNING: | Form C |
| Contact material: | Silver alloy | |

## COMMUNICATIONS
| | |
|---|---|
| Serial Ports: | 300 – 19,200 baud, programmable parity, ModBus® RTU or DNP 3.0 protocol |
| Ethernet Port: | 10BaseT, RJ45 Connector, ModBus® RTU over TCP/IP |

## POWER SUPPLY

### CONTROL POWER
| | |
|---|---|
| Options: | LO/HI (specified when ordering) |
| LO range: | DC = 20 to 60 V AC = 20 to 48 V @ 48 – 62 Hz |
| HI range: | DC = 88 to 300 V AC = 70 to 265 V @ 48 – 62Hz |
| Power: | 25 VA nominal, 35 VA maximum |
| Voltage loss hold-up time: | 30 ms |

## ENVIRONMENTAL
| | |
|---|---|
| Operating temperature range: | -40° C to +60° C |
| Ambient storage temperature: | -40° C to +85° C |
| Ambient shipping temperature: | -40° C to +85° C |
| Humidity: | Operating up to 95% (non condensing) @ 55C |
| Pollution degree: | 2 |
| IP rating: | IP40 (front), IP20 (back) |

## APPROVALS TESTS
| | |
|---|---|
| cULus: | UL508, UL1058, C22.2.No 14 |
| CE | EN60255-5, EN50263 |

## PRODUCTION TESTS
| | |
|---|---|
| Thermal cycling: | Operational test at ambient,   reducing to-40° C and then increasing to 60° C |
| Dielectric strength: | On CT inputs, VT inputs, control power inputs, switch inputs, coil supervision outputs, and relay   outputs (2 kVac for 1-minute) to safety ground. |

## TYPE TESTS
| | |
|---|---|
| Dielectric voltage withstand: | EN60255-5 |
| Impulse voltage withstand: | EN60255-5 |
| Insulation resistance: | EN60255-5 |
| Damped Oscillatory: | IEC 61000-4-18 / IEC 60255-22-1 |
| Electrostatic Discharge: | EN61000-4-2 / IEC 60255-22-2 |
| RF immunity: | EN61000-4-3 / IEC 60255-22-3 |
| Fast Transient Disturbance: | EN61000-4-4 / IEC 60255-22-4 |
| Surge Immunity: | EN61000-4-5 / IEC 60255-22-5 |
| Conducted RF Immunity: | EN61000-4-6 / IEC 60255-22-6 |
| Radiated & Conducted Emissions: | CISPR11 / CISPR22 / IEC 60255-25 |
| Sinusoidal Vibration: | IEC 60255-21-1 |
| Shock & Bump: | IEC 60255-21-2 |
| Siesmic: | IEC 60255-21-3 |
| Power magnetic Immunity: | IEC 61000-4-8 |
| Pulse Magnetic Immunity: | IEC 61000-4-9 |
| Voltage Dip & interruption: | IEC 61000-4-11 |
| Ingress Protection: | IEC 60529 |
| Environmental (Cold): | IEC 60068-2-1 |
| Environmental (Dry heat): | IEC 60068-2-2 |
| Relative Humidity Cyclic: | IEC 60068-2-30 |
| EFT: | IEEE / ANSI C37.90.1 |
| Damped Oscillatrory: | IEEE / ANSI C37.90.1 |
| RF Immunity: | IEEE/ANSIC37.90.2 |
| ESD: | IEEE/ANSIC37.90.3 |
| Safety: | UL508 / UL C22.2-14 / UL1053 |

*Please refer to Multilin 750/760 Feeder Protection System Instruction Manual for complete technical sepcifications*