Lightning Surge Protectors for Electronics Equipment *M-RESTER*

LIGHTNING SURGE PROTECTOR FOR DeviceNet

MODEL **MD-DNM**
MD-DNS

MODEL & SUFFIX CODE SELECTION

MD–DNM
MD–DNS

MODEL

MD-DNM: Load capacity 8A
MD-DNS : Load capacity 2A

ORDERING INFORMATION

Specify code number. (e.g. MD-DNM)

GENERAL SPECIFICATIONS

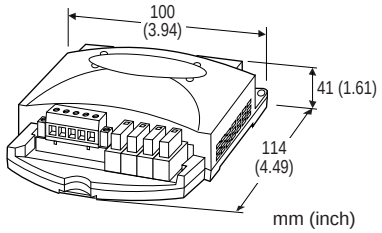
Construction: Stand-alone
Connection: Connector terminal block
Housing material: Flame-resistant resin (black)
Alarm relay contact: Turns on in an abnormality of surge absorber element (when the safety fuse is blown).
Rating: 30V DC @0.5A (resistive load)
Max. switching voltage: 125V AC/DC
Max. switching power: 25VA
Min. load: 5V DC @1mA
Alarm indicator: Surge absorber failure indicator turns white when the fuse is blown.
Number of modules: Max. 4 modules per network
ODVA approval: Not approved (No relevant product category exists for surge protectors.)

INSTALLATION

Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90% RH (non-condensing)
Mounting: Surface or DIN rail
Dimensions: W100×H114×D41 mm (3.94"×4.49"×1.61")
Weight: 400 g (0.88 lbs)

PERFORMANCE

Discharge voltage
- **Signal line**
  Between lines: ±5V min.
  Line to ground: ±280V min.
- **Power line**
  Between lines: 26V min.
  Line to ground: ±280V min.
- **Drain**
  Line to ground: ±280V min.



Functions & Features
- Designed specifically to protect devices connected to DeviceNet from lightning surges

Maximum surge voltage*
*The maximum voltage that could pass through M-RESTER. Protected equipment must be able to withstand this voltage for very short time period.
- **Signal line**
  Between lines: ±15V max.
  Line to ground: ±800V max.
- **Power line**
  Between lines: 120V min.
  Line to ground: ±650V max.
- **Drain**
  Line to ground: ±800V max.

Response time: ≤0.1 microseconds
Discharge current capacity: 1500A
Maximum load current
- **Signal line**: 100mA
- **Power line**: 8A (MD-DNM); 2A (MD-DNS)

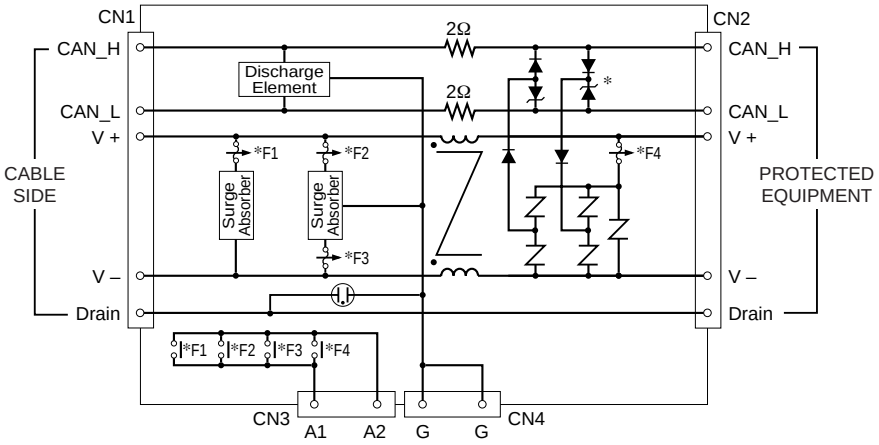
Internal series resistance
- **Signal line**: 2Ω × 2
- **Power line**: ≤0.2Ω

Leakage current
- **Signal line**: ≤0.3mA at ±5V DC
- **Power line**: ≤0.3mA at 26V DC
- **Line to ground**: ≤20μA at ±280V DC

Maximum line voltage
- **Signal line**: ±5V
- **Power line**: 26V

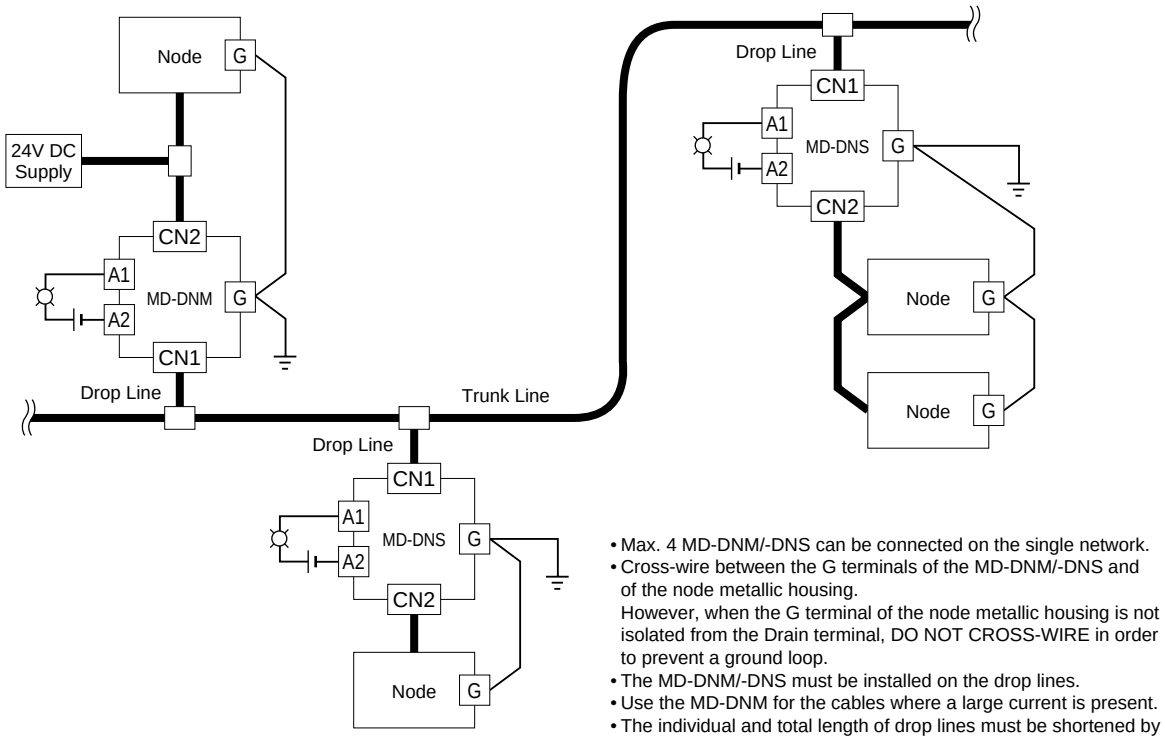
Capacitance
- **Signal line**: Approx. 25 pF @100 kHz
- **Line to ground**: Approx. 25 pF @100 kHz

SCHEMATIC CIRCUITRY



*DO NOT CONNECT the communication line across CAN_H and CAN_L.
Such a wrong connection may destroy diodes, or result in a network malfunction caused by a power line voltage decrease.

CONNECTION DIAGRAM



- Max. 4 MD-DNM/-DNS can be connected on the single network.
- Cross-wire between the G terminals of the MD-DNM/-DNS and of the node metallic housing.
  However, when the G terminal of the node metallic housing is not isolated from the Drain terminal, DO NOT CROSS-WIRE in order to prevent a ground loop.
- The MD-DNM/-DNS must be installed on the drop lines.
- Use the MD-DNM for the cables where a large current is present.
- The individual and total length of drop lines must be shortened by 1 meter per each MD-DNM/-DNS module.

Specifications subject to change without notice.

EXTERNAL DIMENSIONS mm (inch)