

ADVANCED DISTRIBUTION GRID MONITORING SYSTEM

GridView™ Medium Voltage & Current Sensor System

Product Overview:

- 4kV to 35kV Outdoor rated, 225 kV BIL, 60 Hz
- Includes both Current & Voltage Sensing
- Sensing Voltage: 4 kV to 35 kV
- Sensing Amperes: 10 to 1000A
- Transients: 10 dB (10x steady state condition)
- Harmonics: Measurements to 50th Voltage Harmonic
- Approximate weight: 12 lbs. (5.4 kg)

Application:

The GridView™ Medium Voltage & Current Sensor System, utilizes a 100% “all optical” measurement platform for unparalleled accuracy and precision of both voltage and current across multiple voltage classes. Installation time for a typical three-phase system, is less than three hours, resulting in significant deployment savings. All signals from the sensor are connected via optical fiber connections to a “plug & play” modular optical sensor platform m410 Modular Optical Sensor Platform, that is fully ruggedized and scalable.

Features:

The GridView™ Medium Voltage & Current Sensor is a direct replacement for standard power transformers and current transformers. Because of the “all optical” sensor design, there are no conductive materials used for the measurement of both voltage and current. The insulator body is casted in hydrophobic cycloaliphatic epoxy (HCEP) using a state of the art injection molding process. HCEP construction provides superior arc track, ozone, and ultraviolet-resistive properties while maintaining physical strength. The hydrophobic surface properties of HCEP ensure highly reliable performance in wet or humid conditions. All calibration and performance settings are stored in the ruggedized modular electronics enclosure at the base of the optical cable. The m410 Modular Optical Sensor Processor provides a “highly accurate” as well as “low cost” precision solution for distribution grid monitoring and control. Features include:

All optical Solution for Voltage & Current Measurements:

- One SKU for 4kV to 35kV Voltage & Current Classes
- Modular, hot-swappable and plug & play
- Calibration and offsets are contained within the R⁹235 Sensor

Benefits of HCEP:

- Enhanced water shedding properties
- Reduced contamination-related leakage
- Improved product quality and reliability
- Improved UV protection
- Results in a more consistent and reliable product

Installation:

The GridView™ Medium Voltage & Current Sensor installs directly on the conductor wire using anti-rotation, conduction grade, aluminum wire clamps. A shot-gun stick hook located on the top of the GridView™ R⁹235 Sensor enables, safe and quick live installations.

Performance:

The GridView™ Medium Voltage & Current Sensor provides both high accuracy and precision that remains constant regardless of applied voltage or current. Average accuracy is $\pm 0.15\%$ from 1% of nominal operational temperatures of 21°C (70°F) and $\pm 0.5\%$ within a temperature range of -30°C(-22°F) to 70°C(158°F).



Specifications: GridView™ R⁹235 Sensor

Sensor:

- Insulator Body rating 35kV, 55ft/(17m) Cable Length
- Wire clamp adjustable diameter 0.162” to 1.125”
- Transients: 10 dB (10x steady state condition) minimum
- Harmonics: Measurements to 50th Harmonic
- Accuracy: +/- 0.5% Voltage & Current
- Long term stability +/- 0.25%

Environmental:

- Operational: -22°F to 158°F (-30°C to 70°C)
- Relative Humidity: 5% to 95%

Certifications:

- Acid Atmosphere: MIL-STD-810G, Method 518.1
- Salt Fog: MIL-STD-810G, Method 509.5.
- Temperature Shock: MIL-STD-810G, Method 503.5
- Vibration: MIL-STD-810G, Method 514.6, 514.6C-4
- BIL: 200kV Full-Wave Lightning Impulse
- Partial Discharge Per IEEE Std. 4

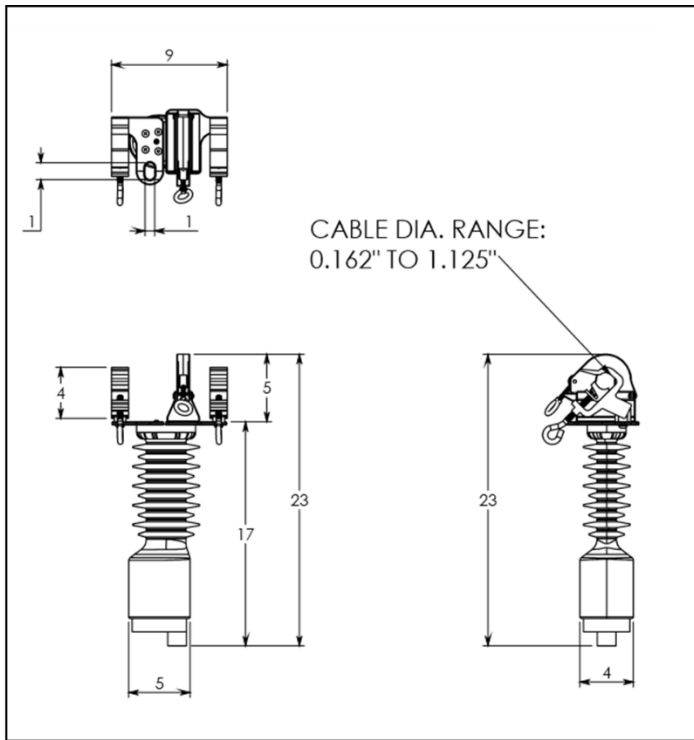
Typical Included Components:

- Three GridView™ R⁹235 Sensors
- Suggested Insulation Guide

Test Reports:

Test reports are stored electronically and can be e-mailed in various formats at the time of shipment.

Unit Dimensions:



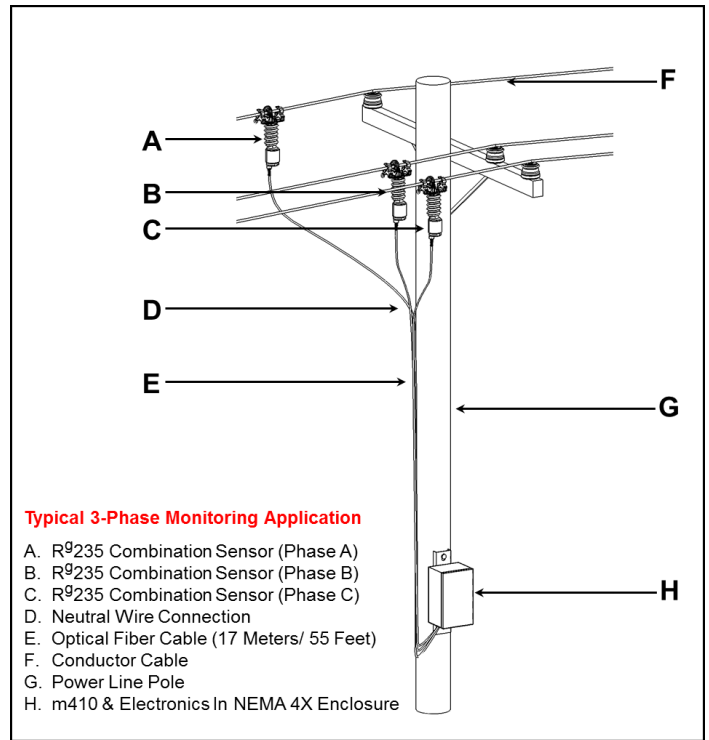
SKU: R⁹235

Additional styles available. Contact your Micatu sales representative.

For more information please contact:

Eaton's GridAdvisor

Typical 3-Phase Monitoring Application:



Electronic Scannable QRC Formats:



Vcard Information and digital PDF of the GridView™ Brochure

GridView™ Voltage & Current Configurator:

GridView Voltage & Current Sensor Ordering Configurator		<input type="text"/>	<input type="text"/>	<input type="text"/>
Sensor Configuration:				
GridView Overhead Sensor	R ⁹	}	}	}
GridView Standoff Insulator Sensor	R ¹			
GridView Elbow Sensor	R ^e			
Sensor Type Configuration				
Voltage Only Sensor	1	}	}	}
Combination Sensor (Voltage & Current)	2			
Current Only Sensor	3			
Sensor Insulating Rating				
15kV Insulator Rating	15 (R ¹ Only)	}	}	}
35kV Insulator Rating	35 (R ¹ & R ⁹ Only)			
Standard 200A "Deadbreak" Elbow	20 (R ^e Only)			
Standard 600A "Deadbreak" Elbow	60 (R ^e Only)			

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