

Pole-Top MV Sensors (PT/CT)

For Smart Grid Deployment

SATEC PM17x series can be supplied with Line Post Sensors for replacing of existing pole isolators with voltage and current sensors for MV grids of 15kV, 25kV or 35kV.

The MV Sensors are designed for Distribution Automation to provide:

- Compact, economical power-line sensing
- No line cutting
- Not for dead-end use
- Linear outputs up to fault levels
- Accurate performance
- Non-hazardous voltage on output
- Completely sealed against moisture



Advantages of Sensor Monitoring

- Precise Real-Time measurements
- Provides DNP3.0 protocol
- GPRS Communication
- Local display
- Memory (redundancy)
- Waveform / PQ features
- Phasors & phase rotation
- Directional Harmonics
- Neutral currents
- Complete Total Cabinet Package
- Expandability

Help Manage

- Line losses
- Capacitor controls
- Voltage regulation
- Outage detection
- Load balance
- Harmonics
- Fault location
- Power theft

Sensor Specifications

ELECTRICAL RATINGS

| | | | |
|-------------------------|------------------|------------------|------------------|
| Insulation Class | 15kV | 25kV | 35kV |
| Impulse (Bil) | 110kV | 150kV | 200kV |
| Leakage Distance | 16.4" 41.6 cm | 24.5" 62.2 cm | 35.3" 89.6 cm |
| Dry Arc Distance | 8.8" 22.3 cm | 12.6" 32 cm | 16.3" 41.4 cm |
| Overall Height | 13.2" 33.5 cm | 16.7" 42.4 cm | 20.8" 52.8 cm |
| Corona (extinction) | 11kV | 19kV | 26kV |
| Low Freq. Dry Flashover | 80kV | 110kV | 125kV |
| Low Freq. Wet Flashover | 60kV | 85kV | 100kV |

CURRENT SIGNAL OUTPUT

| | |
|----------------------|---|
| Ratio | 600A:10V |
| Output Burden/Load | Calibrated for a 10,000 ohm or greater load |
| Open Circuit Voltage | 10 volts at 600 amps line current |

VOLTAGE SIGNAL OUTPUT

| | |
|------------------|--------------------------|
| Divider Ratio | Depends on network |
| Output Impedance | Calibrated for 1 MΩ load |

ACCURACY

| | |
|------------------------|----------------------------------|
| Sensor Native Accuracy | 2% for current 1% for voltage |
|------------------------|----------------------------------|

Using SATEC PM17x Calibration Class 0.5s

MECHANICAL

| | | | |
|--------------------------------|-----------------------|-----------------------|-----------------------|
| Insulation Class | 15kV | 25kV | 35kV |
| Cantilever Strength (Ultimate) | 2,800 Lbs. 1270 kg | 2,800 Lbs. 1270 kg | 2,800 Lbs. 1270 kg |
| Weight | 39 Lbs. 17.6 kg | 49 Lbs. 22.2 kg | 59 Lbs. 26.7 kg |
| Shipping Weight | 44 Lbs. 20 kg | 54 Lbs. 24.5 kg | 64 Lbs. 29 kg |

NOTE: For vertical mounting only

OPERATING TEMPERATURE

| | |
|-------------------|-----------------------------------|
| Temperature Range | -40°C to +65°C -40°F to +149°F |
|-------------------|-----------------------------------|

CONDUCTOR DIAMETER RANGE

The two-sided keeper is made of aluminum (for aluminum conductor) or galvanized ductile iron (for copper conductor) and can accommodate a 0.25" to 1.25" / 6.35mm to 31.75mm diameter conductor

BASIC CONSTRUCTION

The pole-top sensor is molded from polysil, a high dielectric strength, anti-tracking polymer concrete developed under epri contract

Order String

For 15kV network - PTS 15

For 25kV network - PTS 25

For 35kV network - PTS 35