

# COSI-NXMU

## Merging Unit

Our comprehensive COSI range (Compact Optical Sensor Intelligence) includes innovative digital instrument transformers for AC and DC applications. The COSI-NXMU integrates a set of analog voltages together with the full COSI product range, which includes COSI-NXCT, COSI-NXCM and COSI-NXCT F3

### COSI-NXMU merging Unit

- Global synchronization
- Merging and synchronization of primary optical CT and analog VT signals
- IEC 61850-9-2LE (Ethernet 100BaseFx) standardized interface
- 80 and 256 samples /cycle available
- Redundant optical Ethernet outputs (choice of connector options)
- Configurable scaling via software
- User friendly 61850-9-2LE analyzer software available
- 1A/5A metering and 9-2LE protection simultaneously available (for complete analog metering and digital protection solution)

### Interoperability

- MICOM, all 61850-9-2LE relays and special applications.



**The COSI-NXMU integrates a set of analog voltages together with the full COSI product range, which includes COSI-NXCT, COSI-NXCM and COSI-NXCT F3.**

### COSI-NXCT

The COSI-NXCT design permits current measurements to be made with extended range accuracy.

To address stringent revenue metering applications, its performance exceeds IEC 0.2S / IEEE 0.3 / IEEE 0.15S Classes with a dynamic range that extends from 1 A to 4800 A.

To address protection applications, its performance exceeds IEC5P / IEEE 10% / TYP protection: 63 kArms for 1s.

### COSI-NXCM

The COSI-NXCM combines analog voltage transformers with wide dynamic range optical current transformers to make a compact metering and protection system. The optical CT has the same specifications as the COSI-NXCT. Capacitive voltage

transformers (CVTs) are used in high-voltage and extra high-voltage transmission systems to provide potential outputs to metering instruments and to protective relays.

### COSI-NXCT F3



The Alstom Grid COSI-NXCT F3 optical current sensor is the most flexible, portable optical current transformer sensor available and the easiest to install.

### Customer Benefits

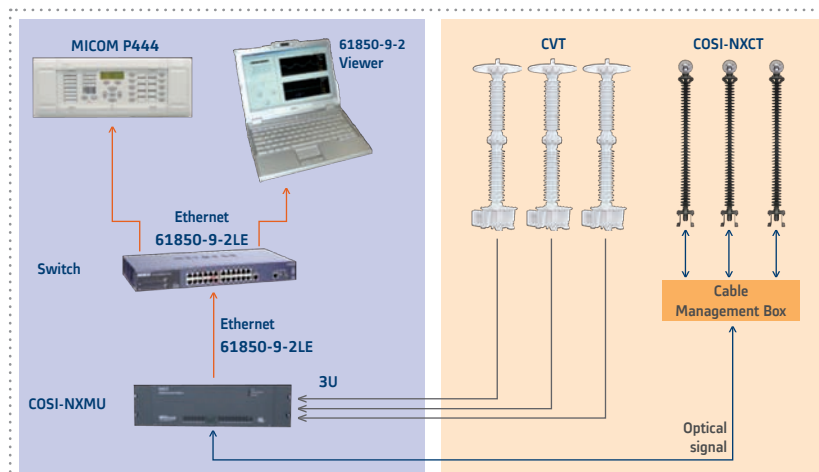
- Intelligence for Smart Grid
- Smart redundancy
- Ethernet connectivity
- Self-diagnostic
- SCADA ready

## General specifications

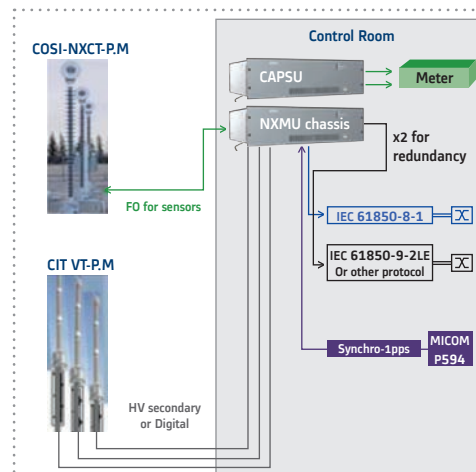
Environmental	
Operating Temperature Range	- 40° C to 55° C (- 40° F to 131° F) Outdoor Service Conditions
Opto-Electronic Module	- 5° C to 40° C (23° F to 104° F) Indoor Service Conditions
Seismic Capability	0.5 g
Mechanical	
Standard Pollution Withstand	IEC Level II, other ratings available
Insulation	Solid composite insulator
Electronics Dimensions	19" x 18" x 8.75" (482 mm x 457 mm x 222 mm) (includes high energy metering interface)

Electronics		
Packaged in 2 modules:   Sensor Electronics   Current Amplifier/Power Supply	Digital  Low Energy Analog Interfaces <sup>1</sup>  Dynamic Range  Bandwidth  High Energy Analog Interfaces <sup>1</sup>  Dynamic Range  Bandwidth  Input Power Requirements  Electronic Turns Ratio  Alarms Contacts	<b>61850-9-2LE with optical Ethernet connectors</b> IEC 0.2S / IEEE 0.3 / IEEE 0.15S Classes IEC5P / IEEE 10% / TPY  4 V <sub>rms</sub> metering 200 mV <sub>rms</sub> protection < 0.2% error at rated current for 4V output, < 0.5% error at rated current for 200 mV output < 2% error at 63 kA <sub>rms</sub> (using protection sensor) 0.5 Hz to 6 kHz DC available 1 A <sub>rms</sub> [2 ohm burden] or 5 A <sub>rms</sub> nominal [B0.1 (2.5 VA) burden] at a power factor of 0.9 for metering < 0.2% error from 1 A to 4000 A (using extended metering range sensor) 10 Hz to 6 kHz for 1 A metering output / Digital: 80 and 256 samples/cycle 70 V <sub>dc</sub> to 150 V <sub>dc</sub> and 187 V <sub>dc</sub> to 242 V <sub>dc</sub> Typical power 60 W User selectable Data invalid / Maintenance required

## Protection scheme



## Protection and metering architecture



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GRID

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