



**Add IEC61850 monitoring to any of your AMETEK Transient Fault Recorders with the TR61850 recorder**

AMETEK's TR61850 has IEC 61850-8 protocol for GOOSE messaging and supports subscription to 128 GOOSE messages from multiple IED's within the substation. GOOSE Messages are mapped to alarm inputs within the TR61850 and all changes of state are stored in the internal sequential log. When used in conjunction with AMETEK transient fault recorders all data is retrieved automatically and merged with the transient fault records by the Display Station software. Each TR61850 can be used with multiple transient fault recorders to provide a single complete record for all substation events. Cross-Trigger capability allows the TR61850 to trigger a transient record when a GOOSE message change of state is detected.

**Specifications**

**Input Capacity**

- 128 GOOSE Message subscriptions
  - GOOSE Messages are mapped virtual inputs
  - Supports mapping to multiple IED's
- 16 Hardwired digital inputs

**Field Contacts**

- NO/NC software programmable
- Programmable debounce or filter timers
- 20-150 VDC FCV

**Outputs**

- 8 form C (SPDT) relays, configurable functions:
  - Cross-Trigger, Watchdog, Loss of LAN1/2...
  - Energized or de-energized operation
- Published GOOSE Messages
  - Status of 128 virtual inputs
  - Status of 8 contact outputs
  - Status of 16 hardwired inputs

**Time Stamping**

- 1 msec time stamp resolution
- GOOSE Messages can be time stamped internally or by the GOOSE time stamp

**Time Synchronization**

- IRIG-B input (modulated or demodulated)
- NTP time sync (can sync with up to 3 servers)
- IEEE1588
- Master/Slave sync with other TR61850 units via RS485
- Slave sync with TR2000/TR2500 fault recorders with internal GPS via RS485 and fiber optic PPS

**Fault Recorder Support**

- Works with all AMETEK TR100+ &TR2xxx fault recorders
  - Each TR61850 can be used with multiple fault recorders
  - All data is merged automatically into a single fault recorder with Display Station

**Communication**

- Dual 10/100BASE-T Ethernet Ports
  - Independent MAC Addresses
  - Configurable for IP address and function
- Serial communication for time sync

**Mechanical**

- 19" Rack mount
- 1U, 6.8" (172mm) deep

**Power**

- 2 Power supply bays
  - Single or dual/redundant option (hot swappable in the dual/redundant configuration)
- 24VDC Power supply
  - 19-29VDC, 24W max
- AC/DC Power supply
  - 85-300VAC 50/60Hz, 24W max
  - 100-300VDC, 24W max

**Environmental**

- -4 to 140°F (-20 to 60°C) operating temperature
- 20-90% Relative Humidity

**Certifications**

- KEMA IEC61850 Compliance

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