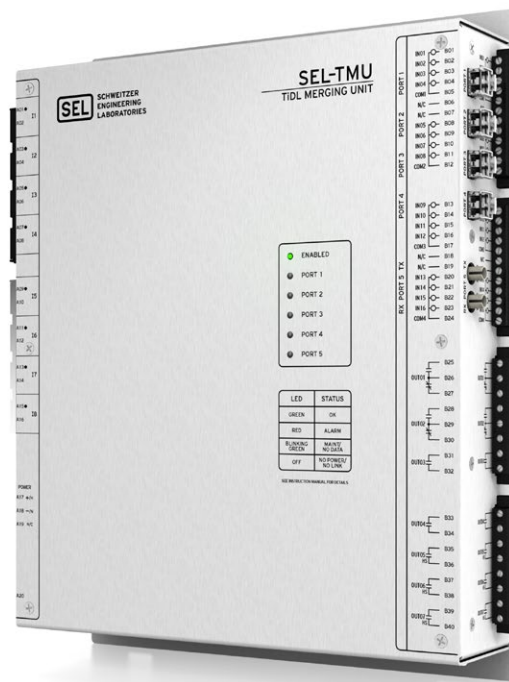


SEL-TMU

TiDL[®] Merging Unit



A simple remote data acquisition device for SEL TiDL systems

- Digitizes analog signals from primary equipment and transmits them via fiber to an SEL Time-Domain Link (TiDL) technology relay.
- Shares data with up to four TiDL relays, reducing the overall device count.
- Requires no user settings, reducing maintenance and operation costs.
- Provides robust self-monitoring, increasing TiDL system availability.
- Can be applied in customized topologies to match various applications, making expansion easy.



Key Features

TiDL Remote Data Acquisition Device

In a TiDL technology digital secondary system, an SEL-TMU is placed in the yard close to the primary equipment and digitizes discrete I/O signals and analog data, such as voltages and currents. These data are then transported over point-to-point fiber-optic cables to an SEL TiDL relay in the control house. The SEL-TMU data stream is automatically and independently synchronized to each connected SEL TiDL relay, eliminating the need for an external time source.

Data-Sharing Capabilities

An SEL-TMU can communicate with as many four TiDL relays over direct fiber-optic connections without the need for a network switch. This data-sharing capability gives you flexibility on how to best design protection for your system and makes installations more economical by reducing the device count. The multiple point-to-point connections also make expansion easy.

Increased Security

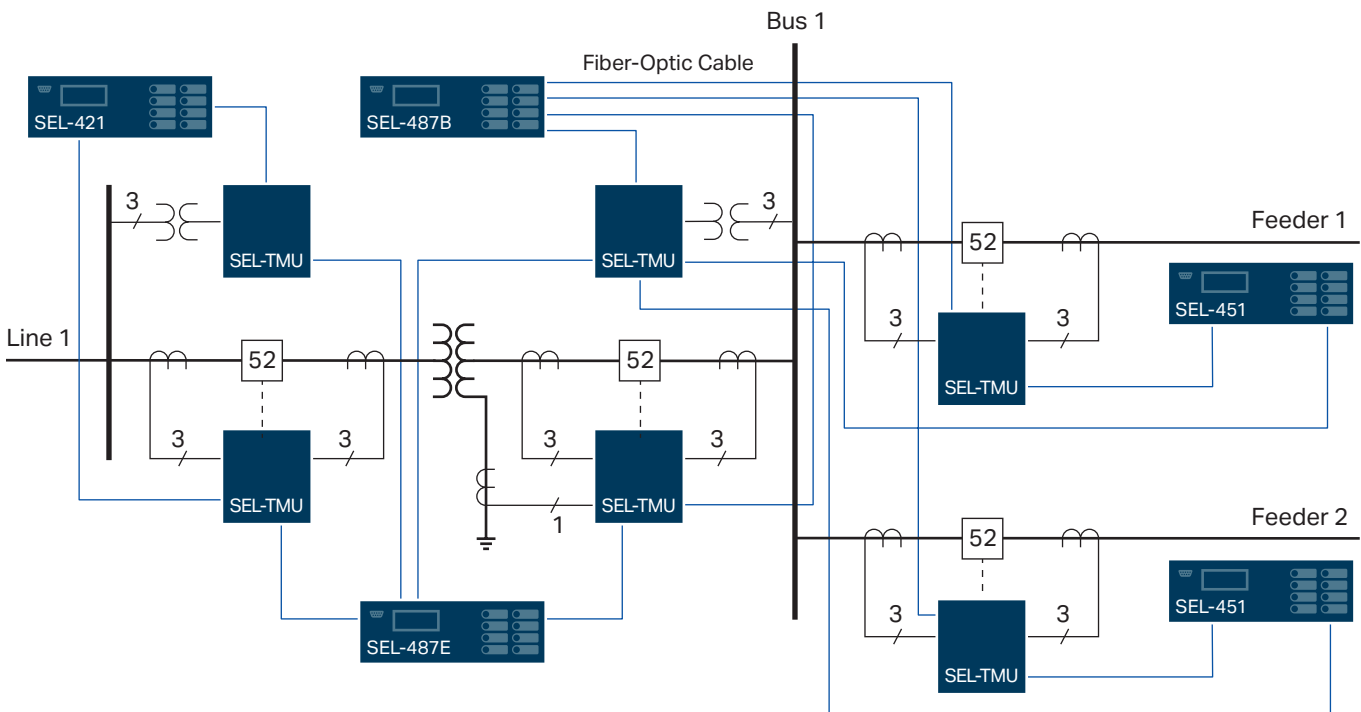
The SEL-TMU communicates directly with the SEL TiDL relays by using a nonroutable protocol and does not offer interactive remote user access. These features increase security, reduce complexity, and reduce the associated compliance costs in a distributed remote data acquisition system.

Rapid Commissioning

With no user settings and no microcontroller, the SEL-TMU is easy to deploy and manage long-term. Pluggable, self-shorting CT connections increase personnel safety by providing an additional layer of protection and make swapping connections between SEL-TMU devices quick and easy.

Robust Self-Monitoring

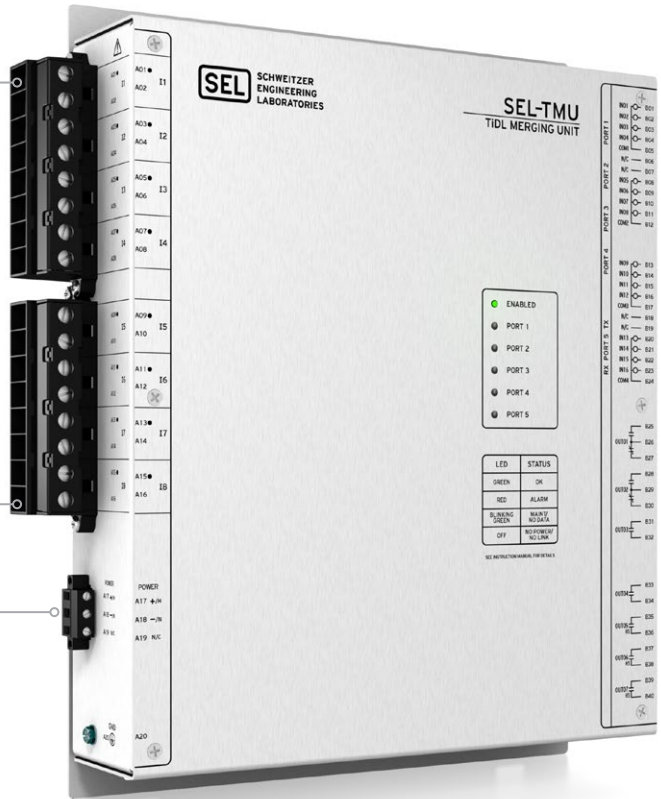
The SEL-TMU provides robust self-monitoring to detect an out-of-tolerance condition within the device. If an out-of-tolerance condition occurs, the SEL-TMU takes appropriate action (e.g., disables outputs on a detected failure to avoid spuriously tripping a breaker) and then alerts the connected TiDL relays.



An SEL-TMU works in various protection applications with TiDL relays.

Product Overview

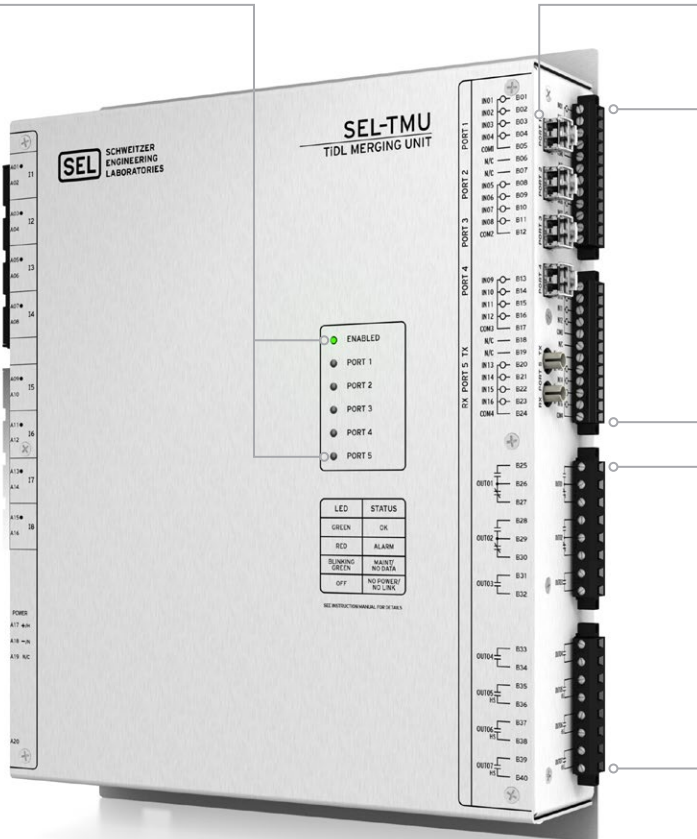
Choose a model with 8 current inputs or with 4 current inputs and 4 voltage inputs.



The power supply operates over a wide range: 48–250 Vdc/100–240 Vrms.

The LED interface indicates the status of each port and the overall hardware health.

Small form-factor pluggable (SFP) fiber ports allow the SEL-TMU to communicate with up to four TiDL relays.



The 16 universal contact inputs operate over a range of 24–250 Vdc.

The 7 flexible contact outputs support tripping, signaling, or switching applications.

TiDL System Configuration

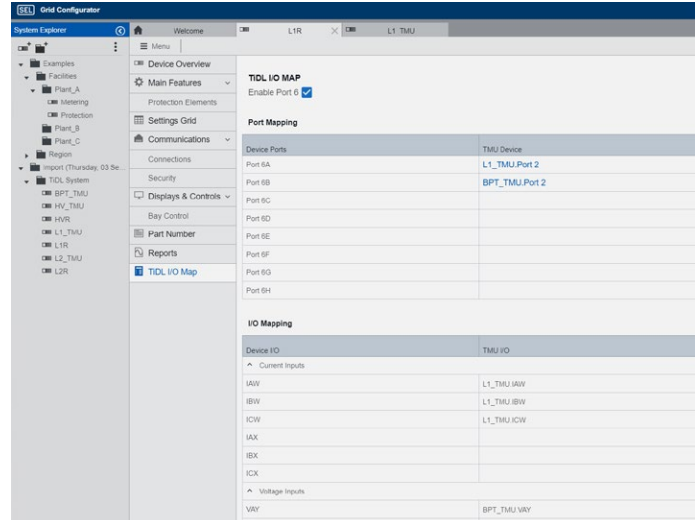
Quickly create, manage, and deploy TiDL devices using SEL Grid Configurator.

Customized Topologies

Use Grid Configurator to configure and commission custom TiDL topologies to fit each application. The software maps SEL-TMU I/O to the local I/O of the TiDL relay and verifies all connections and hardware, making commissioning quick and easy.

Custom Aliases

While programming your topologies, you can give customized names to SEL-TMU I/O quantities (e.g., the physical location of the unit or company nomenclature) to make the mapping configuration more intuitive.



Specifications

General	
AC Current Inputs (as many as 8)	1 A/5 A
AC Voltage Inputs (as many as 4)	300 Vrms continuous, 600 Vrms for 10 seconds
Binary Inputs (Universal; 16 total)	Sampling rate: 10 kHz Rated voltage range: 24–250 Vdc Operational voltage range: 0–300 Vdc
Binary Outputs (7 total)	Update rate: ≤ 2 ms Rated voltage range: 24–250 Vdc Operational voltage range: 0–300 Vdc Operating Time—Standard Form A and Form C Binary Outputs Pickup: ≤ 6 ms; dropout: ≤ 6 ms Operating Time—High-Speed, High-Current Interrupting Binary Outputs Pickup: ≤ 10 μ s; dropout: ≤ 6 ms
Communications Protocol	SEL T-Protocol
Power Supply	48–250 Vdc/100–240 Vrms
Operating Temperature Range	–40° to +85°C (–40° to +185°F)

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