



## 8240 Tactical Data Unit

**Data collection device for pressure, temperature and meter volume.**

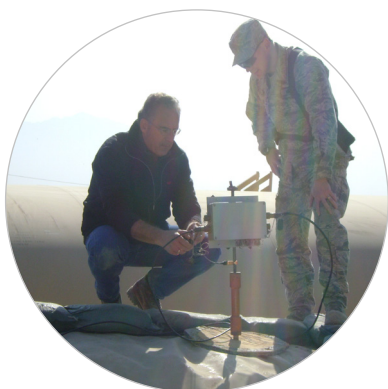
### Reliable and Repeatable Automated Inventory Management

The 8240 Tactical Data Unit (TDU) collects pressure, temperature and meter volume from connected field devices, such as the 7660 Tactical Fuel Gauge (TFG) or a Tactical Flow Meter (TFM). It calculates observed fuel volumes and performs the collapsible tank mapping process. All data is transferred to the TacFuels® Tactical Mobile Computer (TMC) for inventory management and accounting.

A component of the TacFuels® solution, the 8240 TDU works alongside the 7660 TFG and 8250 TIC to help improve the accountability process of tactical fuel points with collapsible storage tank farms. These devices automate the measurement and management of fuel inventories to reduce the errors associated with manual data entry processes. Integrated with the FuelsManager® Inventory Management and Accounting applications, the complete solution becomes a reliable method to baseline inventory and track fuel movements 24/7 for better asset visibility and operational control.

### Key Benefits

- Simple, low cost installation - No tools required for mounting to a ground rod in the fuel farm environment
- Rugged design makes it suitable for harsh environments
- Suitable for large tactical or expeditionary fuel farms - Integrates up to four 7660 TFGs and four TFMs
- Calculates corrected fuel volumes to 60°F/ 15°C in accordance with API Tables 5b/6b or 53/54
- Approved for use in hazardous areas





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Data collection unit for pressure, temperature and meter volume.

## System Configuration

### Quick Specs

**Data Transmission Protocol:**  
MODBUS

**Environmental Operating Temperature:**  
-40°F to +167 °F (-40 to +75 °C)

**Power Required:**  
8 - 36 VDC

**Power Consumption:**  
25 mA

**Temperature Measurement Range:**  
-4 to +176 °F (-20 to +80 °C)

**Dimensions:**  
10.2" x 6.3" x 3.6" (260 x 160 x 90mm)

**HART Output:**  
2-position terminal, fused

**Pulse Input:**  
2 channels available, 4 optional  
3 to 30 VDC voltage range  
30 KHz pulse frequency limit  
3 position, pluggable terminal block

**Hazardous Area Approvals:**  
ISA/CSA Standards - Class 1 Division 2,  
Groups C and D ATEX and IECEx Standards  
- Ex II 3(1)G EX nA [ia Ga] IIB T5 Gc (-40 °C,  
Ta, 85 °C)

The 8240 TDU can be used in various system configurations, based on the supply of power and connection to the particular device running TacFuels software. Each 7660 TFGs power and communications are daisy chained together in a loop and terminated at an 8240 Tactical Data Unit (TDU). The 8240 TDU polls each connected 7660 TFG in turn for measurement data, performs the required volume calculations and provides the resulting inventory information to the TacFuels system computing device. The 8240 TDU is connected to a TFM during the tank 'strapping' process.

## Configuration - Tank Volume Mapping

The 8240 TDU is designed to dynamically create an accurate tank chart (strapping table) for each collapsible tank in a TacFuels measurement system – an automatic tank mapping process. It is recommended that tank mapping is performed during installation of the TacFuels measurement system, as well as periodically to maintain fuel inventory management precision.

Volumetrically mapping a collapsible tank involves creating a gauge chart of entries correlating volume to measured pressure within the collapsible tank at the metered product temperature. The 8240 TDU performs a continuous data collection cycle to construct a strapping table than contains up to 1,000 data points. This table is then stored in the non-volatile memory of the TDU.

The TacFuels tank mapping process compensates for the dynamic variances in tank construction, installation conditions, tank expansion, tank squat and product density above manufacturer specifications. The tank mapping feature increases the precision and reliability of volume measurements throughout the system and provides a standardized method for inventory management.