Unique Group

Uni-Logger DAQ

Data Acquisition Unit (DAQ)

1. Introduction

The Uni-Logger acts as the central hub for interfacing with sensors and collecting critical data. Designed for durability, it is housed in an IP67-rated aluminium enclosure, ensuring reliable performance in harsh marine environments.

Supports up to 24 sensor inputs, offering high capacity for diverse monitoring applications.

Supported Sensor Inputs & features:

- 4-20mA Pressure sensors
- Millivolt Signal Input
- Digital Water Ingress Detection
- Dry Contact Input
- NAMUR Sensors
- DC Voltage Monitoring (0-10V, 0-30V)
- Resistance Monitoring (0-180Ω)

- RTD Sensors (PT100, 3/4-wire)
- Serial Communication (RS232, RS485)
- Galvanic Isolation
- High-Resolution ADC
- Diagnostic LEDs
- Redundant Power and Data Network

Additional Modules:

Iridium & GPS Antenna Assembly: For robust communication and precise real-time tracking.

Built-in AHRS Module: Provides Attitude, Heading, and Roll (AHRS) information.

Ruggedized Tablet: Primary Human-Machine Interface (HMI) for control, monitoring, logging, and communication. (Optional)
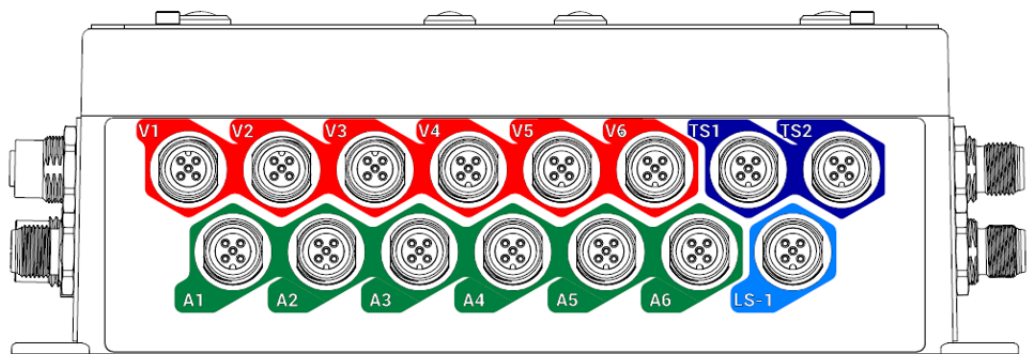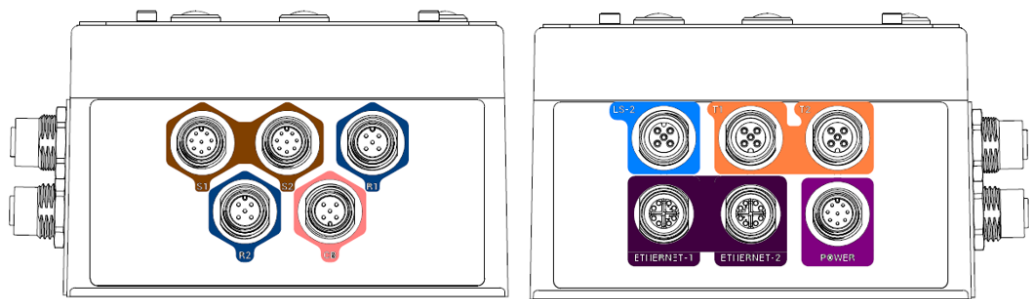
Unique Group

2. Uni-Logger - Port Location & Schematics

The Uni-Logger unit has 24 input/output ports

SPHL			
COLOR	LABEL	FUNCTION	CONNECTOR
🟥	V1 - V6	ADC (0 - 36 VDC)	M12 5Pin Female, Code - A
🟦	TS1 & TS2	Temprature Sensor	M12 5Pin Female, Code - A
🟩	A1 - A6	Analog (4 - 20 Amp)	M12 5Pin Female, Code - A
🟦	LS-1 & LS-2	Level Sensor	M12 5Pin Female, Code - A

SPHL			
COLOR	LABEL	FUNCTION	CONNECTOR
🟦	LS-2	Level Sensor	M12 5Pin Female, Code - A
🟧	T1 & T2	Tachometer	M12 5Pin Female, Code - A
🟪	EITHERNET 1 & 2	Eithernet	M12 8Pin Female, Code - A
🟪	POWER	Power	M12 8Pin Male, Code - A
🟫	S1 & S2	RS232	M12 8Pin Male, Code - A
🟦	R1 & R2	RS485	M12 5Pin Male, Code - A
🟥	CB	CAN - BUS	M12 5Pin Male, Code - A

Unique Group

Uni-Logger DAQ

Data Acquisition Unit (DAQ)

3. The standard Uni-Logger supply includes (subject to client-SOW):

The Uni-Logger unit has 24 input ports
> 1 x Uni-Logger DAQ Box
> 6 x Pressure Sensors (4-20mA Input)
> 2 x Temperature Sensors
> 2 x Level Sensors
> 2 x RS232 & RS485 Input
> 2 x CAN Bus
> 1 x Ruggedized Tablet
> 1 x Power Cable
> Related Harness and Connectors

4. Input and Output Data

On the input side, the Uni-Logger receives various analogue and digital signals from connected sensors. The resolution of the current sensing ports is 0.01 mA, and for voltage inputs, it is 0.01 V.

The built-in software processes these inputs and generates a standardized output format.

Unique Group

Deep Imagination
Leading the way in Subsea Technology & Engineering