

T-Chain

Customizable thermistor string with optional sensor integration.

The T-Chain is a waterproof electrical cable containing a range of integrated water quality sensors for vertical profiling. Every T-Chain is constructed on a semi-custom basis, with users specifying the length, interval, type and quantity of pre-constructed sensors included. The central electrical cable is manufactured specifically for PME, featuring a Kevlar reinforced core and waterproof polyurethane sheathing.

The RS 232/485 T-Chain requires connection to a customer-supplied power source, and it emits calibrated

measurements in accordance with RS232 and RS485 protocol. PME recommends the Campbell System Data Logger for the host logger system.

- Central cable is reinforced by Kevlar core
- Reliable and responsive sensors ensure data accuracy
- Moderate power requirements ranging between 9V to 20V

SUPPORTED MEASUREMENTS

Dissolved Oxygen, Pressure, PAR, CHL, Turbidity, CDOM/FDOM, Temperature

SPECIFICATIONS: T-CHAIN, PART NUMBER 6534, RS232/485

Sensor Type	Dissolved Oxygen, Pressure, PAR, CHL, Turbidity, CDOM/FDOM, Temperature
Operating Temperature Range	-4 to 36 degrees C
Temperature Calibration Range	0 to 36 degrees C or an optional cold water range of -4 to 31 degrees C
Temperature Accuracy	±0.010 degrees C
Temperature Resolution	1 millidegree C
Temperature Response Time	Less than 5 seconds
Temperature Stability/Drift	±0.030°C per year
Measurement Interval	5 seconds to 24 hours (or keypress)
Input Voltage	9V - 20V
Maximum Depth	165 meters (541 feet)

OPTIONAL SENSOR SPECIFICATIONS

Sensor Model	PME Oxygen Sensor	Keller Series 10L	LI-192 (LI-COR)	Turner Designs Cyclops-7 Sensors		
Sensor Type	Dissolved Oxygen	Pressure	PAR	CHL (Chlorophyll)	Turbidity	CDOM/FDOM
Measurement Range	0 to 150% saturation	0 - 5 bar (4512) 0 - 10 bar (4717) 0 - 20 bar (4730)	0-3000 µmol s-1 m-2	0 - 500 µg/L	0 - 1,500 NTU	0-3000 ppb
Resolution	0.01 mg/L	0.1 bar	N/A	0.3 µg/L	0.05 NTU	0.5 ppb
Accuracy	±5% of the measurement or ±0.3mg/L, whichever is larger	± 0.50 %FS max.	Maximum deviation of 1% up to 10,000 µmol s-1 m-2	N/A	N/A	N/A
Stability/Drift	Typically less than -3% per year	less than ± 1.5 mbar per year	less than ± 2% per year	N/A	N/A	N/A

WIPER for Loggers Added to T-Chain

The anti-fouling WIPER is a self-contained, completely submersible wiping device compatible with loggers integrated into the T-Chain. Its brushing wheel rotates over the sensor surface, reducing the growth of various organisms and preventing biofouling. After each rotation the brush rests away from the sensor to avoid any monitoring interference, allowing for accurate and continuous monitoring.

