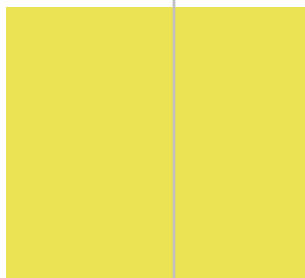


TruIDL™ E-Coat Process Data Logger

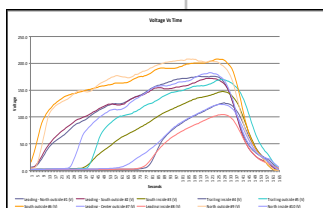
PRODUCT DATA SHEET



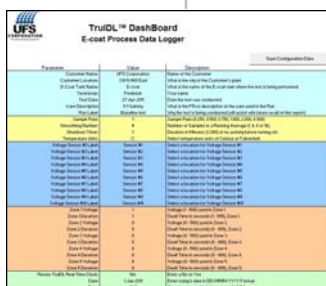
The TruIDL (Immersible Data Logger) measures voltage over the surface of the ware as it moves through the tank in an E-coat paint system. Voltage is directly related to the amount of E-coat paint film that has formed on the ware, and the TruIDL enables run time data to be quickly analyzed. The TruIDL is battery powered and communications are handled by a Mini USB connection. An Excel based configuration file is transferred to the TruIDL, and then logs E-coat process data. Once removed from the ware after the last rinse, the TruIDL's run data is transferred back to the same Excel file for viewing.



View of TruIDL Module



Voltage vs Time Chart



Parameter	Value	Description
Component Location	1000000000	1000000000
E-Coat Tank Name	1000000000	1000000000
Temperature	1000000000	1000000000
Conductivity	1000000000	1000000000
Current	1000000000	1000000000
...

TruIDL Dashboard

Features

- Miniature module; battery operated; up to 10 voltage sensors
- USB connectivity to computer; uses Microsoft Excel as the communications portal
- LED lights display functional working status
- Leak proof container; grounding via magnets or auxiliary wire; carrying case
- Measures Bath Temperature (TU10 only)
- Voltage sensor leads are color-coded to simplify record keeping for placement locations on the ware

Benefits

- Quickly defines quality of the film thickness.
- Can be installed before pretreatment system.
- Monitors overall performance of anode cells and alerts to possible poor performing Membrane Electrode Cells, grounding, and electrical rectifier issues
- Measures as many as 10 places over a large or complex ware shape
- Can be used in conjunction/or in place of ME Cell Current Monitor

Properties

- Adjustable sample rates from 0.062 seconds per sample up to 4 seconds per sample.
- Only control is a tilt switch
- Over sampling is a parameter to compensate for noisy conditions by using an average
- Reset button
- The TU5 & TU 10TruIDL Logger are for cathodic E-coat paint tank. TU5A is the anodic version.

Options

- TU5: 5 voltage sensors
- TU10: 10 voltage sensors, temperature, and conductivity (beta)
- Voltage sensor harness can be customized as needed
- Horseshoe, 1/4" Class "A" Surface or Oval Sensor (1" contact) voltage sensor body styles are available.

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Product Specifications & Ratings

Module

Weight	280 gr (0.6 lbs)
Dimensions	8 cm x 7 cm x 5 cm (3" x 2-3/4" x 2")
<u>Operating Range</u>	
Voltage x 5 or 10 channels	0 - 500 V DC
Temperature x 1 channel	10 - 40 C (50 - 104 F)
<u>Resolution</u>	
Voltage	12 bit ADC (analog to digital conversion)
Temperature	0.125 V
	0.03 C (0.05 F)
Accuracy	+/- 2.5%
Microprocessor	48 MHz, extreme low power, Real Time Clock & Calendar, 3.3 V operation
Controls	Tilt & Reset (internal) switches
Sample rates (seconds between samples)	0.062, 0.125, 0.25, 0.5, 0.75, 1, 2, & 4
Smoothing (i.e. over sample) rates	1 (i.e. no smoothing), 4, 8, or 16
Max # of records	~2400 or, approximate elapsed recording times: 10 minutes @ 0.25 seconds/sample & 2.75 hrs @ 4 seconds/sample
Flash memory	~70 kB
USB connection	Mini 'B' type, IP - 68
Logger Construction	Polycarbonate case, IP - 67, 82 C (180 F) maximum
Storage Temperature	-7 to 33 C (20 - 90 F)
Battery charge time	30 - 120 minutes
Battery Type and rating	Lithium polymer : 4.2 V @ 900 mAh
Battery operating life (recharge needed)	Awake: ~12 hrs & Sleep: ~1 week
Carrying Case	27.4 cm x 25 cm x 11.4 cm (10.7" x 9.8" x 4.5")

Voltage Sensor Wiring Harness

Weight	680 gr (1.5 lbs)
Length	TU5 - Std length is 1 wire @ 3.5 m (11.5 ft.) 1 wire @ 3 m (9.8 ft.), 1 @ 2.5 m (8.2 ft.), 2 @ 2 m (6.6 ft.); TU10 - Std length is 2 @ 3.5 m (11.5 ft.), 2 @ 3 m (9.8 ft.), 2 @ 2.5 m (8.2 ft.) and 4 @ 2 m (6.6 ft.). Harness can be custom made as requested.
Auxiliary ground cable/clamp	1.2 m (4') green coiled wire
Connector	Circulator, multiple pin, IP - 67
Sensor Body Type	Pull: Horseshoe - 58 N (13 lbs), 1" Oval - 31 N (7 lbs), 1/4" Class "A" - 22 N (5 lbs)

Calibration

Module + Voltage Sensor Harness will be factory calibrated using 250 V. Typical deviation <0.5 V