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CERTIFICATE OF CALIBRATION

METTLER TOLEDO Thornton Inc., an ISO 9001 certified company, hereby certifies that the item below meets or exceeds all published specifications. The calibration procedures comply with ISO10012-2003. The standards used are traceable to the ASTM International standards D1125 and D5391 and to the National Institute of Standards and Technology (NIST).

Sensor Part No:	58031404
Sensor Serial No:	5818250182
Certificate No:	58031404 5818250182 2018-06-19 055152

Date Tested:	2018-06-19
Test Procedure:	TP99897
Technician:	LPM <i>LPM</i>

Calibration Results	Slope/Multiplier	Offset/Adder
Cell Constant*	0.09971	0.00000
Temperature Constant	1.00000	0.01723

Calibration Verification	Unit Under Test	UPW Standard	Deviation	Limits ±	Result
Compensated Resistivity (MΩ-cm) †	18.172	18.180	-0.042 %	0.750 %	PASS
Temperature (°C)	24.919	24.930	-0.011	0.100	PASS
Uncompensated Resistivity (MΩ-cm)**	18.251	Result: Sensor meets specifications.			

Reference Equipment	Make	Model	Serial #	Calibration Due Date
Conductivity Sensor	Thornton	230-211	07060564	2019-02-23
Transmitter	Thornton	775-VD0	706110097	2018-11-14

	Uncompensated Resistivity (MΩ-cm)	Compensated Resistivity (MΩ-cm)	Temperature (°C)
UPW Verification††	18.184	18.116	24.930

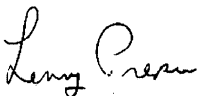
* All sensor cell constants are calibrated to Ultrapure Water at a compensated resistivity of 18.18 MΩ-cm.

† Published accuracy: ±1% of reading

** Uncompensated value is for reference only.

†† Verification compensated resistivity is used to verify UPW at 18.18 MΩ-cm.

Conductivity cell constant and temperature constant calibrations are valid for one year from date of installation. Annual calibration is recommended thereafter. However, rough handling or use in samples containing suspended solids or aggressive fluids can degrade cell constant accuracy and require more frequent calibration.



Lenny Prepas
 Quality Assurance Manager

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Part Number:	58 031 404
Serial Number:	5818250182
PCB Firmware Rev.:	1.30
Date Tested:	2018-06-12
Calibration Procedure:	TP58170117
Temperature (°C):	22.9
Relative Humidity (%):	38.0
Certificate Number:	58031404 5818250182 2018-06-19 055152

Calibration Results

Standard (ohms)	Unit Under Test (ohms)	Deviation %	Limit (±%)	Result
100.21	100.26	0.05	0.50	PASS
503.75	503.59	-0.03	0.50	PASS
1003.62	1003.14	-0.05	0.30	PASS
49991.71	50004.11	0.02	0.30	PASS
199370.05	199466.85	0.05	0.30	PASS
499823.88	499626.01	-0.04	0.30	PASS
1832442.70	1834029.95	0.09	0.30	PASS

Standard (ohms)	Unit Under Test (ohms)	Deviation %	Limit (±%)	Result
1098.39	1098.36	-0.00	0.08	PASS
1499.04	1498.90	-0.01	0.08	PASS

Reference Equipment

Standard Equipment	Make	Model	Serial #	Calibration Due Date	Accuracy (%)
PCB Fixture	Thornton	AF58180094	5-6	2018-11-13	±0.01

Calibration of conductivity sensor electronics (page 2) is performed before calibration of the cell constant and temperature (page 1). Complete sensor limits of error are ±0.75% for cell constant and ±0.10 °C for temperature.