

Product Datasheet - Technical Specifications



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Probe Specifications

Version 3.0

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This document provides the specifications for 3rd party probes that are compatible with LDSBus and Modbus Devices.

Use of BRTSys devices in life support and/or safety applications is entirely at the user's risk, and the user agrees to defend, indemnify, and hold BRTSys harmless from any and all damages, claims, suits or expense resulting from such use.

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1 pH Sensor

Item	Model/PN	Connector	Measurement Range	Operating Temperature	Resolution	Accuracy	Application
pH Sensor Probe	DX-100	BNC	0-14 pH	0 ~ 80 °C	-	-	Water Treatment Swimming Pool Sewage Wastewater Aquaculture
pH Sensor Probe	E-1325M	BNC	0-14 pH	0 ~ 50 °C	0.01 pH	±0.01 pH	Water treatment Pool and Spa water

DX-100



E-1325M



LDSBus pH Sensor Adapter



Modbus pH Sensor Adapter



LDSBus / Modbus pH Sensor Adapter

The following specifications are recommended for selecting pH sensor adapter Probe -

pH Range	:	0~14pH
Connector Interface	:	BNC
Zero Point	:	Max. 7±0.5pH
Theoretical slope %	:	≥90% and ≤105%
Internal Resistance	:	≤250MΩ

2 Electrical Conductivity (EC) Sensor

Item	Model/PN	Connector	Cell Constant	Measurement Range	Resolution	Accuracy	Application
EC Sensor Probe	DJS-0.1	BNC	0.1	(1 – 1500 uS/cm)	-	-	Fresh water
EC Sensor Probe	DJS-1	BNC	1.0	(1 – 15 mS/cm)	-	-	Fresh water
EC Sensor Probe	DJS-10	BNC	10	(1 – 150 mS/cm)	-	-	Fresh water

DJS-0.1



DJS-1



DJS-10



LDSBus EC Sensor Adapter



Modbus EC Sensor Adapter



LDSBus / Modbus EC Sensor Adapter

The following specifications are recommended for selecting EC sensor adapter Probe -

Detection Range	:	0.001mS/cm to 1.5mS/cm
Cell Constant	:	K=0.1
Detection Range	:	0.05mS/cm to 15mS/cm
Cell Constant	:	K=1.0
Detection Range	:	0.5mS/cm to 150mS/cm
Cell Constant	:	K=10
Connector	:	BNC

3 Oxidation-Reduction Potential (ORP) Sensor

Item	Model/PN	Connector	Measurement Range	Operating Temperature	Resolution	Accuracy	Application
ORP Sensor Probe	ORP-1/ORTK-777	BNC	-1999 ~ 1999 mV	-	1 mV	±0.1% FS	Fresh water
ORP Sensor Probe	ENV-40-ORP	BNC*	-2000 ~ 2000 mV	1 ~ 99 °C	1 mV	± 1 mV	Fresh water / Salt water

*Needs SMA to BNC Adapter

Note: In the Accuracy specification, FS refers to Full Scale

ORP-1/ORTK-777



ENV-40-ORP



LDSBus ORP Sensor Adapter



Modbus ORP Sensor Adapter



LDSBus / Modbus ORP Sensor Adapter

The following specifications are recommended for selecting ORP sensor adapter Probe –

Detection Range : -2000mV to +2000mV

Connector : BNC

4 Dissolved Oxygen (DO) Sensor

Item	Model/PN	Connector	Measurement Range	Operating Temperature	Resolution	Accuracy	Application
DO Sensor Probe	ENV-40-DOX	BNC*	0 – 100 mg/L	1 ~ 60 °C	-	±0.05 mg/L	Fresh water / Salt water
DO Sensor Probe	DO1200 (PTFE)	BNC	0 – 20 mg/L	0 ~ 50 °C	-	+ 2% when measuring temp equal cal temp	Fresh water / Salt water

*Needs SMA to BNC Adapter

ENV-40-DOX



DO1200(PTFE)



LDSBus DO Sensor Adapter



Modbus DO Sensor Adapter



LDSBus / Modbus DO Sensor Adapter

The following specifications are recommended for selecting Dissolved Oxygen sensor adapter Probe

Type	:	Galvanic Probe
Detection Range	:	0-50mg/L
Connector	:	BNC

5 Thermocouple Sensor

Item	Model/ PN	Connector	Measurement Range	Operating Temperature	Resolution	Accuracy	Application
Thermo couple	TS0005C STMZD	Type K	-40 ~ 4800 °C	-	-	±0.05 mg/L	Fresh water / Salt water

TS0005CSTMZD



LDSBus Thermocouple Sensor Adapter



Modbus Thermocouple Sensor Adapter



LDSBus / Modbus Thermocouple Sensor Adapter

Type K Plugs to terminate Type K thermocouple probes for connection to LDSBus Thermocouple Sensor Adapter

'+' Contact	'-' Contact	IEC Miniature		ANSI Miniature		JIS Miniature	
		Colour	Green	Colour	Yellow	Colour	Blue
Nickel Chromium	Nickel Alloy						

6 Water Level Transmitter

Item	Model/ PN	Connector	Measurement Range	Output Signal (mA)	Power Supply	Accuracy	Application	Remarks
Water Level Transmitter	ALS-MPM-2F	Two Wires	0 – 5 metres, 0 – 10 metres 0 – 20 metres	4-20 mA	12-24 (Volts DC)	0.5% FS	Sensing of Liquid Levels	This probe is available in 5m, 10m and 20m depth versions. Choose at point of order.

Note 1: The Water Level Transmitter connects to the LDSBus Isolated IO Controller

Note 2: In the Accuracy specification, FS refers to Full Scale

<u>ALS-MPM-2F</u>	<u>LDSBus Isolated IO Controller</u>	<u>Modbus Isolated IO Controller</u>
		

7 Contact Information

Refer to <https://brtsys.com/contact-us/> for contact information.

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Appendix A – Revision History

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Product Page: <https://brtsys.com/resources/documentation/brtsys-adapters/>

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Revision	Changes	Date
Version 1.0	Initial Release	15-02-2022
Version 2.0	Updated release	18-05-2023
Version 3.0	Updated the existing Probe Specifications document to make it common for both LDSBus & Modbus devices	08-01-2026