WATLOW®

Connect a Computer to Watlow's Process and Temperature Controllers or Other Equipment

0847-0326-0000
USB to 485,
USB to Screw Terminals

0847-0400-0000
USB to Ethernet, RJ45

Laptop and personal computers include a variety of features including serial communications "COM" ports and Universal Serial Bus (USB) ports that allow them to communicate with other devices such as printers and digital cameras. Industrial and commercial devices such as process and temperature controllers often have EIA 485 communications interfaces (also known as RS-485) which cannot be directly connected to a typical computer. Watlow® offers a selection of adapters that provides a simple and reliable solution to connecting these devices to computers.

These compact serial converters offer several features that make them ideal for use in applications in which Watlow controllers communicate with a computer via Modbus® or standard bus.

Features and Benefits

Adds communication ports to computer
- Supports using computer software with industrial products
- Eliminates the need to add a communication card to the computer

USB connection to computer (0847-0326-0000)
- Adds a communications port to a computer with USB
- Automatically configures on Windows® 8, 7, Vista, XP, ME, 2000 and 98
- Eliminates need for external power supply
- Includes cable

Screw terminals
- Connects to standard 485 network wiring with no need for additional components

Optical isolation (0830-0473-0005)
- Prevents ground loops that can disrupt or damage instruments that are not isolated

USB to Ethernet (0847-0400-0000)
- Provides additional local Ethernet network for configuring controllers with Ethernet communications

0830-0473-0001
232 to 485, DB9 Female
to Screw Terminals

0830-0473-0005
232 to 485, Isolated,
DB9 Female to
Screw Terminals

WATLOW®
Powered by Possibility

Specifications

Specification	0847-0326-0000	0847-0400-0000	0830-0473-0001	0830-0473-0005
Connection to computer	USB type A	USB type A	DB-9, female	DB-9, female
Computer interface	USB 1.0, 1.1 and 2.0	USB 1.0, 1.1 and 2.0	Serial COM (232)	Serial COM (232)
Connection to serial network	Removable terminal block	RJ-45 female	Terminal block	Terminal block
Serial network	Half duplex 485 (2-wire)	IEEE 802.3, 802.3u and 802.3ab (10BASE-T, 100BASE-TX and 1000BASE-T) compatible	Half duplex 485 (2-wire)	Full duplex (4-wire) or half duplex 485 (2-wire)[1]
Communication speed	300 to 921K baud	10/100/1000 Mbps (USB 3.0)	300 to 115.2K baud	300 to 115.2K baud
Echo jumper	No	Crossover detection and auto-correction (Auto MDIX)	No	Yes
Optical isolation: data-to-ground and computer-to-network	None	None	None	1500V RMS 1 minute
Port powered	Yes	Yes	Yes, when computer's handshake lines are powered	232 side requires power from computer's handshake lines
Cable length	39 in. (1 m)	5.2 in. (132 mm)	No cable	No cable
External power supply	Not needed	Not needed	Required for computers without powered handshake lines	Required for 485 side
Agency	CE, RoHS	CE, RoHS	CE, RoHS	CE, RoHS
Supported operating systems	Windows® 8, 7, Vista, XP, ME, 2000 and 98	Windows® 10, 8 / 8.1, 7, Vista, XP	No software required	No software required
Dimensions	2.53 x 1.25 x 0.64 in. (64 x 32 x 16 mm)	2.6 x 1.0 x 0.6 in. (67 x 26 x 15 mm)	3.50 x 1.34 x 0.67 in. (89 x 34 x 17 mm)	3.20 x 2.10 x 0.64 in. (81 x 53 x 16 mm)
Recommended applications	Computer with a USB port, communicating via Modbus® RTU or EZ-ZONE standard bus	Computer with a USB port, communicating via Modbus® TCP or standard bus over Ethernet (F4T)	Computer with a DB-9 male 232 serial port, communicating via Modbus® RTU or EZ-ZONE standard bus	Computer with a DB-9 male 232 serial port, communicating via Modbus® RTU or EZ-ZONE standard bus

[1]Half duplex operation (2-wire) requires connection of -Tx and -Rx and +Tx and +Rx in external cable.

Converters

0847-0326-0000	USB to 485, USB to screw terminals
0847-0400-0000	USB to Ethernet, RJ45 female
0830-0473-0001*	232 to 485, DB9 female to screw terminals
0830-0473-0005*	232 to 485, isolated, DB9 female to screw terminals

*The isolated 232 to 485 converter and any 232 to 485 converter when used with a computer (particularly a laptop) that does not provide power to the converter, requires a power supply.

Accessories

0830-0473-0003	6-foot serial communications cable, DB9 male to DB9 female
0830-0473-0002	Power supply (110-120VAC input, 12VDC output)
0830-0473-0004	Power supply (210-240VAC input, 12VDC output)

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To be automatically connected to the nearest North American Technical Sales Office:

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