8 or 16 Channel Universal Input Touch Screen Data Logger

NEW

OM-DAQXL

1 YEAR WARRANTY CE RoHS

OM-DAQXL shown smaller than actual size.

Stylus (included).

- ✔ **7" Touch Screen TFT Display**
- ✔ **8 or 16 Analog Channel Inputs**
- ✔ **8 or 16 Virtual (Math) Channels**
- ✔ **8 Digital I/O (4 Inputs, 4 Outputs)**
- ✔ **Measures Voltage, Current, Thermocouples, RTDs, Thermistors, Strain Gage, Frequency and Pulse**
- ✔ **24-Bit Analog Input Resolution**
- ✔ **Fast Sampling Rate–125 Samples/Sec (1 Channel)**
- ✔ **4 Alarm Outputs**
- ✔ **Large Data Storage: 1 GB Internal Memory, 32 GB SD Card or 32 GB USB Drive**
- ✔ **USB Device (PC Communication) and USB Host (USB Drive, Mouse, etc.)**
- ✔ **Powers from Rechargeable Lithium-Ion Battery and/or AC Adaptor**
- ✔ **Protective Rubber Boot**
- ✔ **Benchtop or Wall Mount Enclosure Design**

OM-DAQXL is an 8 or 16 channel analog input portable data logger with a 7 inch resistive touch color display. All inputs are programmable and can be configured for millivolts, volts, milliamps, thermocouple, RTD, thermistor, strain gauge, or frequency. All the menus, selections, and configurations can be done from the display touch screen. The unit also has 4 digital inputs, 4 digital outputs, 4 alarm outputs, one USB host port and one USB device port. The unit also has 3 LEDs for different indications (Power, Alarm and Logging).

The OM-DAQXL comes complete with protective rubber boot, rechargeable lithium ion battery, 32 GB SD card, one plastic stylus, 1 GB USB thumb drive, 1.8 m (6') USB cable, 1.8 m (6') digital I/O cable, alarm/excitation terminal block, universal AC adaptor, screwdriver, quick start guide, set of 5 PTFE insulated Type K thermocouples, set of 5 ferrites to install on the thermocouple inputs (for noise reduction) and crimp-on ground lug. The unit can be wall mounted using the provided keyhole mount or operated on a bench using the tilt stand.

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Home Screen

The home screen is the main screen of the data logger's user interface. It is divided into 3 distinct sections as shown below.

Status/information display

Data display area

Navigation toolbar
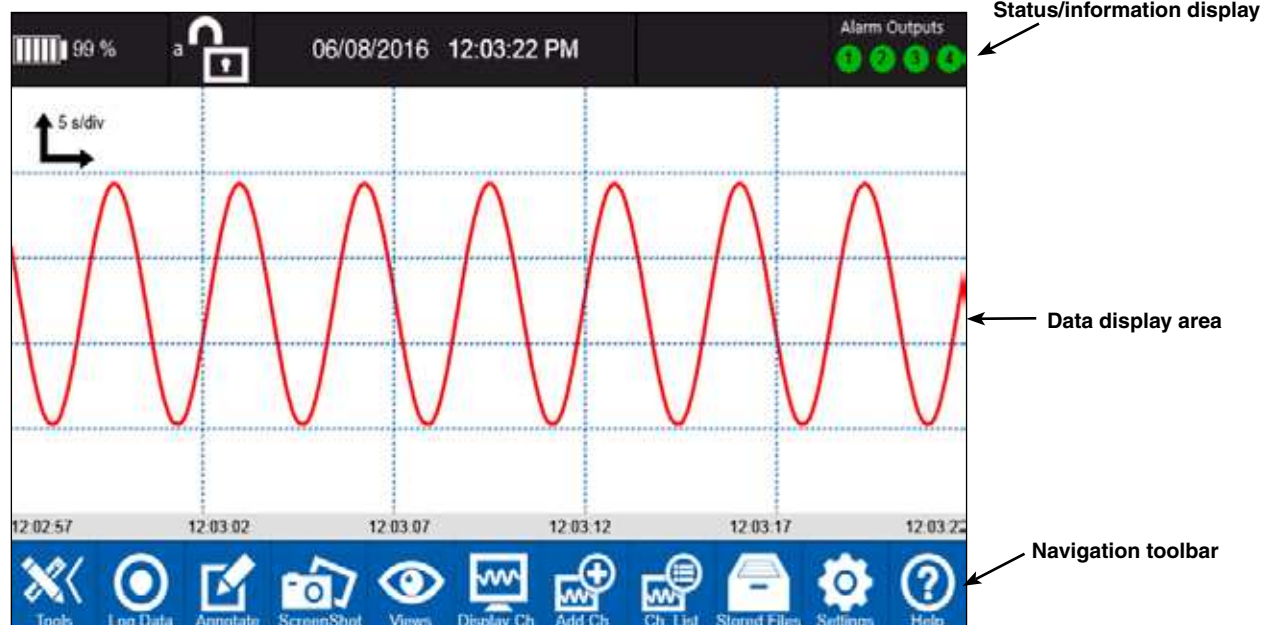
Line graph display.

Digital Display View

Status/Information Display: This status bar provides information such as Battery Charge percentage, System Clock (displays current Time & Date), Lock/Unlock data logger, status of the 4 Alarm Outputs, and Logging Mode indication.

Digital display.

Data Display Area: This is the area where different inputs (up to 4 Channels) are displayed vs. time. The data is displayed in 4 different ways: Waveform, Waveform & Table, Table only, and Digital. In the Digital view, each channel name and number are displayed along with the value.

Navigation Toolbar: This toolbar provides access to all the functions and menus of the data logger. You can extend or retract the toolbar by pressing the Tool button. The following flow chart shows all the functionalities of the buttons of the toolbar.

The OM-DAQXL comes complete with hard carrying case, protective rubber boot, rechargeable lithium ion battery, 32 GB SD card, one plastic stylus, 1 GB USB thumb drive, 1.8 m (6') USB cable, 1.8 m (6') digital I/O cable, alarm/excitation terminal block, universal AC adaptor, screwdriver, quick start guide, set of 5 PTFE insulated Type K thermocouples, set of 5 ferrites to install on the thermocouple inputs (for noise reduction) and crimp-on ground lug. Not all items shown. See User Guide for instructions on installing ferrites on the thermocouple inputs.
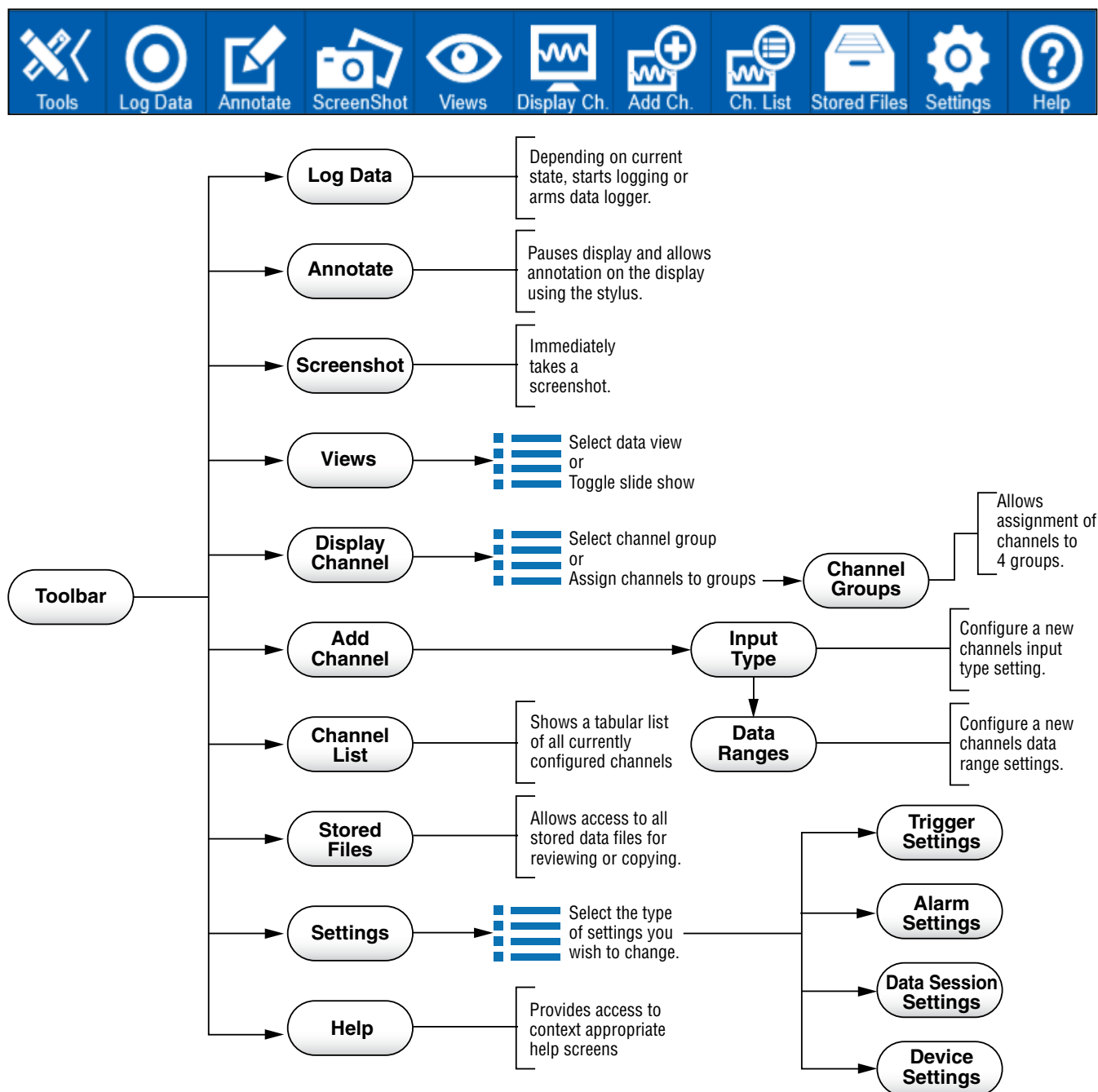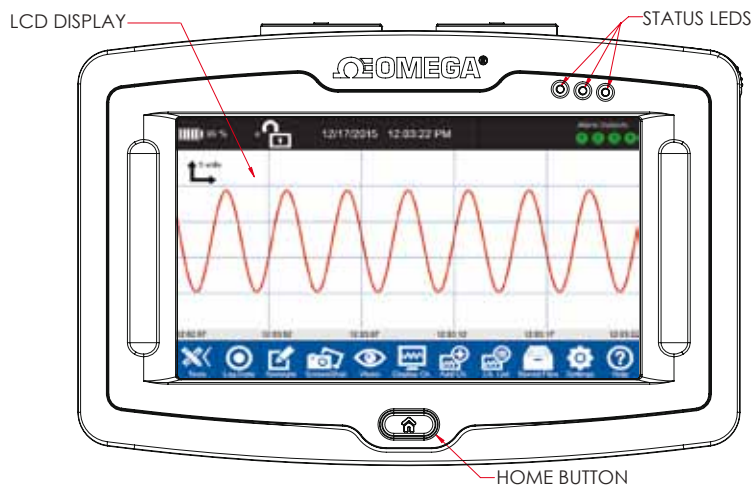
www.valuetronics.com

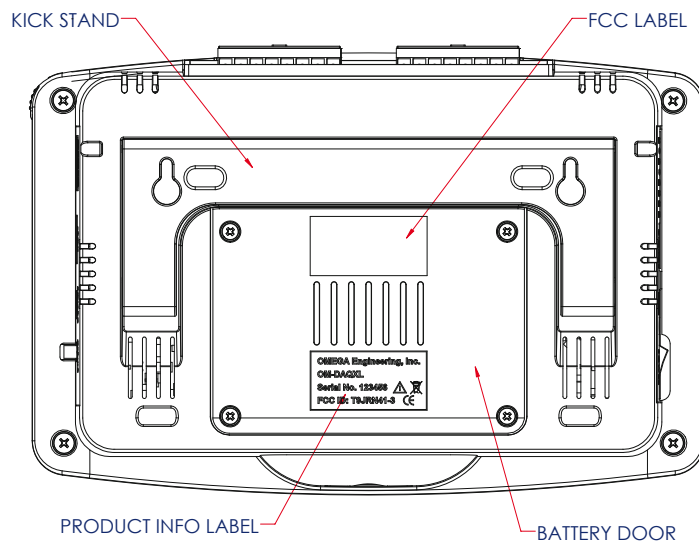**OM-DAQXL shown smaller than actual size.**

Standalone Operation

The OM-DAQXL's touch screen user interface (UI) makes configuring the data logger for operation straight forward and simple. Recorded data files can easily be reviewed and analyzed on the OM-DAQXL. For data analysis on a computer, simply transfer the data file from the SD card or USB thumb drive to the PC and open the selected data file into Excel® or other data analysis software.
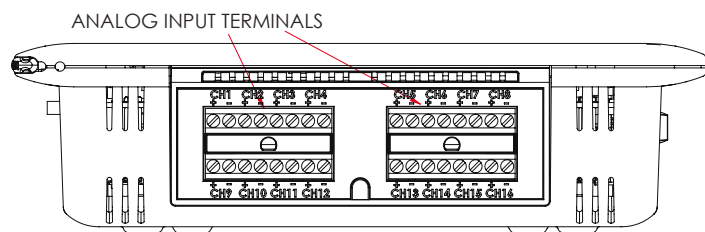
Toolbar Flowchart

| Tools | Log Data | Annotate | ScreenShot | Views | Display Ch. | Add Ch. | Ch. List | Stored Files | Settings | Help |

Log Data — Depending on current state, starts logging or arms data logger.

Annotate — Pauses display and allows annotation on the display using the stylus.

Screenshot — Immediately takes a screenshot.

Views — Select data view or Toggle slide show

Display Channel — Select channel group or Assign channels to groups → **Channel Groups** — Allows assignment of channels to 4 groups.

Add Channel → **Input Type** — Configure a new channels input type setting. → **Data Ranges** — Configure a new channels data range settings.

Channel List — Shows a tabular list of all currently configured channels

Stored Files — Allows access to all stored data files for reviewing or copying.

Settings — Select the type of settings you wish to change. → **Trigger Settings**, **Alarm Settings**, **Data Session Settings**, **Device Settings**

Help — Provides access to context appropriate help screens

Toolbar

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LCD DISPLAY

STATUS LEDS

HOME BUTTON

Front view, OM-DAQXL

KICK STAND

FCC LABEL

PRODUCT INFO LABEL

BATTERY DOOR

Back view, OM-DAQXL

ANALOG INPUT TERMINALS

CH1 CH2 CH3 CH4   CH5 CH6 CH7 CH8
CH9 CH10 CH11 CH12   CH13 CH14 CH15 CH16

Top view, OM-DAQXL

SD CARD SLOT

Bottom view, OM-DAQXL

ALARM, EXTERNAL TRIGGER & 24V
EXCITATION TERMINAL

24V EXC
GRID
EXT TRIG
GRID
ALARM4
ALARM3
ALARM2
ALARM1

DIGITAL   12V   POWER

POWER
SWITCH

DIGITAL I/O

12V DC INPUT

Left side view, OM-DAQXL

SHIELD GROUND TERMINAL

STYLUS

SHIELD   DEVICE   HOST

USB DEVICE PORT

USB HOST PORT
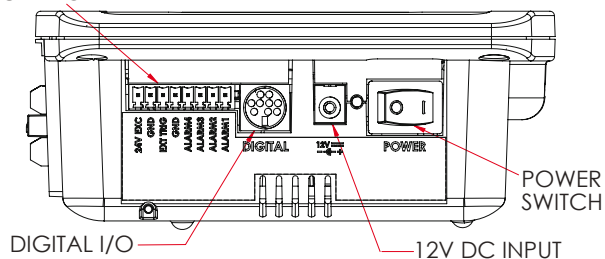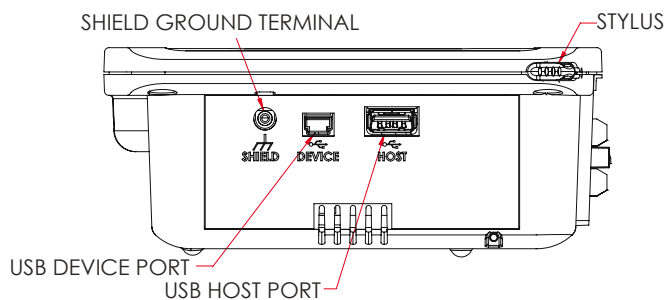
Right side view, OM-DAQXL

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Specifications

Screen: 7 inch, TFT, resistive touch comes with plastic stylus
Rubber Boot: Black
Analog Input Type: Thermocouple, thermistor, RTD, strain gauge, DC voltage, DC current
Digital Input Type: Pulse/Frequency
Thermocouple Types: J, K, T, E, R, S, B, C, N

T/C Type	Range (°C)	Range (°F)
J	-200 to 1100°C	-328 to 2012°F
K	-200 to 1370°C	-328 to 2300°F
T	-200 to 400°C	-328 to 752°F
E	-200 to 1000°C	-328 to 1832°F
R	0 to 1760°C	32 to 3200°F
S	0 to 1760°C	32 to 3200°F
B	500 to 1820°C	932 to 3308°F
C	0 to 2315°C	32 to 4200°F
N	-100 to 1300°C	-148 to 2372°F

T/C Type	Measurement Accuracy
J, K	±(0.15% of reading + 1.1°C)
T, E, N	±(0.15% of reading + 1.7°C)
R, S, B, C	±(0.15% of reading + 2.0°C)

Frequency/Pulse Input: 0 to 250 KHz
Frequency Accuracy: ±2 Hz
Strain Gauge Type: 100Ω full bridge, 350 Ω full bridge
Strain Gauge Excitation: 5V, 10V
Sampling Rate: 125 s/sec (Max) to 1 s/hour (Min)
Maximum Sampling Rate per Number of Channels (Analog and Digital):
  1 Channel: 125 s/sec
  2 Channels: 50 s/sec
  4 Channels: 25 s/sec
  8 Channels: 10 s/sec
  16 Channels: 5 s/sec
Logging Rate: 125 s/sec (Max) to 1 s/hour (Min)
Maximum Logging Rate per Number of Channels (Analog and Digital):
  1 Channel: 125 s/sec
  2 Channels: 50 s/sec
  4 Channels: 25 s/sec
  8 Channels: 10 s/sec
  16 Channels: 5 s/sec
Excitation to Power External Transmitter: 24 Vdc @ 50 mA output–set in data session setting
Filter Options: Per channel selectable moving average filter: None, 2, 5, 10, 20 or 50 samples
Number of Samples for Moving Average Filter per Channel: Up to 50 samples
Math (Virtual) Channels: 8 or 16
Digital Inputs: 4 Schmitt trigger based inputs
  Range: 0 to 24 Vdc single-ended
  Logic High Threshold: 2.5V
  Logic Low Threshold: 1.5V
Digital Outputs: 4 channels, open collector, 5V @ 50 mA

Thermistor Type	
Thermistor Type	2252Ω/10 KΩ
Range (2252Ω)	-30 to 150°C (-22 to 302°F)
Range (10 KΩ)	-5 to 150°C (23 to 302°F)
Resolution	0.1°C
Accuracy	±1°C

RTD Types	
2-, 3- or 4-Wire RTD Sensor Standard	Lead wire compensation
2-, 3- or 4-Wire RTD Sensor Standard	Pt 100, Pt 500, Pt 1000 (0.00385 curve)
2-, 3- or 4-Wire RTD Sensor Standard	Pt 100, Pt 500, Pt 1000 (0.00392 curve)
Range (0.00385 curve)	-200 to 850°C (-328 to 1562°F)
Range (0.00392 curve)	-200 to 660°C (-328 to 1220°F)
Accuracy	±(0.25% of reading +1°C)
Resolution	0.1°C

DC Voltage Input		
Voltage Range	Measurement Range	Accuracy
50 mV	-50 to 50 mV	
100 mV	-100 to 100 mV	
1V	-1.00 to 1.00V	
5V	-5.00 to 5.00V	±0.1% of FS
10V	-10.00 to 10.00V	
20V	-20.00 to 20.00V	
50V	-50.00 to 50.00V	

DC Current Input		
Current Range	Measurement Range	Accuracy
20 mA	-20 to 20 mA	±0.1% of FS

Alarm Output: 4, Open collector, 30V @ 500 mA
Alarms per Channel: Two
Alarm Types: High, low, windows in, windows out, open sensor
Alarm Latching: Settable in alarm menu
On Alarm Event: Map to 4 alarm outputs, take screen shot, sound buzzer
Logging Conditions: On command or based on trigger conditions
Start and Stop Trigger Conditions: Timer, date and time, weekday and time, alarm output, external trigger
Memory:
  Internal: 1 GB
  SD Card: 32 GB
  USB Drive: 32 GB
USB Ports: One host and one device
Battery: Rechargeable lithium-ion; 7.2V @ 4.8 Ah
Battery Life: 4 to 8 hours based on display setting
DC Adaptor: 12 Vdc @ 5A
Operating Environment: 0 to 50°C (32 to 122°F), 0 to 95% RH non-condensing
General Dimensions: 28.6 L x 15.24 H x 6.35 cm D (9 x 6 x 2.5")
Weight: 1.13 kg (2.5 lbs)
Note: Measurement accuracy is at room temperature after 30 minutes of warm-up.

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OM-DAQXL with protective rubber boot removed (included). Shown smaller than actual size.

Country Code	AC Power Cord Included
NA	North America
UK	UK
EU	Europe
CN	China
JP	Japan
KR	Korea
SEA	Southeast Asia
SAA	Australia
SN	Singapore
BR	Brazil
MX	Mexico

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.

To Order

Model	Description
OM-DAQXL-1-*	8-channel touch screen data logger with USB host/device
OM-DAQXL-2-*	16-channel touch screen data logger with USB host/device

* Insert country code.

Comes complete with hard carrying case, protective rubber boot, 32 GB SD card, 1 GB USB thumb drive, 1.8 m (6') USB cable, 1.8 m (6') digital I/O cable, alarm/excitation terminal block, universal AC adaptor, screwdriver, quick start guide, set of 5 PTFE insulated Type K thermocouples and crimp-on ground lug.

Ordering Example: OM-DAQXL-1-NA, *8-channel touch screen data logger with USB host/device and* **OCW-1,** *OMEGACARE℠ extends standard 1-year warranty to a total of 2 years.*

Accessories

Model No.	Description
OM-DAQXL-RB	Spare rubber boot
SD32GB	Spare 32 GB SD card
OM-DAQXL-USB	Spare USB cable, 1.8 m (6')
OM-DAQXL-CABLE6	Spare digital I/O cable, 1.8 m (6')
OM-DAQXL-TB8	Spare alarm/excitation terminal block
5TC-TT-K-20-36	Spare set of 5 Type K thermocouples with stripped leads
PT-USB-1	Spare 1 GB thumb drive
OM-DAQXL-RF	Spare ferrite for thermocouple input
OM-DAQXL-ADAPTOR-*	Spare 12 Vdc, 5A power adaptor
OM-DAQXL-BATTERY	Spare rechargeable battery pack
OM-DAQXL-STYLUS	Spare stylus

* Insert country code