

OM-2020/2040 Frequently Asked Questions

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FAQ Battery & Power

How long will the batteries last in the OM-2020/240 Logger?

With all channels logging, the following table can be used as a guide:-

LOGGING INTERVAL	1F8	2F8/2F16	4F16
CONTINUOUS	1.75 days	1.25 days	0.75 days
5 seconds	2.5 days	2 days	1.25 days
10 seconds	5 days	3.75 days	2.5 days
15 seconds	8 days	6 days	4 days
30 seconds	16 days	12 days	8 days
1 minute	25 days	19 days	12 days
5 minutes	75 days	58 days	37 days
15 minutes	120 days	92 days	62 days

What happens when the batteries are exhausted?

It is not possible to arm the logger when below approximately 5.5. Volts. If the unit was logging when the voltage dropped below this point, it will disarm automatically.

Can I power from external supply?

Yes, 10-18V DC only. Includes 12VDC battery.

What happens if the external supply fails?

If the external power fails, batteries must be fitted to prevent loss of data. In the case of a power failure, the logger will switch to the battery supply and continue with no interruption.

How is the battery level displayed?

By use of a “bar” multi-segment battery indicator on the logger display and, if required, the actual voltage is displayed in the appropriate screen both on the logger display and in OMEGALOG®.

Can the OM-SQ20XX Logger be used on a vehicle?

The logger is designed to be powered from a 12V vehicle system directly, higher system voltages will require the use of a suitable convertor. Two high voltage inputs are available to directly monitor vehicle supplies (up to 60V).

Can the Logger be powered by the USB port?

No. However, the use of USB does not put any extra load on the logger power supply or batteries.

How do I power a GSM modem?

A power adaptor lead is included with the GSM kit (OM-SQ-GSM-KIT) to power the modem and the logger from the mains power pack (OM-SQ-UNIV-ADAP)

Can the Logger connect to Ethernet?

Yes we supply a serial RS232, Ethernet converter kit (OM-SQ-NET-ADAP) a power adaptor lead is included with the kit to power the modem and the logger from the mains power pack (OM-SQ-UNIV-ADAP)

Can I power sensors from the Logger?

Yes Via connection terminal E

- A external supply (as supplied into the DC power socket Max 100mA
- B 5V regulated output Max 50mA

Can the internal batteries be rechargeable?

No only AA alkaline batteries should be used

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FAQ Connection & Communication

Is the Logger USB 2.0 Compliant?

Yes

Can I connect to the logger remotely?

Yes via 3rd party Ethernet or wireless adapters as well GSM and dial-up modem. Contact Omega Engineering for more details.

Is the logger real 'plug & play' via USB?

Windows will automatically detect the presence of your data logger, supplied drivers will be required the first time used.

What if I connect to both ports simultaneously?

The USB and serial ports may be physically connected at the same time; however, the logger will talk to only one external host at a time.

Can the logger survive mains supply accidentally connected to inputs?

The unit is not designed to withstand such an event; however the unit is ESD protected.

Can the Logger connect to Ethernet?

Yes the OM-SQ2020 2F8, OM-SQ2040 2F16 and the OM-SQ2040 4F16 have inbuilt Ethernet connection. For the OM-SQ2020 1F8 we supply a serial RS232, Ethernet converter kit (OM-SQ-NET-ADAP) a power adaptor lead is included with the kit to power the modem and the logger from the mains power pack (OM-SQ-UNIV-ADAP)

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FAQ Operation

Can I download while the logger is logging?

Yes if downloaded via OMEGALOG[®], but not to MMC. The logger will download until the point that the instruction to download was issued.

Can I download by time?

Yes, use the advanced function in the download screen.

What is the alarm output regime (one per channel)?

User specified triggers can activate a total of 4 alarm outputs. As an example; these triggers may be based upon channel conditions.

What can I trigger from?

Triggers can be from analogue, digital channels or time.

Can I print direct from the logger?

No, this can only be achieved via the host

Can I set an automatic download?

Yes Downloader is supplied on the OMEGALOG[®] CD.

Why is the Ref Junction set automatically when I select a Thermocouple in Sensor Type?

Thermocouples do not measure absolute temperature, they only measure the temperature difference between the sensing end (the probe tip) and the reference end (where the probe plugs into the logger). To acquire the absolute temperature the logger adds together the temperature difference measured by the thermocouple to the temperature at the reference junction. The reference junction temperature is measured by the Reference Junction channel. To save the user from having to remember to turn on the Reference Junction channel, OMEGALOG[®]. and the logger do it automatically whenever a thermocouple channel is selected.

Can I use the logger outside?

The logger is not weatherproof if to be used outside or in damp conditions it will need to be placed in an IP rated enclosure

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FAQ General

Can I read my data using notepad (.csv file)?

By using OMEGALOG[®] you are able to export data to .csv format to a preferred spread sheet.

Can I fit the logger to a wall?

Yes, a universal bracket is supplied as standard with each Logger. It can be adjusted to act as a wall bracket or desk stand.

How often does the Logger require calibration?

Drift is not expected although annual calibration is recommended. In real terms this is dependant upon use. Contact Omega Engineering for further details. The last date of calibration can be viewed via OMEGALOG[®].->Diagnostics->OM-SQ20xx logger

What is the Inter-channel isolation?

For **1F8** loggers, inputs on blocks A to D share a common measurement circuit and must be within $\pm 25V$ of each other and within $\pm 60V$ of the negative pin on the logger's power supply.

For **2F8** loggers, inputs on blocks A and B share one measurement circuit and blocks C and D share another measurement circuit. Inputs on blocks A and B must be within $\pm 25V$ of each other and within $\pm 60V$ of the negative pin on the logger's power supply. Inputs on blocks C and D must be within $\pm 25V$ of each other and within $\pm 60V$ of the negative pin on the logger's power supply. Inputs on blocks A and B must be within $\pm 60V$ of the inputs on blocks C and D.

For **2F16** loggers, inputs on blocks A to D share one measurement circuit and blocks G to K share another measurement circuit. Inputs on blocks A to D must be within $\pm 25V$ of each other and within $\pm 60V$ of the negative pin on the logger's power supply. Inputs on blocks G to K must be within $\pm 25V$ of each other and within $\pm 60V$ of the negative pin on the logger's power supply. Inputs on blocks A to D must be within $\pm 60V$ of the inputs on blocks G to K.

For **4F16** loggers, there are four separate measurement circuits connected to four pairs of input blocks - A and B, C and D, G and H, and J and K. Inputs on each pair of blocks must be within $\pm 25V$ of each other and within $\pm 60V$ of the negative pin on the logger's power supply. Any input on any block pair must also be within $\pm 60V$ of any other input on any other block pair.

Caution: Voltages approaching 60V and above can cause personal injury.

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FAQ Memory

How long will the memory last?

How long the memory will last is mainly dependant upon the number of channels set and their sample rate. For sample rates that are not sub-hertz, 16 bytes are used per reading (less than 16 bytes is used when logging sub-hertz). If Channel 1 was logging every second it would take approximately 11 days to fill the internal capacity or 16 weeks if logging every 10 seconds. If 4 channels log every 10 seconds the memory would fill in approximately 40 days.

If I install a external memory card, will it increase the memory?

No, the memory card is used to download your data without the need for a PC.

What happens when the memory is full?

The logger will disarm and go into the memory full condition. The logger cannot be armed again until enough free space is made available by the deletion of data. Download and most other functions will still be available when memory is full.

Can I choose how much memory to download?

It is not possible to specify memory but it is possible to download between two specified times.

Do I need to use a specific brand of memory card?

If you experiencing compatibility problems with a MMC/SD card, ensure that the logger controller firmware is at version 2.2 or above (firmware upgrades are included in you OMEGALOG[®] installation directory).

Do you recommend a specific brand of memory card reader?

Any brand name should work without issue but SANDISK or Microtech Zio are two known good readers.

Can I program the logger from a memory card?

Yes, in that setups created in OMEGALOG[®] can be saved onto a card and loaded into the logger using the stored setups menu.

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FAQ Speed

How fast can I log with n number of channels?

See Sample Rates under OM-SQ2020/40 logger.

Can I have different channels logging at different speeds?

Yes, a total of 4 sample intervals can be specified, but they must be multiples of each other.

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FAQ Front Panel Controls

How many channels can I view on the loggers display at the same time?

One channel at a time by using the metering feature, with auto scroll of all channels if required (press and hold enter key).

Can I display sampled inputs in real time?

The metering feature allows data to be viewed on the logger display or OMEGALOG[®] at approximately 1Hz, regardless of channel sample rates.

Can you lock and disable the keypad?

You can configure the logger such that no changes to setup can be made (read only). Refer to the Configuration Tab in OMEGALOG[®] Logger Setup.

Can I program the Logger from front panel?

You may load pre-configured set-ups that have previously been stored in the logger, or from the External Memory Card

Can I start logging from the front panel key pad?

Yes the logger can be armed and disarmed from

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