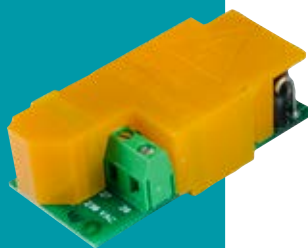


Data sheet

Meter mains supply

- For MULTICAL® meters
- 230 VAC, 24 VAC or 24 VAC/VDC
- Fulfils EN 61010-1
- Fulfils EN 1434 class A and C (MID class E1 and E2)
- Fulfils double-insulation requirements
- Galvanically separated



Key features

Long-term stable mains supply modules for MULTICAL® thermal energy meters. Delivers power to the entire meter including the installed sensors and communication modules. Some communication modules may require high-power SMPS HC-993-03/11 or HC-993-04/12. Fulfils double-insulation requirements when mounted in MULTICAL®, thus no protective earth wire is needed.

Technical data

Electrical data

Mains supply	230 VAC +15/-30 %, 50/60 Hz 24 VAC ±50 %, 50/60 Hz, 24 VDC +75/-25 % *
Insulation voltage	3,75 kV
Power consumption	< 1 W
Backup supply	Integral supercap eliminates interruptions due to short-term power failures (only supply modules type HC-993-07 and HC-993-08)
EMC data	Fulfils EN 1434 class A and C (MID class E1 and E2)

* High-power SMPS - HC-993-04/12 and auxiliary supply HC-993-14 only

Dimensions

Made bespoke for the power supply area in MULTICAL® meters.

Description

230 VAC supply module (type HC-993-07)

This module is galvanically separated from the 230 VAC supply. The module is adjusted to direct connection to the electricity network. The module includes a double-chamber safety transformer and fulfils the requirements for double insulation when the calculator top is mounted on the calculator base when mounted in MULTICAL®. If the supply is interrupted, the module typically keeps the meter powered for a few minutes.



24 VAC supply module (type HC-993-08)

This module is galvanically separated from the 24 VAC supply. The module is adjusted to industrial installations and installations powered by a separate 230/24 V safety transformer, for instance mounted in a control panel. The module includes a double-chamber safety transformer and fulfils the requirements for double insulation when mounted in MULTICAL®. If the supply is interrupted, the module typically keeps the meter powered for a few minutes.



230 VAC high-power SMPS (type HC-993-03/11)

This module is galvanically separated from the 230 VAC supply. The module is adjusted to direct connection to the electricity network. The module is constructed as a Switch Mode Power Supply, which complies with the requirements for double insulation when mounted in MULTICAL®. When disconnecting the supply, the module will only keep the meter supplied for a few seconds.



24 VDC/VAC high-power SMPS (HC-993-04/12)

This module is galvanically separated from the 24 VDC/VAC supply. The module is adjusted to industrial installations and installations powered by a separate 230/24 V safety transformer, for instance mounted in a control panel. The module is constructed as a Switch Mode Power Supply, which complies with the requirements for double insulation when mounted in MULTICAL®. When disconnecting the supply, the module will only keep the meter supplied for a few seconds.



Auxiliary supply 230 VAC – 24 VDC (HC-993-13)

This module is galvanically separated from the 230 VAC supply and is used for supplying either analog output modules or passive 24 V flow sensors from a third-party supplier in MULTICAL® 803. The module is constructed as a Switch Mode Power Supply that meets the requirements for double insulation when mounted in MULTICAL®.



Auxiliary supply 24 VAC/VDC – 24 VDC (HC-993-14)

This module is galvanically separated from the 24 VAC/VDC supply and is used for supplying either analog output modules or passive 24 V flow sensors from a third-party supplier in MULTICAL® 803. The module is constructed as a Switch Mode Power Supply that meets the requirements for double insulation when mounted in MULTICAL®.



General requirements

The whole installation must fulfil current national regulations. Connection/disconnection of the module can be carried out by the meter installer, whereas installation of the 230/24 VAC safety transformer in a control panel as well as other fixed installations must be carried out by an authorized electrician.

Power supply and meter compatibility

Power supply module	MULTICAL® 403	MULTICAL® 603	MULTICAL® 803
HC-993-07	X	X	
HC-993-08	X	X	
HC-993-03/11*		X	X
HC-993-04/12*		X	X
HC-993-13			X
HC-993-14			X

* HC-993-11 and HC-993-12 correspond to HC-993-03 and HC-993-04, respectively, but are delivered with additional connection cables to fit MULTICAL® 803.

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