AUTOMETERS SYSTEMS

MA-IO
Quick setup guide

Programming the meter

When you receive the meter there will be at least one value that you must programme into the meter. This is the current transformer ratio.

If the meter has been purchased with the intention of using the RS 485 Modbus output then you will need to program the Modbus parameters you require.

IMPORTANT NOTICE

The MA-10 is a MID approved electricity meter, once you have altered any of the parameters e.g. Current transformer ratio or voltage ratio and you have come out of the programming mode you cannot alter them again. Contact us to assist. This rule does not apply to the Modbus settings.

Communication Settings

Where the meter has been supplied with a RS 485 protocol output the individual parameters are set by using the front key panel. The range is 001 to 247.

Enter Password

Long press E to enter PASSWORD programming mode.

The first digit will flash, Press MD PF Hz to increment the number (1000)

Long press E to confirm and enter programming mode.

Modbus RS 485 Address

SEt Addr 001 — Set Address now appears on the display.

Long press E and the mod -bus address will be shown.

SEt Addr 101 — Long press E again and first digit for the mod-bus address will flash.

Press the MD PF Hz key to increment the number.

SEt Addr 101 — Press the E key to move the cursor to the right. When all three numbers have been selected long

press E to confirm, GOOD will appear to confirm locked.

Press V/A to return to set address menu.

Baud Rate

SEt bAUd 9.6 k — Press the P CH key to move to baud rate.

Long press E and the numbers will flash

SEt bAUd 9.6 k — press the E key to scroll through the options available.

SEt bAUd 38.4 k — Select the parameter you want, Press Long and confirm BAUD RATE. GOOD will appear to confirm locked.

Parity

SEt PArL EuEn — Press the P CH key for Parity.

Long press E to enter parity for options will flash.

SEt PArL EuEn — To set parity repeat using the MD PF Hz or P CH keys to choose between even, odd or none and long

press E to lock. GOOD will appear to confirm locked.

SEt PArL nonE

Press V/A Twice to leave programming mode.

CT Ratio Settings

Enter Password

Long press E to enter PASSWORD programming mode.

The first digit will flash, Press MD PF Hz to increment the number (1000)

Long press E to confirm and enter programming mode.

CT1

Ct rAtE 0001 — Set Address now appears on the display.

Press the P CH key to scroll through the various adjustable options.

Ct CH 01 rAtE 0001 — Stop at CT1 this is the c.t ratio setting.

Long press E key channel CHO1 will flash

Long press E, again CH01 will stop flashing and the first large digit will flash for the C.T rate.

Press the MD PF Hz key to increment the number.

SEt Ct rAtE 0200 — Press the E key to move the cursor to the right. E.g. 200 amp should be 0200.
When all four numbers have been selected long

press E to confirm, Good should appear on the display confirming this is now locked.

Press V/A twice to leave programming mode.

If the meter has been supplied with multiple channels, then enter programming mode and

press P CH to change the channel and repeat as listed before.

Electrician

MA-10 Din rail electricity meters should only be installed by a fully qualified electrician who has knowledge of electricity meters connected with current transformers.

It is the installer who is fully responsible for the safe installation of this meter. It must be installed to meet the current electrical regulations concerning installation of electricity meters.

EMC Installation Requirements

Please see full installation brochure for details - visit autometers.co.uk

Wiring Information

Power Supply

The MA-10 receives it power from the bottom of the meter through the AUX terminals, this must be connected (240 volt).

Wiring

The electrical connections of voltage current and Mod-bus are made directly to the top and bottom of the meter.
The Mod-bus connections are made to the top of the meter either using the wiring terminal or the RJ-45 sockets.

All electrical terminals can be unplugged for wiring. The current input is made via a RJ12 plug into the top of the meter.

Electrical Connections

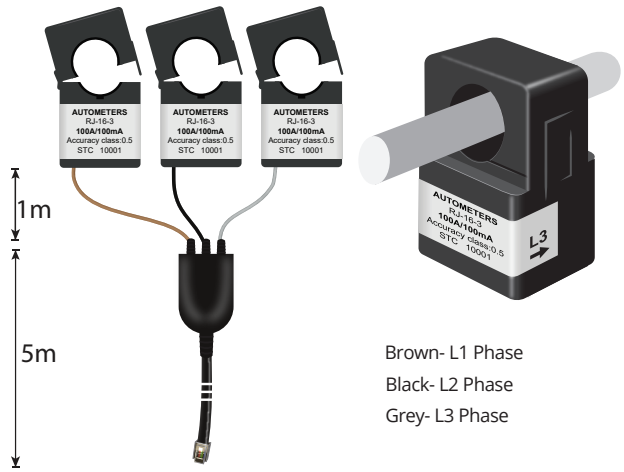
1.0 mm cable is all that is required for the voltage connections. For the low voltage communication connections we recommend a twisted shielded cable Belden 9841 -2 wire or 9842 -4 wire or equivalent.
Phasing and polarity of the AC current and voltage inputs and their relationship is critical to the correct operation.

Dimensions

The meter is a four module DIN rail mounted meter.
Dimensions are 71.7mm width x 122.5mm height x 66mm deep.
The cut out hole for the front of the enclosure is 72mm x 46mm.

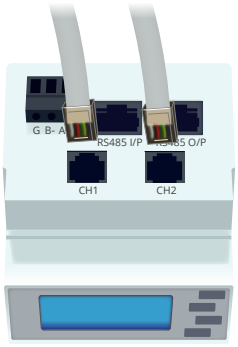
CT Connection

Current transformer connection shown is using the new split core quick-connect current transformers.

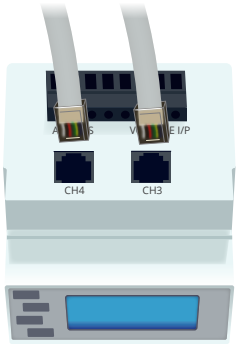


Brown- L1 Phase
Black- L2 Phase
Grey- L3 Phase

CHANNEL 1 CT CONNECTION | CHANNEL 2 CT CONNECTION | CHANNEL 3 CT CONNECTION | CHANNEL 4 CT CONNECTION



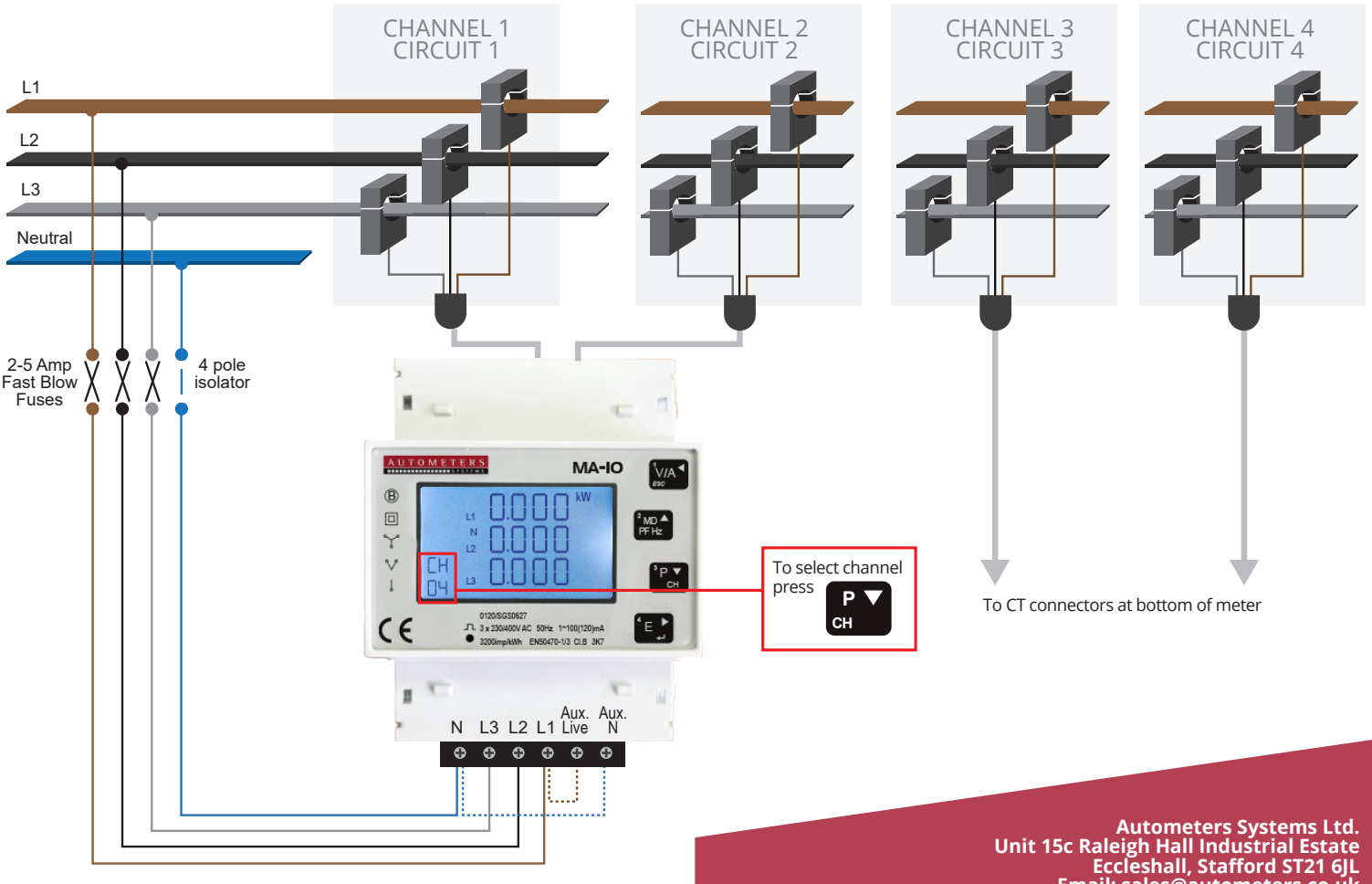
TOP



BOTTOM

Wiring Diagram

3 phase 4 wire split core CT arrangement



For full installation brochure please visit autometers.co.uk

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