

# LV Motor Test Resistor Assembly Kit for MVE Commissioning

## 1. Low Voltage Test Mode

The soft starter can be connected to a low voltage motor ( $\leq 500$  VAC) for testing. To conduct the low voltage test, you need to use a LV motor test resistor assembly (part number 995-03946-00). This allows the user to thoroughly test the soft starter and its associated power and control circuits. The low voltage test mode provides a means of testing the soft starter's configuration without requiring a full medium voltage test facility.

During the low voltage test, the soft starter's control input, relay output and protection settings can be tested. Low voltage mode is not suitable for testing soft starting or soft stopping performance.

The FLC for the low voltage motor must be  $\geq 5$  A (refer to parameter 1A *Motor Full Load Current*). The typical value for parameter 2D *Current Limit* is 130%.

## 2. Packing List

Each kit contains:

4 x LV motor test resistor assemblies (one per phase arm and one spare)

1 x Instruction sheet

### 3. Connect the LV motor test resistor assembly

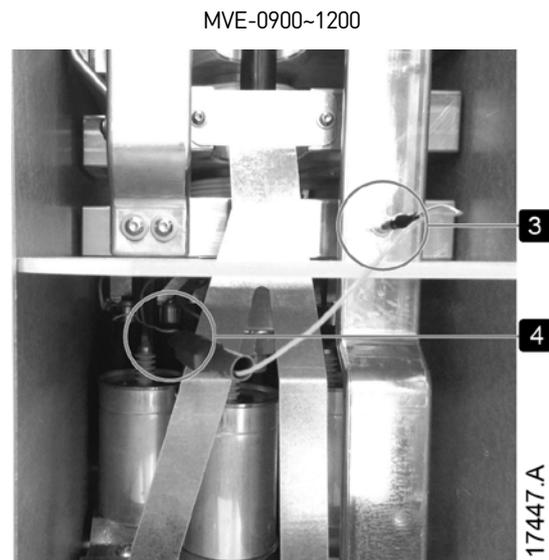
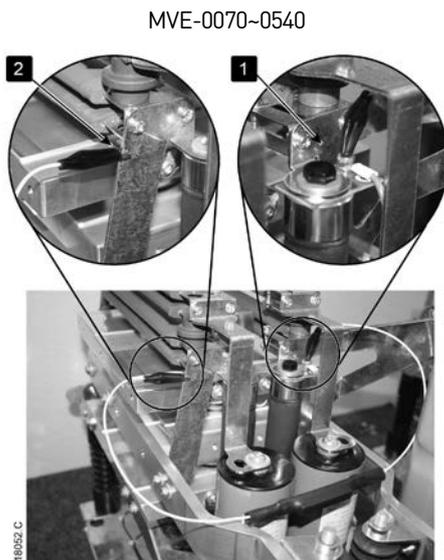
For detailed instructions and illustrations, refer to the soft starter user manual.

#### MVE-0070~0540

1. Clip one end of the resistor assembly to the bolt on the non-conduction PCB. The non-conduction PCB is located on the side of the phase arm, at the top of the long round grading resistor.
2. Clip the other end of the assembly to the steel bracket behind the grading resistor on the other side of the phase arm.

#### MVE-0900~1200

1. Remove the 12 screws holding each fan assembly in place. Do not remove the 3 screws holding each fan in place.
2. Disconnect the fan control wiring plug.
3. Clip one end of the resistor assembly to the bolt on the busbar.
4. Clip the other end of the assembly to the small bolt just below the bushing under the insulating panel.



### 4. Low Voltage Operation



#### WARNING

After low voltage mode testing, ensure that the LV motor test resistor assembly is removed from each phase arm before connecting the soft starter to a medium voltage motor. If the LV motor test resistor assemblies remain on the phase arms, the soft starter may suffer severe damage.



#### CAUTION

After low voltage mode testing, any fan control wiring must be reconnected and the fan assemblies must be screwed to the front of each phase arm before connecting to the medium voltage mains supply.

To operate the MVE in low voltage test mode:

1. Isolate the soft starter from the motor and the mains supply.
2. Connect one LV motor test resistor assembly to each phase arm.
3. Connect T1, T2, T3 of the soft starter to a three phase motor with full load current  $\geq 5$  A. Connect L1, L2, L3 of the soft starter to three phase mains supply with voltage less than 500 VAC (frequency 50 Hz or 60 Hz).
4. Set parameter *1A Motor Full Load Current* to the value shown on the motor name plate.
5. Switch on control and mains supply, and use the MVE to start the motor. The start command can be sent from the controller or via the remote input. Monitor the soft starter's display and verify the line current and voltage readings.
6. Stop and restart the motor several times to confirm correct and consistent operation.
7. When testing is complete, isolate the soft starter from the mains and control supply. Disconnect the soft starter from the motor.