

Model 6 Motor Control Centers

Common Startup Issues for starter units equipped with Tesys T Overloads.

Scenario: All the terminations are complete and when the motor was started the starter would not “hold in”. In this scenario, if the starter does not “hold in” meaning that the Over Current Protective Device (OCPD) trips or the Starter Overload Trips, try the following steps for resolution.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS-2011, or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Qualified electrical personnel must perform work in accordance with all applicable national and local electrical codes.
- Perform such work only after reading and understanding all of the instructions contained in this bulletin.
- Follow all safety procedures defined in NFPA 70E, CSA Z462, and OSHA 1910.331-35, as well as those established by your specific location.
- Turn off all power supplying this equipment before working on or inside equipment.
- Assume that all circuits are live until they have been completely deenergized, tested, locked out, and/or tagged out (per OSHA 1910.147). Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of backfeeding.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors, and covers before turning on power to this equipment.

Failure to follow these instructions will result in death or serious injury.

1. Starter will not “hold” in upon motor start.

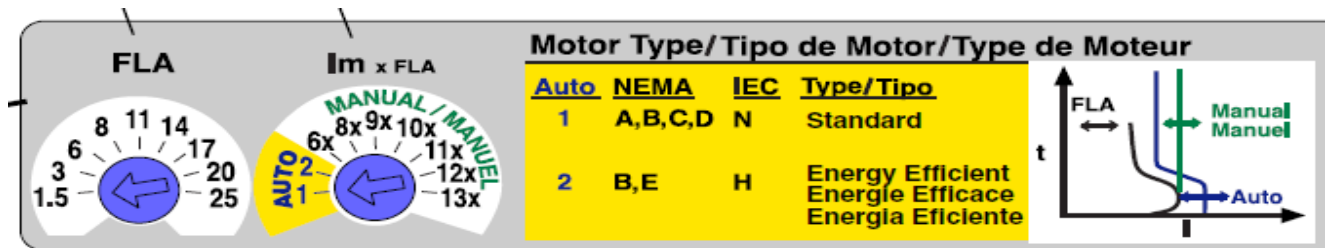
Steps:

- A. Check the Nameplate on the Motor and record the following:

- 1) Motor Full Load Current / Amps _____
- 2) Motor Service Factor _____
- 3) Motor Frame Type (NEMA or IEC) Code letter _____

- B. Using the recorded information on the motor nameplate set the following devices:

- 1) Motor Overcurrent Protective Device; Motor Circuit Protector (MCP) Refer to **instruction bulletin 48940-260-01** for detailed information.
 - a) Set the FLA dial to the closest match of the Motor Full Amps.
 - b) Set the $I_m \times FLA$ dial to desired selection for Auto or Manual. If using Auto mode, ensure to use the setting related to the NEMA or IEC code letter.



- 2) When using the Manual mode, it may require several, start attempts before the right selection is found. Refer to the instruction bulletin for this procedure. Remember that each time the motor is started thermal heating is taking place and thus allowing a cool down time between start attempts is recommended.

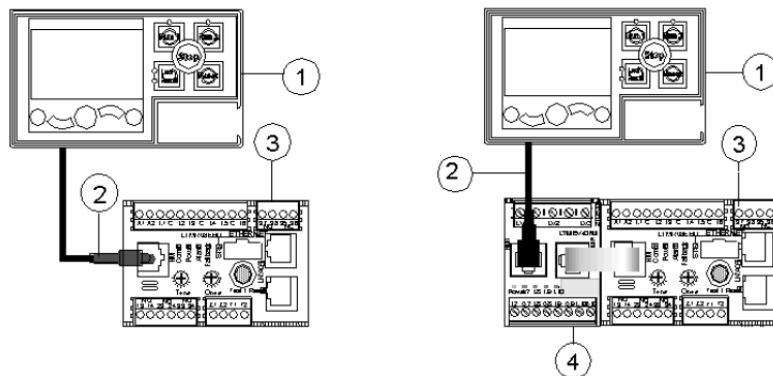
2. Starter Tesys T Overload Settings:

A. Tesys T – Unless the starter overload has been reset to factory default, all parameters are set before shipment per the parameter drawing and **ONLY the Full Load Amp setting needs to be set for startup.**

- 1) Using the Motor Full Load Amps value from the motor nameplate enter the value into the Tesys T overload using the following methods.
- 2) If the starter is equipped with an external door mounted display referred to as an LTMCU, then enter the Motor Full Load Amps via the display.



- i. The Quick Start guide 163958EN-04 has details for navigation using the LTMCU.
 - 3) Using the **LTMCU** navigation buttons enter the Motor Full Load Amps in the Protection settings menu. The Motor Full Load Amps will be represented in the menu as field “FLC1 or OC1”. “Motor full load current ratio”. Note that for all single speed starters only FLC1 value will be entered. FLC2 is only used for two speed starters and the field is not enabled unless the starter is configured for two speed.
- B. If the starter unit is not equipped with an external door mounted display, then proceed with the following steps.
- 1) Locate and secure the hand held LTMCU programmer provided with the Model 6 Motor Control Center.
 - 2) Connect the LTMCU to the starter overload using the RJ-45 cable plugged into the LTMCU and the appropriate port as shown below. The figure is representative of a Tesys T overload with and without an expansion module.



- 1 LTM CU Control Operator Unit
- 2 RJ45 cable (VW3 A1 104R30, in this example)
- 3 LTM R controller
- 4 LTM E expansion module

3) Enter the Motor Full Load Amps using the procedure steps in 2A above.

Note: The settings above are the first steps that should be checked.

Attention!

If the starter has been started prior to programming the Tesys T overload there may be an error code showing on the display or LED indicator on the overload. If so, use the external display or hand held programmer display to determine the fault. It will likely indicate **Fault** Thermal Overload. If so, the starter can be reset in two manners.

- A. If the motor experienced a Thermal overload, allow the motor to cool before resetting. This could take minutes or hours depending on the level of Thermal Capacity.
 - 1) Allowing the motor to cool use the reset button to reset the overload.
- B. If the motor did not experience a Thermal overload, but tripped because the FLC1 value was set too low, use the **Clear Thermal Capacity** command.
 - 1) Access the maintenance settings and use the **Clear Thermal Capacity** command. This will set the Thermal Capacity to Zero (0) and allow the fault to be reset. The reset pushbutton can then be used to reset the overload.

After resetting, continue with the starting process. If the Tesys T overload for the starter shows a fault code after restarting, document the code and refer to the Tesys T instruction bulletin.

Record Fault Code and Description:

Warning / Fault: _____

Fault Name: _____

Other factors may contribute or be the cause of the issue. If the issue persists, the next steps should be consulting the **Model 6 Motor Control Center Instruction Bulletin 80459-641-01E_10/2012 Section 11**, for more information.

If the issue has not been resolved by the previous procedures; please complete the Trouble Shooters Checklist prior to contacting **Schneider Electric Customer Care**.

<http://www.schneider-electric.us/en/work/support/customer-care/>

Phone: **(888) 778-2733 [888 SQUARED]**

Completing the information and setting the equipment parameters will be essential and offer the customer service agents essential information in evaluating the issue.

Trouble Shooters Checklist:

- ☐ The Motor Control Center record drawings with the parameter drawing is available for reference. (Drawing Type: Parameter Settings)

- ☐ The actual motor nameplate information has been secured and validated.

(Record in the spaces provided)

Motor Full Load Current / Amps _____

Motor Service Factor _____

Motor Frame Type (NEMA or IEC) Code letter _____

- ☐ The Over Current Protective Device has been set per the actual motor nameplate information and the instructions in steps 1A and 1B above.

(Record the settings in the spaces provided)

FLA Motor Current Dial Setting _____

Im x FLA Dial Setting _____

- ☐ The Motor Full Load current has been programmed into the starter overload using the steps in procedure 2 above.

Starter Location ID _____

FLC value entered _____

- ☐ Tesys T starter overload code and description.

Warning / Fault _____

Fault Name: _____

Printed Name and Date: _____