



Frequently Asked Questions (FAQs)

Listed below are some of the more frequently asked questions by users of the MMII. The list includes questions asked by consultants before the MMII has even been specified to the end user and after the MMII is installed and controlling a motor.

- **Does the MMII support ladder logic as in a PLC?**
No. The MMII switch inputs do not allow total programmability as in PLCs; however, it does have a range of over 30 different dedicated functions that can be assigned for typical applications. These functions come complete with built in timers if necessary for that particular function. Ex. Auto Permissive and Auto Start for PLC hard wired control, Two Wire Control for PLC starts or jogging, Process Interlocks with starting and running override timers for pressure and flow monitoring. All the programmable switch inputs may be configured as normally open or normally closed.
- **Does the MMII have any hot winding protection?**
Yes. The MMII has a single thermistor input to protect the motor against hot windings. These thermistors are typically wound into stator windings of the motor when manufactured and can be Positive Temperature Coefficient (PTC) or Negative Temperature Coefficient (NTC).
- **After wiring the MMII into the control circuit, it remains UNAVAILABLE for starts. What does this mean?**
Three conditions can cause the MMII to remain UNAVAILABLE for starts.
 - 1) The MMII has tripped on a trip condition
 - 2) The STOP switch input (terminal 51) is not energized.
 - 3) If a Process Interlock function is assigned to one of the programmable switch inputs and the startup override is set to 0 seconds, the MMII will remain UNAVAILABLE until that switch input is energized.
- **When a start is attempted, the motor starts for a second then shuts off. The MMII displays an OPEN CONTROL CIRCUIT alarm. What is the problem?**

The MMII must see feedback from the Contactor A and, if used, Contactor B within 1 second of the MMII closing the contactor or the MMII will stop the motor as it assumes that there is a problem in the circuitry for the motor contactor coil. The feedback from the contactors go to the status inputs (terminals 55 & 56) of the MMII. NOTE: This condition will result in the toggling of the motor contactor when the MMII is in the Two Wire mode as there can be a constant start signal from the two wire device. Use the Open Control Circuit trip feature to prevent the toggling of the motor contactor.

- **After connecting the MMII through an interface device to a PLC network, communications to the MMII cannot be established. What is the problem?**

Verify:

- 1) - if master communicating with Modbus® RTU protocol
- 2) - wiring between interface device and MMII
- 3) - MMII communications address
- 4) - master polling address
- 5) - MMII baud rate
- 6) - master baud rate
- 7) - MMII parity setpoint
- 8) - master parity settings

If problem still persists, call Multilin for technical support.

- **Can the MMII interface with an external analog device?**
Yes. The MMII has a single analog input that can be used to monitor an external transducer. Alarm and trip setpoints can be configured to warn the user or shut down the motor.
- **Can the MMII be used on medium voltage motors?**
No. The MMII was designed specifically for the low voltage market (600 V or less). The protection features offered in the MMII are typically not advanced enough for larger, more expensive motors. The power measuring will only accommodate 600 V systems.
- **Can the control transformer in the MCC be used for the VT input on the MMII, as well as for control voltage?**
Yes, provided that the control transformer secondary voltage is 110 V or 120 V which corresponds to the VT SECONDARY VOLTAGE setpoint.
- **Can the START keys on the faceplate of the MMII be disabled?**
Yes. One of the programmable switch inputs can be configured to REMOTE PERMISSIVE and a jumper placed from Switch Common to permanently energize that switch input. This will allow starts from the switch inputs of the MMII only, when in the MANUAL mode.