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# F. High Power Modules

## MT8 Family—High Power Module

### 1. Product Overview

The high power modules are required to provide a means for the customer to communicate through the tool changer

Amphenol MS style connectors are provided for interfacing on the Master and Tool modules. When the tool changer is coupled, the Master and Tool signal modules communicate with each other using a spring loaded pin block. A flexible boot surrounds the pin block to seal the connection from moisture and liquid while coupled.

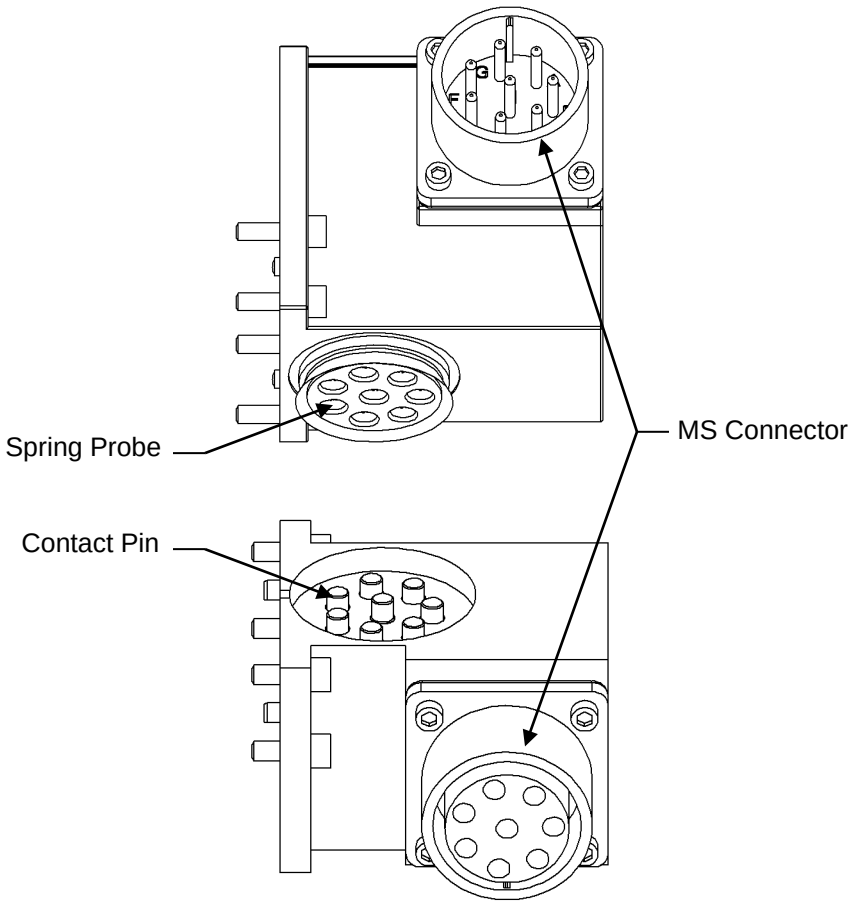



**Figure 1.1 – High Power Modules (MT8-M, MT8-T shown)**

## 2. Installation

The control/signal modules are typically installed by ATI prior to shipment. The steps below outline the field installation or removal as required.

**DANGER:** Power and air should always be removed prior to maintenance or repair.

### 2.1 Installing

1. It may be necessary to clean the mounting surface on the tool changer prior to installing the module in order to remove any debris that may be present.
2. Apply Loctite-222® (or similar) thread locker to the socket head cap screws and tighten using a hex key.

### 2.2 Removal

1. All customer connections up to the module need to be disconnected.
2. Remove the socket head cap screws and pull the module off the tool changer.

## 3. Operation

The primary current modules are designed to carry large currents to various industrial devices, providing a separable joint in the power wiring. To maximize the service life of these components the following points should be observed:

1. Do not couple or uncouple the modules unless electrical power has been disconnected and discharged both upstream and downstream from the modules. Arcing and contact damage will occur if this is not observed.
2. Properly route and secure all cables, particularly on the Master. Failure to observe this point may result in premature failure of the industrial electrical connectors. Poor cable routing can also result in wires and cable being pinched in the joint between the tool changer halves.
3. Always protect the un-used Tool modules when not coupled to a Master module. Dust, debris, and weld spatter can contaminate the contact tips resulting in arcing and a significant decrease in contact life.

## 4. Maintenance

Contact pins on the control module should be inspected and cleaned periodically to ensure electrical continuity is maintained. Care should be taken not to bend or pull out the contacts when cleaning. Do not use an abrasive media to clean the contact pins as erosion may occur to the contact surface.

## 5. Troubleshooting

| Symptom | Possible Cause / Correction |
|---|---|
| Loss of Communication | Check/Replace cabling up- and down-stream of the tool changer modules.<br><br>Inspect signal module contact pins for debris/wear. |

## 6. Recommended Spare Parts

| Assembly | Part Number | Description |
|---|---|---|
| **MT8/MT8L/MTS8 High Power Module Master** | 9120-MT8-M | Master High Power Module Assembly |
| | 9120-MT8L-M | Master High Power Module Assembly with connector relocated 180 degrees from standard MT8 |
| | 9120-MTS8-M | Master High Power Module Assembly with Axial Connector |
| | 4010-0000041-01 | V-Ring |
| **MT8/MT8L High Power Module Tool** | 9120-MT8-T | Tool High Power Module Assembly |
| | 9120-MT8L-T | Tool High Power Module Assembly with connector relocated 180 degrees from standard MT8 |
| | 9120-MTS8-T | Tool High Power Module Assembly with Axial Connector |

## 7. Specifications

| | | |
|---|---|---|
| **<u>High Power Module</u>** | **MT8-M / MT8-T<br>MT8L-M / MT8L-T<br>MTS8-M / MTS8-T** | High Power Module with signal pass-through for customer use. |
| Weight (coupled) | 1.6 lbs. (.73 kg) | MT8-M /T and MT8L-M /T |
| Pass-Through Signals | 8 @ 20 amp<br>500 VAC / 600VDC | Master-side Customer interface connector, MS3102E22-23P.<br>Tool-side Customer Interface connector, MS3102E22-23S. Rhodium-plated contacts with first mate ground pin. |

## 8. Drawings

Drawings are available on the ATI website or by contacting an ATI representative.