

Model 494.74 Two-Station HSM Interface Board

About the Model 494.74 Two-Station HSM Interface Board

The Model 494.74 Two-Station HSM transition board is a single-width board that plugs into the transition card cage on a Series 494 Chassis.

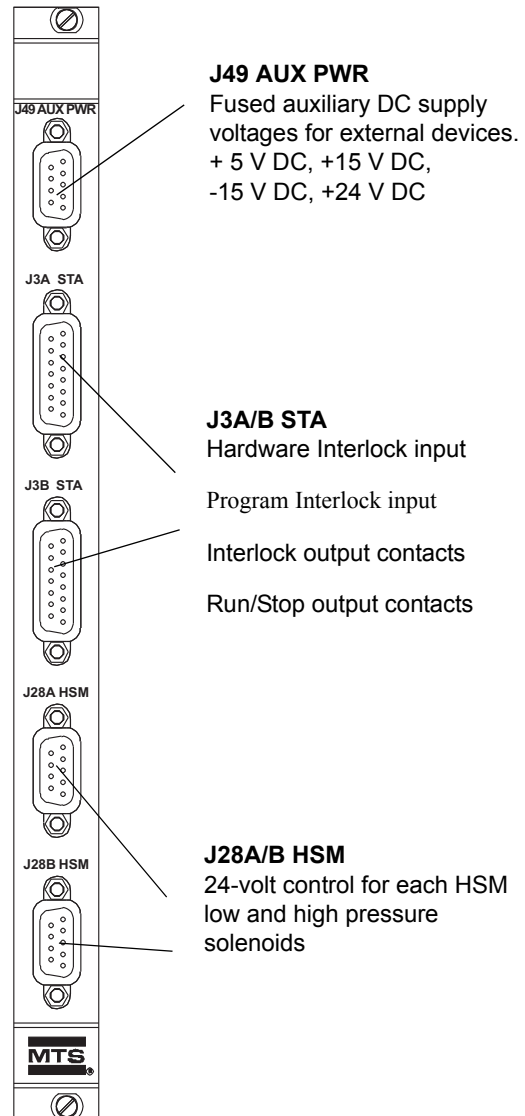
AUX Power (J49)—the J49 connector provides fused (self resetting) auxiliary power outputs for: +5 V DC, +15 V DC, -15 V DC, and +24 V DC.

HSM Interlocks (J3)—each station has a J3 connector that includes the following interfaces to external equipment:

- External hardware interlock inputs
- Program (function generator) interlock inputs
- Run/Stop Output contacts
- Interlock Output contacts

HSM Control (J28)—this connector provides two 24-volt HSM control (Off/Low/High) circuits. Each station has a J28 connector for the HSM control cable.

Note *The Model 494.74 Two-Station HSM board cannot be used directly with 115 V AC HSMs. Applications that use 115 V AC HSMs require an external converter box (such as a Model 413.08), which is used with this board.*



Specifications—Model 494.74 Two-Station HSM Interface Board

Model 494.74 Specifications (part 1 of 2)

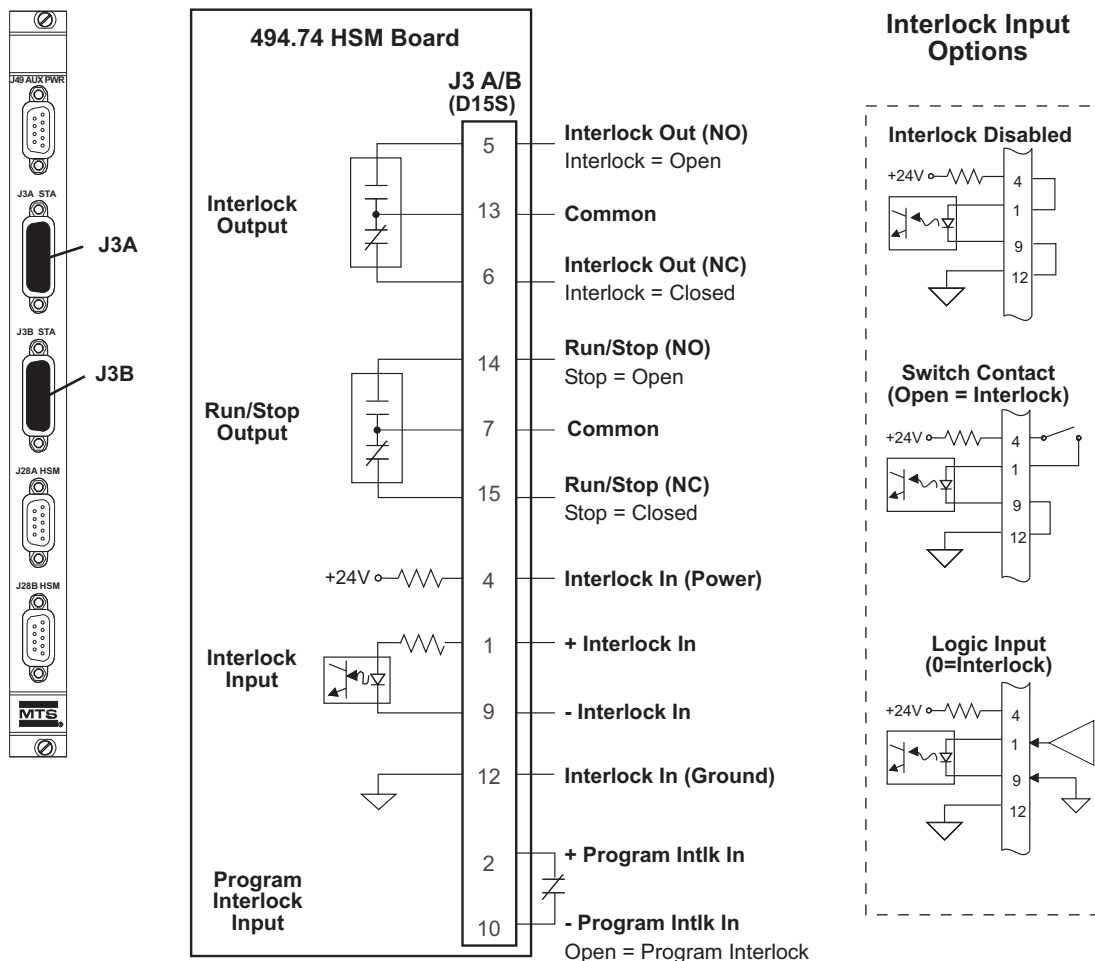
PARAMETER	SPECIFICATION
HSM Outputs	Connectors 28A and 28B (D9S))
Low Output	1.0 A maximum
High Output	1.0 A maximum
	HSM Command State Monitoring:
	Each HSM channel monitors and compares the HSM command state against the actual HSM Low and High output states to help sense failed HSM relay contacts.
	If a discrepancy is encountered, +24 V power is removed from the HSM High and Low relay contacts for that HSM channel. In addition, the HSM controls for that HSM channel are forced to the Off state.
Interlock Output Relays	Connectors J3A and J3B (D15S)
Voltage	30 V DC/AC maximum
Current	1 A maximum
	Normally Open Relay Contacts: Open = Interlock
	Normally Closed Relay Contacts: Closed = Interlock
Interlock Inputs	Connectors J3A and J3B (D15S)
Interlock Trip Voltage	2 V minimum, 3 V maximum (at ~ 0.5 mA)
Maximum Input Voltage	+26 V DC
Input Resistance	3000 Ω
Interlock Power Output	+24 V DC, current limited by a 3000- Ω resistor

Model 494.74 Specifications (part 2 of 2)

PARAMETER	SPECIFICATION
Run/Stop Output Relays	Connectors J3A and J3B (D15S)
Voltage Rating	30 V DC/AC maximum
Current Rating	1 A maximum
	Normally Open Relay Contacts: Open = Program is stopped
	Normally Closed Relay Contacts: Closed = Program is stopped
Auxiliary Power Outputs	Connector J49, (D9S)
+5 V DC	0.75 A maximum
+15 V DC	0.75 A maximum
-15 V DC	0.75 A maximum
+24 V DC	0.75 A maximum

J3 Interlock Connections for the Model 494.74 HSM Board

Each HSM channel has interlock inputs and outputs that are available through connector J3A or J3B (one channel per connector). Interlock output contacts can control external devices. Interlock inputs from external devices can initiate station and program interlocks.



Interlock output J3

Each HSM channel has a set of interlock output contacts that are available through connector J3A and J3B (one channel per connector). These interlock contacts change state when an interlock line goes active and can be used to control external devices.

CONTACTS	INTERLOCK	NO INTERLOCK
Normally Open	Open	Closed
Normally Closed	Closed	Open

Run/Stop output J3

Each HSM channel has a set of Run/Stop Output contacts that are available through connectors J3A and J3B (one channel per connector). You can use these contacts to control external devices.

The run/stop contacts respond to the function generator run/stop states for the test station where the HSM is assigned.

CONTACTS	TEST STATION STOP	TEST STATION RUN
Normally Open	Open	Closed
Normally Closed	Closed	Open

Interlock input J3

Each HSM channel has a set of interlock inputs that are available through connector J3A and J3B (one channel per connector). External switch contacts or logic signals connected to the interlock input can initiate a station interlock.

Program interlock J3

Each HSM channel includes a program interlock input from an external mechanical switch that is available through connector J3A and J3B (one channel per connector). External switch contacts connected to the Program interlock input can initiate a program interlock.

A program interlock occurs when the external switch contacts are open.

Note *For Series 793 Controller applications, a program interlock stops the function generator for the station where the J3 Interlock connector is assigned. The J3 Interlock connector is assigned to a station based on the HSM module chassis-slot position.*

Cable specification

To maintain EMC compliance, **J3 Interlock** cables must comply with the following specifications:

Connector—15-contact, type D, male EMI connector.

Backshell—EMI metallized plastic or metal.

Cable—AWG and number of conductors as required. Braided shield with shield connected to the metallized backshell at the chassis.

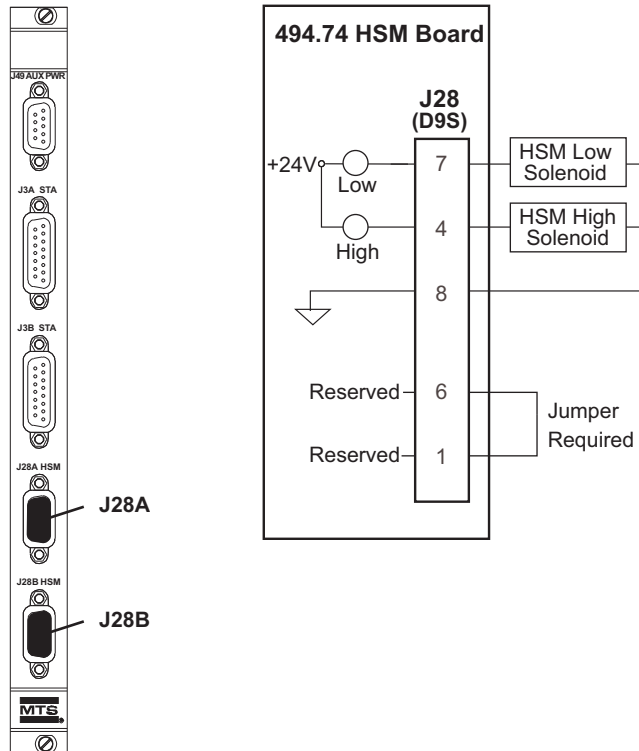
Jumper plug required

If connector **J3** is not used, you must install a jumper plug to maintain the integrity of the interlocks. Use jumper plug part number 100-180-351 or jumper pins: 1 and 4; 2 and 10; 9 and 12.

J28 HSM Connections for the Model 494.74 HSM Board

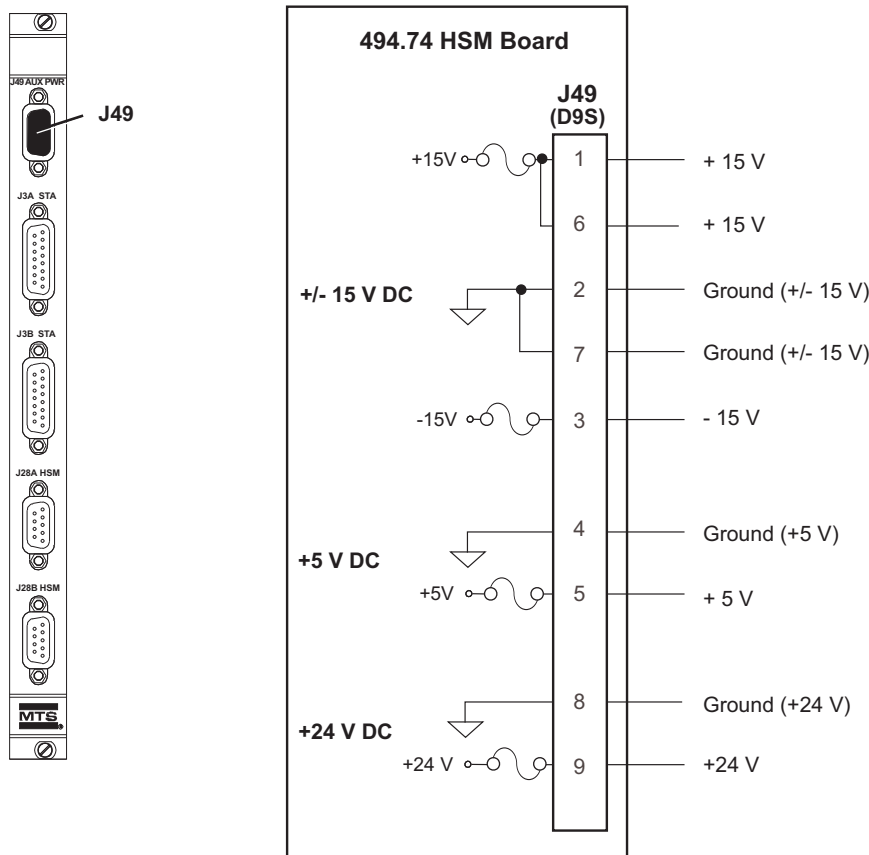
The control cable for each HSM plugs into a separate J28 connector on the 494.74 HSM board. Each HSM channel has separate 24-volt, low-pressure and high-pressure outputs that drive the HSM low- and high-pressure solenoids.

Note *The Model 494.74 HSM board cannot be used directly with 115 V AC HSMs. Applications that use 115 V AC HSMs require an external converter box (such as a Model 413.08), which is used in conjunction with this board.*



J49 Auxiliary Power Connections for the Model 494.74 HSM Board

The J49 connector provides auxiliary power outputs for: +5 V DC, +15 V DC, -15 V DC, and +24 V DC.



Cable specification

To maintain EMC compliance, **J49 Aux Power** cables must comply with the following specifications:

Connector—9-contact, type D, male EMI connector.

Backshell—EMI metallized plastic or metal.

Cable—AWG and number of conductors as required. Braided shield with shield connected to the metallized backshell at the chassis.