



**A Rockwell Automation Company**

# **QSHT User Manual Addendum, Power Connectors**

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## About This Addendum

This document is an addendum to the *QuickStick HT User Manual* to clarify the pinouts for the power connectors on the motor controllers.

### Purpose

This document explains how to wire the power connections to the QSMC and QSMC-2 motor controllers on QSHT transport systems. Use this document in combination with the *QuickStick HT User Manual* and other documentation that accompanies the transport system to design, install, configure, test, and operate a QSHT system. MagneMotion offers instructor-led training classes that provide additional experience.

### Audience

This document is intended for all users of QuickStick HT transport systems and provides information on wiring the power connectors on the motor controllers for QSHT transport systems.

### Prerequisites

The information and procedures that are provided in this manual assume the following:

- Familiarity with personal computers and with the Windows® operating system.
- Full documentation for the transport system is available.
- All personnel operating the transport system are properly trained.



### Reference Documents




- 990000496, QuickStick HT User Manual







## Safety

### Mechanical, Electrical, Magnetic Hazards

See the *QuickStick HT User Manual* for detailed hazard and safety information.

	 <b>WARNING</b>
	<p style="text-align: center;"><b>Crush Hazard</b></p> <p>Moving mechanisms have no obstruction sensors.</p> <p>Do not operate the QuickStick HT components without barriers in place or personal injury could result in the squeezing or compression of fingers, hands, or other body parts between moving mechanisms.</p>

 	 <b>WARNING</b>
	<p style="text-align: center;"><b>Electrical Hazard</b></p> <p>400V DC maximum, 15 A maximum.</p> <p>All power to the QuickStick HT system must be disconnected per the facility's lockout/tagout procedure before servicing to help prevent the risk of electrical shock.</p>

    	 <b>WARNING</b>
	<p style="text-align: center;"><b>Strong Magnets</b></p> <p>To avoid severe injury, people with pacemakers and other medical electronic implants must stay away from the magnet arrays.</p> <p>To avoid injury from strong magnetic attractive forces:</p> <ul style="list-style-type: none"> <li>• Handle only one vehicle/magnet array at a time.</li> <li>• Do not place any body parts, such as fingers, between a magnet array and any QuickStick HT motors, ferrous material, or another magnet array.</li> <li>• Vehicles and magnet arrays not being used must be secured individually in isolated packaging.</li> </ul> <p>To avoid damage to watches, electronic instruments, and magnetic media (for example, cell phones, memory disks/chips, credit cards, and tapes) keep these items away from the magnet arrays.</p>

## Electrical Specifications

The QSMC motor controller is the remote motor controller for the QSHT 1 m motor. One QSMC is used for each QSHT 1 m motor. The QSMC-2 motor controller is the remote motor controller for the QSHT 0.5 m motor. One QSMC-2 is used for two consecutive QSHT 0.5 m motors. The power connections for each controller are shown in Figure 1. Wiring for the connections and their mating cables is provided after the figure.

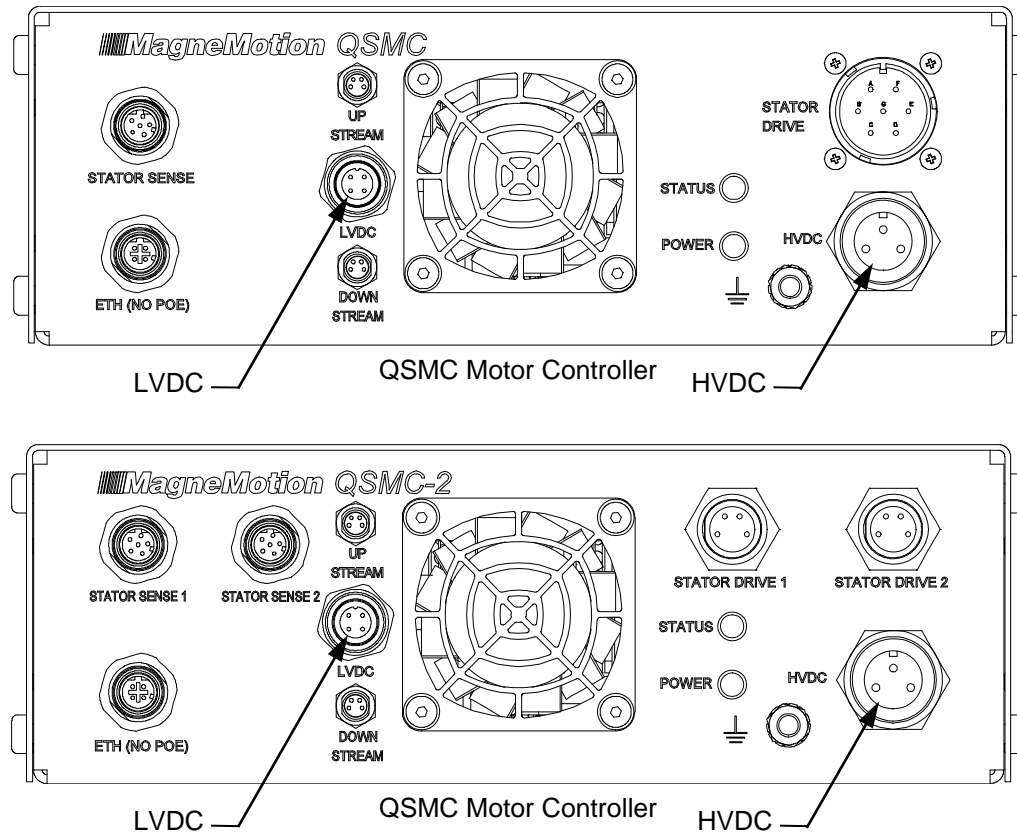


Figure 1: QSHT Motor Controllers

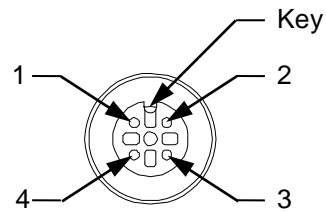
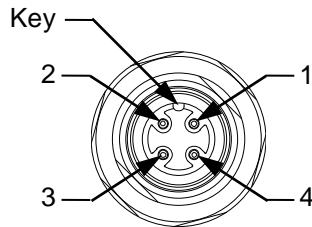
Table 1: QSMC and QSMC-2 Motor Controller Power Power Connections

Label	Description	Connector Type
LVDC (logic power)	24 VDC $\pm$ 5%, 0.6 A typical, 0.75 A max	M12 Eurofast, FSFD 4.4, Male
HVDC (motor power)	270 VDC min, 400 VDC max, 5 A typical, 15 A max	A-size Powerfast™, 3-Pin, Male

### NOTICE

Hot-plugging of either power source to the motor controller is not recommended.

Table 2: QSMC and QSMC-2 Motor Controller LVDC Power Pinouts



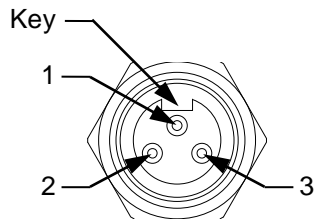
**M12 Eurofast, FSFD 4.4, Male  
Controller Front Panel**

	LVDC
<b>PWR</b>	1
<b>-</b>	2
<b>-</b>	3
<b>GND</b>	4

**M12 Eurofast, FSFD 4.4, Female  
Power Cable**

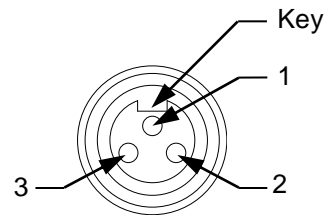
	Connector End	Terminal End	Wire Gauge
<b>PWR</b>	1	Brn	18 AWG
<b>-</b>	2		
<b>-</b>	3		
<b>GND</b>	4	Blk	18 AWG

Table 3: QSMC and QSMC-2 Motor Controller HVDC Power Pinouts



Powerfast, 3-Pin, Male  
Controller Front Panel

	HVDC
<b>GND</b>	1
<b>PWR RTN</b>	2
<b>PWR HI</b>	3



M12 Eurofast, FSFD 4.4, Female  
Power Cable

	Connector End	Terminal End	Wire Gauge
<b>GND</b>	1	Grn	14 AWG
<b>PWR RTN</b>	2	Blk	14 AWG
<b>PWR HI</b>	3	Wht	14 AWG

**NOTICE**

**Verify Wiring Before Applying Full Power**

The high-voltage connection on the motor controllers does not have reverse polarity protection since power must be allowed to flow out of the connection during regeneration. Applying reversed full power can damage the controller.

Verify that all cables are wired correctly by powering with a current limited power supply to verify polarity before applying full power.



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## **More Information**

MagneMotion Website: [www.magnemotion.com](http://www.magnemotion.com)

Questions and Comments: [www.magnemotion.com/about-magnemotion/contact.cfm](http://www.magnemotion.com/about-magnemotion/contact.cfm)

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## **Revision History**

**Rev.**

**Change Description**

A Initial release

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## Rockwell Automation Support

Use the following resources to access support information.

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Technical Support Center	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	<a href="https://rockwellautomation.custhelp.com/">https://rockwellautomation.custhelp.com/</a>
Local Technical Support Phone Numbers	Locate the phone number for your country.	<a href="http://www.rockwellautomation.com/global/support/get-support-now.page">http://www.rockwellautomation.com/global/support/get-support-now.page</a>
Direct Dial Codes	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	<a href="http://www.rockwellautomation.com/global/support/direct-dial.page">http://www.rockwellautomation.com/global/support/direct-dial.page</a>
Literature Library	Installation Instructions, Manuals, Brochures, and Technical Data.	<a href="http://www.rockwellautomation.com/global/support/direct-dial.page">http://www.rockwellautomation.com/global/support/direct-dial.page</a>
Product Compatibility and Download Center (PCDC)	Get help determining how products interact, check features and capabilities, and find associated firmware.	<a href="http://www.rockwellautomation.com/global/support/pcdc.page">http://www.rockwellautomation.com/global/support/pcdc.page</a>

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## Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the How Are We Doing? form at [http://literature.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002\\_-en-e.pdf](http://literature.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002_-en-e.pdf).

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