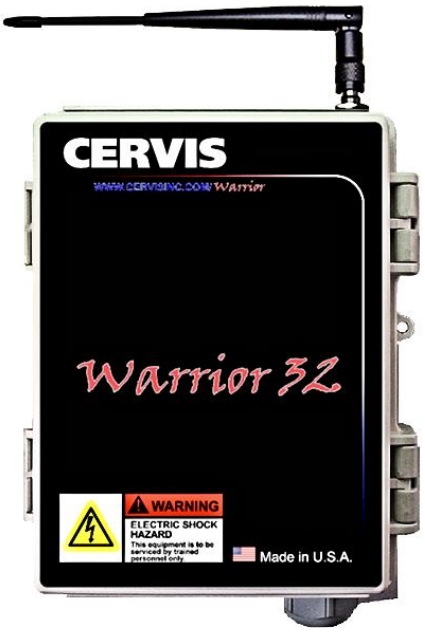
MU Machine Unit



Features

- ✓ **Compact Designed to IP65/IP67 Standards**
- ✓ **900MHz Operation**
- ✓ **Designed to ICS 8 NEMA Crane Specification**
- ✓ **8 DIP Switches Allow for Configurability**

The MU Machine Unit is a low cost machine-mounted unit intended for use on industrial systems. The MU is self-contained and prefigured providing a no-touch solution. The unit is available in 900MHz for maximum flexibility. The MU will accept control commands from HH2S and MCB varieties in the product family.

The MU can be mounted by utilizing the included mounting feet or a 2-bolt mounting plate. The sturdy enclosure allows the MU to operate worry free in harsh weather conditions. A single pre-wired number-keyed 25-wire-fed cable is integral to the unit that allows easy connection to the controlled devices.

Specifications

Power

Operating Voltage	110 to 220VAC @ 50-60Hz 7 to 36VDC 10 to 28VAC @ 50-60Hz
Operating Power	0.35A

Environment

Operating Temp	-40°C to 70°C (-40°F to 158°F)
Storage Temp	-40°C to 80°C (-40°F to 176°F)
Humidity	0 – 95% non-condensing

Enclosure

Dimensions	8.327” x 6.358” x 3.937” (211.50mm x 161.50mm x 100mm)
Durability	NEMA 1, 2, 4, 4X IP65/IP67
Mounting	Four wall mounting brackets and Four M4 x 10mm LG. self-tapping screws

Indicator (LED)

White	Used during Association

Radio

Frequency (MHz)	906-924
Power	100mW
License	License Free
Antenna	External (RP – TNC)

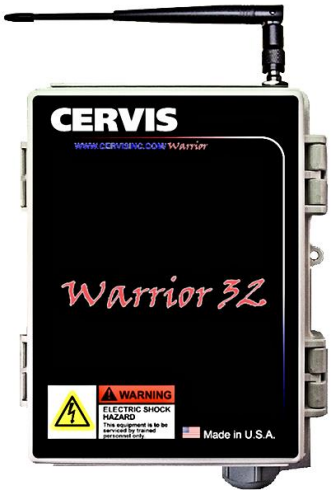
Safety Circuit

Two (Series)	Type Form A
Contact Rating	8A Max. @ 250VAC

Control Relays

Sixteen	Type Form A
Contact Rating	8A Max. @ 250VAC

MU Machine Unit



25-Lead Wiring Harness Individual Wire Assignments

Wire	Function
1	+V (LINE)
2	-V (NEUTRAL)
3	MLC NO
4	K12 NO
5	K12 C
6	K01
7	K02

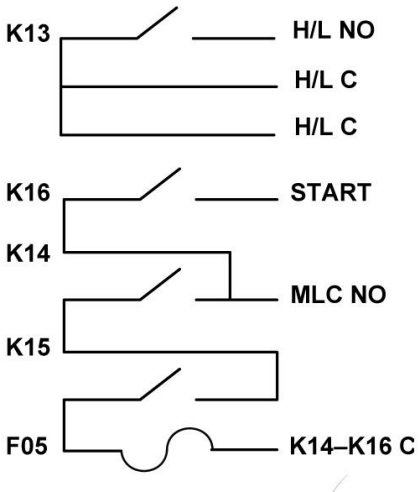
Wire	Function
8	K03
9	K10
10	K09
11	K11
12	H/L C
13	K05
14	K06

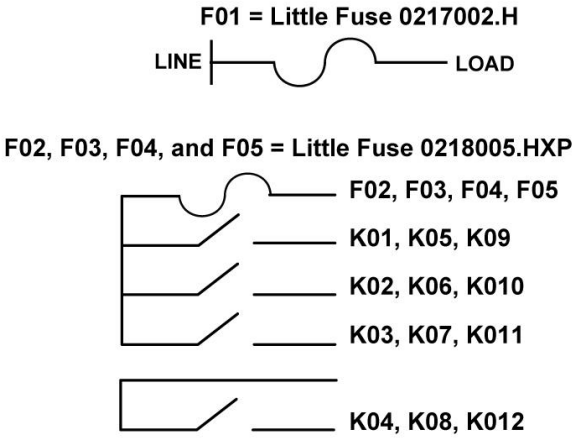
Wire	Name
15	K07
16	K08 C
17	K08 NO
18	K04 NO
19	K01 - K03 C
20	K05 - K07 C
21	K09 - K11 C

Wire	Name
22	H/L NO
23	START
24	K04 C
Y/G	EARTH

16-System Relays Schematic Diagram

The sixteen system relays are divided into four groups of four relays each; K1 through K4, K5 through K8, K9 through K12, and K13 through K16. Groups 1 through 3 perform related functions, group 4 contains the MLC Safety Circuit, and each group has a shared independent fused bus.





DIP Switch Configurations

The MU utilizes 8 DIP switches to allow for configuration of A/B cycling sequences, configuring relays for 4-wire control systems, configuration of Auxiliary Relay A, configuration of Auxiliary Relay B, mapping of button 9 and button 10, configuration of Relay 16, and button mapping for the Auxiliary Relay.

1	2	3	4	5	6	7	8
Mode			**A/B CFG**	**AUX M/L**	**Future Use**		**Assoc.**

Mode - Sets the MU operation mode:

- 0 0 0 = 3-Motion. BR/TR/Hoist 3-Wire. A/B cycling (Default).
- 0 0 1 = 3-Motion. BR/TR/Hoist 3-Wire. A/B Independent.
- 0 1 0 = 3-Motion. BR/TR 3-Wire, Hoist 4-Wire. A/B Cycling. No Aux.
- 0 1 1 = 3-Motion. BR/TR 3-Wire, Hoist 4-Wire. A/B independent. No Aux.
- 1 0 0 = 3-Motion. BR/TR/Hoist 4-Wire. No A/B. No Aux.
- 1 0 1 = 4-Motion. BR/TR/Hoist 4th 3-Wire. No A/B. No Aux.
- 1 1 0 = Reserved
- 1 1 1 = Reserved

A/B Configuration (CFG) when Mode = 0 0 0

- 0 = A, B, Both, A, B, Both …. (Default).
- 1 = A, B, OFF, A, B, Off ….

A/B Configuration (CFG) when Mode = 0 0 1

- 0 = A and B momentary outputs.
- 1 = A and B latching outputs.

Aux M/L - Configures the Aux Relay only when Mode = 0 0 X

- 0 = Momentary (Default).
- 1 = Latching.

Assoc. - Enables or disables association

- 0 = Association locked.
- 1 = Association unlocked.