Manual for

LoadMate Electric Chain Hoist Wiring Diagrams for Crane Applications
<table>
<thead>
<tr>
<th>Wiring Diagram Selection Chart</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chain Hoist for QL Modular Crane – PBR Style Push Button Pendant</td>
<td>4</td>
</tr>
<tr>
<td>LM Electric Chain Hoist Wiring Instruction - Chain Hoist for QL Modular Crane</td>
<td>4</td>
</tr>
<tr>
<td>LM05 Single Speed Hoist 208v or 230v</td>
<td>5</td>
</tr>
<tr>
<td>LM05 Single Speed Hoist 460v</td>
<td>6</td>
</tr>
<tr>
<td>LM05 Two-Speed Hoist 208v or 230v or 460v</td>
<td>7</td>
</tr>
<tr>
<td>LM05 Two-Speed Hoist 575v</td>
<td>8</td>
</tr>
<tr>
<td>LM10 Single Speed Hoist 208v or 230v</td>
<td>9</td>
</tr>
<tr>
<td>LM10 Single Speed Hoist 460v</td>
<td>10</td>
</tr>
<tr>
<td>LM10/LM16/LM20/LM25 Two-Speed Hoist 208v or 230v or 460v</td>
<td>11</td>
</tr>
<tr>
<td>LM10/LM16/LM20/LM25 Two-Speed Hoist 575v</td>
<td>12</td>
</tr>
<tr>
<td>QL Modular Crane Pendant</td>
<td>13</td>
</tr>
<tr>
<td>Chain Hoist for Crane – Hoist Mounted Push Button Pendant</td>
<td>14</td>
</tr>
<tr>
<td>LM Electric Chain Hoist Wiring Instruction - Chain Hoist for Crane</td>
<td>14</td>
</tr>
<tr>
<td>LM05 Single Speed Hoist 208v or 230v – Telemecanique Style Push Button</td>
<td>15</td>
</tr>
<tr>
<td>LM05 Single Speed Hoist 460v - Telemecanique Style Push Button</td>
<td>16</td>
</tr>
<tr>
<td>LM05 Two-Speed Hoist 208v or 230v or 460v - Telemecanique Style Push Button</td>
<td>17</td>
</tr>
<tr>
<td>LM05 Two-Speed Hoist 575v - Telemecanique Style Push Button</td>
<td>18</td>
</tr>
<tr>
<td>LM10 Single Speed Hoist 208v or 230v - Telemecanique Style Push Button</td>
<td>19</td>
</tr>
<tr>
<td>LM10 Single Speed Hoist 460v - Telemecanique Style Push Button</td>
<td>20</td>
</tr>
<tr>
<td>LM10-16-20-25 Two-Speed Hoist 208v or 230v or 460v - Telemecanique Style Push Button</td>
<td>21</td>
</tr>
<tr>
<td>LM10-16-20-25 Two-Speed Hoist 575v - Telemecanique Style Push Button</td>
<td>22</td>
</tr>
<tr>
<td>LM05 Single Speed Hoist 208v or 230v - PBR Style Push Button Pendant</td>
<td>23</td>
</tr>
<tr>
<td>LM05 Single Speed Hoist 460v - PBR Style Push Button Pendant</td>
<td>24</td>
</tr>
<tr>
<td>LM05 Two-Speed Hoist 208v or 230v or 460v - PBR Style Push Button Pendant</td>
<td>25</td>
</tr>
<tr>
<td>LM05 Two-Speed Hoist 575v - PBR Style Push Button Pendant</td>
<td>26</td>
</tr>
<tr>
<td>LM10 Single Speed Hoist 208v or 230v - PBR Style Push Button Pendant</td>
<td>27</td>
</tr>
<tr>
<td>LM10 Single Speed Hoist 460v - PBR Style Push Button Pendant</td>
<td>28</td>
</tr>
<tr>
<td>LM10-16-20-25 Two-Speed Hoist 208v or 230v or 460v - PBR Style Push Button Pendant</td>
<td>29</td>
</tr>
<tr>
<td>LM10-16-20-25 Two-Speed Hoist 575v - PBR Style Push Button Pendant</td>
<td>30</td>
</tr>
</tbody>
</table>
Wiring Diagram Selection Chart

Is the pushbutton mounted on the hoist?

- Yes
  - Wiring Diagram
    - Chain Hoist for Crane – Hoist

- No
  - Wiring Diagram
    - Chain Hoist for QL Crane

* Bridge Transformer Must Be Used For All Motions.*
Chain Hoist for QL Modular Crane – PBR Style Push Button Pendant

LM Electric Chain Hoist Wiring Instruction - Chain Hoist for QL Modular Crane

For the QL modular crane packages, the push button pendant is mounted on the bridge crane, utilizing a sliding festoon trolley. All leads from the pendant are terminated to the bridge control panel. The hoist receives the hoist and trolley control leads from the bridge panel via a festoon cable.

QL modular crane packages will utilize the crane mounted push button pendant arrangement.

**Use Bridge Control Transformer for All Motions**

1. On the LM05 add the mainline power feed to the load side of the K10 contactor. On the LM10, 16, 20, 25 add the mainline power feed into the normal position.

2. On the LM05 remove the F100 transformer use.

3. On the LM10, 16, 20, and 25, disable the transformer by removing wires as shown on wiring diagram.


5. Must purchase proper pendant plug adapter.
   - 2309717006 - adapter from X23 to Molex plug
   - 2309717051 - PB pigtail from X23 to no plug

*Factory not responsible for wiring completed in field. This is just a note to assist in the wiring change.*

PBR Style Push Button Pendant
LM05 Single Speed Hoist 208v or 230v
LM05 Single Speed Hoist 460v

Transformer is disabled. Bridge Transformer supplies control voltage for hoist.

E-Stop

Up

Down

Fast

Forward

Trolley

Reverse

Fast

To control, refer to wiring diagram 2309624201

Existing Circuit

X31A2 Power Plug
X23: Pendant Plug
X6: Trolley Plug
X11: Terminal Strip (Terminal Number)

F291 Motor Thermal Protection
S221 Upper Limit Switch
S222 Lower Limit Switch

DWG NO: 2309624203
LM05 Two-Speed Hoist 208v or 230v or 460v

R&M Materials Handling, Inc
Springfield, Ohio USA

Hoist Wiring Diagrams for Cranes
September 2002

09/23/02 RM-LM-WD-2002-0-ENG.doc
LM05 Two-Speed Hoist 575v

Diagram of the wiring for the two-speed hoist 575v. The diagram shows connections and labels for various components such as X1 to X10, F100, F291, and other electrical parts. The diagram includes instructions for controlling the hoist and motor. The header provides information about R&M Materials Handling, Inc., the manufacturer, and the website for more information.

Legend:
- Existing Circuit
- New Wires
- Transformer & Enclosed Bridge Transformer Supplies Control Voltage For Hoist
- F-STOP
- UP
- DOWN
- FAST
- FORWARD
- TROLLEY REVERSE
- FAST

Control Festoon: See Wiring Diagram 2309624201

DWC NO: 2309624205

09/23/02

9/23/02 RM-LM-WD-2002-0-ENG.doc
LM10 Single Speed Hoist 208v or 230v

Diagram showing wiring connections for the LM10 Single Speed Hoist with options for 208v or 230v operation. The diagram includes labels for control inputs and outputs, with notes on transformer configuration and control voltage for host/trolley.

Legend:
- X1: Contactor (Multiple configurations)
- X2: Motor (Multiple configurations)
- X3: Limit Switches (Multiple configurations)
- X4: Transformer (Multiple configurations)
- X10: Control Panel
- X14: Brake

Instructions:
- Transformer is disabled; primary leads are removed from X10
- K104: Brake transformer supplies control voltage for host/trolley
- Add & connect X10 to X10

Components:
- X1A2: Power Plug
- X2A: Pendant Plug
- X24: Trolley Plug
- X1: Terminal Strip (Terminal Number)
- F281: Motor Thermal Protection
- S221: Upper Limit Switch
- S222: Lower Limit Switch

Internal Use Only

Dwg: 2509624206

Date: 09/23/02
LM10/LM16/LM20/LM25 Two-Speed Hoist 208v or 230v or 460v
LM10/LM16/LM20/LM25 Two-Speed Hoist 575v

Diagram showing the wiring for the hoist with labels for various components such as L-STOP, HOST, TROLLEY, and control functions. The diagram includes connections for X1, X2, X3, X4, X10, X11, X12, X13, X14, X15, X16, X17, X18, X19, and X20. Notations for power plugs and terminals are also indicated.
QL Modular Crane Pendant


This wiring diagram of the bridge controls (shown below) is for general reference only. A wiring diagram for the bridge controls is generated to the order to reflect the components supplied. It is furnished under a separate cover.
Chain Hoist for Crane – Hoist Mounted Push Button Pendant

LM Electric Chain Hoist Wiring Instruction - Chain Hoist for Crane

If the push button pendant is mounted to the chain hoist, all leads from the pendant (including the bridge button leads) are brought in to the hoist control panel.

Use Bridge Control Transformer for All Motions

1. Rewire X23 plug in hoist body. (X23 – the female side of the pendant plug in the hoist control panel)
   a) Cut two (2) wires approximately 6” long and crimp female plug onto one end. Label one wire #10, the other wire #11 and insert the wires into the X23 plug in the corresponding plug location.
   b) LM05 Hoist Body:
      Remove wire #5 from the X1:5 terminal strip*.
      Remove wire #9 from the X1:9 terminal strip*.
   LM10, LM16, LM20; LM25 Hoist Body:
      Remove wire #5 from A2 on the K10 contactor*.
      Remove wire #9 from the X1:9 terminal strip*.
   *These wires should all be connected to the X23 plug.

2. On the LM05 remove the F100 transformer fuse.

3. On the LM05 add the mainline power feed to the load side of the K10 contactor. On the LM10, 16, 20; 25 add the mainline power feed into the normal position.

4. Wire connections between the bridge and hoist.
   - Wire #5  E-stop from pushbutton to A2 coil on bridge mainline contactor.
   - Wire #9  Bridge forward
   - Wire #10 Bridge reverse
   - Wire #11 Bridge fast
   Control neutral wire to X1:9 terminal strip
   LM05 Hoist: Control hot wire to X1:1 terminal strip.

*Factory not responsible for wiring completed in field. This is just a note to assist in the wiring change.
LM05 Single Speed Hoist 208v or 230v – Telemecanique Style Push Button

Diagram of LM05 Single Speed Hoist 208v or 230v – Telemecanique Style Push Button.
LM05 Single Speed Hoist 460v - Telemecanique Style Push Button

[Diagram of LM05 Single Speed Hoist 460v - Telemecanique Style Push Button]

- Transformer is disabled.
- Bridge transformer supplies control voltage for hoist/trolley.

Diagram Elements:
- X1: Control Power
- X2: Bridge UP/Down
- X3: Bridge Fast
- X4: Bridge Reverse
- X5: Trolley UP/Down
- X6: Trolley Fast
- X7: Trolley Reverse
- X8: Pendant Plug
- X9: Trolley Plug
- X10: Pendant Switch

Legend:
- X: Input
- Y: Output
- F: Function

Optional Components:
- Connect as shown if furnished.

Existing Circuit:
- X23: Pendant Plug
- X24: Trolley Plug
- X11: Pendant Switch
- X12: Trolley Switch
- X13: Pendant Stop Switch
- X14: Trolley Stop Switch

Note:
- DWC No: 2309624303

LoadMate Chain Hoist
Hoist Wiring Diagrams for Cranes
September 2002

web: www.rmhoist.com
LM05 Two-Speed Hoist 208v or 230v or 460v - Telemecanique Style Push Button
LM05 Two-Speed Hoist 575v - Telemecanique Style Push Button
LM10 Single Speed Hoist 208v or 230v - Telemecanique Style Push Button
LM10 Single Speed Hoist 460v - Telemecanique Style Push Button

Diagram Description:
- To Electric Chain Hoist
- Single Speed Hoist 460v
- Use Pendant Bridge or JB Motion
- Horn Button (optional)
- Maintained Start/Stop

Transformers is Disabled: Primary Loads are Removed from K10 and K104 Bridge Transformer Supplies Control Voltage for Hoist/Trolley.

Hoist Controls:
- Up
- Down
- FAST
- FORWARD TROLLEY REVERSE
- FAST
- FORWARD BRIDGE/VB REVERSE
- FAST

Push Button Control:
- X21: Pendent Plug
- X24: Trolley Plug
- X1:1 Terminal Strip ID/Terminal Number

DWG No: 2309624307

R&M Materials Handling, Inc
Springfield, Ohio USA

LoadMate Chain Hoist
Hoist Wiring Diagrams for Cranes
September 2002

web: www.rmhoist.com

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LM10-16-20-25 Two-Speed Hoist 208v or 230v or 460v - Telemecanique Style Push Button
LM10-16-20-25 Two-Speed Hoist 575v - Telemecanique Style Push Button

[Diagram of the LoadMate Chain Hoist with wiring connections labeled with numbers and descriptions such as "FUSE REMOVED", "UP", "DOWN", "FAST", "F291", etc.]

X21: Pendent Plug
X24: Trolley Plug
X1: Terminal Strip/Extension Number

DWC NO: 2309624309

09/23/02
LM05 Single Speed Hoist 208v or 230v – PBR Style Push Button Pendant

Diagram of LM05 Single Speed Hoist 208v or 230v – PBR Style Push Button Pendant

Legend:
- **K10 Contactor is Disabled**
- **Transformer is Disabled**
- **Use Removed**
- **Reserved for Fast**
- **Optional Component Connect as Shown If Furnished**

Terminal Strip (Terminal Number)
- X51: Pendant Plug At Push Button Station
- X23: Pendant Plug
- X24: Trolley Plug
- X11: Terminal Strip (Terminal Number)

Motor Thermal Protection
- F291: Upper Limit Switch
- S221: Lower Limit Switch
LM05 Single Speed Hoist 460v – PBR Style Push Button Pendant

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**Diagram:**

- **Hoist Motor:**
  - Motor control circuit
- **Brake:**
  - X2 brake circuit
- **Control Circuit:**
  - X11 to X15
  - X16 to X17
  - X18 to X19
- **Push Button Pendant:**
  - Control buttons for hoist direction
  - Forward, Reverse, Up, Down

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**Legend:**

- X11: Pendant plug at pushbutton station
- X23: Pendant plug
- X26: Trolley plug
- X1: Terminal strip (terminal number)

**Transformer Setting:**

Transformer is disabled; bridge transformer supplies control voltage for hoist/trolley

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**DWC NO:** 2309624403

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**Notes:**

- Motor thermal protection
- Upper limit switch
- Lower limit switch

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**Contact:**

R&M Materials Handling, Inc
800 955-9967
web: www.rmhoist.com
LM05 Two-Speed Hoist 208v or 230v or 460v – PBR Style Push Button Pendant
LM05 Two-Speed Hoist 575v – PBR Style Push Button Pendant

Diagram of LM05 Two-Speed Hoist 575v – PBR Style Push Button Pendant.
LM10 Single Speed Hoist 208v or 230v – PBR Style Push Button Pendant
LM10 Single Speed Hoist 460v – PBR Style Push Button Pendant

LM10-16-20-25 Two-Speed Hoist 208v or 230v or 460v – PBR Style Push Button Pendant

Diagram of R&M Materials Handling, Inc LoadMate Chain Hoist Hoist Wiring Diagrams for Cranes

[Diagram of hoist and pendant controls with electrical connections and labels]

R&M Materials Handling, Inc
Springfield, Ohio USA

Hoist Wiring Diagrams for Cranes
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LM10-16-20-25 Two-Speed Hoist 575v – PBR Style Push Button Pendant