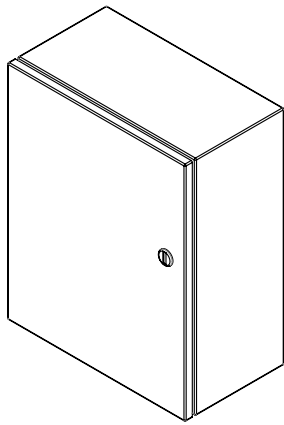


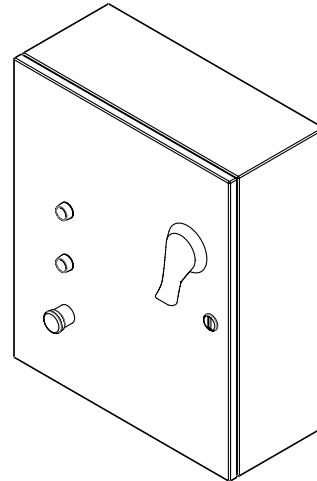
# ELECTRICAL CONTROL PANEL // MODIFICATIONS

## ELECTRICAL CONTROL PANEL SYSTEMS

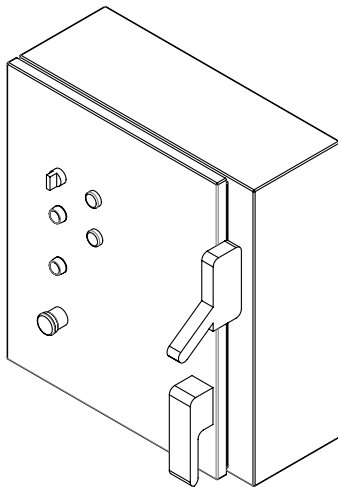
Code	
<b>PRO-PL-XXX</b>	Wall mounted control panel: (R) (Relay logic) * Standard features include N-4/12 20" x 16" x 8" panel, B-2, C-2 wiring, 24V controls, hinged cover, backplate, primary fuses in panel
<b>PRO-PLM-XXX</b>	Wall mounted control panel: (M) (Relay logic with interface module) * Standard features include N-4/12 20" x 16" x 8" panel, B-2, C-2 wiring, 24V controls, hinged cover, backplate, primary fuses in panel and supplied with Micanan N-1 monitored photobeams
<b>PRO-PLE-XXX</b>	Wall mounted control panel: (E) (Full function smart 10.0 logic controls) * Standard features include N-4/12 12" x 10" x 6" panel, B-2, C-2, D1, E2, T, TS, mid-stop control functions, time delay on reverse, on-board radio oreceiver, hinged cover, backplate, primary fuses in panel and supplied with Micanan N-1 monitored photobeams
<b>PRO-PL-PLC-XXX</b>	Wall mounted control panel with fully programmable PLC controls *
<b>PRO-PL-INV-XXX</b>	Wall mounted control panel with variable frequency drive *
* NOTE: 1) If PBS on cover required: add \$85.00 to list price.   2) If panel not ordered with an operator: add \$125.00 to list price.	
<b>MK-00650</b>	If Micanan N-4 photobeams requires in lieu of N-1
<b>MK-00519</b>	Surface mounted fused disconnect mounted to control panel cover (in lieu of primary fuse block inside panel)



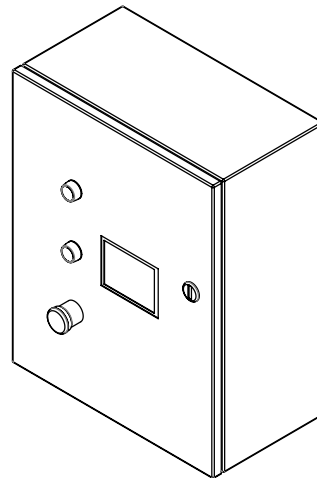
20" x 16" x 8" STANDARD PANEL



24" x 20" x 8" PANEL, O/C/S PBS AND FUSED DISCONNECT



24" x 21" x 8" PANEL, O/C/S PBS, SIDE FLANGE DISCONNECT, SELECTOR SWITCH AND PILOT LIGHT INDICATORS



24" x 20" x 8" PLC PANEL WITH VISION SCREEN

# ELECTRICAL CONTROL PANEL // MODIFICATIONS

R : Relay logic controls  
M: Relay logic with interface module  
E : Full function smart 10.0 logic controls

## ELECTRICAL CONTROL MODIFICATION SYSTEMS

Code	
<b>MP-00001</b>	<b>Timer to close 24V:</b> Timer will start counting when door is fully open. Timer resets upon activation of any open or reversing devices
<b>MP-00083</b>	<b>Timer to close 120V:</b> Timer will start counting when door is fully open. Timer resets upon activation of any open or reversing devices
<b>MK-00002</b>	<b>TDU timer:</b> Timer will start counting from any position other than fully closed position. Timer is reset by any open or reversing devices
<b>MP-00111</b>	<b>Open door indicator circuit:</b> Adjustable timer incorporated into circuit to advise user of an open door condition. After pre-set time has elapsed, timer will activate audible/visual device (not supplied)
<b>MP-00002</b>	<b>Apartment feature:</b> timer to close function and controlling action of two lights (sockets supplied on cover) *
<b>MK-00643</b>	<b>Auxiliary device logic board:</b> Features include controlling of red/green lights, N.O. dry contacts for fully open or close positions, N.O. dry contacts for door opening or door closing cycle *
	*NOTE: Price applies to 110V primary voltage. For other primary voltages (230, 460, 575) add \$40.00 to list
<b>MK-00061</b>	<b>1.5 sec. time delay on reverse (24/120V):</b> Upon activation of safety devices while door is closing, door will stop for 1.5 seconds and then reverse to fully open
<b>MP-00102</b>	<b>1.5 sec. time delay on all open functions (24/120V):</b> Door opens after 1.5 seconds upon activation of open or reverse command
<b>MK-00300</b>	<b>0.5 sec. time delay on reverse (24/120V):</b> Upon activation of safety devices while door is closing, door will stop for 0.5 seconds and then reverse to fully open
<b>MP-00004</b>	<b>Mid-stop feature</b>
<b>MP-00005</b>	<b>4-wire fail-safe edge circuit:</b> Circuit monitors sensing device, if system not connected or becomes damaged, door will open and remain open until serviced (requires 4-wire fail safe edge and 2-wire coil cord)
<b>MK-00651</b>	<b>Failsafe interface sensing circuit:</b> Circuit monitors sensing device, if system not connected or becomes damaged, door will open and can only be closed by constant pressure until serviced. Requires Micanan UL 325 compatible photocell or a 2-wire Micanan compatible fail-safe edge
<b>MV-00201</b>	<b>LDM-1 long distance interface (24V):</b> An interface that is located between operator and a control device that enhances the length of run
<b>MP-00007</b>	<b>115-volt secondary controls:</b> replaces the 24V secondary circuit to 115V, 24V supplied for safety edge
<b>MP-00008</b>	<b>Two-door interlock:</b> Only allows one door to be opened at one time
<b>MK-00172</b>	<b>Non-resettable analogue counter (24V)</b> that monitors door cycles
<b>MK-00249</b>	<b>Non-resettable analogue counter (120V)</b> that monitors door cycles
<b>MP-00010</b>	<b>Auxiliary limit switch:</b> Installed to control auxiliary device
<b>MP-00048</b>	<b>Auxiliary limit switch c/w wire leads</b> to terminal connections
<b>MP-00011</b>	<b>Auxiliary contact block:</b> Installed to control auxiliary device
<b>MP-00049</b>	<b>Auxiliary contact block wire leads</b> to terminal connections
<b>MP-00012</b>	Reverse limit switches
<b>MP-00050</b>	<b>Roll back feature:</b> Operator wired for constant pressure close. Upon release of close contact, door will reverse to fully open
<b>MP-00093</b>	<b>ADA horn/strobe 24VDC</b> supplied with rectifier and wired to activate when door is in motion
<b>MP-00095</b>	<b>Wiring for quick close feature:</b> When a door is fully open, if photocell or loop is activated then cleared, the door closes immediately
<b>MK-00110</b>	<b>Upcharge for ABB size 1 reversing starter</b>
<b>MP-00104</b>	<b>Dynamic braking circuit (with solenoid):</b> Electrical DC braking that helps the motor in conjunction with a solenoid braking system
<b>MP-00109</b>	<b>Miller SM-102 signature module:</b> Installed and wired into controls (requires 2-wire miller electric edge with ELR)

\*\*Applicable only for 1Φ or 3Φ logic board operators over 1HP

# MODIFICATIONS GUIDE // MODIFICATIONS

- : Standard feature
- : Available modification
- ▲: Special note

Control Panel

	LT	T	TB	APT	APTC	GT	LJ	J	EJ	LH	LHA	H	EHJ	HHD	GJ	GH	GHC	SD	GSD	Control Panel
<b>Mechanical Modifications</b>																				
Solenoid Brake	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Minimum depth (reverse mount)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Auxiliary chain hoist for trolley operators	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Auto-re-engage trolley carriage	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
#40 drive chain for Trolley operators	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Dual Trolley assembly	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Jackshaft with auxiliary trolley assembly	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Jackshaft with dual auxiliary trolley assembly	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Double V-belt modification	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
#60, #80, #100 drive chain for Jackshafts	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Center mount mod / no chain hoist	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Auxiliary chain hoist for Jackshafts	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Hand crank modification	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fire release	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
In-line torque clutch	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
High cycle modification	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Pro-GJ external load sensing modification	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Cast Iron Pillow blocks on frame	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Precision Bearing on input shaft modification	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Brake motor mod	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Bi-parting option	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Sliding fire door option	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>Environmental Modifications</b>																				
TEFC Motor modification	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N-4/12 (watertight/ oiltight)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N-4X (carwash/ corrosion proof)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N-7/9 (explosion proof) ▲1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>Cold Weather Modifications</b>																				
Synthetic oil in reducer	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Heater probe in reducer ▲11	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Heater probe in control/ limit box	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Heater c/w adjustable thermostat	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>Control Wiring Options</b>																				
Relay Logic with Micanan interface module (M)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Full feature smart 10.0 logic board (E)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Relay Logic (R) not UL 325 (2010) compliant	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>Electrical Control Modifications</b>																				
Timer to close 24V	▲4	▲4	●	●	▲4	▲4	▲5	▲5	▲4	▲5	▲4	▲5	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4
Timer to close 120V	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5
Open door indicator circuit	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5
Apartment feature (relay logic)	▲5	▲5	▲5	■	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5
Auxiliary device logic board	▲6	▲6	▲6	▲4	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6	▲6
Time delay on reverse 1.5 sec 24/120V	▲4	▲4	●	●	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4
Time delay 1.5 sec on all open functions	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5
Time delay on reverse 0.5 sec 24/120V	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4
Mid-stop feature	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4
4-wire failsafe	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7	▲7
Failsafe sensing circuit (UL325)	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8	▲8
LDM-1 long distance interface	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
115V secondary controls	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5
Two-door interlock	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Non-resetable cycle counter 24V	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Non-resetable cycle counter 120V	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5
Auxiliary limit switch	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Auxiliary contact block	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9
Reverse limit switches	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4
Roll back features	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4	▲4
Fusible disconnect	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ADA Horn and strobe	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Quick close feature	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5	▲5
Size 1 reversing starter upgrade	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9	▲9
Dynamic braking circuit (with solenoid)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Miller SM-102 signature module	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10	▲10
PLC controls	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Variable frequency inverter	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Any special custom mechanical feature	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Any special custom electrical feature	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

- ▲1 : Not available with logic board (E) or interface module (M) control option
- ▲2 : Standard feature for 1.5, 2, 3 and 5HP
- ▲3 : Available for modules PRO-JB and PRO-HB
- ▲4 : Standard feature for wiring control option (E), optional for (M) or (R)
- ▲5 : Optional for wiring control option (M) and (R), not available for (E)
- ▲6 : Optional for wiring control option (E), not available for (M) or (R)

- ▲7 : Standard feature for wiring control option (E) and (M), optional for (R)
- ▲8 : Standard feature for wiring control option (E) and (M), not available for (R)
- ▲9 : Optional feature for wiring control option (M) and (R), only available on (E) if voltage is 575V or HP over 1
- ▲10 : Optional feature for wiring control option (E) and (M), not available for (R)
- ▲11 : Not available with N-7/9 environmental modification