

Contents

Door Settings1
 Error Messages.....2
 PLC Inputs, Outputs and Buttons Layout2
 PLC Inputs3
 PLC Outputs.....4
 Drive Commands4
 Terminal Blocks.....5
 Signal Cable Wire Legend6
 Heat Cable Wire Legend.....6

Door Settings

Use the Programmable Logic Computer (PLC) “P” buttons to adjust door settings (see PLC Inputs, Outputs and Buttons Layout section). Press on the P3 button to scroll through each menu. Follow on-screen instructions to change settings.

DOOR SETTINGS	
Menu	Description
. . . 4 . 6 RE I P SU 17 12 RUN	This is the default screen . Top line shows input numbers that are ON. Bottom line shows output numbers that are ON. NOTE: Inputs 4 and 6 must be ON or door will not operate. Door will not open if input 12 is ON.
R-PLUS DOORS 800-238-4093 **SINGLE** V5.0.x	Indicates the program operating mode (SINGLE or BIPART) and the version number. If the wrong program operating mode is displayed, please contact R-Plus Customer Service department.
PARTIAL OPEN CLOSE DELAY 00000s ▼ to change	Adjustable from 0s to 60s. If value is less than 10s, then function is disabled. Door will close by itself after indicated amount of seconds, when partially opened. Press P4 (▼) to change a value. Value will go up to 60s and roll back to 0s.
FULL OPEN CLOSE DELAY 00000s ▼ to change	Adjustable from 0s to 60s. If value is less than 10s, then function is disabled. Door will close by itself after indicated amount of seconds, when fully opened. Press P4 (▼) to change a value. Value will go up to 60s and roll back to 0s.
PED. CYCLE LENGTH 000000ms ▼ to change	Adjustable from 0s to 3000ms in 10ms increments. If value is less than 500ms, then pedestrian cycle* is disabled. Press P4 (▼) to change a value. Value will go up to 3000ms and roll back to 0ms. *when pressing the OPEN button briefly with pedestrian cycle enabled, the door opens for the indicated amount of milliseconds. When pressing the OPEN button for more than half a second, or if the pedestrian cycle is disabled, the door opens fully.
TRAILING SAFETY EDGE **DISABLED** ▼ to change	Indicates whether the door is equipped with a trailing safety edge or not. Select ENABLED only if door leaf is equipped with a trailing edge.
CYCLES SINCE MAINTENANCE XXXXX	Indicates the amount of cycles performed since last maintenance. Maintenance is due every 5000 cycles on standard doors.
TOTAL CYCLES H: XXXXX L: 0XXXX	Indicates the amount of cycles performed since operator was programmed. "L" is the low portion of the cycle counts (0-9999) and H is the high portion of the cycle count. L counter carries over into H counter. Total amount of cycles = H x 10000 + L

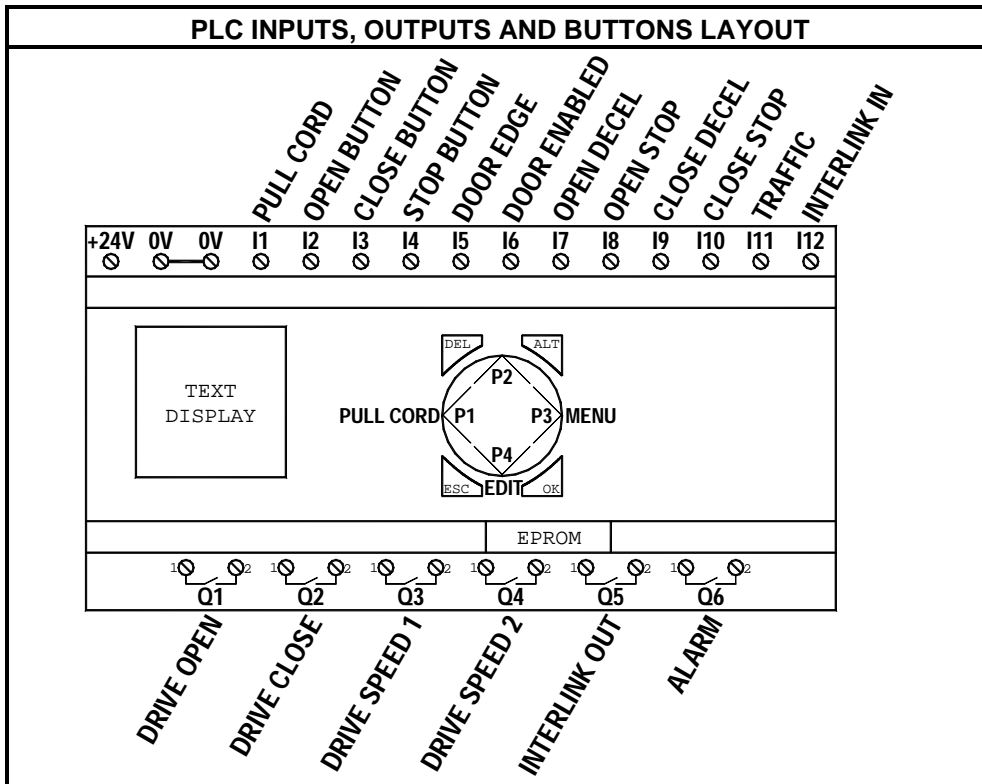
Error Messages

ERROR / MAINTENANCE MESSAGES	
Menu	Description
TIME FOR MAINTENANCE =>Hold ▲ to reset msg	Door maintenance is required. Hold the P2 button (▲) for 4s to reset the maintenance counter and erase this message.
DOOR EDGE ERROR =>Adjust air switch	The door safety edge uses an air switch. If not adjusted properly, the air switch may remain closed. This error message displays if the air switch remains closed for more than 10s. The door will still operate, but at slow speed. Adjust or replace the air switch to correct the problem and for the message to disappear.

PLC Inputs, Outputs and Buttons Layout

The Programmable Logic Computer buttons serve the following functions:

- P1 (Left): Simulates the pull cord. This function is disabled when in the Settings menus.
- P2 (Top): Used to reset "Time for Maintenance" message.
- P3 (Right): Used to scroll through the door Settings menus.
- P4 (Bottom): Used to change settings values.



PLC Inputs

PLC INPUTS			
Input	Function	NO / NC ⁽¹⁾	Description
I1	Pull Cord	NO	Pull-cord switch connects here. Raising edge of signal successively issues Open, Stop & Close commands.
I2	Open	NO	The Open button connect here. The Open button is typically part of a 3-button station, that comes as an option. Press the Open button briefly to open door. If Pedestrian Cycle Length is set to 500ms or more, then door will stop after opening for this amount of time. In this case, press the Open button for more than ½ s and the door will open fully.
I3	Close	NO	The Close button is typically part of the 3-button station, that comes as an option. Press the Close button to close the door.
I4	Stop	NC	The Stop button is typically part of the 3-button station, that comes as an option. Press the Stop button to stop the door. NOTE: If contact is not made, door will not operate. Door lock hasp may be connected to this input, as well as any other contacts designed to disable the door. These contacts are “normally close” contacts and connect in series.
I5	Door Edge	NO	The door leading safety edge air switch connects here. The air switch issues a contact pulse when safety edge is being hit. Contacts does not hold, even if door edge remains pressed. Door may be equipped with an optional trailing safety edge. It connects in parallel with the leading safety edge. Trailing safety edge will not operate properly unless it is enabled as shown in <i>Door Settings</i> .
I6	Door Enabled	NC	This input must be ON or door will not operate. Bullet sensor connects here if door is equipped with one. Optional Door Lock contact may be connected here.
I7	Open Decel	NO	Magnetic sensor on track. Tells the door to slow down when it is opening and it enters the slow down zone.
I8	Open Stop	NO	Magnetic sensor on track. Tells the door to stop immediately.
I9	Close Decel	NO	Magnetic sensor on track. Tells the door to slow down when it is closing and it enters the slow down zone.
I10	Close Stop	NO	Magnetic sensor on track. Tells the door to stop immediately. Not used in bi-parting doors under normal operation (emergency stop only).
I11	Traffic	NO	Connect photo-eyes, infrared sensors, card readers, etc. to this input. When input is ON, door opens fully. Door cannot close until input is OFF. Traffic signal overwrites Pedestrian cycles. Pressing on Close or Stop button while Traffic signal is ON will stop the door until both buttons are released. If door trailing edge is enabled and the door trailing edge hits an obstacle, then door movement reverses briefly and then stops. Door cannot close until Traffic signal is OFF.
I12	Interlink IN	NO	Connect Interlink OUT signal from another door serving the same room here. If input is ON, door will not serve OPEN requests. Door will close normally. Activating the leading safety edge while door is closing will still reverse the door movement. To interlink more than 2 doors together, relays must be used.

⁽¹⁾Normally Open / Normally Close contact

PLC Outputs

PLC OUTPUTS			
Output	Function	NO / NC ⁽¹⁾	Description
Q1	Drive Open	NO	See Drive Commands table.
Q2	Drive Close	NO	See Drive Commands table.
Q3	Drive Speed 1	NO	See Drive Commands table.
Q4	Drive Speed 2	NO	See Drive Commands table.
Q5	Interlink OUT	NO	Connect Interlink IN signal from another door serving the same room here. Output will be ON whenever the door is opened.
Q6	Alarm	NO	Output is ON whenever the door is closing, and in ON in the 5s period preceding an Auto-Close command.

⁽¹⁾Normally Open / Normally Close contact

Drive Commands

DRIVE COMMANDS					
Q1 Drive Open	Q2 Drive Close	Q3 Speed 1	Q4 Speed 2	Drive Display	Action
○	○	⊗	⊗	--	Door not moving
○	●	○	○	20	Door closing slow
○	●	○	●	--	N/A
○	●	●	○	78	Door closing at normal speed
○	●	●	●	2	Holding pressure on bipart door leaves
●	○	○	○	78	Door opening slow
●	○	○	●	120	Door closing fast (typ 80Hz)
●	○	●	○	--	N/A
●	○	●	●	--	N/A
●	●	⊗	⊗	--	N/A

○: OFF - ●: ON - ⊗: Status does not matter

Terminal Blocks

TERMINAL BLOCKS		
#	Description	Notes
1	Master leaf STOP IN	Factory use only Jump 1 & 2 to bypass Master leaf STOP loop
2	Master leaf STOP OUT Slave leaf STOP IN	Factory use only Jump 2 & 3 to bypass Slave leaf STOP loop
3	Slave leaf STOP OUT Field STOP IN	Jump 3 & 4 to bypass field installed STOP signal loop (required if loop does not exist)
4	Field STOP OUT	Always +24Vdc OUT
5	Pull switch #1	Input, N/O, +24Vdc to activate
6	Pull switch #2	Input, N/O, +24Vdc to activate
7	Open switch	Input, N/O, +24Vdc to activate
8	Close switch	Input, N/O, +24Vdc to activate
9	+24VDC	
10	+24VDC	
11	+24VDC	
12	+24VDC	
13	+24VDC	
14	+24VDC	
15	Door Enabled	Input, N/O, +24Vdc to activate
16	Interlink IN	Input, N/O, +24Vdc to activate – Connect to Interlink OUT signal from (1) other door
17	Interlink OUT	Output, N/O, +24Vdc when activated – Connect to Interlink IN signal or (1) other door
18	Alarm	Output, N/O, +24Vdc when activated – Connect to external alarm
19	-24VDC	
20	-24VDC	
21	-24VDC	
22	Door Edge	Input, N/O, +24Vdc to activate
23	Traffic	Input, N/O, +24Vdc to activate
24	Spare	
25	OPEN STOP light	Factory use only
26	OPEN DECEL light	Factory use only
27	CLOSE DECEL light	Factory use only
28	CLOSE STOP light	Factory use only

Signal Cable Wire Legend

SIGNAL CABLES WIRE LEGEND (Control panel and door leaf J-box)		
#	Wire Color	Function
1	White [WHT]	+24VDC
2	Brown [BRN]	Safety Edge
3	Green [GRN]	Stop Loop IN
4	Yellow [YEL]	Stop Loop OUT
5*	Gray [GRY]	Pull Cord
6*	Pink [PNK]	Open
7*	Blue [BLU]	Close
8*	Red [RED]	-24VDC

*Master Leaf signal cable only

Heat Cable Wire Legend

HEAT CABLE WIRE LEGEND [Heater module and door leaf J-box]		
#	Wire Color	Function
1	Black [BLK]	110VAC Phase
2	White [WHI]	110VAC Neutral
3	Green [GRN]	Ground