



Conveyor Start/Stop Roller Controller

Service Manual

WASHLINK CONVEYOR START/STOP CONTROLLER SERVICE MANUAL

This document provides comprehensive operational procedures for the Washlink Conveyor Start Stop Roller Controller. In this manual, we will discuss the Setup and Operation of the Conveyor Start Stop roller Controller.

If further assistance is needed, please contact the Distributor from which the product was purchased.

When calling for assistance, you must have the following information available:

UL Number: _____

Distributor Name: _____

Installation Date: _____

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1 Features

Features of Washlink Systems Conveyor Start Stop Roller Controller:

Start and Stop conveyor system with multiple start and stop inputs for easy troubleshooting.

Monitor Hydraulic Low Level and stop the conveyor system when low with alarm function.

Controller roller raiser functionality.

Heavy duty isolation relays on all outputs.

Easy installation.

Industry proven PLC components from Siemens Worldwide.

Easy to use HMI touch screen interface.

Corrosion proof non-metallic enclosure.

UL Listed and CE compliant.

1 Programming

To get into programming mode, press the ▼ button until the time and date screen appears. fig1

When the Time and Date screen appears, press the ESC button and the following screen will appear. fig2



fig1

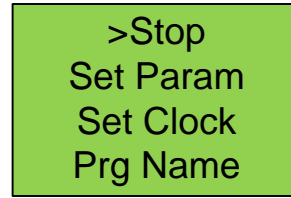



fig2

2 Setting Time & Date

Use the ▼ button and scroll to Set Clock and then press the OK button. fig2

Use the  buttons to scroll between fields and adjust the values, then press OK. fig3

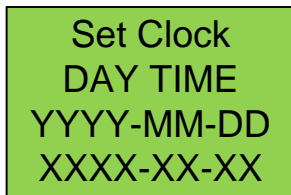


fig3

3 Programming Warning Horn On Time


The Warning Horn function operates after a start input is received before the conveyor starts

There is one settings;

On Time, amount of time the Warning Horn will be on for prior to the conveyor starting

While in Programming Mode:

Scroll using the ▼ button until you get to set Parm and then press the OK button. fig4

Use the  buttons to scroll between fields and adjust the values, then press OK. fig5

On Time = T

(if you want 2.5 seconds on delay T=02:50s)

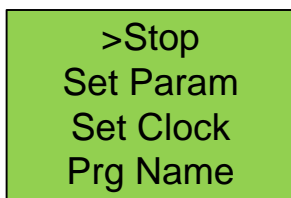


fig4

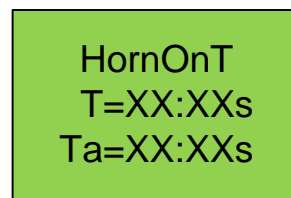



fig5



4 Programming Conveyor Auto Off (Time Based)

The Conveyor Auto Off will turn off the conveyor after XX amount of time after each start input
There is one setting;

CONVTIME, amount of time the Conveyor will run after a start input before turning off

While in Programming Mode:

Scroll using the  button until you get to set Parm and then press the  button. fig6

Use the  buttons to scroll between fields and adjust the values, then press  fig7
On Time = amount of time to keep conveyor on
(if you want 2.5 minutes before the conveyor stops T=02:50m)

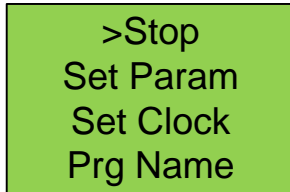


fig6

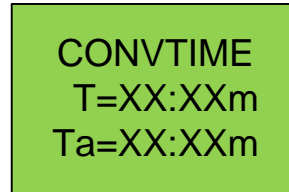


fig7

Note: The time is reset each time a start button or roller button is pressed.

Note: If you do not want to use the conveyor auto off time feature, set the time to 99:99h



5 Programming Conveyor Auto Off (Pulse Based)

The Conveyor Auto Off will turn off the conveyor after XX number of pulses after a Start input
There is one setting;

CONVPULS, number of pulses the Conveyor will run after a start input before turning off

While in Programming Mode:

Scroll using the  button until you get to set Parm and then press the  button. fig8

Use the  buttons to scroll between fields and adjust the values, then press  fig9
On = number of pulses to keep conveyor on
Off = 0 (do not change)
Cnt= current count

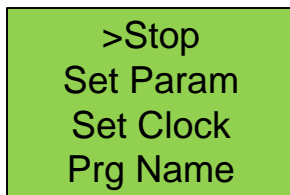


fig8

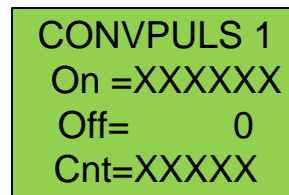


fig9

Note: The pulse count is reset each time a start button or roller button is pressed.

Note: If you do not want to use the conveyor Pulse auto off feature, set On to 999999.

**NOTE: All Stop inputs (inputs 3-6) and Low Level input (inputs 7 & 8) MUST be high for conveyor to start. Each Stop Button and Low Level switch require a Normally Closed contact.
If any Stop inputs or Low Level inputs are not used, they must be have a jumper to the input comm or the conveyor will not start.**

6 Programming Low Level Alarm Flasher (Output 4)



The Low Level Flasher will flash output 4 whenever low level 1 or 2 is open (input 7 & 8)



There are two settings;

Off Time, amount of time between the output flashing on.

On Time, amount of time to stay on between the output flashing off.

While in Programming Mode:

Scroll using the  button until you get to set Parm and then press the  button. fig10

Use the  buttons to scroll between fields and adjust the values, then press . fig11

Off Time = TH

(if you want the off time to be .6 second TH=00:60s)

On Time = TL

(if you want the on time to be 1 second TL=01:00s)

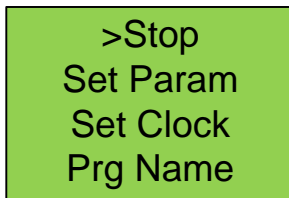


fig10

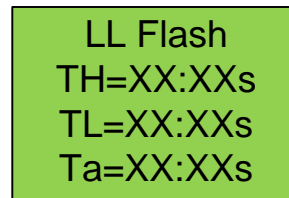


fig11

NOTE: If you do not want it to flash, set TH & TL to pp:99h



NOTE: Low Level inputs will turn off the conveyer just like a Stop input



7 Programming Roller Up (Time Based)

The Roller Up Output (output 3) will stay activated for this amount of time for each roll cycle
There is one setting;

ROLLTIME, amount of time the Roller will be active after a Roller PB input (input 9) and then roller detect input (input 10) before turning off.

While in Programming Mode:

Scroll using the  button until you get to set Parm and then press the  button. fig12

Use the  buttons to scroll between fields and adjust the values, then press  fig13
On Time = amount of time to keep roller active
(if you want 30 seconds for the roller to be active T=30:00s)

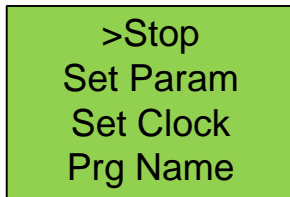


fig12

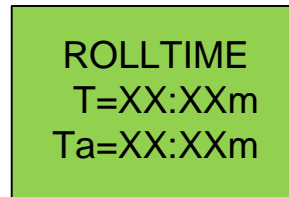


fig13

Note: The time is reset each time a roller button is pressed and then the roller detect input goes high.

Note: If you do not want to use the roller time based feature, set the time to 99:99h

8 Programming Roller Up (Pulse Based)



The Roller Up Output (output 3) for this number of pulses after a Roller PB input (input 9) and then roller detect input (input 10) before turning off.

There is one setting;

CONVPULS, number of pulses the Conveyor will run after a start input before turning off

While in Programming Mode:

Scroll using the  button until you get to set Parm and then press the  button. fig14

Use the  buttons to scroll between fields and adjust the values, then press  fig15
On = number of pulses to keep Roller output active
Off = 0 (do not change)
Cnt= current count

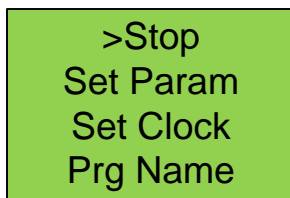


fig14

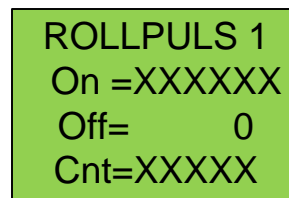


fig15

Note: The pulse count is reset each time a roller button is pressed and then the roller detect input goes high.

Note: If you do not want to use the roller pulse based feature, set On to 999999.

NOTE: The roller raiser function requires a roller detect input (input 10). If you are not using a roller detect switch, install a jumper between Roller PB input (input 9) and Roller Detect input (input 10).

9 System status information screens

During normal operation, the following information messages will appear.

CONVEYOR OFF
WAITING FOR
START 1 OR 2
(INPUTS 1&2)

Conveyor is off and will run when start input received

START #1
INPUT
ACTIVATED

Start #1 input is high

START #2
INPUT
ACTIVATED

Start #2 input is high

HORN OUTPUT
(OUTPUT #1)
IS ACTIVE

Warning Horn output is active (high)

CONVEYOR
OUTPUT
(OUTPUT #2)
IS ACTIVE

Conveyor output is active (high)

LOW LEVEL #1
MUST CLOSE
FOR CONVEYOR
TO START

Low Level 1 or Low Level 2 (inputs 7 & 8) is open. System will not run without all Low Level inputs high (inputs 7 & 8)

LOW LEVEL #1
MUST CLOSE
FOR CONVEYOR
TO START

STOP 1 OPEN
MUST CLOSE
FOR CONVEYOR
TO START

STOP 2 OPEN
MUST CLOSE
FOR CONVEYOR
TO START

STOP 3 OPEN
MUST CLOSE
FOR CONVEYOR
TO START

STOP 4 OPEN
MUST CLOSE
FOR CONVEYOR
TO START

Stop 1, Stop 2, Stop 3 and or Stop 4 (inputs 3-6) is open
System will not run without all stop inputs high (inputs 3-6)

WAITING FOR
ROLLERDETECT
(INPUT #10)
SIGNAL

Roller PB input (input 9) Was pressed but system waiting for Roller Detect (input 10)

ROLLER
OUTPUT
(OUTPUT #3)
ACTIVE

Roller output is active

PAGE	DESCRIPTION
0	COVER SHEET
1	PLC WIRING
2	LAYOUT AND BILL OF MATERIALS

REV	BY	DATE	DESCRIPTION
1.0.1	SH	10/18/2013	FOR APPROVAL

NOTES:

- STANDARD SUPPLY VOLTAGE IS 120VAC 60Hz.
-
- ILLUMINATED LED INDICATES BLOWN FUSE.
- WASHLINK SYSTEMS RECOMMENDS AWG 18 STRANDED COPPER WIRE FOR CIRCUITS LESS THAN 200 FEET.
- TO AVOID RISK OF FIRE AND PERSONAL INJURY, REPLACE ONLY WITH MANUFACTURER'S ORIGINAL RATED FUSE.**
- FUSE HOLDER AND INDICATING LED ARE RATED AT 60 – 150V.
- FUSE HOLDER AND INDICATING LED ARE RATED AT 10 – 36V.
- INPUTS ARE 120VAC ONLY. ANY OTHER VOLTAGE WILL DAMAGE CONTROLLER AND VOID MANUFACTURER'S WARRANTY.



**ALL ELECTRICAL WORK SHOULD BE PERFORMED BY A QUALIFIED AND LICENSED ELECTRICIAN.
ALL ELECTRICAL WORK SHOULD MEET OR EXCEED NATIONAL AND LOCAL CODES AND ORDINANCES.**



CAUTION! RISK OF ELECTRICAL SHOCK. MORE THAN ONE DISCONNECT MAY BE REQUIRED TO BE DE-ENERGIZED BEFORE SERVICING THE EQUIPMENT.



CAUTION! TO REDUCE THE RISK OF FIRE, CONNECT ONLY TO A 120VAC CIRCUIT PROVIDED WITH 15A MAXIMUM BRANCH CIRCUIT PROTECTION IN ACCORDANCE WITH THE NEC, ANSI/NFPA 70 AND LOCAL CODE AUTHORITIES.



CAUTION! BONDING BETWEEN CONDUIT CONNECTION IS NOT AUTOMATIC AND MUST BE PROVIDED AS PART OF THE INSTALLATION.

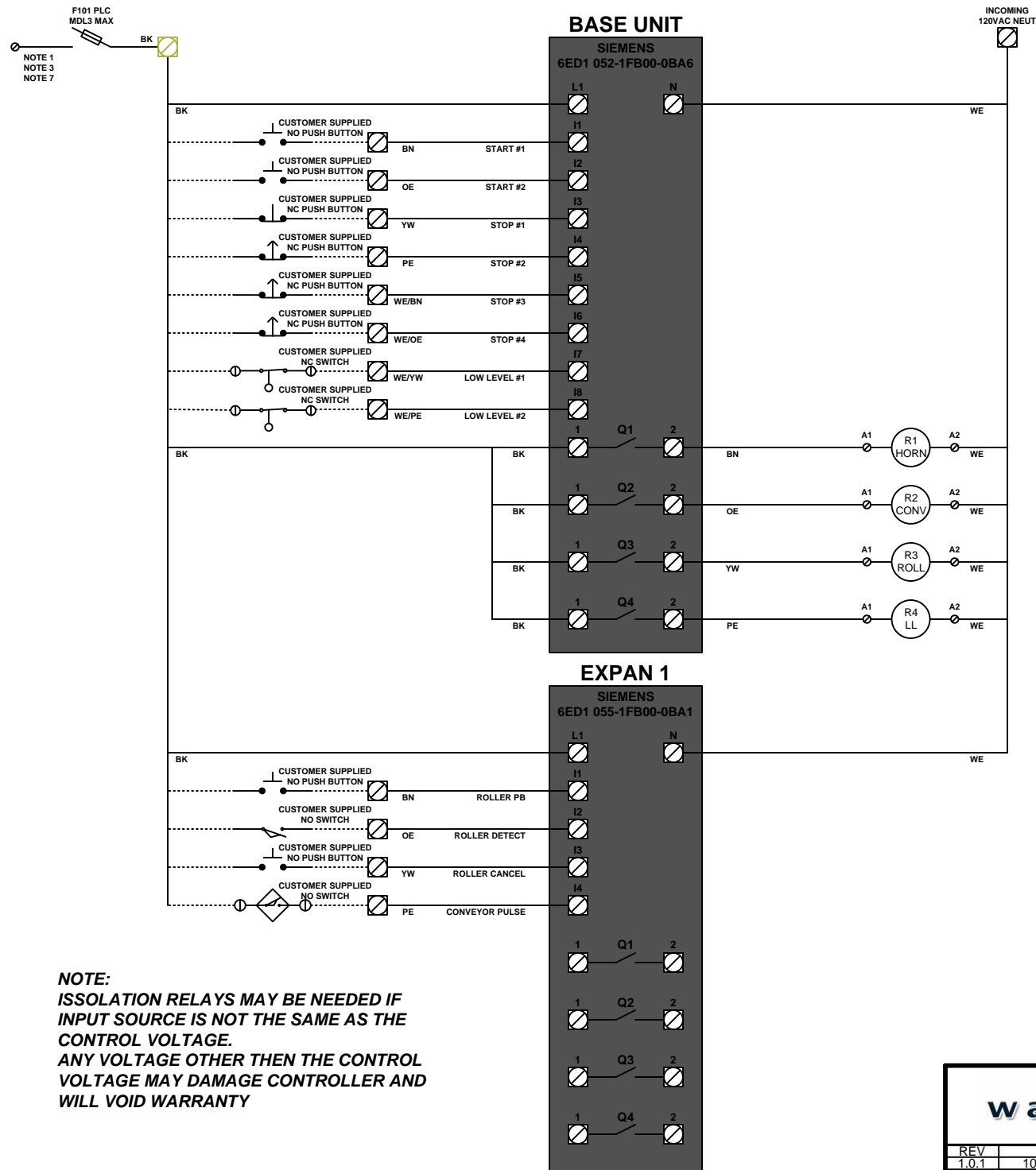
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LEGEND

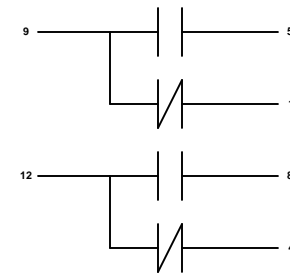
BK – BLACK (120/220VAC HOT)		ENCLOSURE CONVENIENCE TERMINAL
BK/OE – BLACK W/ ORANGE TRACE (120/220VAC CONTROL CIRCUIT)		FUSE HOLDER
BK/YW – BLACK W/ YELLOW TRACE (120/220VAC CONTROL CIRCUIT)		MOMENTARY N/O PUSH BUTTON
WE – WHITE (120/220VAC NEUTRAL)		MAINTAINED N/C PUSH BUTTON
RD – RED (24VAC CONTROL CIRCUIT)		RELAY COIL
WE/RD – WHITE W/ RED TRACE (24VAC NEUTRAL)		RELAY CONTACT N/O
BE – BLUE (24VDC POSITIVE)		LEVEL SWITCH N/C
WE/BE – WHITE W/ BLUE TRACE (0VDC or 24VDC COMMON)		PHOTO EYE N/O
BN – BROWN (CONTROL CIRCUIT)		PROXIMITY SWITCH N/O
OE – ORANGE (CONTROL CIRCUIT)		LIMIT SWITCH N/O
YW – YELLOW (CONTROL CIRCUIT)		
PE – PURPLE (CONTROL CIRCUIT)		
WE/BN – WHITE W/ BROWN TRACE (CONTROL CIRCUIT)		
WE/OE – WHITE W/ ORANGE TRACE (CONTROL CIRCUIT)		
WE/YW – WHITE W/ YELLOW TRACE (CONTROL CIRCUIT)		
WE/PE – WHITE W/ PURPLE TRACE (CONTROL CIRCUIT)		
FIELD WIRING -----		
ENCLOSURE WIRING _____		

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1.0.1	10/18/2013				
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DRAWN DATE: 10/18/2013					

NOT TO SCALE



**TYPICAL OUTPUT RELAY
TWO SETS OF DRY CONTACTS WITH NO & NC
10AMP MAX**



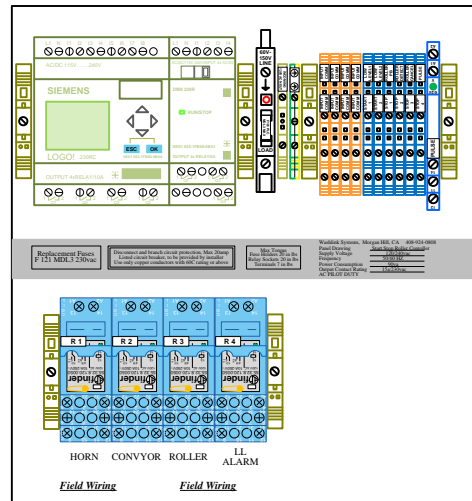
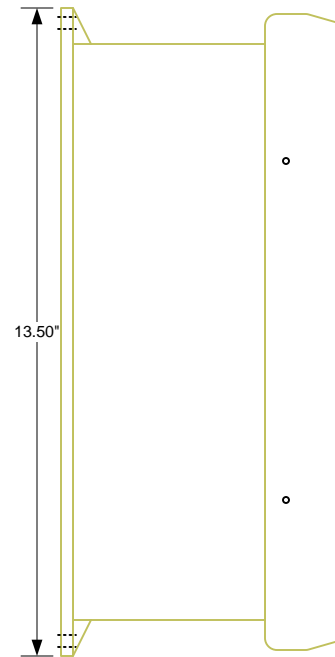
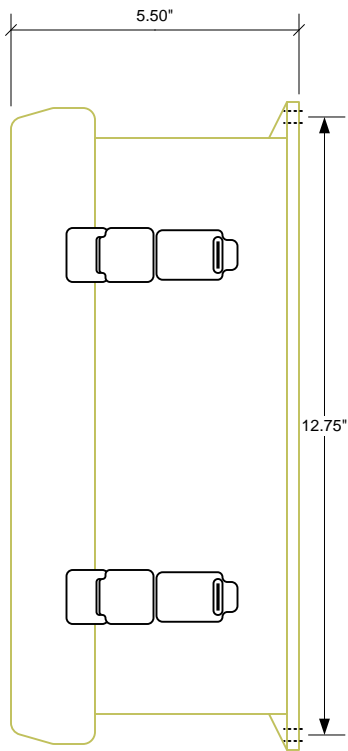
NOTE:
SHOWN FOR 120VAC
24VAC, 24VDC & 230VAC ARE AVAILABLE

NOTE:
ANY UNUSED STOP OR LOW LEVEL INPUTS
MUST BE JUMPED TO THE INPUT
CONTROL POWER SO THE INPUT IS HIGH, IF
THEY ALL ARE NOT HIGH, THE SYSTEM
WILL NOT WORK

NOTE:
ISOLATION RELAYS MAY BE NEEDED IF
INPUT SOURCE IS NOT THE SAME AS THE
CONTROL VOLTAGE.
ANY VOLTAGE OTHER THEN THE CONTROL
VOLTAGE MAY DAMAGE CONTROLLER AND
WILL VOID WARRANTY

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