APPLICATION SOLUTION LGM #01

WOOD GLUING WITH SIX PRESETS APPLICATION

In a cabinet factory, pieces must be glued before being manufactured. On this particular machine, glue has to be applied in two rows of three small strips on each board.

PRODUCTS USED: LGM00101, ZFG0120C, LSAHC001, WF000OK, RRDC000

The LGM, with its six outputs was selected for this function. For a signal, the customer placed a ZFG0120C encoder, with a one-foot WF000OK wheel, directly on the conveyor. The photo-eye RRDC000 was also installed for this application.

HOW IT WORKS

With the one-foot wheel and 120 pulses per revolution, there are exactly 10 pulses per inch. This allows counting in tenths of inches, with no change to the program scale factor. Only the count decimal point needs to be changed. The conveyor turns the wheel even if there are no boards so the photo-eye is wired to maintained reset (User Input 1), which opens at start of board.

Once the LGM is programmed properly, the operator simply sets the presets in inches and runs the machine. The LGM will place glue between P1 and P2, between P3 and P4, and also between P5 and P6. This is achieved by programming the LGM to turn off Out 1 at Out 2, so this is done automatically. Out 3 and Out 5 can't be programmed to turn off automatically at other outputs, so Out 4 and Out 6 are wired back into User Inputs programmed to turn off Out 3 and 5 respectively.

All of the programming can be locked from the operator. If the presets are not going to be changed then they can be locked also. However, the operator can still scroll through the four main displays, which are not all programmed from the factory for count. For this reason, it is suggested that all four displays be programmed the same. This way if someone presses buttons there would be no change from count display.

DESIGN ADVANTAGES

With the six setpoints, the length of three glue strips sets was always applied to a tenth of inch accuracy.

ADDITIONAL CAPABILITIES

The LGM has RS485 communications. This means the unit could be programmed with the free Red Lion Controls software RLCPRO. Also with the communications, data from the LGM could be sent to a printer, data logger, PLC or computer with an RS485 to RS232 converter.

The customer can upgrade to LPGM Legend Plus model. With LGPM model, there are additional features of custom messages and Mnemonics and RS232 communications.

DIP SWITCH OR JUMPER SETTINGS

After programming, place 7 up for program lock.

PROGRAMMING (Only non-factory settings shown)

PRESETS

P1	3.0	Start
P2	16.0	Stop
P3	19.0	Start
P4	32.0	Stop
P5	35.0	Start
P6	48.0	Stop

SCALE FACTORS

CNT DP	0.0

USER INPUTS

USER INP 1	MAN RST
	CNT-YES
USER INP 2	RST OUT 5
USER INP 3	RST OUT 3

OUTPUT 1

ASSIGNED	TO CNT
TYPE	LATCHED
OUTPUT END	@OUT 2

OUTPUT 2

ASSIGNED	TO CNT
TYPE	LATCHED

OUTPUT 3

ASSIGNED	TO CNT
TYPE	LATCHED

OUTPUT 4

ASSIGNED	TO CNT
TYPE	LATCHED

OUTPUT 5

ASSIGNED	TO CNT
TYPE	LATCHED

OUTPUT 6

ASSIGNED	TO CNT
TYPE	LATCHED

DISPLAYS

DISPLAY 1

D1 LINE 1	CNT-MNE
D1 LINE 2	CNT-VAL

DISPLAY 2

D2 LINE 1	CNT -MNE
D2 LINE 2	CNT -VAL

DISPLAY 3

D3 LINE 1	CNT-MNE
D3 LINE 2	CNT-VAL

DISPLAY 4

D4 LINE 1	CNT--MNE
D4 LINE 2	CNT--VAL

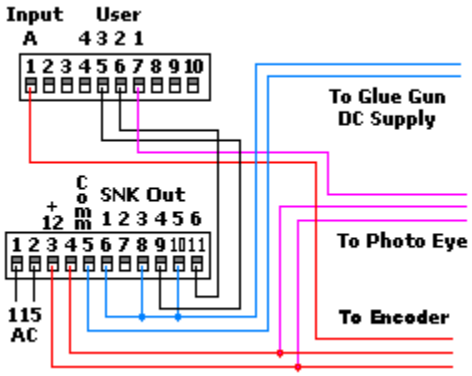
OPTIONS

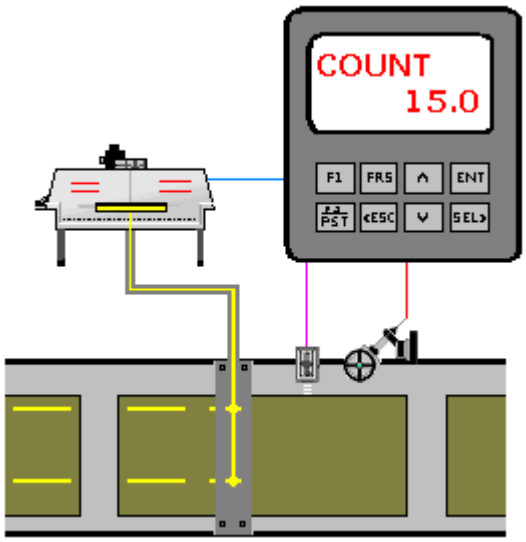
ACCESS

CT LD	LOC
SF'S	LOC

WIRING DIAGRAM

All wiring must be according to the installation guidelines listed in the product's specifications. For the setpoint outputs to function an external isolated voltage source (not shown below) must be connected in series.





This application note is intended to be an example. Your specific application may require changes in products, programming and/or wiring. For specific assistance, you may contact your local Red Lion products supplier or Red Lion Controls Technical Support at 717-767-6511