Class: 4th Stage
Subject: Control Lab
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(Control laboratory)

Experiment No. 00(6)

(Electro pneumatic trainer (using a cylinder and a proximity switch))

Prepared by
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EXP.NO. (6):- Electro pneumatic trainer (using a cylinder and a proximity switch)

Unit objective

After completing this unit, you will be able to understand the use of cylinders, valves, limit switches and proximity switches

Wiring

PS+	CDP 24v
PS-	CDP COM (0v)
CDP 24 V	Simulation + Extension Panel RL-1 COM
CDP COM (0v)	Simulation + Extension Panel Com (0v)
Simulation Extension Panel COM (0v)	CDP Com (0v)
Simulation Extension Panel EDI/5	CDP CDI/1
PS (PROXIMITY SWITCH) OP	CDI/1
PS (PROXIMITY SWITCH) (+)	CDP 24v
PS (PROXIMITY SWITCH) (-)	CDP Com (0v)
S (SELENOID)1 (+)	RL(relay) 1 NO
S (SELENOID)1 (-)	CDP Com (0v)

Procedure:-

1. Make the connection as shown in the table above.
2. Set FRL pressure to 3 bar
3. Connect the power supply.
4. C1 (cylinder) get step out.
5. The proximity switch senses the cylinder.
6. The C1 (cylinder) step in (get to its original position).
7. The process continues.

Conclusion:

In this experiment we have gone through the process of controlling C1 using proximity switch with a valve. It shows that how we can use proximity switch to stop the cylinder and prevent it from reaching its require position.

Component requirement:

1. S1 (5/2 way DC valve).
2. Proximity switch (PS).

Discussion:-

- What is proximity switch? And how it works?
- When the process continued, how to stop it?
- In the main window of KGL-WIN (the Trainer simulation program), write down the procedure of how to open, connect, run any project?