

# CLEAN ROOM

## Door Interlocking System

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## Clean Room Door Interlocking System

### Introduction:-

In clean room areas, any personnel passing through an unclassified area to a classified area is required to pass through series of rooms. In each room certain steps need to be followed. This procedure ensures that the person is not carrying any external contamination in to the process area and also the pressure in each room is maintained before opening of door.

Door Inter Locking System achieves the prevention of process area contamination by

- ✓ Preventing simultaneous access of doors/Rooms.
- ✓ Provides configurable option for user for closing & opening of doors in a particular room.
- ✓ Programmable delay between each door openings to maintain required pressure.
- ✓ In Emergency an override key is available on a push button module for opening the door.



DLS Controllers



Push Button Stations

Emergency Stations

roller



## **DLS CONTROLLER (2-DOOR)** **Model No: DLS 700D**

### ***Description:***

In clean room areas, any person passing through an unclassified area to classified area is required to pass through series of rooms. In each room certain steps need to be followed. This procedure ensures that the person is not carrying external contamination in to the process area.

Our Door lock controller achieve this by preventing simultaneous access of door /Room by ensuring that when one door for a room is open then other door is closed. Push buttons are available for door access. Emergency stations available for opening both doors. Delay between each door openings to maintain required pressure.



### ***Features:***

- ✓ Micro controller based.
- ✓ Supports Maximum of 2 doors & 4 Push buttons.
- ✓ It can support Emergency Stations.
- ✓ Sequence of door inter locking is fixed.
- ✓ Delay between door openings by using Dipswitch (Multiples of 4 up to 60 Sec).
- ✓ Facility available to read feed back from Magnetic Lock.
- ✓ D/I provided to take feedback from BMS in case of Fire.
- ✓ Power on indication
- ✓ Relay status indication
- ✓ Door status indication

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## ***Specifications:***

### ***GENERAL:***

- Push Button Inputs : 2 No.
- Door Feedback Inputs : 2 No, 24V.
- Door control sequencing : Fixed.
- LED Control Outputs for push buttons : 2 No.
- Status LED : 3mm LED (Red).  
(Power ON, Relay, Door status indication)
- Door control outputs : 2, 24V DC.

### ***RELAYS:***

- Contact material : Silver Alloy.
- Contact Rating : 230V AC / 5 A.
- No. of Operations : Mechanical : 10<sup>7</sup> , Electrical : 10<sup>5</sup>.

### ***ENCLOSURE:***

- Enclosure type : MS ( Seimns gray)
- Mounting : Wall mounting

### ***POWER:***

- Power source : 230V, AC 50 Hz (±5%)
- Wattage : 24W

### ***ENVIRONMENTAL:***

- Operating Temperature : 0 to 50<sup>0</sup>C.

### ***MECHANICAL:***

- Weight : 2.2 Kgs.
- Dimensions : 212 x 172x 75mm

## **DLS CONTROLLER**

**Model no: DLS700C**



### **Features:**

- ✓ Micro controller based.
- ✓ Supports Maximum of 8 doors & 16 Push Button Stations.
- ✓ Supports Emergency Stations.
- ✓ Sequence of door inter Locking is field configurable.
- ✓ Delay between door openings is field configurable from 0 to 99 Sec.
- ✓ Facility available to read feed back from Magnetic Lock for all doors.
- ✓ 8x2 DOT MATRIX LCD for Programming.
- ✓ Easy use Soft touch Tactile Membrane keypad & user-friendly programming options.
- ✓ Non-Volatile Flash memory to store programmed parameters.
- ✓ D/I provided to take feedback from BMS in case of Fire.
- ✓ Supports Access control module interface in place of Push Button Stations.

### **Specifications of DLS (Door Locking System ) Controller:-**

<b>Model No.</b>	DLS-700C
Push Button Inputs	8 Numbers.
Door Feedback Inputs	8 Numbers, 24 V
Door Control Outputs	8 Numbers, 24V/2.5 A.
Keypad	Soft touch Tactile Membrane Keys, 4.
Display	8x2 Alphanumeric LCD
Memory	Non-Volatile Flash
Delay between each door	Programmable 0 to 99 Sec.
Door control sequencing	Programmable
Power Supply	100 to 260 V, AC 50 Hz.
Enclosure Type	MS (Siemens gray, powder coated)
Mounting	Flush/Panel/Wall Mounting
Weight	1 K.g. (Approx.)
Dimensions	212 x 114 x 24 mm
Environmental Ratings	Operating Temperature : 0-50°C
	Humidity : 10 – 95% RH, Non-condensing
	Storage temp. : -40 to 65 °C

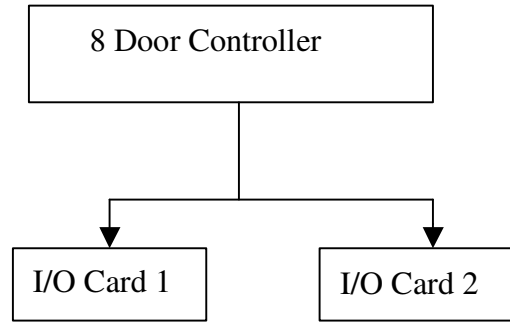
**Standard Accessories:-**

**For 4 Doors:**

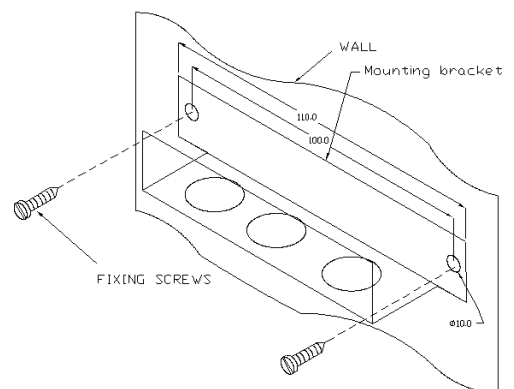
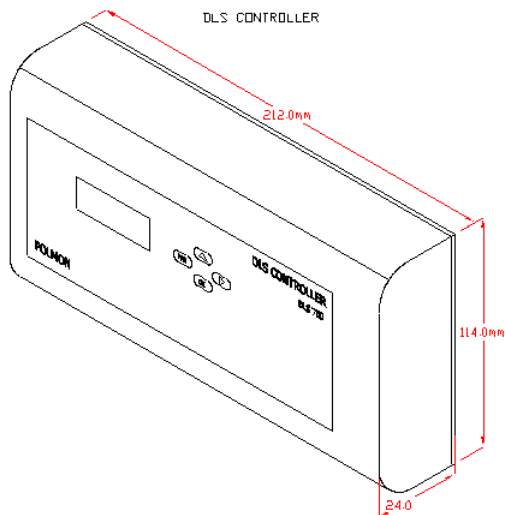
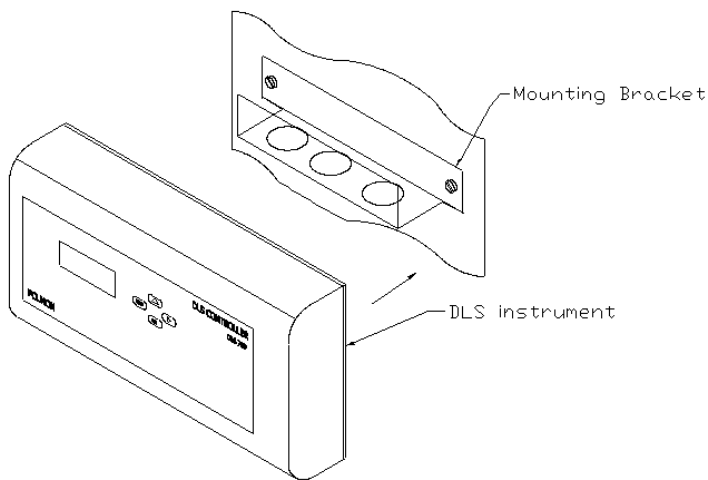
- 1. I/O Module (4-door) : 1.
- Model No: DLS-700IO
- 2. Power Supply ( 4 – door ) : 1.
- Model No: DLS-700PS-1

**For 8 Doors:**

- 1. I/O Module (4-door ) : 2.
- Model No: DLS-700IO
- 2. Power Supply ( 4 – door ) : 2.
- Model No: DLS-700PS-1



**Mounting Diagrams of DLS Controller:-**

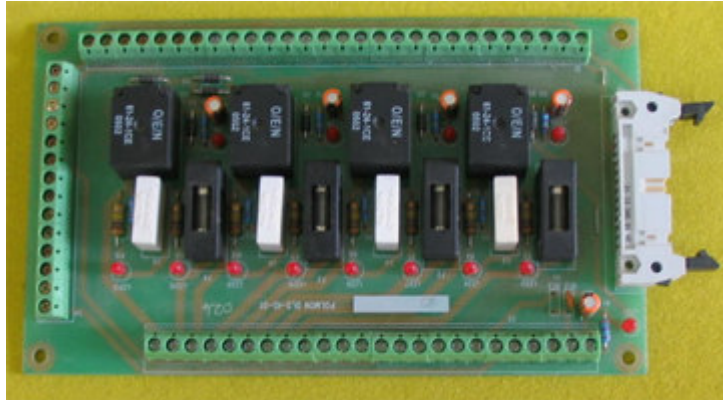


Dimensional Diagram of DLS Controller

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# I/O Module

MODEL No: DLS-700IO



## Features:-

- ✓ Supports Maximum of 4 doors.
- ✓ LED to indicate Relay status.
- ✓ High current protection circuit incorporated.

## Specifications:-

<b>Model No.</b>	<b>DLS-700IO</b>
No. of Relays	4, 24V DC
Contact Material	Silver Alloy
Contact rating	230V AC/5 A
No. of operations	Mechanical : $10^7$ , Electrical : $10^5$ .
Contact Resistance	50 milli ohms
Dielectric Strength	Between contacts & coil : 1500VRMS. Between open contacts : 750VRMS.
Indication LED	3mm LED (Red).
Mounting	Open Frame (DIN Rail mounting)
Dimensions	150 x 100 x 30 mm.



## **PUSH BUTTON STATIONS**

**Model No: DLS700P**



### **Features of Push button station:-**

- ✓ Indication facility for Door entry permitted / prohibited.
- ✓ Supports an entry switch for opening the door.
- ✓ Long Life LED (Red & Green) for door open/close indication.
- ✓ LED flashing in case if emergency button is pressed.
- ✓ SS Bezel with appropriate curvature to prevent resting of dust & powder.
- ✓ Easy mounting arrangement for fixing on Doorframes or on Wall.

### **Specifications:**

<b>Model No</b>	DLS-700P-2	DLS-700P-3
<b>Keypad</b>	Soft touch Tactile Membrane Key, 1	
<b>Status LED</b>	1 Red LED for Door Open / Entry Prohibited. 1 Green LED for Door Close / Entry Permitted	
<b>Enclosure Type</b>	SS	
<b>Mounting</b>	Flush mounting	
<b>Dimension</b>	88 x 88 x 8 mm.	

## **EMERGENCY STATION**

**Model No: DLS700E**



### **Features of Emergency station:-**

- ✓ Enables Emergency access to configured doors.
- ✓ SS Bezel with appropriate curvature to prevent resting of dust & powder.
- ✓ Easy mounting arrangement for fixing on Doorframes or on Wall.

### **Specifications :-**

<b>Model No</b>	DLS-700E (Emergency Station)	
<b>Keypad</b>	Soft touch Tactile Membrane Key, 1	
<b>Status LED</b>	1 Red LED for Door Open / Entry Prohibited. 1 Green LED for Door Close / Entry Permitted	Not present.
<b>Enclosure Type</b>	SS	
<b>Mounting</b>	Flush mounting	
<b>Dimension</b>	88 x 88 x 8 mm.	



# DOOR STATUS MODULE

MODEL No: DLS-700DS

## Features:

- ✓ Indication facility for Door open Status of 8 Doors Max.
- ✓ Long Life LED (Green) for doors open indication.
- ✓ LED flashing in case if emergency button is pressed.
- ✓ SS Bezel with appropriate curvature to prevent resting of dust & powder.
- ✓ Easy mounting arrangement for fixing on Doorframes or on Wall.



## Specifications:-

<b>Model No.</b>	DLS-700DS-2
Status LED	8 Green LED for Doors Open Indication
Enclosure type	SS Bezel
Mounting	Flush mounting.
Dimensions	88 x 88 x 8 mm.

## Ordering Information:

Sl.No	Description	Model No	Remarks
1.	<b>DLS Controller (2 Door)</b>	<b>DLS700D-X</b>	<b>For Default Door Opening Delay</b>
2.	<b>4 - Door Interlock System</b>	<b>DLS700D4</b>	<b>For Programmable Door Opening Delay</b>
a.	<i>DLS Controller Qty: 1 No</i>	<i>DLS700C-X</i>	<i>Included</i>
b.	<i>IO Module - 4Door Qty: 1 No</i>	<i>DLS700IO-X</i>	<i>Included</i>
c.	<i>Power Supply - 4Door Qty: 1 No</i>	<i>DLS700PS-1</i>	<i>Included</i>
3.	<b>8 - Door Interlock System</b>	<b>DLS700D8</b>	
a.	<i>DLS Controller Qty: 1 No</i>	<i>DLS700C-X</i>	<i>Included</i>
b.	<i>IO Module - 4Door Qty: 2 No</i>	<i>DLS700IO-X</i>	<i>Included</i>
c.	<i>Power Supply - 4Door Qty: 2 No</i>	<i>DLS700PS-1</i>	<i>Included</i>
4	<b>Push Button Stations</b>		Refer Note1
a.	<b>Push Button Station (SS -LG)</b>	<b>DLS700P-2</b>	
b.	<b>Push Button Station (SS-NW)</b>	<b>DLS700P-3</b>	
5	<b>Emergency Stations</b>		Refer Note1
a.	<b>Emergency Station (SS-LG)</b>	<b>DLS700E-2</b>	
b.	<b>Emergency Station (SS-NW)</b>	<b>DLS700E-3</b>	
6	<b>Door Status Modules</b>		Refer Note1
a.	<b>Door Status Module-SDoor (SS-LG)</b>	<b>DLS700DS-2-8</b>	
7.	<b>PB/ES/DS Brick wall concealed box assembly</b>	<b>DLS700B-1-1</b>	
8.	<b>PB/ES/DS Modular wall concealed box assembly</b>	<b>DLS700M-1-1</b>	

**Note1:** Compulsory order PB Brick wall concealed box assembly (or) PB Modular wall concealed box assembly as per requirement of wall construction.

*For Further Information Contact:*

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