

# DOOR INTERLOCK CONTROLLER

2 or 4 DOORS, RS485



## ABOUT DXC241

DXC241 controls interlocking of 2 or 4 doors using door feedback sensors. It is a system which on request allows access to only one door for a predefined time and makes other door secure within the designated area. Buzzer and indicators show forcible operation of a door, which is blocked by the system.

Door groups can be formed in 4 door interlocking system. User can program door groups using PC based utility through serial communication. Door locking time and opening time can also be set using utility. A no touch switch / touch switch is provided at the entry side of each door for access.

Four general purpose inputs (GPI) are provided for emergency door opening (e.g. through output of fire alarm system, or manual emergency door open switch). Two general purpose outputs (GPO) are relay outputs which can be used to operate a siren, for example.

## FEATURES

- Four Door Open Switches
- Four General Purpose Inputs (GPIs), for any emergency action
- Four DOTL switch inputs for door position sensing
- Four relay outputs for four Electromagnetic Locks of doors
- Two General Purpose Relay Outputs (GPOs)
- Four green & four red LED controls
- Four buzzer output logics
- Provision of Cascading two system upto 8 doors
- Provision of door opening using SCADA

## SPECIFICATIONS

All specifications at ambient of 25 °C unless specified otherwise

|   |  |
|---|--|
| <b>POWER</b>  |  |
| Supply voltage  | External voltage: 90-264 V AC<br>Internal voltage : 12V  |
| Protection  | Miniature circuit breaker used for over current protection   |
| <b>INPUT</b>  |  |
| Door interface  | 2 Door Open Switch (No touch switch/<br>Touch Based Switch) per door   |
| Digital input   | 4 General purpose inputs   |
| <b>OUTPUT</b>   |  |
| Digital output  | 2 General purpose relay outputs<br>4 Relay outputs for magnetic locks  |
| Door status indicator                                 | 2 LEDs per door<br>1 buzzer per door   |
| <b>COMMUNICATION</b>                                  |  |
| Serial port   | RS485  |
| Protocol  | MODBUS RTU   |
| Slave ID  | User programmable (1-247)  |
| Baud rate   | 9600   |
| <b>CONFIGURATION</b>                                  | Using configuration utility & USB port   |
| <b>PROGRAMMABLE PARAMETERS</b>                        | Door open time settings<br>GPI action configuration<br>GPO event configuration<br>Buzzer sound type and time<br>Door interlock grouping<br>Emergency mode operation of no touch switch |
| <b>ISOLATION</b>                                      |  |
| Mutual isolation between RS485 and 12VDC power supply | 2500 V AC RMS, 1 minute  |
| <b>ENCLOSURE</b>                                      |  |
| Dimensions (in mm)                                    | 295(L) x 265(W) x 70(H)  |
| Material  | MS, Powder coated  |
| Mounting  | Wall   |
| <b>TEMPERATURE, HUMIDITY</b>                          |  |
| Ambient, storage                                      | -20 to +55 °C  |
| Ambient, operation                                    | -20 to +55 °C  |
| Relative humidity                                     | 5~95% RH, non-condensing   |

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### ACCESSORIES

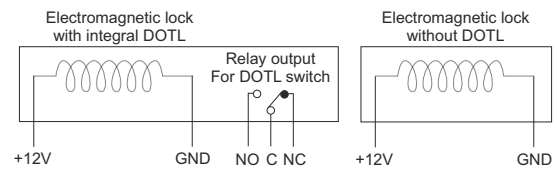
#### ELECTROMAGNETIC DOOR LOCKS

A magnetic lock is a simple locking device that consists of an electromagnet and armature plate. By attaching the electromagnet to the door frame and the armature plate to the door, a current passing through the electromagnet attracts the armature plate holding the door shut. LED indications are used to show the door and lock status.

- Holding force : Holding force 600lb/280Kg (99.99% pure copper coil used)
- Rust protection : Blue zinc-plating
- Armature thickness : 12 mm for maximum holding force
- Dimensions : 250x48x27mm
- Armature plate : 180(L)x38(W)x12(H) mm
- Mounting bracket : 250mm X28mm X48mm
- Voltage : 12VDC
- Current : 0.48A
- Operating temperature : -20 ~ 60 °C



ORDER CODE : 2603



#### EMERGENCY SWITCHES

The emergency switch is used to open all the doors simultaneously in an emergency conditions.

- Contact type : Normally open
- Standard structure : Stainless steel panel, steel button
- Panel material : Stainless steel, brush finish



ORDER CODE : 2641-1

92.3(H) x 29.7(W) x 21.5(D) mm



ORDER CODE : 2605-1

90(H) x 90(W) x 23(D) mm

#### NO TOUCH SWITCHES

No touch switch is used to access the door by simply passing the hand close to the switch. Detection is indicated by an LED. Blue indicates 'Normal' and Red indicates 'No touch detection'.

- Input voltage : 12VDC
- Contact rating : 3A/120VAC 30VDC
- Operating temperature : -20 °C ~ 50 °C
- Life : 500000 operations



ORDER CODE : 2640

114(H) x 69(W) x 32(D) mm



ORDER CODE : 2604

86(H) x 86(W) x 32(D) mm

#### TOUCH BASED SWITCHES

Touch switch is used to access the door by pressing switch. LED indications are configurable from the controller side. Emergency switch is also available in a similar design.



ORDER CODE : 2657-1

87mmx146.5mm

#### FLP MAGNETIC LOCK AND SWITCHES

FLP Door Interlocking system, for operations in hazardous area. Ideal for current GPM norms for Clean rooms.

- Normally all doors remain closed
- Default 5 sec door release time
- Application : For Door Interlock operation in hazardous area like Bulk Drug, API etc.



ORDER CODE : 2658



ORDER CODE : 2661

#### DOTL SWITCHES

DOTL switch is used to determine the position of the door.

- Screw mount : 2 1/2" long
- Magnetic contact leads : 12" centre jacketed



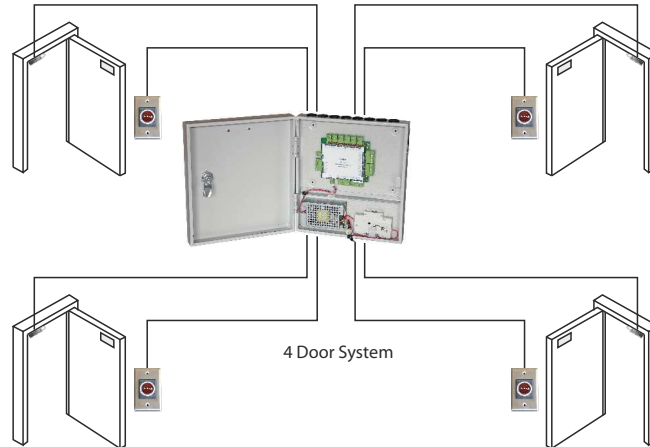
ORDER CODE : 2659

2.5x0.5"

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## APPLICATION



## ORDERING INFORMATION

### CONTROL UNIT

2600 -  A

| Product code | A | No of doors |
|--------------|---|-------------|
| 2600         | 1 | 2 doors     |
|              | 2 | 4 doors     |
|              | 3 | 3 doors     |

### ACCESSORIES

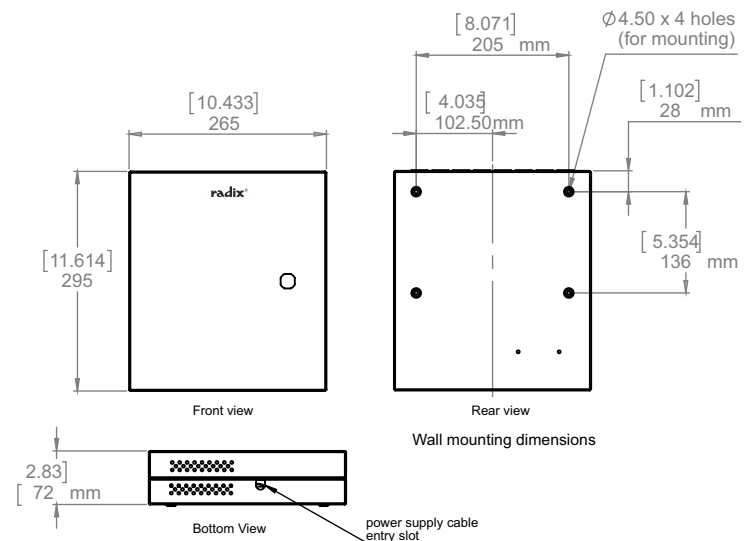
| ITEM  | ORDER CODE |
|---|------------|
| Electromagnetic Lock with DOTL (600LB) <sup>#1</sup>                | 2603       |
| Electromagnetic Lock without DOTL (600LB) <sup>#1</sup>             | 2654       |
| Electromagnetic Lock with DOTL (1200LB) <sup>#1</sup>               | 2655       |
| Electromagnetic Lock without DOTL (1200LB) <sup>#1</sup>            | 2656       |
| Emergency Switch - Square, without LED <sup>#3</sup>                | 2605-1     |
| Emergency Switch - Square, with single LED (Red) <sup>#3</sup>      | 2605-2     |
| Emergency Switch - Rectangular, without LED <sup>#3</sup>           | 2641-1     |
| Emergency Switch - Rectangular, with single LED (Red) <sup>#3</sup> | 2641-2     |
| No Touch Switch - Square, Dual LED (Red, Blue) <sup>#2</sup>        | 2604       |
| No Touch Switch - Rectangular, Dual LED (Red, Blue) <sup>#2</sup>   | 2640       |
| Touch Switch - Square, Dual LED (Red/Green) <sup>#2</sup>           | 2606-1     |
| Touch Switch - Square, Single LED (Green) <sup>#2</sup>             | 2606-2     |
| Touch Switch - Rectangular, Dual LED (Red/Green) <sup>#2</sup>      | 2657-1     |
| Touch Switch - Rectangular, Dual LED (White/Green) <sup>#2</sup>    | 2657-2     |
| Flameproof Magnetic Lock <sup>#1</sup>                              | 2658       |
| Flameproof Magnetic Switch <sup>#2</sup>                            | 2661       |
| DOTL Switch <sup>#1</sup>   | 2659       |

#1 = 1 required per door

#2 = 2 required per door

#3 = As required

## DIMENSIONAL DETAILS



CAT555R6/A

### ENQUIRIES

Instruments : sales@radix.co.in

Sensors : sensors@radix.co.in

Gauges : gauges@radix.co.in

Automation : automation@radix.co.in

Level : level@radix.co.in

Dwyer : sales@radix.co.in

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