

## OVERVIEW:

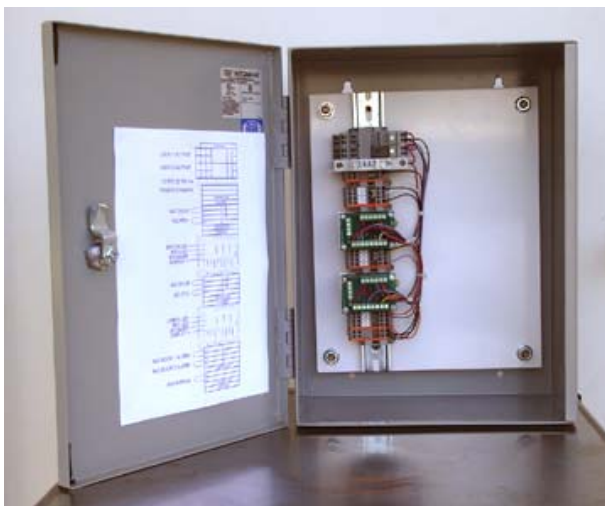
The Kouba Basic Interlocking Door Control System (LDA- IDC) will integrate with any electronic access control system including older or legacy control systems.

The LDA-IDC monitors 2 door position switches, and 2 request to unlock signals from the access control system to control and annunciate the status of 2 interlocking doors. Only one door may be unlocked or open at the same time. The mantrap will not unlock a door if the other door is open, or if an alarm condition exists. The interlock alarm relay opens if both doors are open at the same time.

Lock output relays control the locks, display plates with a local audible alarm indicate system status to the persons using the system, and alarm relays communicate system status to the security control center. The Warning Alarm feature reduces nuisance alarms by sounding a local alarm a few seconds before a Door Held Alarm.

## FEATURES:

- Interlocking Lock Control Relays
- Access Delay
- Warning Alarm Delay
- Door Held Alarm
- Forced Door Alarm
- Interlock Alarm Relay Output
- Interlock System Bypass Input
- Local Audible Alarm
- Optional Supervised Door Contact Monitoring
- Alarm Automatic Reset Delay
- May use card readers or biometrics
- Field Adjustable Time Delays
- Optional Remote Annunciation and Control Panel
- Single Gang Display / Sounder Plates



System Electronics Mounted in Enclosure



System Status Display

## SYSTEM OPERATION

MANTRAP READY- Both doors are closed, no alarm condition exists, the RED LED's on display are on.

REQUEST TO UNLOCK - An Access Control System uses card readers or biometric readers to grant access to persons using the mantrap. The ACS generates a Request To Unlock (RTU) relay contact to the LDA-IDC when a valid card or biometric is read. The LDA-IDC will unlock the door associated with the reader if the other door is not unlocked or open, and no alarm condition exists. The ACS sets the unlock time. The lock output relay will follow this input.

ACCESS GRANTED – When an RTU is received and the LDA-IDC unlocks the door, the display at the unlocked door will turn GREEN, and the display at the other door will remain RED.

DOOR OPEN – While a door is open, the other door is locked, LDA-IDC will not accept an RTU, and the display associated with the other door are RED.

ACCESS DELAY – When a door is opened, the access delay starts. This delay is the amount of time that the door may be open before starting the LOCAL WARNING ALARM. Adjustable 0 – 75 seconds.

LOCAL WARNING ALARM – When a door is held open past the access delay, then a local audible alarm beeps to encourage persons using the mantrap to close the door and prevent a nuisance alarm. Adjustable 0 – 75 seconds.

DOOR HELD ALARM – If a door is held open past the warning delay, then the local audible alarm is on, and the alarm relay is active.

FORCED DOOR ALARM – If a door is opened without first presenting a valid RTU, then the local audible is turned on and the alarm relay is activated.

INTERLOCK ALARM – If both doors are opened at the same time, then the audible alarm is on, and the alarm relay is active.

SUPERVISION ALARM – If either door input is cut or shorted, then the audible alarm is on, and the alarm relay is active. Closed = 1 K Ohm, Open = 2 K Ohm, Short or cut = supervision fault. Door supervision may be disabled with an on board jumper.

DOUBLE VERIFICATION PASSAGE – Card and/or Biometric readers are located on both sides of each door. A valid read must be presented at each reader and the ACS activates an RTU for every time each door is to be opened. A Request To Exit pushbutton may be used inside the mantrap instead of a reader.

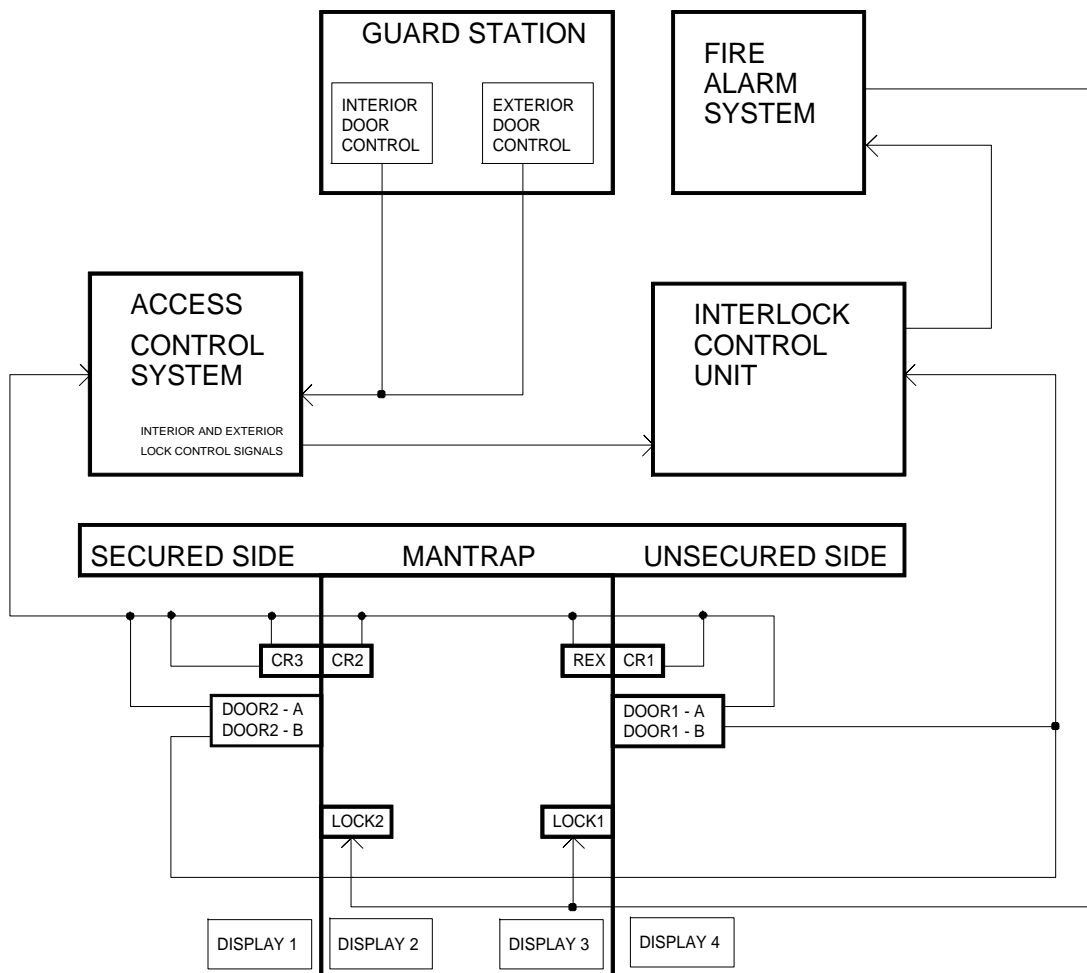
SYSTEM BYPASS – The BYPASS input may be activated to override the interlock or reset an alarm. If an alarm condition exists when the BYPASS is activated, then the alarm is reset. The doors remain locked. Any RTU presented will unlock the door associated with the reader. The doors are not interlocked, and both doors may be unlocked and/or opened at the same time.

Lock Control Relays – DPDT relay with an integrated LED that turns on when the relay is active. The relay activates when an RTU is presented and all other interlocked doors are closed and secured, or if the RTU is presented when the system is in BYPASS.

Alarm Automatic Reset – The system automatically resets an alarm after the doors are closed. Adjustable 0 – 75 seconds. The automatic reset feature may be disabled through the on board jumper..

System Status Displays – Single gang indicator plates with LED's to indicate system status to persons using the mantrap are mounted adjacent to the readers. The RED LED is on when the unit is ready. The GREEN LED is on when access is granted. The LED's flash when the other door is unlocked or open.

Audible Alarm – a sounder located on the display plates is activated when the unit is in alarm.



LOCK1 - UNSECURED SIDE LOCK

LOCK2 - SECURED SIDE LOCK

DOOR 1-A N/C UNSECURED SIDE DOOR CONTACT TO ACS

DOOR 1-B N/C UNSECURED SIDE DOOR CONTACT TO ICU

DOOR 2-A N/C SECURED SIDE DOOR CONTACT TO ACS

DOOR 2-B N/C SECURED SIDE DOOR CONTACT TO ICU

REX - REQUEST TO EXIT TO ACS

CR1 - UNSECURED SIDE ENTRY CARD READER TO ACS

CR2 - INTERIOR ENTRY CARD READER TO ACS

CR3 - SECURED SIDE EXIT CARD READER TO ACS

DISPLAY 1,2, 3 & 4 SHOW MANTRAP OPERATIONAL STATUS

## TECHNICAL SPECIFICATIONS

Power	12 VDC @ 1 Amp. On-board power switch with integrated circuit breaker rated at 1 Amp.
Inputs	Normally closed door contacts. One for each interlocked door. Contacts may be supervised. 1K ohm = closed, 2 K ohm = open, short or cut = supervision fault.  Request to unlock (RTU). One normally open contact for each door. The lock output relay will follow this input if the other door is not unlocked or open.  System Bypass. One maintained normally open input for the interlock bypass. A momentary activation of this input is also an alarm reset.
Outputs	1 normally closed Outer Door Alarm Relay. Relay opens when any alarm occurs with the outer door.  1 normally closed Inner Door Alarm Relay. Relay opens when any alarm occurs with the inner door.  1 Outer Door Display output. The display has one RED LED, one GREEN LED, and one 85dB sounder. Two displays may be connected to this output to show status on both sides of the outer door.  1 Inner Door Display output. The display has one RED LED, one GREEN LED, and one 85dB sounder. Two displays may be connected to this output to show status on both sides of the inner door.  Lock Control Relay's double pole double throw rated @ 8 Amps. Integrated LED shows relay active status.
Field Adjustments	Access Delay – adj 0 – 75 sec. Sets the length of time that the door can be held open before activating the LOCAL WARNING ALARM.  Door Prop Delay - adj. 0 - 20 sec. Sets the length of time that the door can be held before activating the DOOR HELD ALARM.  Alarm Automatic Reset Delay – adj. 0 – 75 sec. Sets the length of time before an alarm is automatically reset. The alarm automatic reset may be disabled with an on-board jumper.
Operation Selection Jumpers:	Alarm automatic reset enable. On-board jumper factory installed enables auto-reset. Removing this jumper will disable alarm automatic reset.  Door Alarm enable. On-board jumper factory installed enables the door alarm operation. Removing this jumper will disable the door alarm features, and the unit will operate only as an interlock. The DOOR FORCED ALARM, LOCAL WARNING ALARM, and DOOR HELD ALARM features will not operate if the jumper is removed.  Door Supervision enable. On-board jumper factory installed enables the door supervision monitoring. Removing this jumper will disable the door supervision, and the unit will monitor a normally closed door contact.  Request to Unlock input select. On-board two position jumper selects the RTU input. Factory installed position selects normally open input. The other position selects RTU to be normally closed input.

Please contact Kouba & Associates, Inc. for further information.