

DSITM

DESIGNED SECURITY, INC.

A Detex Company

ES831



**Custom model shown in stone and bronze*

Bi-Directional Barrier Arm Turnstile

Model ES831



The Designed Security, Inc. **ES831 bi-directional optical turnstiles** with hands-free barrier arms enhance the security of access control systems. The ES831 provides a visual as well as a psychological barrier while communicating to pedestrians that authorization is required to gain access to a facility or area.

Where high-speed pedestrian throughput and aesthetics are priorities, ES831 barrier arm turnstiles can grant access for up to 30-45 people per minute per lane and are surfaced to match the interior of any lobby with standard or custom designs and finishes. Compatible with most reader and access control technology, they detect, deter, and report attempts to enter without a valid card or by "tailgating" behind authorized personnel.

This system can be field selected as a Card-in/Free-exit, or Card-in/Card-out system configuration.

Designed Security, Inc. Optical Turnstiles with Barrier Arms meet the standard of the Americans with Disabilities Act of 1990.

Product Description/Technical Information

Configuration: Field selectable Card-in/Card-out, or Card-in/Free-exit pedestrian control.

Card Readers: Card readers to be supplied by others and may be mounted by DSI.

Local Annunciation: Visual and audible annunciation is provided at each passageway to provide status of passageway, indication of valid card read, invalid card or alarm condition.

Vertical Graphic Arrays/VGA's are solid state.

Nomenclature: OPEN/CLOSED/WAIT (flashes on alarm condition).

Horizontal Graphic Arrays/HGA's are solid state.

Nomenclature: PRESENT CARD/PROCEED (with arrow sequence) and Flashing Red Bar (for alarm condition).

Audible: Distinctive tones for valid card and alarm condition. Short chime sounds to indicate access has been granted. Buzzer sounds upon alarm condition.

Remote Annunciation: Interfaced to access control and/or security monitoring systems. (Optional)

Control Inputs: N/O - momentary "**Entry Card**" (max. 1 sec. pulsed closure)
N/O - momentary "**Exit Card**" (max. 1 sec. pulsed closure)
N/O - momentary "**Invalid Card**"
N/O - maintained "**Bypass/Reset**"
N/O - maintained "**Entry Closed**"
N/O - maintained "**Exit Closed**"
N/O - maintained "**Arm Disable**"
N/O - maintained "**Free Exit**"
N/O - maintained "**Emergency**" (Situation)
N/O - maintained "**Voice Enable**" (Horn Disable) [optional]

Status Outputs: N/O - "**Alarm**" signal
N/O - "**Time Out**" signal
N/O - "**Valid Passage**" (after valid card read) signal
N/O - "**Bypass/Reset**"
N/O - "**Invalid Card**"
Aux. Output Power - "+/- 12 VDC @ 2 amp (max)"

Relays rated 1.0 amp @ 30 VDC/contacts provided for interface to building access control, fire/life safety, security, CCTV, and monitoring systems.

Components: All components and electronic sub-assemblies including the microprocessor controller of the Optical Turnstiles are mounted within the bollards; thus reducing the total cost of installation, labor hours, conduit, wire, and cable.

Pedestrian Throughput: Throughput dependent on type of card reader technology and the response time of the access control system. Typically at three seconds per passage, 20 people per minute/1,200 per hour.

Product Description/Technical Information (contd.)

Interface: The DSI Optical Turnstiles will utilize the building access control system to grant or deny access.

Code Compliance: The Americans With Disabilities Act of 1990/ADA, nonrestrictive barrier-free design provides equal access. NFPA 101 Life Safety Code and most standard building codes.

Manufactured: The microprocessor, Vertical Graphic Arrays/VGA's and Horizontal Graphic Arrays/HGA's are solid state in design and all barrier arm components are designed for virtually maintenance free operation.

Operation: High-speed/nonrestrictive pedestrian passageways. Passageways are truly bi-directional at all times. Arm shall act as a "soft barrier" to control passage while allowing users to "push-to-clear" for emergency egress.

Barrier Arm: Arm travels in a 180° horizontal plane and shall be electro-mechanically driven. (No pneumatic components or compressed air supply will be used.)
The barrier arm will be extended at all times and will swing open when valid access credentials are presented. The arm shall move 90° from the extended position to the retracted position in the direction the user is traveling.

Arm Construction: The barrier arm shall be constructed of anodized aluminum with a satin brushed finish. The arm weight shall be minimized to reduce the inertia of the arm in motion. The arm shall have sufficient strength to withstand vertical forces expected in the workplace environment without permanent damage.

Arm Length: 17" beyond the bollard provide coverage over a 36" wide space with a maximum of 2" between arm tips.

Clearance Sensors: Six (6) IR optical beams within the passageway shall sense direction, detect tailgaters and obstructions.

Emergency Egress: "Push-to-Emergency Exit" design is built into the barrier-arm so the pedestrian passageway does not obstruct emergency evacuation of the facility. Alarm outputs activate if arms are pushed away. Force required to push arm away is consistent with ADA specifications.

Finish: **Top Surface:** DuPont Corian®, Nevamar Laminate or stainless steel.
Side Surface: Stainless steel, Formica, Nevamar Laminate.

Bollard Dimensions: 64" long x 38" high x 10" wide.

Bollard Spacing: 37" recommended to meet ADA requirements.

ES810/ES811
ES820/ES821
ES831
ES840
ES850
ES860
ES870
ES880

Product Description/Technical Information (contd.)

Bollard Mounting: The bollards shall be secured to the floor through the use of four (4) anchor bolts at each end of the assembly. Concealed access panels shall be provided on the bollard’s side to provide access for anchoring.

Conduit Size: Limited by all components including the microprocessor being located in the bollards. All required wiring is low-voltage and can be run in one conduit. Maximum size 1.5” if all I/O functions are utilized.

Power Requirements: 24VDC @ 4 amps. per passageway. Power supply supplied by others and can be mounted in equipment room. (Backup power source should be considered for many applications.)

Wiring Requirements: From access control systems to control bollard:

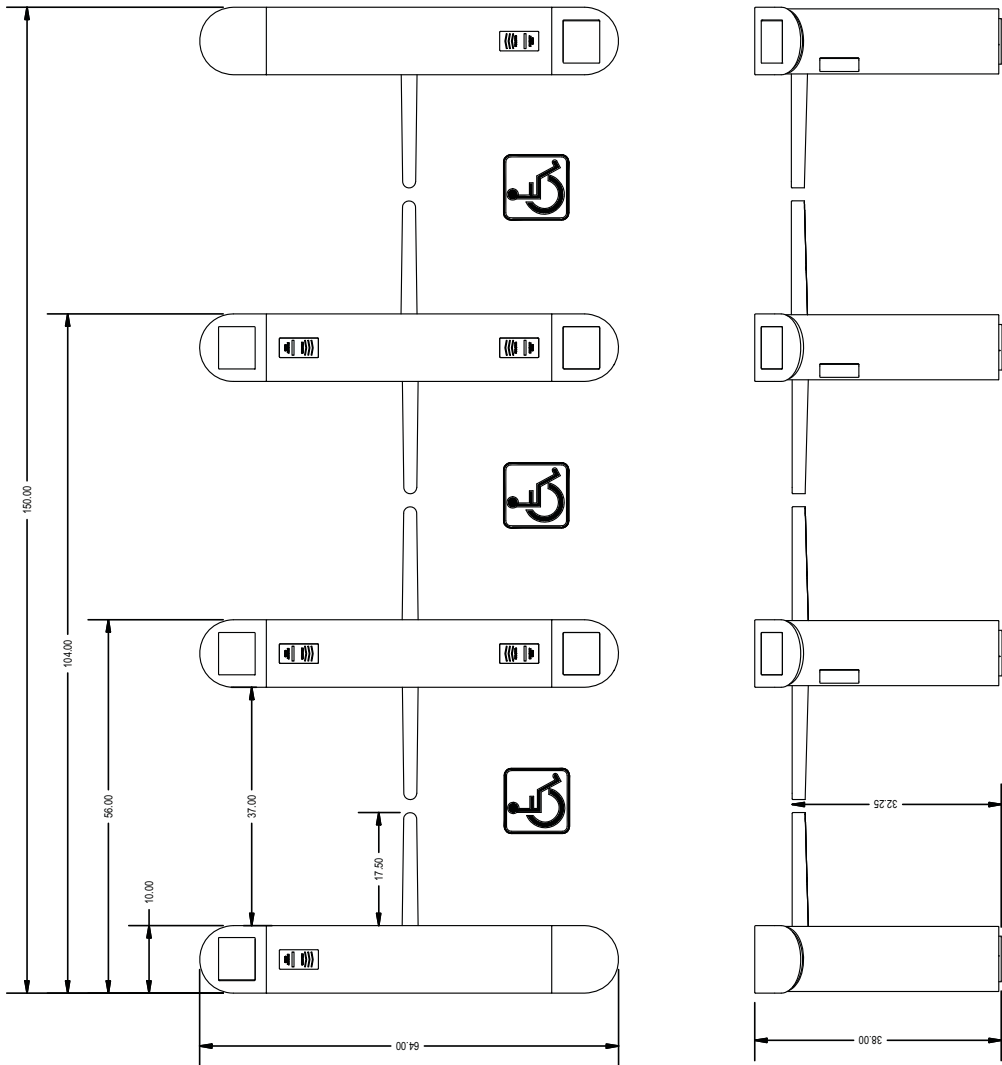
(Some connections may be optional.)

Card reader cable	as specified by manufacturer
“Entry Granted” (Input)	2 conductor/22 ga. (min.)
“Exit Granted” (Input)	2 conductor/22 ga. (min.)
“Invalid Card” (Input)	2 conductor/22 ga. (min.)
“Bypass lane” (Input)	2 conductor/22 ga. (min.)
“Emergency Situation” (Input)	2 conductor/22 ga. (min.)
“Arm Operation Disable” (Input)	2 conductor/22 ga. (min.)
“Free-Exit Enable” (Input)	2 conductor/22 ga. (min.)
“Entry Closed” (Input)	2 conductor/22 ga. (min.)
“Exit Closed” (Input)	2 conductor/22 ga. (min.)
“Alarm Condition” (Output)	2 conductor/22 ga. (min.)
“Passage Completed” (Output)	2 conductor/22 ga. (min.)
“Time Out” (Output)	2 conductor/22 ga. (min.)
“lane Bypassed” (Output)	2 conductor/22 ga. (min.)
24VDC Power	2 conductor/12 ga. (min.)

Wiring from control bollard to adjacent passageway bollard:

Card reader cable	as specified by manufacturer
Horiz. Graphic Display	8 conductor telephone cable/26 ga.
Verti. Graphic Display	4 conductor telephone cable/26 ga.
Motor Cable	4 conductor shielded cable/18 ga.
Encoder Cable	4 conductor shielded cable/22 ga.

Note: Wiring may vary depending on options and conduit runs.

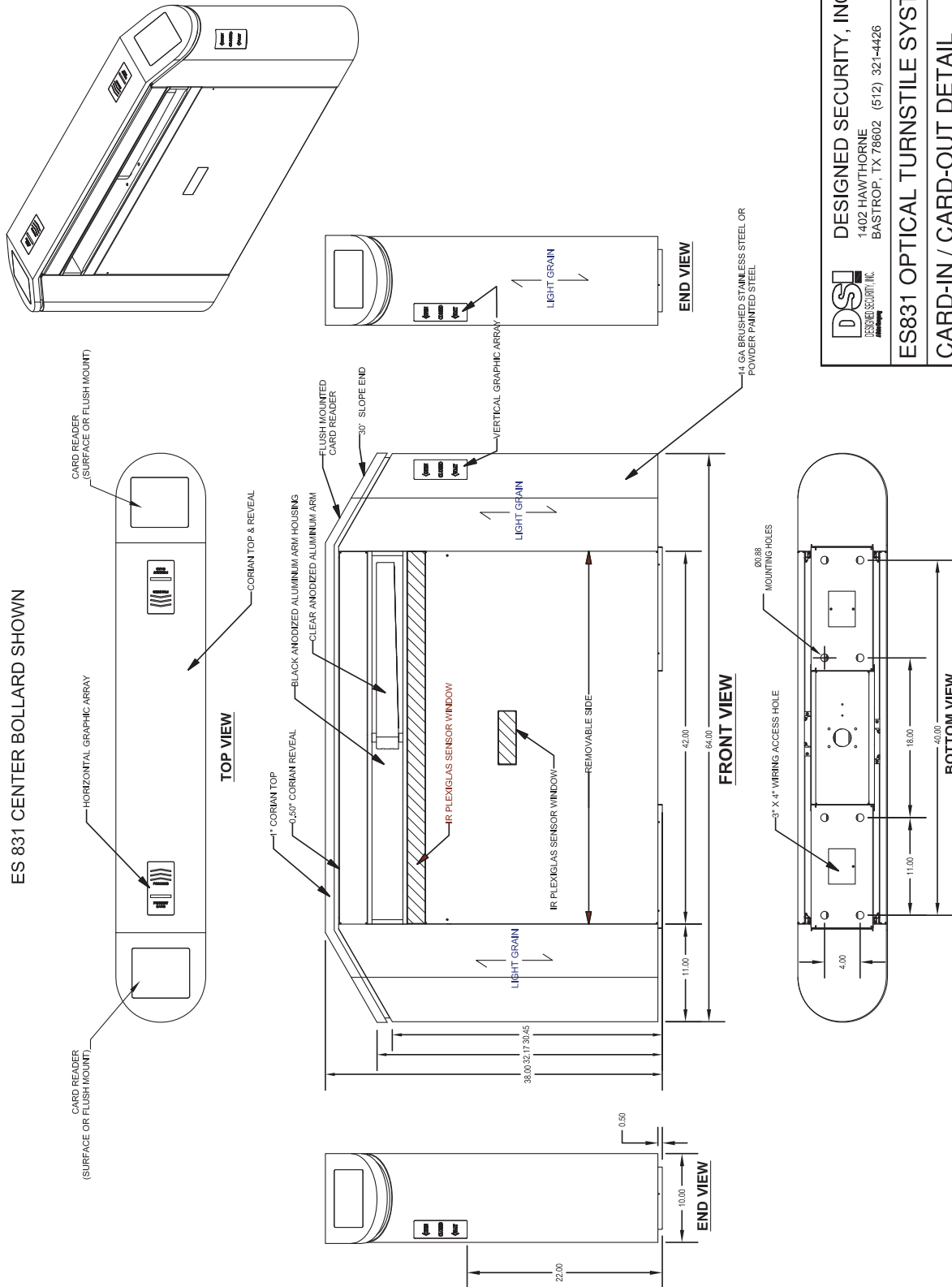


DSI DESIGNED SECURITY, INC. 1402 HAWTHORNE STREET BASTROP, TX 78602 1-800-272-3555	
CONTRACTOR/PROJECT DESIGNED SECURITY INC SS ES 831-N2	DRAWING # SS ES 831-N2
DESIGNER S. STEEL/CORBAN	DATE 7/08
FINISH SATIN BRUSH	SCALE 1:1
TITLE 1-4 Library/Venue Library/831 Library/831 Sales Book/831 ES 831-N2.dwg	SHEET # 2
	DATE 4/1/2004
	DRAWN BY Larity
	CHECKED BY

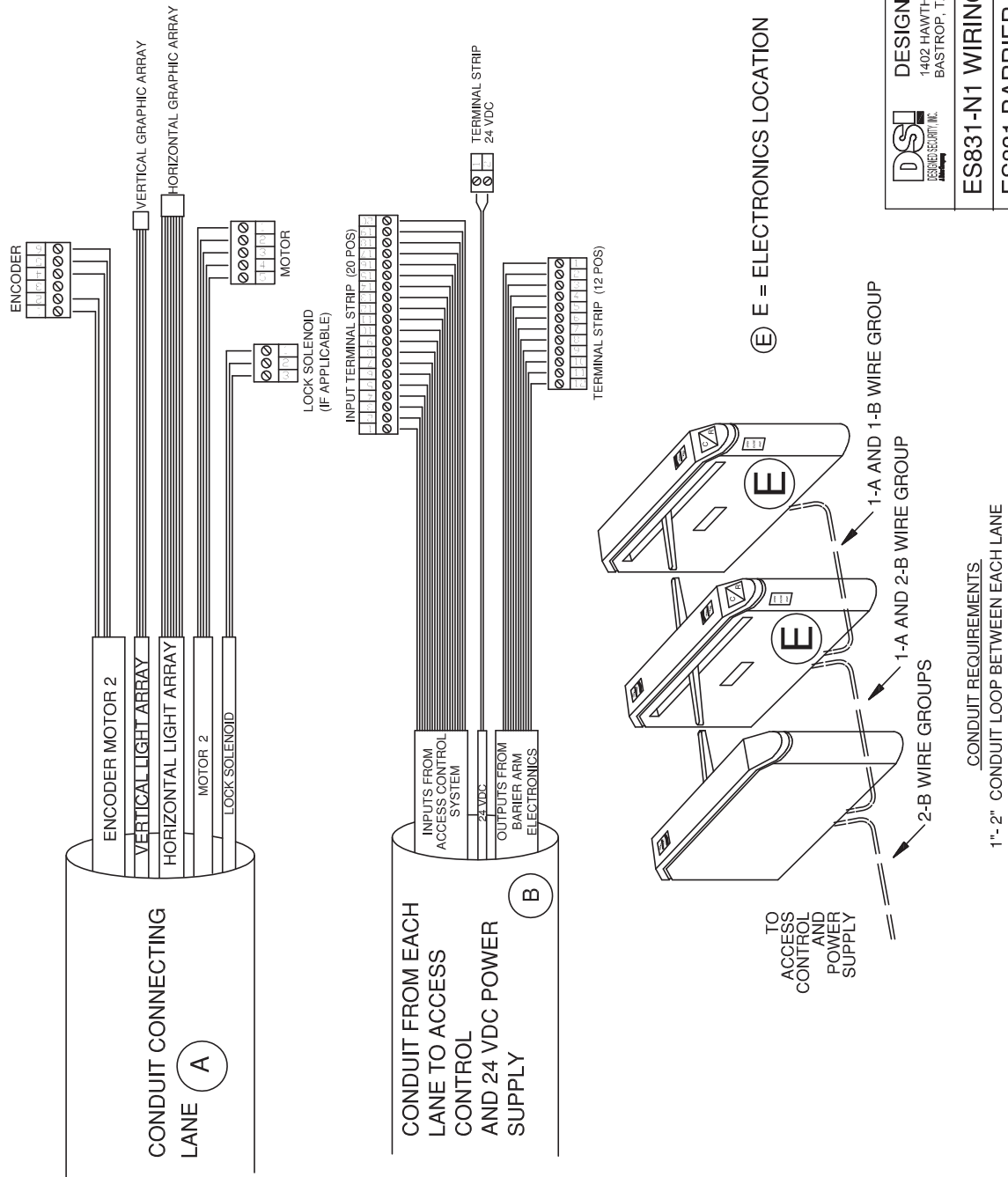
ES810/ES811 ES820/ES821 **ES831** ES840 ES850 ES860 ES870 ES880

ES880 ES870 ES860 ES850 ES840 ES831 ES820/ES821 ES810/ES811

ES 831 CENTER BOLLARD SHOWN



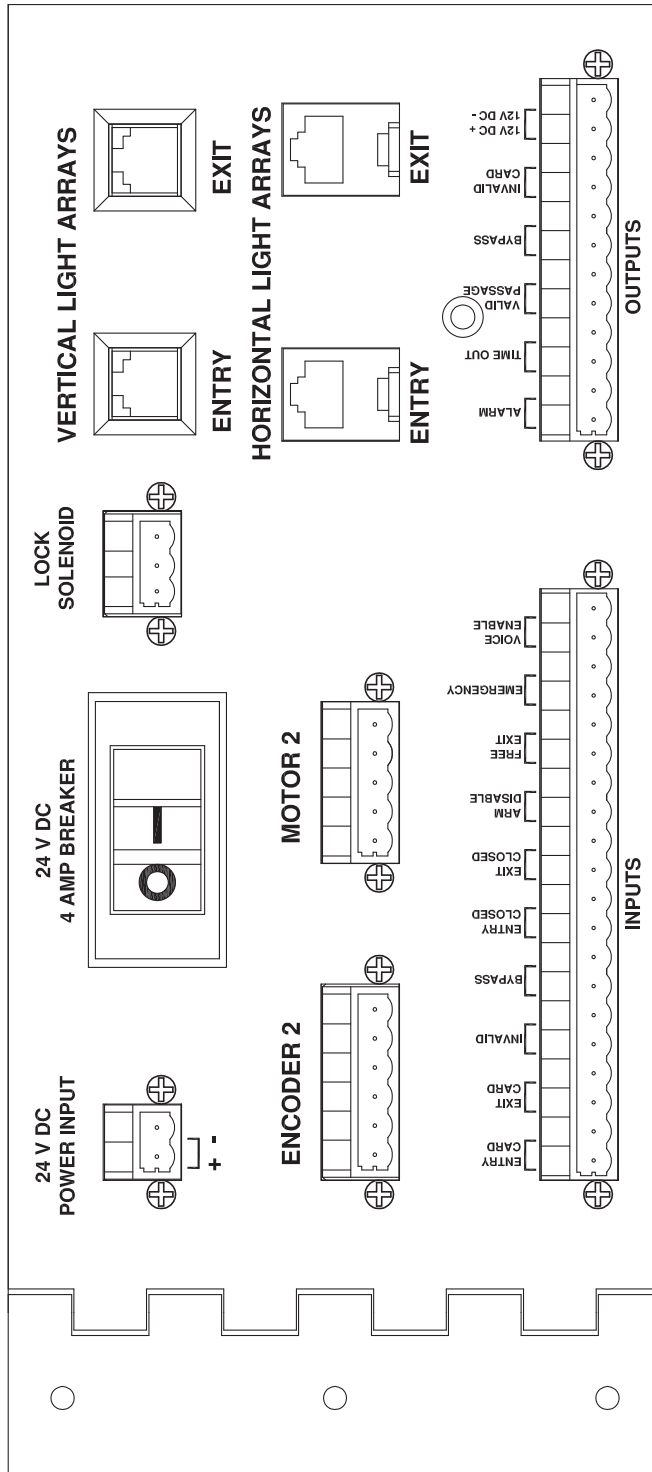
	DESIGNED SECURITY, INC. 1402 HAWTHORNE BASTROP, TX 78602 (512) 321-4426
	ES831 OPTICAL TURNSTILE SYSTEM CARD-IN / CARD-OUT DETAIL
CATALOG/ES831 CICO DETAIL	DATE: 6/23/05 BY: DEP



 DESIGNED SECURITY, INC. 1402 HAWTHORNE BASTROP, TX 78602 (512) 321-4426	DATE: 7/21/05 BY: DEP	
	CATALOG/ES831 WIRE DETAILS	
ES831-N1 WIRING DIAGRAM		
ES831 BARRIER ARM OT		

- ES810/ES811
- ES820/ES821
- ES831**
- ES840
- ES850
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ES880 ES870 ES860 ES850 ES840 **ES831** ES820/ES821 ES810/ES811



 DESIGNED SECURITY, INC. 1402 HAWTHORNE BASTROP, TX 78602 (512) 321-4426	ES831 BRIDGE PLATE	
	PAINTED BLACK WITH SILKSCREENED TEXT CATALOG/ES31 BRIDGE PLATE <small>DATE</small> 6/23/05 <small>BY:</small> DEP	