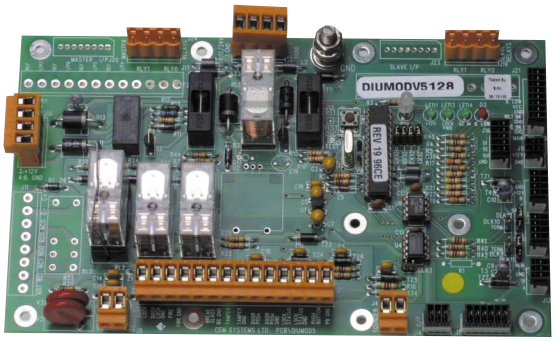
DIU Module



FEATURES

- Door Interface Electronics held on one board
- 1 double pole relay output and 1 optional auxiliary relay
- Backup battery for emergency power (optional)
- Fire alarm and break glass inputs for emergency door release
- Provides interface between door hardware and card reader
- Designed for ease of installation and maintenance using 2 part connectors throughout
- Compliant with EN55022 (Emissions) and EN55024 (Access Control Immunity)

OVERVIEW

The DIU Module (Door Interface Unit Module) is a low cost unit, designed to provide operational power to door locks/holders and local power for the card reader.

The DIU Module is normally mounted in a location adjacent to the reader and door hardware. Its components are housed on a single board and include switchable relay outputs for reader/door interfaces. Two interlinked outputs allow the use of a door strike and door holder, while an auxiliary relay is provided to meet additional user requirements. An optional backup battery is available in the event of power failure.

When a valid card is read, the reader signals the DIU Module to switch power from the door strike. When power is removed from the door strike, the door holder is energized automatically; when power is restored to the door strike, the door holder is automatically de-energized. An example of this function is when doors need to be held open for operational reasons.

PRODUCT HIGHLIGHTS

Interfaces

The DIU Module provides direct interfaces to the following devices:-

- Card Reader (both entry and exit units)
- Electric Door Strike
- Electric Door Holder (optional)
- Fire Alarm System (optional)
- Break Glass Unit (optional)
- Exit Push Button (optional)
- Inputs from alarm devices

Up to 8 inputs can be wired from alarm/status monitoring devices directly to the DIU Module. These devices are used to monitor door sensors, DIU tamper and battery alarms and fire/break glass emergency conditions.

The DIU Module has three interconnected relays when configured for fail-safe operation. Relay 1 is used for the door strike (and holder if fitted); the remaining relays are wired in series with relay 1 and are operated by the fire alarm and break glass unit inputs. If an input from the fire alarm system or break glass unit changes state, the power to the door strike is automatically dropped; this hardware-controlled facility ensures that the door opens in an emergency situation. Details of alarm conditions can be sent directly to the door controller or to the host, via the card reader, for central alarm notification.

Board Protection

The DC power supply to the DIU Module is filtered to protect against mains carried interference. The door strike and door holder outputs are protected against lock faults. Lock electronics should be installed as per manufacturers' instructions with diode or MOV protection, as required.

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TECHNICAL SPECIFICATIONS

Inputs

DIU Module Inputs

*	Door Position
*	Lock Status
*	Exit Push Button
	Break Glass Unit
	Fire Alarm System
	DIU Mains Fail
	DIU Battery Status
	DIU Tamper

* = 4 state tamper protected inputs (can also be used as general purpose inputs if primary function is not required)

Outputs

DIU	12V/24V to Door Strike/Door Holder 12V/24V to External Sounder (Suppression device: diode, MOV, etc. required at output device)

Door Strike

AC Voltage	30 V @ 5 Amp
Power consumption	10 watts + load of lock and reader

Optional connection for routing ENTRY and EXIT reader relay inputs

Note: When DIU Module inputs are used for door monitoring, reader inputs can be used as general-purpose inputs

Electrical

Door Interface Unit Module

Power Supply	40 watts
12V DIU Module	15V 3.5A (adjustable)
24V DIU Module	30V 1.7A (adjustable)

Battery Backup

12V 2.1Ah Operation	One lead acid battery
24V 2.1Ah Operation	Two lead acid batteries

Battery protected against deep discharge and overcharge

Note: Battery capacity required will depend on the load of the DIU Module

Mechanical

Board Dimensions (H x W x D)	120 x 200 x 40 mm (4.7 x 7.9 x 1.6in)

Environmental

Operational Temperature	All ratings and values are given for 25°C (77 °F)

Product Codes

DIU/000/001	DIU Module 12V
DIU/000/002	DIU Module 24V