



DIO 7940

Digital Input/Output Unit

I/NET[®] Seven

The 7940 digital input/output unit (DIO) resides on the sub-LAN connected to either a 7793 MCI, or 7798 I/SITE™ LAN. The 7940 can be one of a maximum of 64 subLAN devices connected to the same sub-LAN. It has the capability to monitor eight discrete contact inputs, and provides control of eight relay outputs for direct control of field devices.

The 7940 is a microprocessor-based control unit combining data processing, memory, communications and field inputs and outputs. This device can provide control and monitoring in stand-alone mode, or as part of a larger LAN host system. Battery-backed RAM. The battery backup is provided by an onboard nickel-cadmium (NiCad) battery. This battery maintains the database contents in the RAM in the event of a power loss. An additional 12 VDC, 4 Amp-hour (4 Ah) standby battery is an option with the 7940, providing up to eight hours of operation when primary power is lost.

Recommended enclosure: ENCL1414
(Refer to enclosures datasheet)

Recommended power supply: XFMR6
(Refer to transformers datasheet)

Installation guide for DIO7940: TCON125



TECHNICAL DATA

Communication Ports:

Sub-LAN port	
Baud Rate	9,600
Protocol	Proprietary
Transport	RS 485 multi-drop asynchronous, polling (open or closed loop)
Connector	2-part screw terminal

Network Wiring Requirements:

Length	4,000 feet per segment
Extended Length	25,000 feet with repeaters
Connector	2-part screw terminal
Cable Type	Belden 9841 or equivalent twisted pair shielded
Cable Size	<22AWG
Impedance	85 to 150 Ohm
Capacitance	>30pF/ft between conductors and >55pF/ft conductor to shield

Hardware Details

Processor	Seimens™ 80C535 operating at a clock speed of 11.0592 Mhz.
EPROM	32KB
Static RAM	8KB

Battery support	Onboard ni-cad, rechargeable, 30 days
-----------------------	---------------------------------------

Physical Details:

General	
Power	24Vac, ±10%, 50/60Hz, Requirements 1.2A max
Operating	32°F to 122°F without battery-backup 50°F to 100°F with lead-acid battery-backup
Temperature	Operating Humidity ... 10-90% RH, Non-condensing
Battery Backup Option	
Type	Gel cell, maintenance free, rechargeable
Capacity	4AH, 12Vdc for up to 8 hours of normal operation (excluding power for locking mechanism, which must be powered separately)
Charge Current	2A max (short circuit), .8A typical
Power Supply	115Vac or 250Vac transformer (50/60 Hz +15%), 75VA max
Power Failure	Standard, using internal Notification detection logic
Weight	5.5 lbs

TECHNICAL DATA

Baseplate Version

Size 14"L x 4"W x 1.75"D

Weight 2 lbs

Enclosure Version

Size 14."L x 14."W x 3.5"D

Weight 13 lbs

Weight with Battery ... 18.5 lbs

Input Details:

General

Standard Quantity Up to 8 supervised or
unsupervised, normally open
or normally closed

Tamper 1 dedicated

Power Loss 1 dedicated

Supervision 1K OHM, ¼ WATT, ± 5%
resistor, 4 states of
supervision: cut, short, open,
closed

Terminations Removable screw terminal
connectors

Digital Output Details:

General

Standard Quantity 8

Terminations Removable screw terminal
connectors

Modes Pulsed, tracking, latched

Type Form C relays, 1 A contact
rating @ 24Vac/dc. Relays
operate in pairs, one pair per
door. Door unlock timer
user-defined 0-255 seconds

LED Details:

Sub-LAN TX

Sub-LAN RX

Standby Power

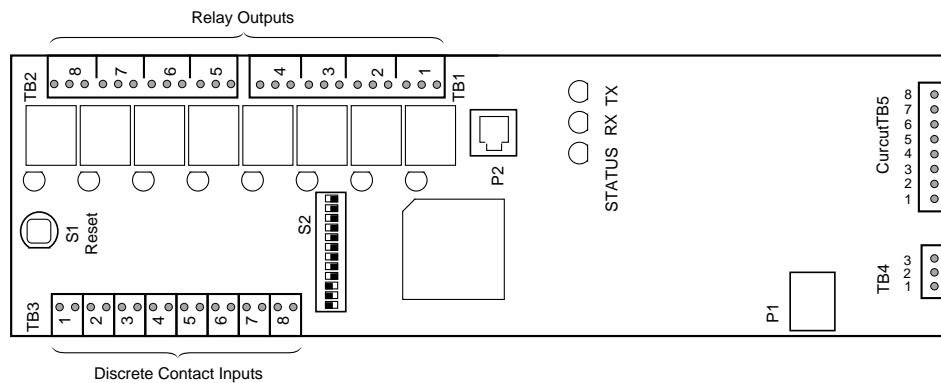
Normal Power

Each Output On/Off

Listings:

UL294 Access control system units

PART NUMBERS					
			DI	DO	RDR
BASE	7940	Digital input/output unit, no enclosure, no transformer, UL294	8	8	—
	79411	Digital input/output unit, not assembled enclosure, transformer	8	8	—
	79411U	Digital input/output unit, assembled, enclosure, transformer, tamper switch kit, battery-backup UL294	8	8	—
	7942	Digital input/output unit, assembled, enclosure, transformer, 120V	8	8	—
	7942U	Digital input/output unit, assembled, enclosure, transformer, 120V, tamper switch kit, battery-backup UL294	8	8	—
	7943	Digital input/output unit, assembled, enclosure, transformer 240V	8	8	—
			COMMENT		
	KITBAT	Battery backup kit	1x4AH, 12VDC battery		
	KITBB	Battery backup bracket kit	No batteries		
	KITSW	Cabinet tamper switch kit	Switch, wiring, screws		
	PLUGINTX	Plug-in transformer	120/24VAC		
	ENCL1414	Purpose-made enclosure	14.25"x14.25"x3.5"		
	XFMR6	Panel mounting transformer	120/24VAC 2.4A Sec		
	TCON125	7940 Installation guide	Download FOC		



7940 Controller Circuit Board

TAC and TAC products are trademarks and/or registered trademarks of TAC AB. All other trademarks mentioned belong to their respective owners. Copyright©2002 TAC AB. All rights reserved.