



# PCU 7756

I/NET<sup>®</sup> Seven

The 7756 process control unit (PCU) is designed for the close control and monitoring of precision environments. The controller has a very high point density that lends itself to the requirements of the close control industry.

This controller comes standard with 8x12 bit medium resolution universal inputs and 24x16 bit high resolution universal inputs. It also has 8 Form C SPDT relay outputs and 8 TRIAC (voltage sourcing) outputs as well as 8 12 bit high resolution 0-10V analog outputs

The 7716 does not support any I/O expansion, but there is provision for a serial expansion card.

PCUs reside on the I/NET<sup>®</sup> controller LAN and support the local connection of a PC and a modem for standalone or Auto-dial/Auto- answer applications.

The controller is supplied mounted on a baseplate for inclusion in a suitable enclosure and requires 24VAC 40VA power supply.

Recommended enclosure: Encl 1813  
(Refer to enclosures datasheet)

Recommended power supply: XFMR10  
(Refer to transformers datasheet)

Installation guide: TCON127



## TECHNICAL DATA

### Communication Ports:

#### Controller LAN

Baud Rate ..... 9,600 or 19,200 baud  
Protocol ..... Proprietary  
Transport ..... RS 485 SDLC token

Connector ..... 2-part screw terminal

#### Han-held Console Port

Baud Rate ..... 1,200 Baud  
Protocol ..... Proprietary  
Transport ..... TTL  
Connector ..... RJ-11

#### Direct Serial Port

Baud Rate ..... 1,200 to 9,600 baud  
Protocol ..... Proprietary  
Transport ..... RS 232 - 7801 tap or asynchronous modem

#### Expansion Serial Port

Baud Rate ..... 1,200 to 9,600 baud  
Protocol ..... Proprietary  
Transport ..... RS 232 synchronous or asynchronous modem, direct or 2-way dial SDLC (78061 or 78035 TAP)

### Autodial

Stored Numbers ..... 8  
Digits per Number ..... 31  
Supports ..... Phone, beeper, pager

### Network Wiring Requirements:

Length ..... 5,000 feet per segment  
Extended Length ..... 25,000 feet with repeaters  
Connector ..... 2-part screw terminal  
Cable Type ..... Belden 9184 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 ..... Zilog Z181  
EPROM ..... 32KB  
Static RAM ..... 256KB  
Non-volatile Memory .. 512Bytes

## TECHNICAL DATA

Battery Support .....	Onboard ni-cad, rechargeable, 300 hours
Firmware .....	Downloaded to battery-backed RAM
Clock/Calendar .....	Battery-backed

### Physical Details:

Baseplate .....	9.6"L x 11"W x 1.75"D
RS232 Expansion Board .....	4.3"L x 3.4"W
Operating Temperature .....	32°F to 122°F
Operating Humidity .....	10-90% RH, Non-condensing
Power Requirements .....	24Vac, ±10%, 50/60Hz, 40VA (max) Triac: up to 24Vac ±10%, 50/60 Hz, 48VA (max)

### Universal Input Details:

#### General

Standard Quantity .....	32
Connector .....	2-part screw terminal

#### Upper Board

Quantity .....	8
Accuracy .....	± 0.1% 0-5V ± 0.5% 0-20mA
Resolution .....	12 Bit (0.024%)
Filtering .....	Averaging (notch) and glitch filters
Transducer power .....	24Vdc 160mA

#### Lower Board

Quantity .....	24
Accuracy .....	± 0.2% 0-10V ± 0.12% 0-40mA
Resolution .....	16 Bit (0.0015%)
Filtering .....	Averaging (notch) and glitch filters
Transducer power .....	5Vdc / 24Vdc 480mA Max

#### Linear Analog Inputs

##### Upper Board

Analog .....	0-5Vdc, 0-20mA
LTS80 .....	Predefined curve

##### Lower Board

Analog .....	0-10Vdc, 0-40mA
10K Thermistor .....	Dale 1M002-C3

#### Nonlinear Analog Inputs

Points on curve .....	31
Curve point spacing ..	User-defined interpolation algorithm

#### Digital Inputs

##### Upper and Lower Board

Dry Contact .....	
Contact Excitation .....	5v @ 5ma

#### Pulsed Inputs

##### Upper Board

Pulse Input Rate .....	4 Hz
Input Duration .....	120 msec min

##### Lower Board

Pulse Input Rate .....	20 Hz
Input Duration .....	25 msec min

### Digital Output Details:

#### General

Standard Quantity .....	16
Connector .....	2-part screw terminal

#### Digital Outputs

##### Upper Board

Quantity .....	8
Style .....	Form C SPDT
Rating .....	.5 Amp resistive at 24Volts AC/DC
Overrides .....	On/Off/Auto switches onboard
Feedback .....	Tri state feedback
Modes .....	Latched, momentary, pulse width modulation

##### Lower Board

Quantity .....	8
Style .....	Triac voltage sourcing
Rating .....	.25 Amp at 24Vac
Overrides .....	On/Off/Auto switches onboard
Feedback .....	Tri state feedback
Modes .....	Latched, momentary, pulse width modulation

### Analog Output Details:

#### General

Standard Quantity .....	8
Connector .....	2-part screw terminal
Voltage Range .....	0 – 10Vdc @ 5mA
Accuracy .....	1% typical, 3% min
Resolution .....	12 Bit

### Options:

#### Communications

RS 232 EXP .....	Additional serial connection with synchronous communication capability
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### LED Details:

LANTX	
LANRX	
RS232TX	
RS232RX	
Hand-held TX	
Hand-held RX	
LAN Reconfig	
Alarm	
Low Power	
Outputs Disabled	
Each Output On/Off/Auto	

### Listings:

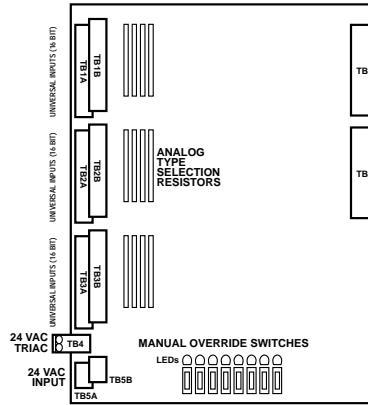
UL916 .....	Energy management equipment
UL864 UUKL .....	Smoke control and smoke management

#### CE Marking .....

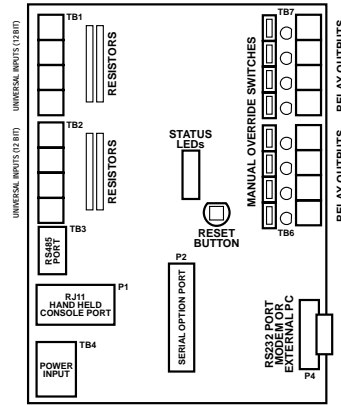
EN61000-4-2 .....	Electro static discharge
EN61000-4-3 .....	Radiated RF
EN61000-4-4 .....	EFT
EN61000-4-5 .....	Surge tested
EN61000-4-6 .....	Conducted RF
EN61000-4-8 .....	Magnetic field
EN61000-4-11 .....	Power quality

PART NUMBERS							
		UI	AI	DI	AO	DO TRIAC	DO FORMC
BASE	7756	32	—	—	8	8	8
	7756-C						
	7756-U8						

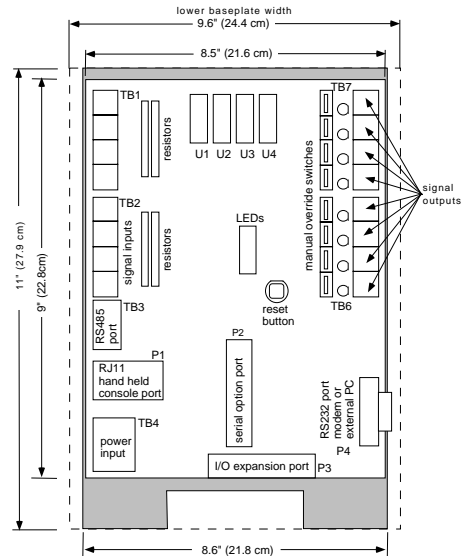
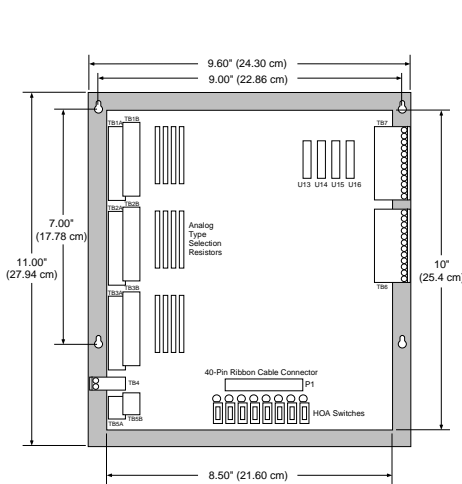
Part numbers ending in -C are Ce Marked.  
 Part numbers ending in -U8 are UL864 UUKL Listed.



LOWER I/O BOARD



UPPER I/O BOARD



RS 232 Expansion Card

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