



# PointScan/127™

## 8-Channel High-Speed Counter/Encoder Module



### Features

- Eight independent and programmable 32-bit counters
- Count rates up to 50 kHz max
- Measure frequency with periods from 10 ms to 60 sec
- Derive position directly from encoders
- Differential (isolated) inputs for higher noise immunity
- Support for gated inputs and software resets
- Ethernet and RS-485 ports with 1200 Vrms isolation



The PointScan/127™ features eight 32-bit counter channels complimented by eight gate inputs and a software reset. Each channel can be configured to operate in one of several programmable modes resulting in a highly versatile general-purpose counter module.

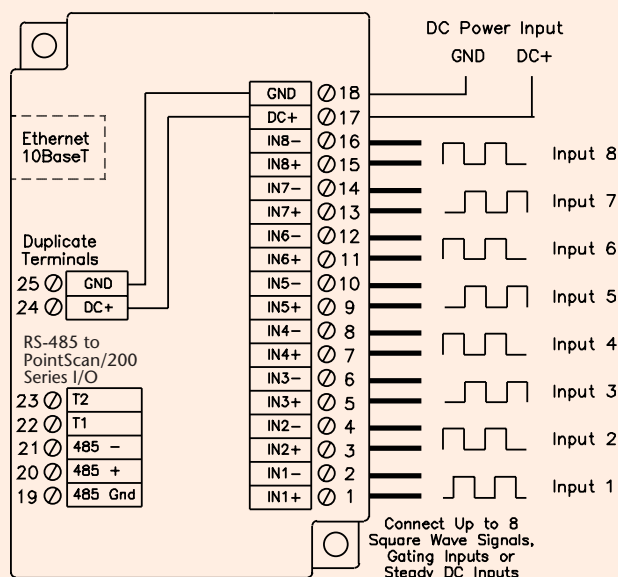
*The PointScan/127 supports multiple general-purpose counting modes plus position data from encoders*

**Modes of Operation. Count Mode:** count values are reported in 32-bit analog input registers with no need to cascade channels. All states of the counter inputs are also reported as digital (10 to 30 VDC) inputs. **Rate (Frequency) Mode:** pulse rates up to 50 kHz (max) are supported, ideally suited for measuring flow rate and conveyor speed. **Position (Encoder) Mode:** read pulses directly from either quadrature or incremental encoders without the need for external decoder circuits.

**Network Isolation.** The PointScan/127 has a single Ethernet (10BaseT) port that is isolated from the PC by 1200 Vrms, and a single RS-485 port that is also isolated by 1200 Vrms. This isolation protects PCs from damage caused by high voltages and protects the system from ground loops. The result is more reliable measurements in high-voltage environments.

**Field I/O Connection.** The PointScan/127 module is supplied with a terminal base where differential inputs are supported and where twisted wire pairs are recommended in order to provide the best noise immunity.

### PointScan/127 Wiring Diagram





# PointScan/127™

## Specifications & Ordering Information

### Specifications

**Number of Counters:** 8\*

**Count Mode Performance**  
**Guaranteed Count Rate:** 50 kHz  
**Count Resolution:** 32 bits

**Rate (Frequency) Mode Performance**  
**Max Input Rate:** 50,000 per sec  
**Shortest Measurement Period:** 10 ms\*\*  
**Longest Measurement Period:** 60 sec

**Position Mode Performance**  
**Max Position Axis (Two Channels per Axis):** 4  
**Max Pulses per Second:** 25,000  
**Max Quadrature States:** 100,000 per second  
**Position Resolution:** 32 bits

**Input Performance**  
**Guaranteed Input Voltage:** 4V  
**Max Count Input Voltage:** 30V  
**Guaranteed Off Input Voltage:** 1.5V  
**Nominal Count Input Current:** 8 mA

**Ethernet Communications**  
**Number of Ethernet I/O Nodes:** 16,000  
**Ethernet Port on Each Module:** 10BaseT@10Mbps  
**Protocols Supported:** TCP/IP, MODBUS ASCII/RTU  
**Number of I/O per Node:** 256  
**Required Supply Voltage:** 10 to 30 VDC (0.75W typical)

**Operating Temperature Range:** -30° to +70°C  
**Storage Temperature Range:** -40° to +85°C  
**Flammability (Module Plastic):** UL 94V-0 materials  
**Electrical Safety:** UL 508, CSA C22.2/14; EN61010-1 (IEC1010), CE

**EMI Emissions:** FCC part 15, ICES-003, Class A; EN55022, CE

**EMC Immunity:** EN50082-1 (IEC801-2, 3, 4) CE

**Surge Withstand:** IEEE-472 (ANSI C37.90)

**Vibration:** IEC68-2-6

**Hazardous Locations:** UL1604, CSA C22.2/213-M1987, (Class I, Div 2, Groups A, B, C, D), EN50021 (zone 2)

### Ordering Information

Description	Part No.
8-channel high-speed counter/encoder module	PointScan/127
Optional hardcopy PointScan/100 series user's manual	1085-0901

For complete information on accessories and cables, visit [www.iotech.com/acc](http://www.iotech.com/acc)

Related Products	
<b>Hardware</b>	
PointScan/440	p. 265
PointScan/443	p. 268
<b>Software</b>	
KEPServerEX	p. 271
KEPServerEX Lite	p. 271

\* A pair of counter channels can be combined to make a 32-bit up/down counter or accumulator  
 \*\* I/O register update time does not include external communications