

# PSxxx-270 Wide Angle Pulse Sensor

## 2D Laser Scanner



- Long range up to 250 m
- Wide scan angle up to 270°
- Small spot size
- High lateral resolution
- Fast scan rate
- Very high accuracy in range and angle
- Tough and robust housing, rate IP67
- Multi-echo evaluation technology
- Operating with rain and snow
- Real time Ethernet

### PSxxx-270 Applications

Triple-IN PSxxx-270 is the sensor for who wants to see wide with rapidity and efficiency, obtaining accurate and detailed 3D data. PSxxx-270 is suitable for both indoor and outdoor applications, ensuring also goals achievement for existing systems integration.

**Collision avoidance, security, profile detection, crane control, monitoring, surveying and counting** in different fields are only some of the most suitable applications.

## PSxxx-270 Technical Data

Sensor	PS250-270	PS150-270
<b>Order No.</b>	4100	4000
<b>WORKING RANGE</b>		
Maximum Range @ R = 100%, Lambertian Reflector (m)	<b>200</b>	<b>160</b>
Maximum Range @ R = 10%, Lambertian Reflector (m)	65	50
Minimum Range (m)	2	0.8
<b>ACCURACY DATA</b>		
Resolution (mm)		1
Repeatability 1 $\sigma$ @ strong signal (mm)		<b>4</b>
Repeatability 1 $\sigma$ @ weak signal (mm)		20
Accuracy (systematic error) (mm)		$\leq 4$
<b>SPOT PROPERTIES</b>		
Beam Divergence ( $^{\circ}$ )		<b>0.09</b>
Spot close to the sensor window (mm)		12 x 16
Focusing distance (m)		45
<b>SCAN AND PROFILE PROPERTIES</b>		
Maximum Scan and Profile Angle		270 $^{\circ}$ - programmable
Scanning Mechanism		Rotating Mirror
Maximum Scanning Duty Cycle		75%
<b>OPERATIONAL MODES</b>		
<b>Normal Mode</b>		
Beam Scan Angle Step ( $^{\circ}$ )		0.09
Measurements in 270 $^{\circ}$ Scan		3000
Scan Rate (Hz)		10
Scan Time @ 270 $^{\circ}$ Scan (ms)		75
<b>Fast Mode</b>		
Beam Scan Angle Step ( $^{\circ}$ )		0.18
Measurements in 270 $^{\circ}$ Scan		1500
Scan Rate (Hz)		20
<b>Fine Mode</b>		
Beam Scan Angle Step ( $^{\circ}$ )		0.045
Measurements in 270 $^{\circ}$ Scan		6000 interlaced
Scan Rate (Hz)		5
Scan Time @ 270 $^{\circ}$ Scan (ms)		75
<b>MULTI-ECHO EVALUATION</b>		
Echoes evaluated		4
Selectable echoes		First or last
<b>LASER DATA</b>		
<b>Measurement Laser</b>		
Measurement Laser Type		Pulse Laser Diode
Wave Length (nm)		905
Safety Class; EN 60825-1; 94,96,01	1	1
Measurement or Pulse Rate (kHz)		40

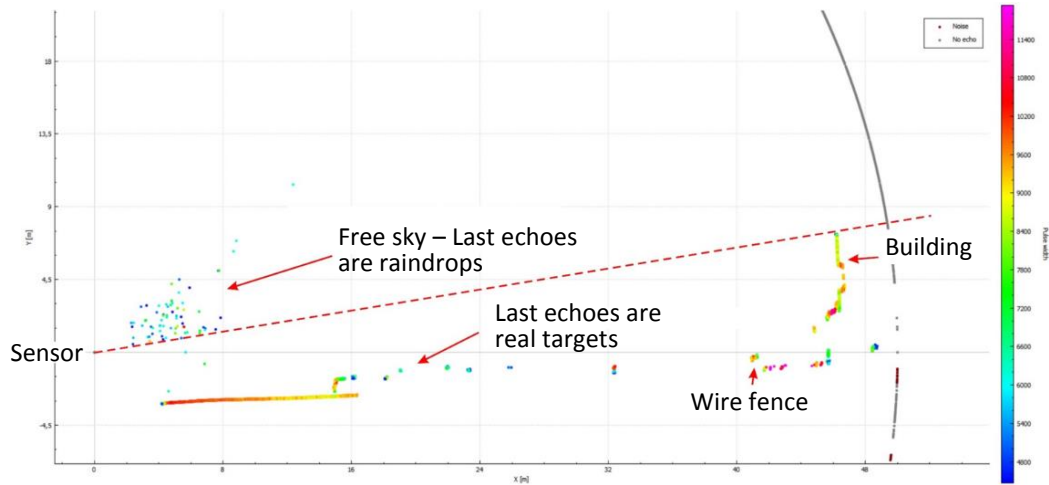
Sensor	PS250-270	PS150-270
<b>INTERFACES</b>		
Ethernet		UDP 100 Mb/s
RS232 for Sensor Programming		115 kBaud, 8n1
Discrete Switching Outputs		4 Solid State Relays
Discrete Switching Inputs		2 Digital Inputs
<b>POWER SUPPLY</b>		
Power Voltage		24 VDC ± 5 VDC
Power Consumption (W)		8
Power Consumption with optional Internal Heater (W)		30
Start-up Time (s)		< 20
<b>SENSOR PROTECTION</b>		
Ingress Protection		IP67
Operating Temperature Range		-10°C to +50°C
Temperature Range with optional Heater		-30°C to +50°C
Temperature Range for Storage		-30°C to + 80°C
Enclosure		Aluminum, Die Cast
Enclosure Finish		Powder coated
Front Screen		Black plastic sheet
Function in strong Sunshine		Ambient light control
<b>DIMENSIONS &amp; WEIGHT</b>		
Height x Width x Length (mm)		260 x 123.6 x 130
Weight (kg)		2.6

Options	PS250-270	PS150-270
Focusing Distance (m)		From 3 to 45
Temperature range for Internal Heater		T ≥ -30°C
External Encoder Inputs		Incremental Encoder; A, B
Increased Scan Rate		yes

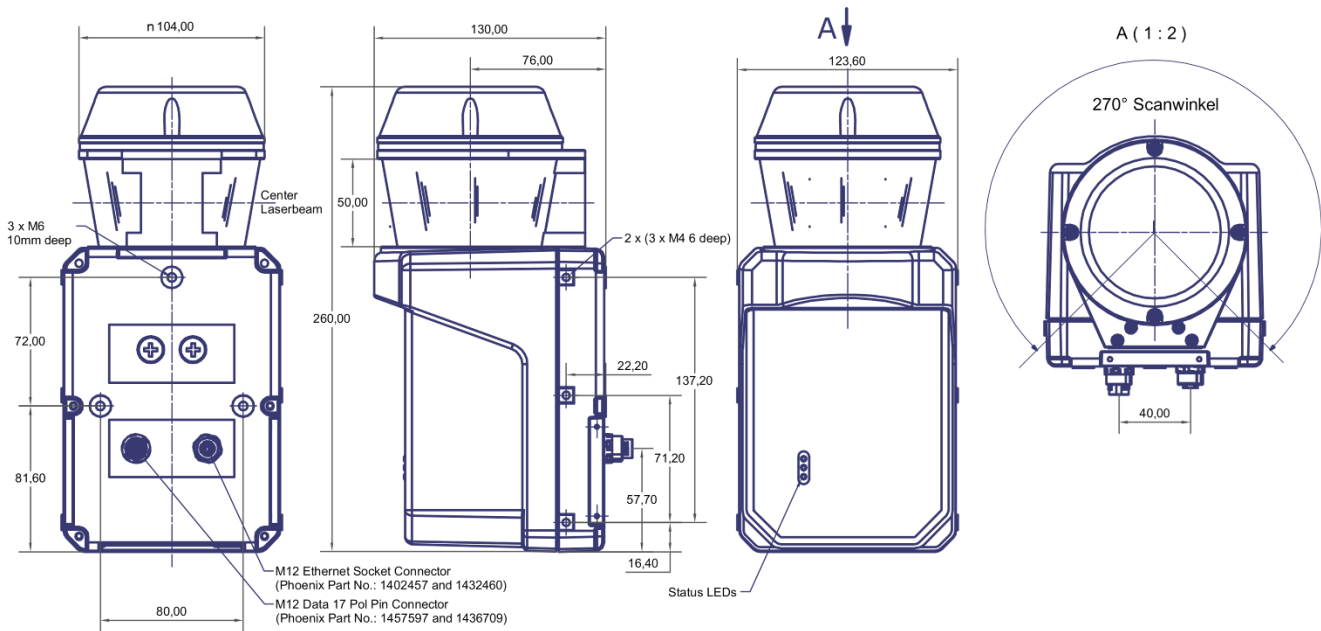
## PSxxx-270 Accessories

Accessories
Protection Hood
Holder
Tribrach with Adaptor
220/230 VAC - 24 VDC POE Module
Data Cable, 5 m, 90°
Serial Interface Cable, 5 m, 90°
Beam Finder

## PSxxx-270 Multi-echoes Evaluation



## PSxxx-270 Dimensional Drawings



**Triple-IN GmbH**  
Experts in Laser Distance Measurements

Poppenbütteler Bogen 64  
D-22399 Hamburg  
Germany  
Voice: 0049 (0) 40 500 91998  
Fax: 0049 (0) 40 527 34933

[www.triple-in.de](http://www.triple-in.de)