

# SP SERIES

SPLASHPROOF LOW PROFILE METERS

A new series of digital panel meters combining a low profile with miniature "component style" body. The SP Series can provide splash-proof protection, when the supplied silicon seal is fitted.



Module shown actual size

DC Voltmeter

Stock No. **SP 100**

- 3½ digit LED voltmeter
- 9.4mm (0.37") digit height
- Auto-zero, auto-polarity
- Programmable decimal points
- 200mV full scale reading
- Display blanking facility
- Compatible with other manufacturer's modules
- DIL connection

• Digital hold version:

**SP 101**



Module shown actual size

DC Voltmeter

Stock No. **SP 200**

- 3½ digit LCD voltmeter
- 9.75mm (0.38") digit height
- Low battery warning
- Auto-zero, auto-polarity
- Programmable decimal points
- 200mV full scale reading
- LED backlighting
- Compatible with other manufacturer's modules
- DIL connection



DC Voltmeter

Stock No. **SP 300**

- 3½ digit LED voltmeter
- 9.4mm (0.37") digit height
- Auto-zero, auto-polarity
- Programmable decimal points
- 200mV full scale reading
- SIL connection



DC Voltmeter

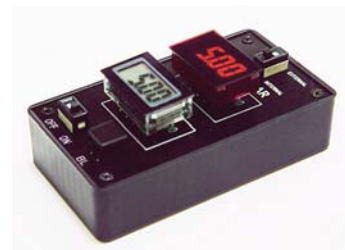
Stock No. **SP 400**

- 3½ digit LCD voltmeter
- 9.75mm (0.38") digit height
- Low battery warning
- Auto-zero, auto-polarity
- Programmable decimal points
- 200mV full scale reading
- LED backlighting
- SIL connection

• Blue LED backlit version:



**SP 400-BLUE**



Evaluation Pack

Stock No. **SP EVAL**

- Complete evaluation system
- Accelerates system development
- SP 300 & SP 400 included
- Battery Powered (9V PP3 supplied)

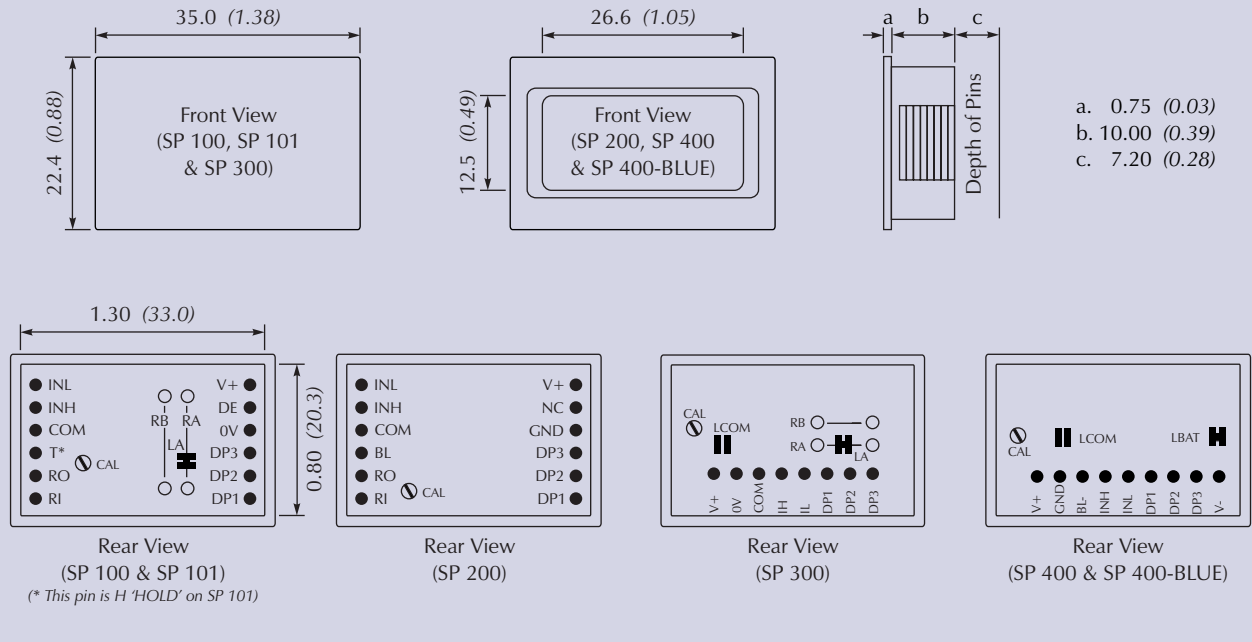
FOR A FULL PRODUCT DATA SHEET, PRICING AND ON-LINE STORE VISIT:

[www.lascarelectronics.com](http://www.lascarelectronics.com)



## Mechanical Specification

All dimensions in inches (mm)

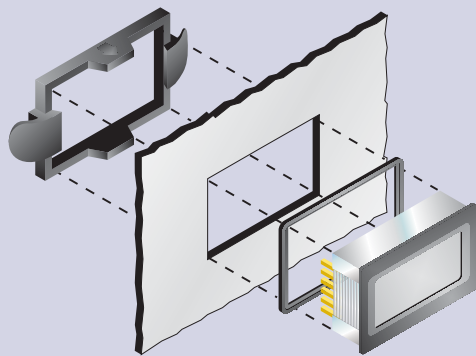


Dimensions	SP 100 (101)		SP 200		SP 300		SP 400 (400-BLUE)	
Digit height	9.4mm	0.37"	9.75mm	0.38"	9.4mm	0.37"	9.75mm	0.38"
Panel cut-out (W x H)	34.0 x 21.3mm	1.34" x 0.84"	34.0 x 21.3mm	1.34" x 0.84"	34.0 x 21.3mm	1.34" x 0.84"	34.0 x 21.3mm	1.34" x 0.84"
Bezel (W x H)	35.0 x 22.4mm	1.38" x 0.88"	35.0 x 22.4mm	1.38" x 0.88"	35.0 x 22.4mm	1.38" x 0.88"	35.0 x 22.4mm	1.38" x 0.88"

Specification	SP 100 (101)		SP 200		SP 300		SP 400 (400-BLUE)	
Accuracy (overall error)*	0.1% ( $\pm 1$ count) (typ.)		0.1% ( $\pm 1$ count) (typ.)		0.1% ( $\pm 1$ count) (typ.)		0.1% ( $\pm 1$ count) (typ.)	
Full scale reading	$\pm 200$ mV d.c.		$\pm 200$ mV d.c.		$\pm 200$ mV d.c.		$\pm 200$ mV d.c.	
Resolution	100 $\mu$ V		100 $\mu$ V		100 $\mu$ V		100 $\mu$ V	
Sample rate	2.5 samples/sec. (typ.)		2.5 samples/sec. (typ.)		2.5 samples/sec. (typ.)		2.5 samples/sec. (typ.)	
Operating temperature range	0°C to 50°C		0°C to 50°C		0°C to 50°C		0°C to 50°C	
Supply voltage	4.75V to 5.25V d.c.		3.5V to 5.25V d.c.		4.75V to 5.25V d.c.		3.5V to 7.0V d.c. (V+ to GND) or 7.5V to 14V d.c. (V+ to V-)	
Supply current	50 (80)mA (typ.) (DE connected to V+)		350 $\mu$ A (typ.)		50mA (typ.)		350 $\mu$ A (typ.)	
	0.4 (1.0)mA (typ.) (DE connected to 0V)		-		-		-	
Backlight current @ 5V d.c.	-		40mA (typ.)		-		40mA (15mA @ 6.5V) (typ.)	
Input leakage current (V <sub>in</sub> =0V)	1.0pA (20pA) (typ.)		1pA (typ.)		1pA (typ.)		1pA (typ.)	

\* To ensure maximum accuracy, re-calibrate periodically.

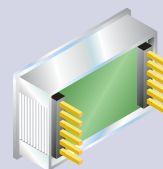
## Mounting Method



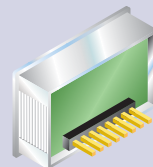
Panel cut-out: 34.0 x 21.3mm  
1.34" x 0.84"

Panel thickness: 1.0 to 3.0mm  
0.04" to 0.12"

## Connection



DIL - Dual in Line  
(SP 100, SP 101  
& SP 200)



SIL - Single in Line  
(SP 300, SP 400  
& SP 400-BLUE)

Connector Pitch: 0.1"  
2.54mm

Please note that all specifications are correct at time of print. The Company reserves the right to change any specification, typographical, clerical or other error or omission without any liability on the part of the company.

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