



## SCE900 SERIES HIGH PERFORMANCE DIGITAL SERVO DRIVES

### No Other Drive Offers Higher Performance. No Other Drive Offers Broader Functionality.

The Pacific Scientific SCE900 Series family of all-digital servo drives are designed to help you get the most out of your equipment. Offering the highest performance and broadest functionality available, our advanced line includes four models rated for high voltage operation (180-528V ac motor bus input). And provides a range from 5 to 27 kW peak output power at 480V.

With CE-marking and high-voltage capability, our platform addresses a world-wide range of applications. Reliable, modular and flexible, these innovative drives help you remain competitive, increase operator efficiency and reduce engineering time:

- Digital resolver-to-digital conversion provides better control, easier set up, more accurate positioning and makes drift a thing of the past.
- Signature current control gives you smoother low-speed operation without sacrificing high-speed performance.
- Autotuning optimizes drive performance based on specific motor characteristics.

- IGBT PWM Power stage minimizes audible noise and leads to greater efficiency.
- Seven-segment status display provides diagnostic and fault codes.
- Modular communications cards enable multiple communication options, including open SERCOS interface. And you can choose between digital and analog I/O.

All of these features are part of Pacific Scientific's commitment to offering the highest performance products, backed by unmatched customer support and quality, with an ability to offer custom products to fit your unique applications.

## THE BASIC DRIVE

The Pacific Scientific SCE900 Series is a family of all-digital servo drives that use a single DSP to close the current, velocity and position loops. All system and application parameters are set digitally to ensure repeatability and eliminate drift. The SCE900 Series is available in five power levels, all with integral power supplies and shunt regulators. The base drive includes several command interface features. A standard  $\pm 10V$  analog interface commands motor torque or velocity. Step/direction and step up/step down stepper interfaces allow velocity and position commands.



## OC930 SERIAL INTERFACE OPTION CARD

- RS-232/485 serial interface
- Access drive from a PC during set up
- Facilitates all-digital set up of current, velocity and position loops
- Serves as a vehicle for field firmware upgrades
- Data can be stored on an option card or in the drive

## OPTION CARDS FOR BROAD FUNCTIONALITY

A modular design increases functionality and the open architecture ensures that your investment can be upgraded as additional functional enhancements are added.

The basic drive, with its impressive features, accepts various option cards to increase its functionality. The good news is you pay only for what you need by selecting the appropriate card.

## OC940 SERIAL INTERFACE OPTION CARD

- SERCOS interface
- The only open-architecture network specifically designed for motion control
- Synchronous multi-axis protocol
- Fiber optic connection
- Speeds and simplifies connections
- Eliminates complex wiring
- Immune to external electrical noise
- Cable lengths up to 100m between drive and controller possible
- Eight optically-isolated inputs
- Eight optically-isolated outputs
- Torque, velocity and position servo loops are closed locally at the drive



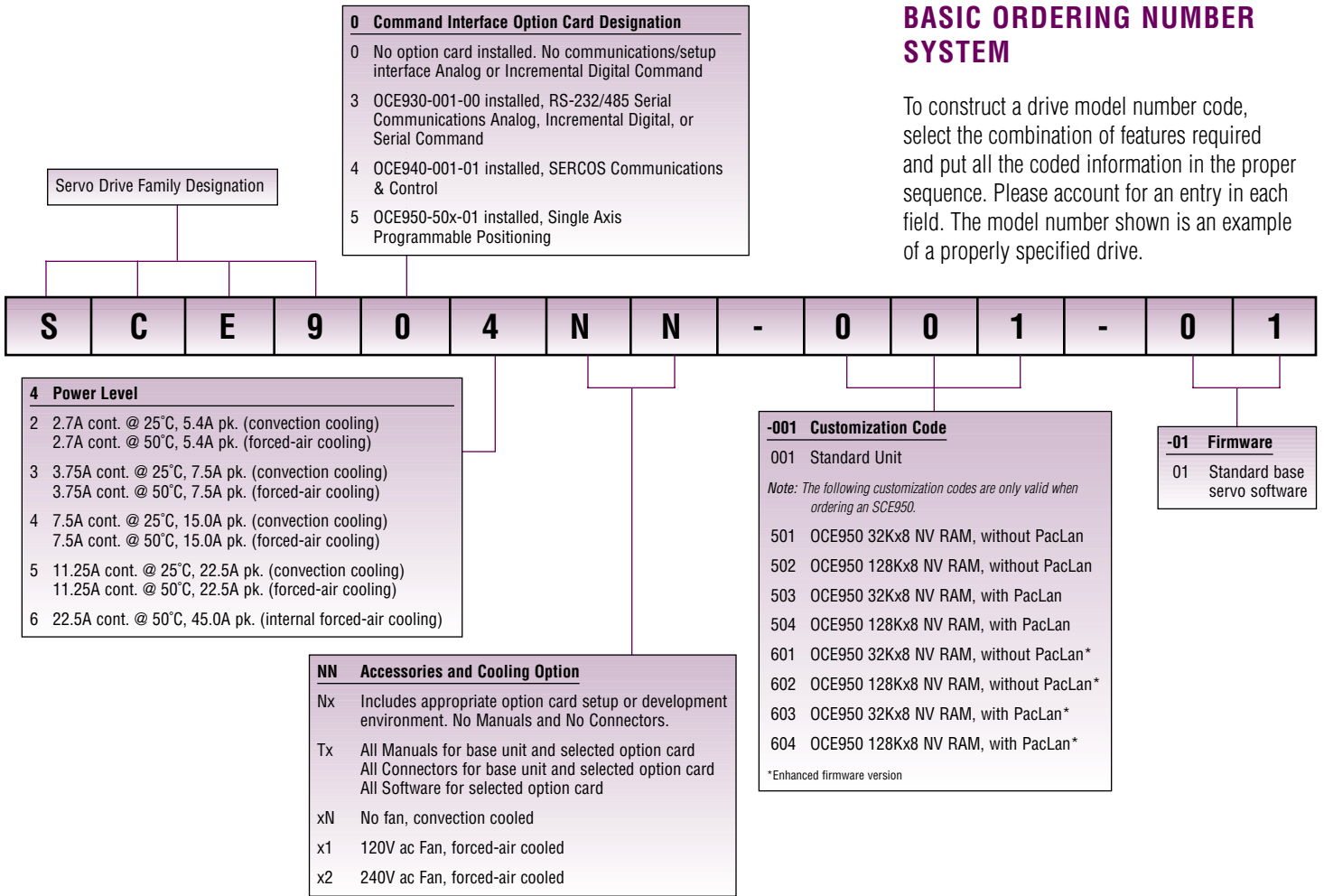
## OC950 PROGRAMMABLE SINGLE AXIS POSITION CONTROL OPTION CARD

- Electronic cam profiling
- Popular PLC and HMI protocols like Modbus and A-B DF1 available
- Eight software-programmable limit switches
- PC connectivity:
  - DDE Servers for Windows NT<sup>®</sup>
  - Communications DDLs for Windows<sup>®</sup> 95, Win 98, Win NT
- Powerful interactive diagnostics
- ServoBASIC Plus<sup>™</sup> programming software
- Full math capabilities
- High speed interrupt-driven software
- 21 programmable and configurable I/O options — connects with Opto 22
- Optional PacLAN<sup>™</sup> local area network
- Connect up to 255 drives
- 2.5 Mbaud ArcNet compatible



## BASIC ORDERING NUMBER SYSTEM

To construct a drive model number code, select the combination of features required and put all the coded information in the proper sequence. Please account for an entry in each field. The model number shown is an example of a properly specified drive.



## DRIVE / MOTOR COMBINATIONS

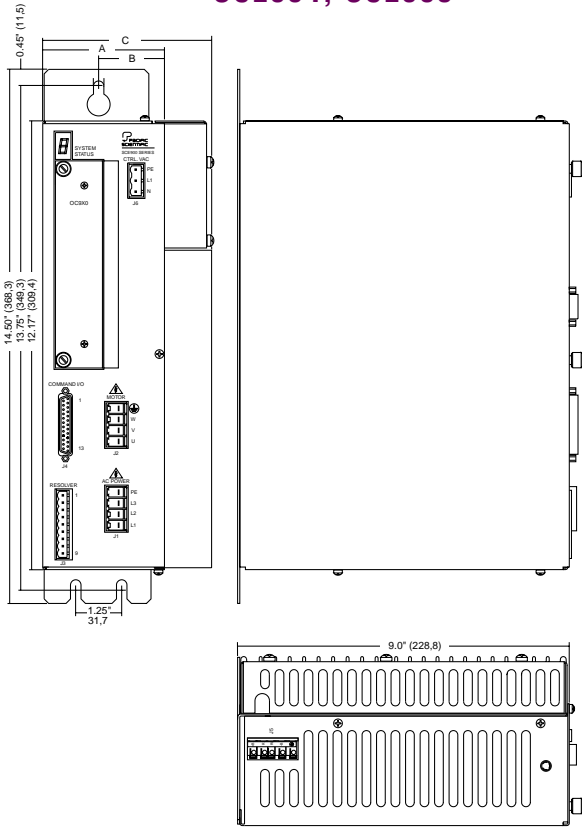


DRIVES	DRIVE AMPS		MOTORS					
	Cont	Peak	SENTRY S20	PMA2XX	SENTRY S30	PMA4XX	PMA5XX	PMA6XX
<b>SCE902</b>	<b>2.7</b>	<b>5.4</b>	S21H S22H S24G	PMA21B PMA22B	S31H S32G S33G S34G	PMA42M		
<b>SCE903</b>	<b>3.75</b>	<b>7.5</b>			S33A S34A	PMA42M PMA43N PMA44N PMA45N		
<b>SCE904</b>	<b>7.5</b>	<b>15</b>				PMA43P PMA44P PMA45Q	PMA53Q PMA54Q PMA55Q	
<b>SCE905</b>	<b>11.25</b>	<b>22.5</b>					PMA53R PMA54R PMA55R PMA57R	PMA65R PMA66R
<b>SCE906</b>	<b>22.5</b>	<b>33.75</b>						PMA65S PMA66S PMA67S PMA69S

This table contains recommended pairings of Pacific Scientific SCE900 Drives with PMA and S series brushless servomotors. In matching the SCE900 family with its brushless servomotors, Pacific Scientific engineers analyzed real-world

motion control applications and tailored the windings for maximum efficiency. The combination of Pacific Scientific motors and drives results in higher performance and efficiency, delivering more — from .5 to 48.5 Nm — continuous usable torque in your application.

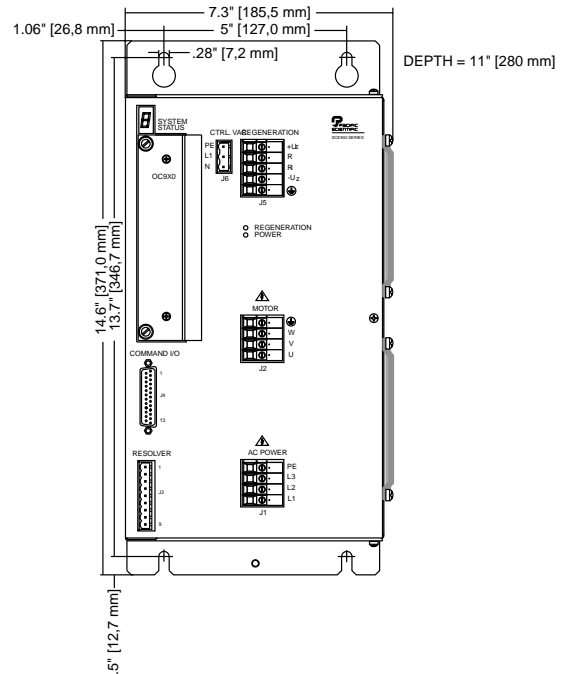
## DIMENSIONS: SCE902, SCE903, SCE904, SCE905



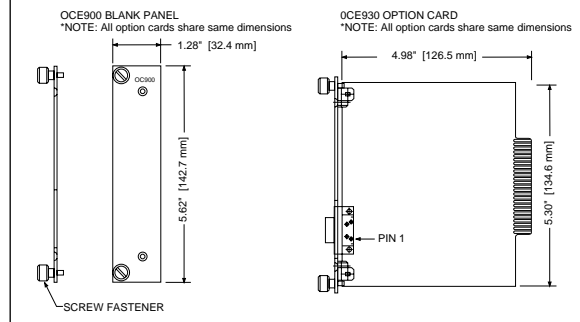
Model	A	B	C
SCE902	2.25" [57.2 mm]	1.12" [28.6 mm]	N/A
SCE903	3.31" [84.0 mm]	1.79" [45.5 mm]	3.35" [85.0 mm]
SCE904	3.31" [84.0 mm]	1.79" [45.5 mm]	4.6" [116.5 mm]
SCE905	3.31" [84.0 mm]	1.79" [45.5 mm]	6.3" [159.5 mm]

## DIMENSIONS: SCE906

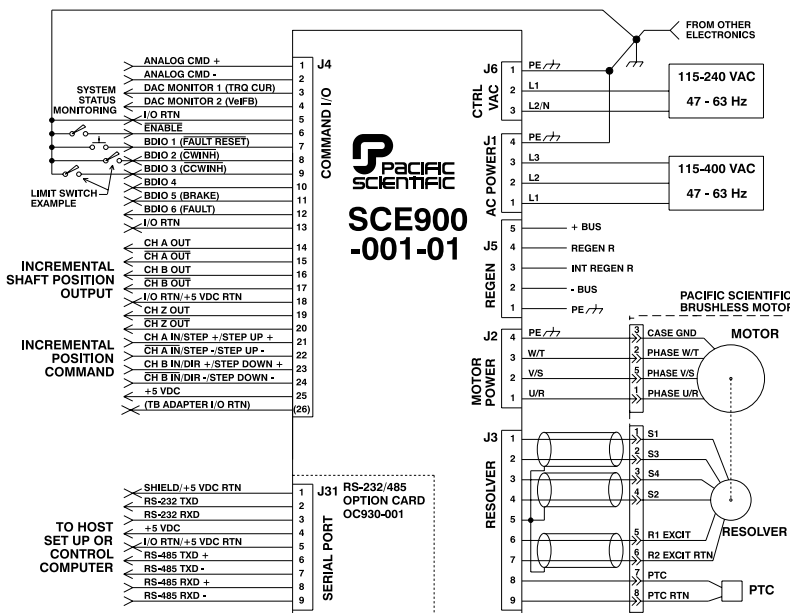
SCE906  
in. (metric dimensions for ref. only)



## DIMENSIONS: OPTION CARDS



## ELECTRICAL CONNECTIONS



HIGH PERFORMANCE MOTORS & DRIVES

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Locations:  
Rockford, IL      Ennis, Ireland  
Wilmington, MA      Frankfurt, Germany  
Broomfield, CO

To learn more about Pacific Scientific and our solutions for your motion control needs, call 1-888-4-PACSCI or visit our website at [www.pacsci.com](http://www.pacsci.com).

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