

Product Features & Benefits

- Converts Bridge sensor output into digital signal.
- Miniature package that fits into sensor body.
- Ideal for single or multiple sensor systems.
- Eliminates the need for external signal conditioner and interconnections.
- Up to 500 readings/second.
- Software tools included.

Applications

- Aerospace
- Industrial Weighing
- Marine
- Automotive

Description

Digital Strain Gage Modules (DCell) are compact, high-performance strain gage digital signal conditioner modules. They are aimed at applications which require high measurement accuracy, resolution, and stability. The internal signal conditioner reduces interference in noisy environments and allows for longer cable runs. The module and sensor may be powered by a typical DC power supply and communicates using standard or custom bus communications and protocols. Outputs include RS-485 and CAN. Available protocols include ASCII, CAN, and Modbus.

The modules may be mounted inside of the Strainsert sensor body in either a single bridge, dual bridge, or bi-axial configuration.

Software tools are included for quick and convenient interfacing with device configuration, calibration, datalogging, and recording. A standard Windows DLL is provided for creating custom applications.

Contact Strainsert Engineering for assistance with custom solutions, systems integration, or software development.

Specifications		Units
Internal Resolution	16 Million	counts / divisions
Resolution at 1Hz (noise stable) over 100s	200,000	
Resolution at 10Hz (noise stable) over 100s	120,000	
Resolution at 100Hz (noise stable) over 100s	50,000	
Resolution at 500Hz (noise stable) over 100s	18,000	
Signal Filter	Dynamic recursive type - user programmable	
Power Supply voltage	5.8 to 18 (12, recommended)	VDC
Power Supply ripple	100, maximum	mVAC PK-to-PK
Power Supply current	60, maximum (45, typical max. with 350 Ohm Bridge)	mA
Power Supply wattage	450, typical with 350 Ohm Bridge	mW
Temperature Range, Operating	-40 to 85 (-40 to 185)	°C (°F)
Temperature Range, Storage	-40 to 85 (-40 to 185)	
Humidity	0 to 95	%RH
Data transmission rate, RS485	2,400 - 230,400	bps
Data transmission rate, CAN	20K - 1M	
Data cable length, RS485 & CAN	1,000 (3,280), maximum (Dependent on Data transmission rate and number of sensors)	meters (feet)

DCell module mounting and interconnection

Mounting, interconnection, and environmental protection of DCell modules are made within the sensor body and are completed by Strainsert during the manufacturing process. Connections to the assembly may be made using either standard or custom connections.

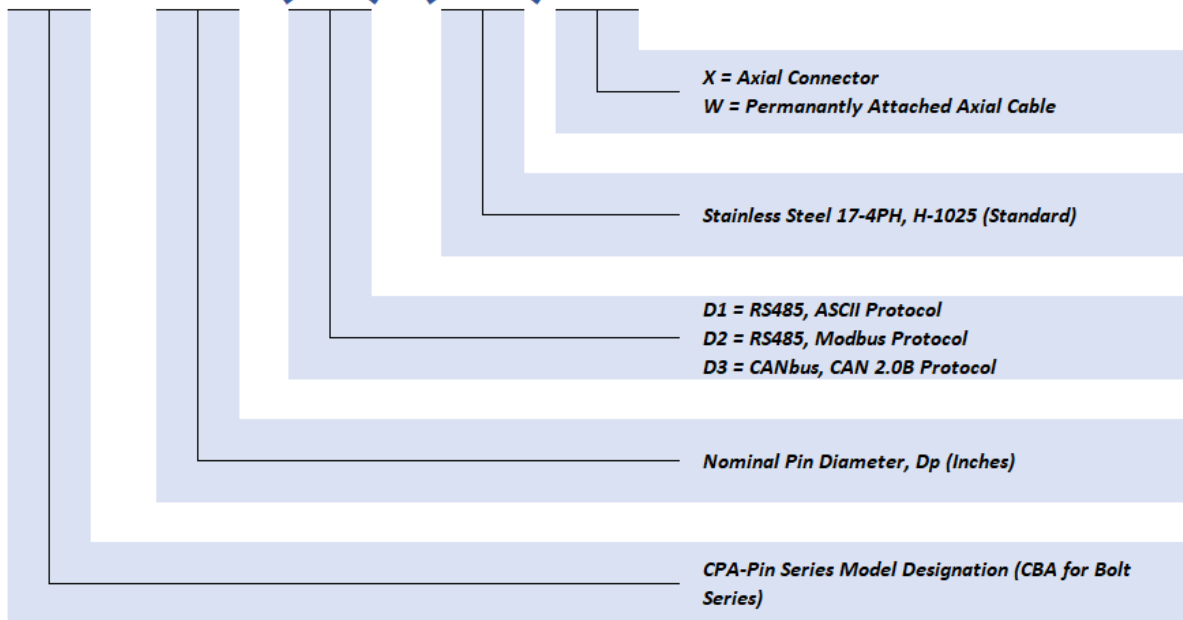
Digital Strain Gage Module (DCell) Option Codes		
Option Code	Output	Protocol
D1	RS485	ASCII
D2	RS485	Modbus
D3	CAN	CAN 2.0B

Standard Cable Connections			
Wire Color	Connector Pin	CAN	RS485
Red	A	V+	V+
Green	B	CAN L	RS485-
White	C	CAN H	RS485+
Black	D	V-	V-
N/A	SH	Shield	Shield

ORDERING EXAMPLE

Standard

CPA-2.5 (D1) (SS) X



ORDERING EXAMPLE

Custom

(CPD1-FB) QXXXXX

