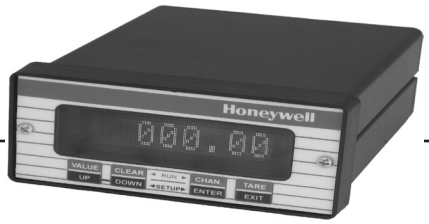
Honeywell

Model SC500



Programmable Single-Channel Transducer Indicator/Conditioner

DESCRIPTION

The SC series models are self-calibrating microprocessor-based transducer signal conditioners when used with sig mod equipped transducers. Indicators are available with several different types of input channels and output channels. When used with unamplified strain gage transducers that have the signature calibration module installed, these instruments will completely self calibrate zero, span, decimal point, and engineering units automatically.

Input channels are available for a variety of transducers. Each input channel includes an excitation power supply and either an isolated voltage (optional) or isolated current analog output (optional).

- Unamplified pressure or load
- Pressure or load with internal voltage amplifiers
- Pressure or load with internal or external two-wire current amplifiers
- ac/ac displacement transducer
- dc/dc displacement transducer

Available output channels for the SC500 include:

- Contact relays for the two form C or three form A optional limits
- Isolated digital-to-analog voltage (±5 Vdc or 0 Vdc to 10 Vdc)

In addition to the physical input and output channels, up to three virtual channels can be configured to assist in many potential applications.

FEATURES

- Choice of transducer inputs
- Small 1/8 DIN form factor
- Automatic setup, calibration via sig cal
- Shunt-cal, mV/V or known load calibration
- Peak/valley capture
- Optional analog output and RS-232/RS-485
- Field selectable frequency response (up to 250 Hz) and calibration
- Up to three virtual channels (optional)
- CE approved

Model SC500

PHYSICAL SPECIFICATIONS

Characteristic	Measure
Form factor	1/8 DIN
Case material	Aluminum

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	5 °C to 40 °C [40 °F to 105 °F]
Temperature, storage	-30 °C to 90 °C [-40 °F to 195 °F]

DISPLAY SPECIFICATIONS

Characteristic	Measure
Display type	Vacuum fluorescent
Numeric display format	+999999 to -999999 (0, 1, 2, 3, 4, 5 decimal places)
Digit size, normal mode (H x W)	5 mm x 2,5 mm [0.2 in x 0.1 in] (with engineering units)
Digit size, large mode (H x W)	10 mm x 5 mm [0.4 in x 0.2 in] (no engineering units)
Engineering units display	4 characters, available in normal mode only
Display update per second	4

POWER SPECIFICATIONS

Characteristic	Measure
Power supply type	ac (with included wall-mount adapter) or dc
dc power supply requirements	10 Vdc to 26 Vdc @ 1 A
ac wall-mount adapter (included)	Interchangeable plugs for use in the Americas, Europe, the United Kingdom and Australia (100 Vac to 240 Vac)

ANALOG OUTPUT (OPTIONAL) SPECIFICATIONS

Characteristic	Measure
Voltage range	5 Vdc, ±5 Vdc, 10 Vdc or ±10 Vdc (field selectable)
Isolation	500 V
Digital-to-analog resolution	15 bits
Frequency response	Same as input

COMMUNICATIONS OUTPUT (OPTIONAL) SPECIFICATIONS

Characteristic	Measure
Serial setup and output	Isolated RS-232 or RS-485 (factory option)
Max. baud rate	38400 Baud

LIMITS OUTPUT (OPTIONAL) SPECIFICATIONS

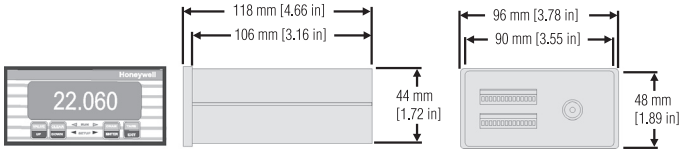
Characteristic	Measure
Quantity	2 Form C or 3 Form A (factory option)
Response time	Same as input
Relay energized when signal is	less than, greater than, inside or outside set points
Contact ratings	1 A @ 30 Vdc, 0.5 A @ 50 Vac

Not RoHS compliant

OPTION CODES

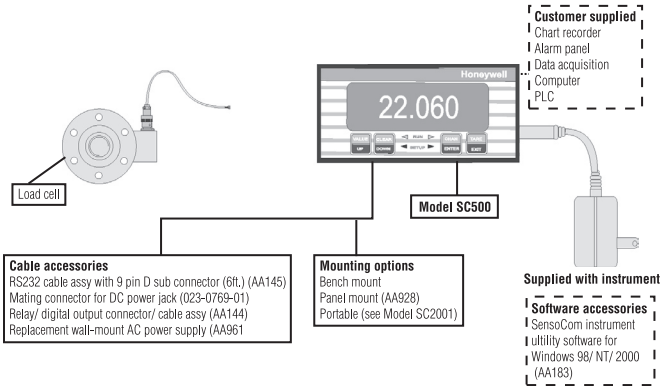
	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see http://sensing.honeywell.com/TMsensor-ship for updated listings.
Output options	53a. RS-232 (not available with 53d) 53d. RS-485 (not available with 53a) 58a. Two limit set-points with form C contact relays (not available with 58h) 58h. Three limit set-points with form A contact relays (not available with 58a) 58i. Isolated digital-to-analog (DAC) voltage

MOUNTING DIMENSIONS AND CHARACTERISTICS

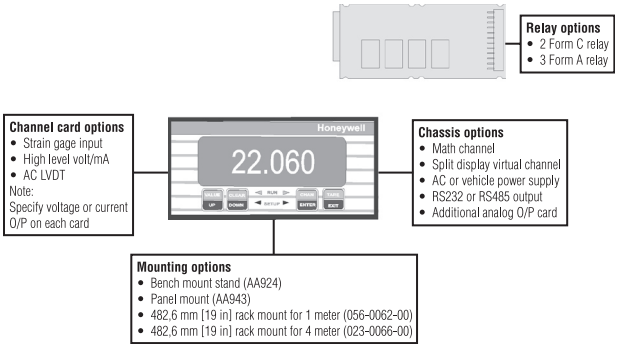


For reference only

TYPICAL SYSTEM DIAGRAM



FLEXIBLE AND EXPANDABLE PLATFORM



INPUT

	Strain gage millivolts	High level volts/mA	ac/ac displacement transducer
Order code	AE236	AE237	AE238
Transducer type	Unamplified pressure or load	Amplified pressure or load, dc/dc displacement transducer	Displacement transducer
Range	0.5 mV/V to 21 mV/V	±5 Vdc or ±10 Vdc, 4 mA to 20 mA	0.1 VRMS to 15 VRMS
Frequency response and resolution	See table below	See table below	See table below
Calibration type (field selectable)	Shunt, mV/V, 2-, 3-, or 5-point known load	Shunt, 2-, 3-, or 5-point known load	2-, 3-, or 5-point known load
Transducer excitation	5 Vdc @ 60 mA max.	12 Vdc, ±15 Vdc, 28 Vdc	3 Vac @ 5 kHz
Push button 100 % tare	Yes	Yes	Yes
Push button shunt test	Yes	Yes	No

		Resolution (counts) (not including min. 10 % overrange/underrange capability)		
Frequency response (Hz) field selectable	**Step response (ms) typical**	**Strain gage**	**High level**	**ac/ac displacement transducer**
2 (fast mode)	40	±50000	±50000	±25000
2	440	±50000	±50000	±25000
8	110	±25000	±25000	±15000
16	55	±20000	±25000	±10000
32	28	±10000	±20000	±10000
50	16	±5000	±15000	±5000
100	8	±5000	±10000	±5000
250	3	±2000	±10000	±2000

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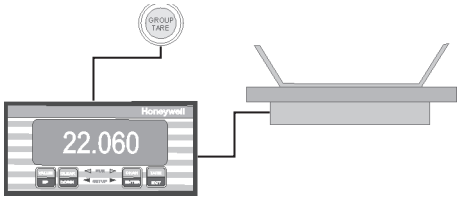
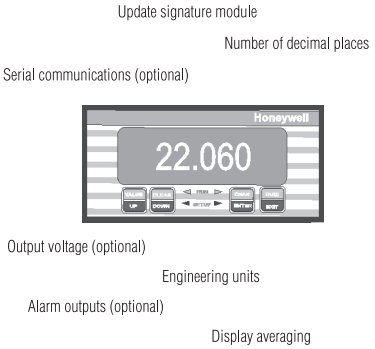
SC500 CAPABILITIES

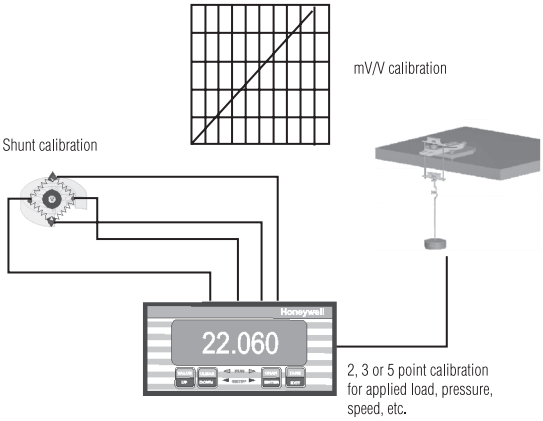
Front panel or remote tare



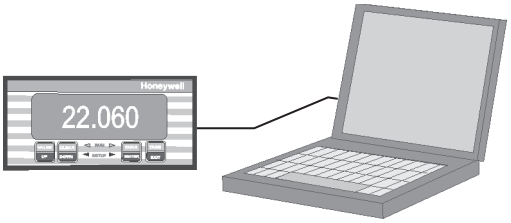
Flexible user setup



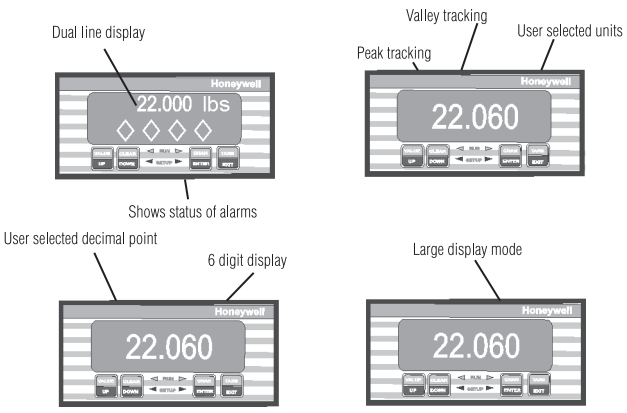
mV/V or shunt calibration or five-point calibration



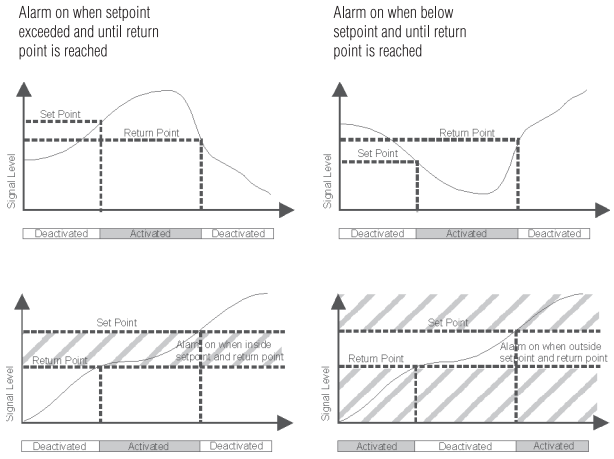
Remote setup



User selectable display options

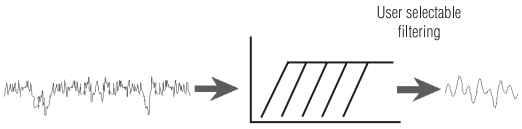


Different alarm configurations (optional)

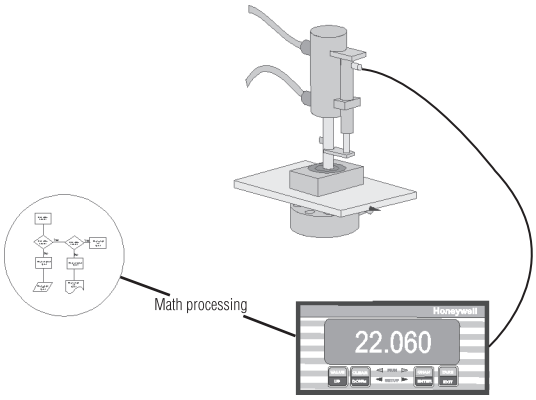


SC500 CAPABILITIES

User selectable filtering

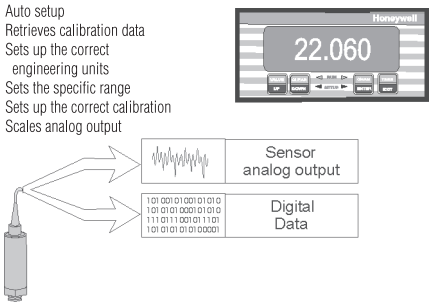


Math channel (optional) can act like PLC

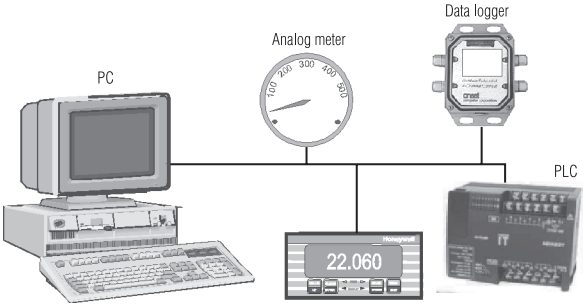


Sig cal auto setup

Auto setup
Retrieves calibration data
Sets up the correct
engineering units
Sets the specific range
Sets up the correct calibration
Scales analog output



Analog and digital outputs (optional)



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Programmable Single-Channel Transducer Indicator/Conditioner

Warranty. Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

For more information about Sensing and Control products, visit www.honeywell.com/sensing or call +1-815-235-6847
Email inquiries to info.sc@honeywell.com

⚠ WARNING

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING

MISUSE OF DOCUMENTATION

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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