

**IN-LINE
SIGNATURE CALIBRATION
MODULE**



SENSOTEC

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In-line *Signature Calibration* Module

Sensotec Part Number: 008-0329-00

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IMPORTANT! IT IS RECOMMENDED THAT YOU READ THIS DOCUMENT THOROUGHLY BEFORE APPLYING POWER TO THIS UNIT. THIS DOCUMENT CONTAINS INFORMATION ON WIRING, CALIBRATION, AND USE OF FEATURES.

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Chapter 1

INTRODUCTION

1.1 Overview

Signature Calibration is the SENSOTEC technique in which a small memory device is embedded within a transducer, storing the characteristics of the transducer. When a properly-equipped signal conditioner is connected to the transducer, the memory is interrogated, and the characteristics passed to the signal conditioning instrument. The instrument then sets itself up to match these characteristics. Such operation saves setup time, and results in an accurate setup every time.

When the transducer is not sufficiently large to accommodate the memory module and its holder, an Inline *Signature Calibration* module may be used. This device contains the memory that would ordinarily be placed inside the transducer. The transducer connects to this module by a standard 4-wire cable which enters the module through a compression fitting or a connector. The module has an output connector or fitting which connects to the instrument.

1.2 Variations

The table below lists the variations of the Inline *Signature Calibration* module, whether a gland fitting or a connector is used to wire to the transducer, and whether a gland fitting or connector is used to wire to the instrument.

Table 1: In-Line *Signature Module* Variations

part number	transducer connection	instrument connection
060-6831-00	gland fitting	6-pin connector
060-6831-01	6-pin connector	6-pin connector
060-6831-08	gland fitting	gland fitting

Chapter 2

WIRING

2.1 Internal Arrangement

The figure below shows the internal arrangement of the standard Inline *Signature Calibration* Module (060-6831-00).

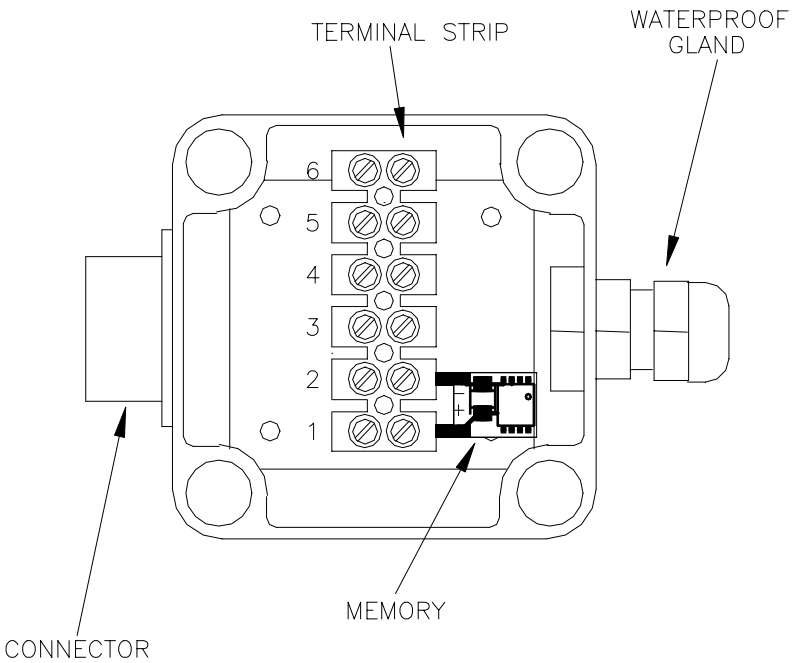


Figure 2-1: Internal Arrangement of p/n 060-6831-00

2.2 Transducer Connection

2.2.1 Gland Fitting

The cable from the transducer should be passed through the waterproof gland assembly, allowing sufficient wire length for all four wires to reach the terminal strip. Connect the wires as shown in the table below, using the side of the strip closest to the waterproof gland.

Table 2: Terminal Strip Wiring to Transducer

terminal	function
3	(+)Excitation
4	(-)Excitation
5	(-)Signal
6	(+)Signal

2.2.2 6-pin Connector

For the modules with part number 060-6831-01, a mating connector has been supplied for the input side of the module. The four wires in the cable from the transducer are to be connected to the terminals in the connector as shown in the table below..

Table 3: Connector Wiring to Transducer

terminal	function
A	(+)Excitation
C	(-)Excitation
E	(-)Signal
F	(+)Signal

2.3 Instrument Connection

2.3.1 6-pin Connector

A mating connector has been supplied for the output side of the module. The six wires in the cable are to be connected to the terminals in the connector as shown in the table below. Then connect the other end of this cable to the instrument.

Table 4: Connector Wiring to Instrument

terminal	function
A	(+)Excitation
B	(+)Signature
C	(-)Excitation
D	(-)Signature (connect to instrument's DGND pin)
E	(-)Signal
F	(+)Signal

2.3.2 Gland Fitting

For modules with part number 060-6831-08, the cable from the instrument should be passed through the waterproof gland assembly, allowing sufficient wire length for all six wires to reach the terminal strip. Connect the wires as shown in the table below, using the side of the strip closest to the waterproof gland.

Table 5: Terminal Strip Wiring to Instrument

terminal	function
1	(+)Signature
2	(-)Signature
3	(+)Excitation
4	(-)Excitation
5	(-)Signal
6	(+)Signal

Chapter 3

PROGRAMMING

If the Signature Calibration module has been purchased with a transducer, the initial programming of the module to match the transducer has already been performed. If no transducer was purchased with the module, however, a generic programming of the module has been performed. In either case, when the signal conditioner is powered up, it will read the contents of the memory and set itself up to these characteristics. The values entered into the memory of the signal conditioner can be read out during the setup procedure. If these characteristics are not correct (as would be the case if a generic setup were used), the proper values may be entered manually in the setup procedure. At the conclusion of the setup, the new values should be written to the memory in the Signature Calibration module, for future use.

To program the module it is only necessary to correct the values during setup. When calibration is performed with the new values, the memory in the Signature Calibration module should be rewritten and stored. The Signature Module can be programmed with either a signal conditioner (such as the Model SC) or with a personal computer. The "Signature Module Reader for PC's" (order code AA181) includes an adapter cable and a program that runs under MS-DOS, Windows 3.1 and Windows 95.

Chapter 4

WARRANTY / REPAIR POLICY

4.1 Limited Warranty on Products

Any of our products which, under normal operating conditions, proves defective in material in workmanship within one year from the date of shipment by SENSOTEC, will be repaired or replaced free of charge provided that you obtain a return material authorization from SENSOTEC and send the defective product, transportation charges prepaid with notice of the defect, and establish that the product has been properly installed, maintained, and operated within the limits of rated and normal usage. Replacement product will be shipped F.O.B. our plant. The terms of this warranty do not extend to any product or part thereof which, under normal usage, has an inherently shorter useful life than one year. The replacement warranty detailed here is the buyer's exclusive remedy, and will satisfy all obligations of SENSOTEC whether based on contract, negligence, or otherwise. SENSOTEC is not responsible for any incidental or consequential loss or damage which might result from a failure of any SENSOTEC product. This express warranty is made in lieu of any and all other warranties, express or implied, including implied warranty of merchantability or fitness for particular purpose. Any unauthorized disassembly or attempt to repair voids this warranty.

4.2 Service Under Warranty

Advanced authorization is required prior to the return to SENSOTEC. Before returning the items, either write to the Customer Service Department c/o SENSOTEC, Inc., 2080 Arlingate Lane, Columbus, Ohio 43228, or call (800) 848-6564 with: 1) a part number; 2) a serial number for the defective product; 3) a technical description* of the defect; 4) a no-charge purchase order number (so products can be returned to you correctly); and 5) ship and bill addresses. Shipment to SENSOTEC shall be at Buyer's expense and repaired or replacement items will be shipped F.O.B. our plant in Columbus, Ohio. Non-verified problems or defects may be subject to an evaluation charge. Please return the original calibration data with the unit.

4.3 Non-Warranty Service

Advance authorization is required prior to the return to SENSOTEC. Before returning the item, either write to the Customer Service Department c/o SENSOTEC, Inc., 2080 Arlingate Lane, Columbus, Ohio 43228, or call (800) 848-6564 with: 1) a model number; 2) a serial number for the defective product; 3) a technical description* of the malfunction; 4) a purchase order number to cover SENSOTEC's repair cost; and 5) ship and bill addresses. After the product is evaluated by SENSOTEC, we will contact you to provide the estimated repair costs before proceeding. Shipment to SENSOTEC shall be at Buyer's expense and repaired items will be shipped to you F.O.B., our plant in Columbus, Ohio. Please return the original calibration data with the unit.

4.4 Repair Warranty

All repairs of SENSOTEC products are warranted for a period of 90 days from date of shipment. This warranty applies only to those items which were found defective and repaired, it does not apply to products in which no defect was found and returned as is or merely recalibrated. Out of warranty products may not be capable of being returned to the exact original specifications or dimensions.

* Technical description of the defect: In order to properly repair a product, it is necessary for SENSOTEC to receive information specifying the reason the product is being returned. Specific test data, written observations on the failure and the specific corrective action you require is needed.