

# USM GEN2

## Universal Sensor Module for Compressor Packages

Innovative system designed to provide Altronic Controls DE-3000 control panel users (and others) with an integrated, off-the-shelf, tested solution for all on-package sensor wiring and tubing.

A single, flexible and robust plug-and-play harness brings all measured package data back to the panel-mounted DE-3000 from each module.

Three (3) USM Modules are available in the following input configurations:

**691221-1** – One (1) magnetic pickup (MPU), twelve (12) analog (5- and 24-volt supply available), eight (8) discrete (normally-open/normally closed, sinking/sourcing), twelve (12) Type K thermocouples

**691221-2** – One (1) magnetic pickup (MPU), twelve (12) analog (5- and 24-volt supply available), eight (8) discrete (normally-open/normally closed, sinking/sourcing), six (6) Type K thermocouples, six (6) RTDs

**691221-3** – One (1) magnetic pickup (MPU), twelve (12) analog (5- and 24-volt supply available), eight (8) discrete (normally-open/normally closed, sinking/sourcing), twelve (12) RTDs

Engine and compressor process data is easily integrated with a DE-3000 annunciator

Status LEDs and standardized wiring aids with troubleshooting

Completely scalable and expandable system allows for use across a range of low, medium, and high-spec applications

Designed and constructed for service in harsh environments

CSA certified for use in Class I, Division 2, Groups C and D hazardous areas

The USM GEN2 Universal Sensor Module is a pre-fabricated, pre-tested, plug-and-play instrumentation system designed to capture all relevant engine and process values and statuses from the associated compressor package. A typical application uses two USM modules, one to monitor the necessary points on the engine, and the second to capture and monitor all of the compressor-related points. By placing smart inputs near to the monitored points of interest, tubing and wiring costs are reduced while simultaneously delivering a full Class I, Group C and D, Division 2 compliance when used with an Altronic DE-3000-based system. Three different modules incorporating multiple temperature input options are available.

Speedier system fabrication, enhanced reliability, and reduced troubleshooting times are core features and capabilities of the USM GEN2 system. In addition to the reduced sensor input requirements noted above for both wired and tubed applications (such as process pressures), the cost and complexity of wiring the control panel itself is reduced through the use of robust USM wiring harnesses, and pre-terminated in-panel connectors. The system is suitable for both new and existing applications, and can be removed from the engine within minutes to allow the package to be relocated or for heavier maintenance requirements.

Altronic's Universal Sensor Module is ideal for lease fleet, packagers, and end-users seeking, a cost-competitive, standardized, speedier, and more reliable alternative to custom, conduit-based wiring solutions. Please contact your local Altronic Distributor or Altronic Controls representative for additional application details and quotation on this innovative solution.



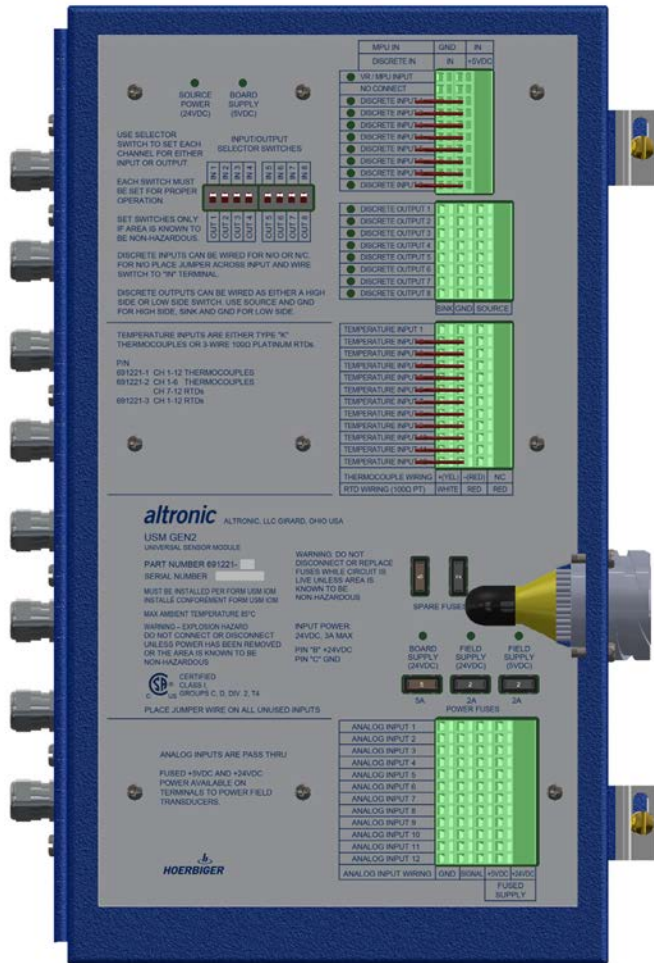
  
C US  
CERTIFIED  
CLASS I, DIVISION 2,  
GROUPS C and D,  
TEMP CODE T4

## General Specifications

### USM GEN2 Board

Power .....	24Vdc, 3Amp max.
Operating Temperature Range .....	-40°C to 85°C
Enclosure .....	.16 Gauge Stainless Steel
Terminals .....	Spring Terminals
Led Indicators .....	Power, MPU, & Discrete Input/Output Status
Hazardous Area Classification.....	Class I, Div. 2, Groups C & D

## USM Module Cutaway and I/O Detail



Note: See USM GEN2 IOM, Figures 13 and 14 for additional dimensional details.

## To Order

### MODULES

(Note: All include one (1) magnetic pickup (MPU) input, twelve (12) analog (5- and 24-volt supply available) inputs, eight (8) discrete (normally-open/normally closed, sinking/sourcing) inputs, plus:

12 – Thermocouple Inputs.....	691221-1
6 – Thermocouple / 6 RTD Inputs .....	691221-2
12 – RTD Inputs.....	691221-3

### STAND KIT

Stand (includes hardware) .....	690279-KT
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### MAIN HARNESSES

5 ft. length .....	693159-5
20 ft. length .....	693159-20
35 ft. length .....	693159-35

### INTERFACE HARNESSES KITS

(Includes: Harness & Hardware)

Wire numbers 1001 - 1037 .....	690280-1KT
Wire numbers 2001 - 2037.....	690280-2KT

### MAGNETIC PICKUP KITS

(Includes: Magnetic Pickup, Cable Gland, & Pickup Harness)

30 ft. Harness.....	690281-360KT
50 ft. Harness.....	690281-600KT
75 ft. Harness.....	690281-900KT

### DISCRETE INPUT KITS

(Includes: End Device 3-Pin Adaptor, Cable Gland, & Harness)

10 ft. Harness.....	690282-120KT
20 ft. Harness.....	690282-240KT
30 ft. Harness.....	690282-360KT
40 ft. Harness.....	690282-480KT
50 ft. Harness.....	690282-600KT

### PSIA TRANSDUCER KIT

(Includes: Transducer, B&B Valve, Hardware, Cable Gland, & Locknut)

0 – 100 PSIA Transducer .....	690283-100KT
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### PSIG TRANSDUCER KITS

(Includes: Transducer, B&B Valve, Hardware, Cable Gland, & Locknut)

0 – 100 PSIG Transducer .....	690284-100KT
0 – 300 PSIG Transducer .....	690284-300KT
0 – 500 PSIG Transducer .....	690284-500KT
0 – 1000 PSIG Transducer .....	690284-1000KT
0 – 2000 PSIG Transducer.....	690284-2000KT

### BULKHEAD INTERFACE HARNESS KITS

(Includes: End Device 3-Pin Adaptor, Hardware, & Harness)

10 ft. Harness.....	690285-120KT
20 ft. Harness.....	690285-240KT
30 ft. Harness.....	690285-360KT
40 ft. Harness.....	690285-480KT
50 ft. Harness.....	690285-600KT

### HARDWARE OPTIONS

1 – Bulkhead Bracket.....	615454
6 – Cable Glands .....	902797-KT
6 – Gland Plate Blanks.....	902798-KT
6 – Cable Gland Locknuts.....	902799-KT

# altronic

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