



## CERTIFICATION RECORD

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The company named below has been authorized by CSA International to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

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File No: 042965\_0\_000

Class No: 4818 04 SIGNAL APPLIANCES Systems - For Hazardous Locations

### SUBMITTOR

4500546 Altronic Inc.  
712 Trumbull Ave  
Girard, OH 44420  
USA

### FACTORIES

4500546 Altronic Inc.  
712 Trumbull Ave  
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### Class I, Group D:

- Annunciating System, DA-A Series, comprising Power Supply (Explosion-proof) Part No 690-104 rated 12-24V dc nominal, having intrinsically safe cable circuits (9.0V max, 150 ohm) for connection to Annunciator Part Nos DA-16A-O, DA-16A-C, DA-32A-O, DA-32A-C (intrinsically safe when connected to passive sensor switches).
- Annunciating System, comprising power supply (explosion-proof) Part No 690-110 or 690-112, rated 100-350V dc nominal, having intrinsically safe cable circuits (9.0V max, 150 ohm) for connection to annunciator, Part No DTUO-4200 (intrinsically safe when connected to passive sensor switches).
- Barrier units, Part Nos 690-107 (negative ground) and 690-108 (positive ground), 160V, 7510 ohm, OCV max.160Vdc, SCC 34mA max..  
having outputs which provide intrinsically safe circuits for connection to tachometer/hour meter/over-speed trigger devices, Models DH-100A, DTH-2100, DTHO-2100, DT-3200, DTO-3200 and DO-3300, which are intrinsically safe with over-speed circuits connected to Models

DA-16/32 annunciators; barriers also for connection between sensor leads of Models DA-16/32 annunciators and passive contacts located outside of hazardous areas.

- Annunciator Panels, 650 Series, comprising Certified Altronic power supply, annunciator, safety barrier unit and/or tachometer/hourmeter/overspeed trigger devices; temperature and pressure gauges with passive switch contacts for intrinsically safe circuits may also be mounted in the panel.
- Annunciating System, DA-N Series, comprised of an explosion-proof power supply Part No 690-101-1 rated 100 to 175V dc or 690-101-2 rated 175 to 350V dc or 690-101-3 rated 100 to 350V dc or 690-105 rated 12 to 24V dc or 690-110 rated 100 to 350V dc or 690-112 rated 100 to 350V dc, having intrinsically safe cable circuits (9.0V max, 150 ohms) for connection to annunciator Part No DA-16N-O or DA-16N-C or DA-32N-O or DA-32N-C. (Intrinsically safe when connected to passive sensor switches).
- Annunciating System, DA-P Series, comprised of an explosion-proof power supply Part No 690-110 rated 100 to 350V dc, having intrinsically safe cable circuits (9.0V max, 150 ohms) for connection to annunciator Part No DA-32P-O or DA-32P-C. (Intrinsically safe when connected to passive sensor switches).
- Annunciating System, DD-NT Series, comprised of an explosion-proof power supply, Part No 690-101-1 rated 100 to 175V dc or 690-101-2 rated 175 to 350V dc or 690-101-3 rated 100 to 350V dc or 690-105 rated 12 to 24V dc or 690-110 rated 100 to 350V dc or 690-112 rated 100 to 350V dc, having intrinsically safe cable circuits (9.0V max, 150 ohms) for connection to annunciator Part No DD-20NT-O/DD-20NT-C or DD-40NT-O/DD-40NT-C. (Intrinsically safe when connected to passive sensor switches).
- Adapters; Loss of Ignition Power, Part No 691 054; Class B Isolator, Part No 691 055 and Loss of 24V Power, Part No 691 098 for use with Certified Annunciator Panels, Series 650; having intrinsically safe circuits when connected through Certified Barrier Units, Part No 690 107 or 690 108.

### **Class I, Div. 2, Group D:**

- Annunciator System DD-NT Series comprised of annunciator Part Numbers DD-20NT-O,-C; DD-40NT-O,-C; DD-20NTL-O, -C; or DD-40NTL-O, -C with power supply part numbers 691-150-1 rated 100 to 350V dc or 691-160-1, 691-155-1 or 691-180-1 rated 12 to 24V dc.
- Adapters; Loss of Ignition Power, Part NO 691 054; Class B Isolator, Part NO 691 055 and Loss of 24V Power, Part No 691 098 for use with Certified Annunciator Panels, Series 650 and Certified Power Supply, Part No 691 155-1, rated 12-24V dc.

### **Class I, Division 2, Groups C and D**

- DD-40NTa-x series Digital Annunciator System. Input: 10-30V dc, 50 mA max., or ignition powered from Altronic Inc. ignition system: 100-400V. Ambient temperature - 40°C to 85°C, temperature code T5.

Where “a” indicates firmware functionality, S or V, and “x” indicates output contacts arrangement, “O” or “U”.

System is comprised of the following:

- (1) Annunciator Module, part number DD-40NTa-O or , DD-40NTa- U. Were “a” indicates the firmware feature set either “S” or “V”;
- (2) Power Supply Module, part number 691200-x. Were “x” indicates diagnostic output

function set 1 or 3, rated 12 to 24V dc;

(3) Terminal Board assembly, used only on –U units, part number 672169-1.

Notes:

- 1) This is OPEN type equipment that must be used within a suitable end-use system enclosure, the interior of which is accessible only through the use of a tool. The suitability of the enclosure is subject to investigation by the local Authority Having Jurisdiction at the time of installation.
- 2) Models identified as “-U” are provided with one or more terminal board assemblies having nonincendive field wiring for use only with passive switching components.
- 3) Except for the nonincendive switch circuits connected to the terminal board assembly of "-U" models, wiring to or from the equipment, which enters or leaves the system enclosure, must utilize wiring methods suitable for Class I, Division 2 Hazardous Locations, as appropriate for the installation.

**Class I, Division 2, Groups C and D:**

- Annunciator System, DE-2000 Series, comprised of Display module Model DE-2000, Power Supply Module Part No 691122-1, rated 12-24V dc, Sensor Input Terminal Module Part No 691123-1, CD Ignition or Fuel Valve Output Module Part No 691124, Industry Standard Output Modules 691125, 691056, 691065, 691066 or any equivalent Certified Output Module. T. Code T4
- Controller System, DE-25XX Series, comprised of Display module Model DE-25XX, Power Supply Module Part No 691122-1, rated 12-24V dc and 200mA max, Terminal Module Part No 691127-X, CD Ignition or Fuel Valve Output Module Part No 691124, Industry Standard Output Modules 691125, 691056, 691066, 691065, or any equivalent Certified Output Module. Input Pressure Transducers 691204-X, 691201-X, and Temperature Transducers 691202-X, 691203-X, 691212-X, and 691213-X. T. Code T4. Note: This equipment shall be powered by a suitable Certified Class 2 power supply.
- DE-2200 Compressor Monitor System, comprised of Display Module Model DE-2200, Power Supply Module P/N 691122-1 rated 12 to 24V dc, Terminal Module P/N 691136-1, CD Ignition or Fuel Valve Output Module P/N 691124, Industry Standard Output Modules 691125, 691056, 691066, 691065 or any equivalent Certified Output Module. Input Pressure Transducers 691204-X, 691201-X and Temperature Transducers 691202-X, 691203-X, 691212-X and 691213-X. T. Code T4. Note: Equipment to be installed inside a Control Panel. Final installation to be approved by local authorities having jurisdiction.
- Controll System DE-15xx Series composed of DISPLAY MODULE model DE-15xx, TERMINAL MODULE P/N 691 142-x rated 12 to 24V dc Class 2, 500 mA max, INPUT Pressure Transducers 691 204-x, 691 201-x, 691 206-x and Temperature Transducers 691 202-x, 691 203-x, 691 212-x and 691 213-x.

Notes:

1) This system consists of OPEN type equipment that must be used within a suitable end-use system enclosure, the interior of which is accessible only through the use of a tool. The suitability of the enclosure is subject to investigation by the local Authority Having Jurisdiction at the time of installation.

2) Wiring to or from this system, which enters or leaves the system enclosure, must utilize wiring methods suitable for Class I,

Division 2 Hazardous Locations, as appropriate for the installation.

- Altronic, Exacta RX 2000 Control System, rated 24V dc, 2A; Temperature Code T4 at Max ambient 85°C; Non-incendive when installed per installation drawing Form RX2000 IOM.

Note: The RX2000 is certified as component only and is required to be mounted in a suitable enclosure where its combination and final installation is subjected to acceptance by local authorities having jurisdiction.

- Display Module – Part numbers 691170- x, and 691174-x. (Where x is any alphanumeric digit indicating firmware/software version.) Rated 5Vdc, 500mA max. Ambient temperature -40°C to +85°C, Temperature Code T4A.

Notes:

1) This is OPEN type equipment that must be used within a suitable end-use system enclosure, the interior of which is accessible only through the use of a tool. The suitability of the enclosure is subject to investigation by the local Authority Having Jurisdiction at the time of installation.

2) Wiring to or from this equipment, which enters or leaves the system enclosure, must utilize wiring methods suitable for Class I, Division 2 Hazardous Locations, as appropriate for the installation.

### **Class I, Division 2, Groups C, D:**

- Digital Annunciation System - Model DE-30aa. Rated 12 to 32Vdc, 500mA. Ambient temperature -40°C to 80°C, Temperature Code T4.

Where:

aa = is two numerics representing assembly build and software.

Option: Model DE-3000 CSI. . Rated 12 to 32Vdc, 500mA. Ambient temperature -40°C to 80°C, Temperature Code T4.

System Consists of the following CSA Certified component assemblies:

- I/O Terminal Modules - p/n 691171-x and/or 691172-x and/or 691175-x.  
May also use Certified p/n 691217-x, where “-x” indicates software version and label

May also use non Certified p/n 691217-x

- Display module - p/n 691170- x and/or 691174-x.

With, or without:

- Power Supply Module - p/n 691122-x.

With, or without:

- CD Ignition or Fuel Valve Output Module - p/n 691124-x.

With, or without:

- Industry Standard Module - p/n 691125-x or 691056- x or 691066-x or 691065-x or any equivalent Certified Output module.

With, or without:

- Pressure Transducer - p/n 691204-x or 691201-x or any equivalent Certified Pressure Transducer.

With, or without:

- Temperature Transducer - p/n 691212-x or 691213- x or 691202- x or 691203- x or any equivalent Certified Temperature transducer.

- GTI Digital Annunciation System – Models GPN2010V, GPN2212V, GPN2213V, GPN2214V, GPN2011V, GPN2012V, GPN2015V , and GPN2020V. Part numbers 691173-x, or 691176-x, or 691177- x, 691178-x, 691216-x, 691197-x, 691219-x and 691729-x respectively. Rated 10 to 32Vdc, 1A. Where x is any alphanumeric character indicating the software/firmware version.

- System may be supplied with one or more of the following harnesses assemblies: Part number 693118-x, 693119- x, 693120-x, 693121-x, 693122-x, 693123-x, 693124-x, 693125-x, 693126-x, 693127-x, 693128-x, 693132-x and/or 693208-x. (Where x represents the harness length, in feet)

- System may be supplied with optional vibration transducers: Part number 691205-x or any equivalent Certified Vibration, Pressure, or Temperature Transducers. (Where x represents the harness length, in feet)

Notes:

1) These systems are OPEN type equipment that must be used within a suitable end-use system enclosure, the interior of which is accessible only through the use of a tool. The suitability of the enclosure is subject to investigation by the local Authority Having Jurisdiction at the time of installation.

2) Wiring to or from this equipment, which enters or leaves the system enclosure, must utilize wiring methods suitable for Class I, Division 2 Hazardous Locations, as appropriate for the installation.

### **Class I, Division 1, Group D**

- DE 3000 System rated 12-32 VDC, 500mA. Consists of the following system components:
  - o Explosion proof Division 1 power supply (691350-1); Temperature Code T6; Ambient temperature range -50°C to +40°C
  - o DE-3000 Terminal Board (691171-3); Temperature Code T2 Ambient temperature range -50°C to +85°C
  - o DE-3000 Display (691170-3); Temperature Code T1; Ambient temperature range -50°C to +85°C

Terminal Board, Display and accessories are considered Intrinsically Safe when installed in accordance with I.S. Installation drawing 690 255

I.S. Barrier parameters:

$V_{max} = 8.787V$

$I_{max} = 5.84A$

$C_a = 730\mu F$

$L_a = 8.34\mu H$

Conditions of acceptability:

1. Conduit seal shall be installed within 3" of conduit entries.
2. Accessories connected to the terminal board must contain less than the combination of 288.1 $\mu F$  of capacitance and less than the combination of 8.34 $\mu H$  inductance.
3. Acceptability of the final installation shall be subject to the authority having local jurisdiction.

/jw