



INSTALLATION DATA MANUAL
MODEL 570/770/870 PRESSURE TRANSMITTERS
MODEL LP770 PRESSURE TRANSMITTER

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COMPANY BACKGROUND

Viatran is an ISO 9001:2008 certified company committed to providing high quality pressure transducers and transmitters. Established more than 40 years ago, Viatran has built its reputation on providing durable, and accurate pressure sensing devices. Our products are often specifically specified by integrators and engineering firms for applications ranging from the offshore oil rigs to tank and well level measurement. Viatran is often called for custom modifications for applications where standard products are not available.

TECHNICAL SUPPORT

Technical assistance is available Monday – Friday 8:00 AM to 5:00 PM (Eastern) from our knowledgeable factory personnel to answer any of your application or installation questions. Our toll-free number is 1-800-688-0030. Questions or additional documentation can also be requested via e-mail at solutions@viatran.com.

CUSTOMER SERVICE

Orders for additional units or accessories can be placed by calling customer service at 1-800-688-0030 or by fax at 1-716-693-9162. Orders can also be placed by contacting a local representative in your area. To find the nearest representative, visit our web site at www.viatran.com.

PRODUCT OVERVIEW

All information contained in this document is representative of a standard Model 570/770/870 and LP770. If the product you ordered has special requirements or modifications, refer to the permanently marked information on the product and your purchase order for possible alteration to the product's configuration. Failure to verify product configuration before installation may cause permanent product damage and in most cases, void the manufacturer's product warranty. If you are unsure or have questions about your product, please contact our Application Engineers for assistance.

Remove and retain all instruction manuals and performance certificates that are shipped with the product. These documents provide important information on the product's calibration, operation, safety precautions, recommended maintenance, re-calibration requirements, repair service instructions and warranty information. These documents are updated from time to time as changes to the product occur and should be reviewed at receipt so that proper and safe installation can occur.

BASIC OPERATION

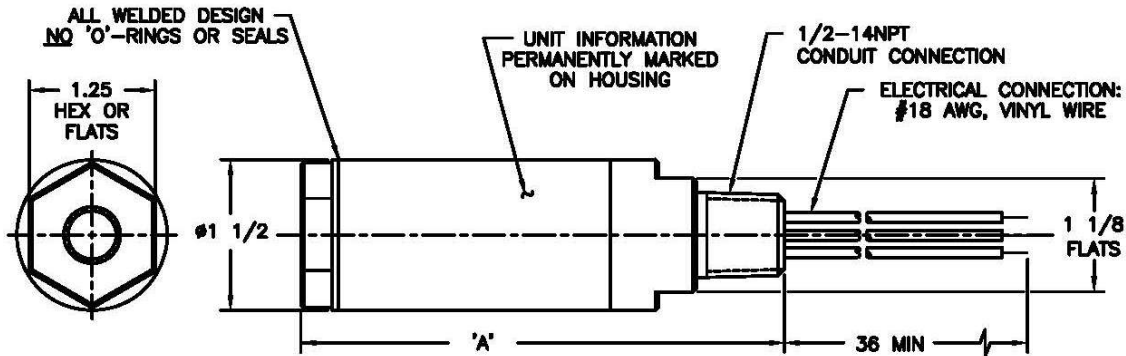
The "70" Series has been pre-set at the factory for the required output. Typical outputs are 4-20 mA, 0-5 VDC (1-5 VDC on LP770) and 2 mV/Volt. With the exception of absolute units, which are referenced to absolute zero (full vacuum), all other products are referenced to atmospheric pressure (zero PSIG). Once factory set, the product should perform as indicated by the performance certificate and product labeling. In all cases the zero and span cannot be externally adjusted, hence any deviation from the factory settings would indicate damage to the sensor, electronics, or both.

- A. For compound ranges with a voltage output, (a negative pressure to a positive pressure, ie. -15 to +50), the zero balance will occur and be set for zero PSIG. For the compound range the output of the transmitter will be split between the plus and minus pressure ranges with respect to zero. The output would be plus or minus depending on the type of pressure applied to the pressure port. For compound ranges with a 4-20 mA output, where an output is required at a negative pressure (ie. -15 to +50) the zero balance will be set at the negative pressure (ie. 4 mA at -15 and 20 mA at +50 PSI).
- B. Output for sealed units will go positive with positive pressure applied to the pressure port.
- C. For absolutes, the pressure port must have a full vacuum applied to reach the absolute zero point. After the full vacuum is applied, the unit will begin to read positive pressure changes as less and less of a vacuum is evident at the pressure port.

INSTALLATION DATA - VIATRAN MODEL 570/770/870/LP770

Note: The drawing below is for informational purposes only and is not to scale.

All dimensions are nominal, in inches and for reference purposes only.



| RANGE (PSIS/A/G) | 'A' (OVERALL LENGTH) | | | |
|-------------------------|----------------------|------|------|-------|
| | MODEL | | | |
| | 570 | 770 | 870 | LP770 |
| 0-50 THRU 0-15,000 | 5.00 | 5.29 | 5.19 | 5.25 |
| 0-20,000 THRU 0-50,000 | 5.22 | 5.50 | 5.32 | 5.38 |
| 0-60,000 THRU 0-100,000 | 5.97 | 6.25 | 6.06 | 6.13 |

Sensor Construction:

Bonded Foil Strain Gage

Wetted Materials:

< 20K PSI: 15-5 PH SST

≥ 20K PSI: 13-8 Mo SST

Pressure Connection

(Recommended Torque):

50 - 15K PSI: 1/4" NPT female (about 3 full turns after finger tight)

20K - 50K PSI: AE type F250C (25 FT-LBS)

60K - 100K PSI: AE type F312C150 (70 FT-LBS)

Electrical Mating Connection:

Acceptable 18AWG wire termination connection - 1/2" NPT(M)

Output:

570: 4-20 mA

770: 0 to 5 VDC

LP770: 1 to 5 VDC

870: 2.0 mV/V (0-15K PSI)

1.2 mV/V (20K-100K PSI)

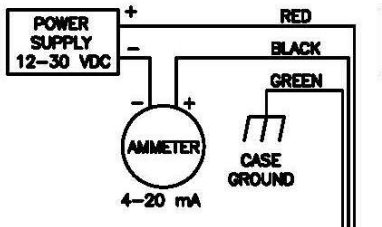
CONNECTION DIAGRAMS & WIRING

MODEL 570

MODEL 770

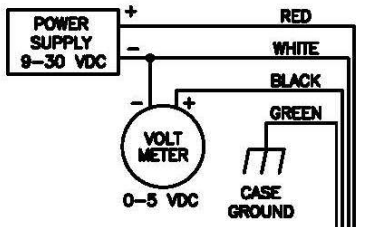
MODEL 870

MODEL LP770



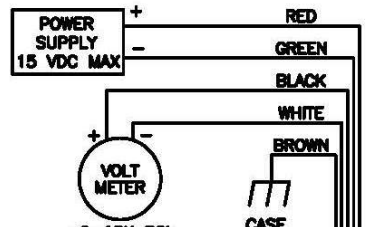
WIRING

Red: +Signal
Black: -Signal
Green: Case Ground



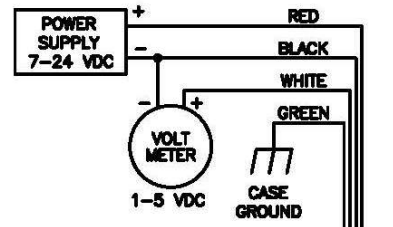
WIRING

Red: +Power
Black: +Signal
White: -Signal/-Power
Green: Case Ground



WIRING

Red: +Power
Green: -Power
Black: +Signal
White: -Signal
Brown: Case Ground



WIRING

Red: +Power
White: +Signal
Black: -Power/-Signal
Green: Case Ground

Note: If the unit is certified for hazardous locations as Intrinsically Safe, use the enclosed connection diagram. Only the pressure transmitter is considered to have the Factory Mutual, CSA or ATEX safety ratings. If you have purchased a transmitter and isolator/remote seal, they have not been tested as a system for safety certification. The end-user shall be responsible for verifying the system is safe and installed accordingly.

INSTALLATION REQUIREMENTS AND CAUTIONS

1. All electrical & pressure connections should be compatible with specifications outlined above.
2. Installation should occur only after electrical (input power) and line pressure is off and at zero.
3. The product's internal electrical circuitry is isolated from case ground. It is not recommended that the case or ground of the unit be connected to the input, output, or calibrate pins of the product or wiring system. Ground loops and line noise will affect the product's performance and may cause internal electrical failure.
4. All products should be protected from direct or continued exposure to fluids at the electrical connection. The electrical connections on the Models 570, 770, 870, and LP770 have been designed to be terminated in a junction box or encased in conduit. In applications where moisture or fluid contamination is possible, the use of an application approved connection box is recommended for connection termination.
5. Use care when handling the unit by the connection wires. Continued or constant movement of the connection wires at the area of sealant might cause the seal to break. If the seal fails, internal contamination and product failure will occur.
6. When installing the unit to a pressure or electrical connection, only use the wrench flats closest to the end being installed. If the unit is being installed on a pressure pipe, only use the 1-1/4" wrench flats at the end where the pressure port is located, not the 1-1/8" flats at the electrical end.
7. At no time should an object be inserted into the pressure port or pressed against the sensing area to deflect the sensor (to test or simulate pressure), as permanent damage to the sensing diaphragm may occur.
8. To preserve the integrity of the hermetic design, the units have no field replaceable or repairable parts.
9. When shipped in quantities, units should be packaged individually to eliminate possible damage.
10. The "70" Series can be provided with a variety of pressure fittings. The units should be mounted using an anti-galling product on the threads that is compatible with the media being measured. If your unit is equipped with a NPT female pressure port, it should be mounted to 20 ft-lbs. of torque to ensure proper trim. Always check for process leaks after installation.

CONDITION OF USE

1. Equipment will be installed only with wiring systems not requiring earth connection. e.g. Metal conduit or armored cable (See Note #3 above).
2. Ex db certified sealing device shall be used between the equipment and wiring system.

MAINTENANCE AND REPAIR

Viatran transmitters are designed to function free from routine or scheduled maintenance. Simple cleaning of the electrical connector, pressure port threads, and pressure cavity on an as needed basis will provide years of satisfactory performance. Protecting the product from continued exposure to moisture or fluids at the electrical connection, breather area (model dependent) will eliminate premature internal failure of the product. Whenever the product is removed from service, the connector and pressure port threads should be cleaned and the pressure cavity flushed with a stainless steel compatible cleaner to prevent media buildup. A lint-free cloth is recommended for cleaning. Cleaning with a coarse or stiff bristle can damage the diaphragm surface.

It is suggested that the calibration be verified on a usage dependent schedule. If the product is in continuous service 7 days a week, calibration verification may be necessary every 6 to 8 months. If the product is in a lab test environment, a more lenient verification schedule would be appropriate. In all instances, the performance of the product will depend on the individual application or process in which it is installed. More continued usage would require a shorter period between calibration verification and product maintenance.

If a product is perceived to be exhibiting problems, it may be returned to Viatran for analysis and/or repair. It is suggested that only Viatran personnel attempt repair of the product. Any damage resulting from customer disassembly would result in a loss of coverage under the warranty policy. All Viatran products are able to be repaired at minimal cost if simple cleaning and precautions are taken in the handling and application of the product. Older products returned for repair are updated to current specifications unless the repair cost would outweigh the cost of a new replacement model. Products returned for repair should include information on the person to contact for repair quote approval, the individual to contact if Viatran's technical staff requires additional information during analysis, and a brief description of the problem associated with the product's failure.

WARRANTY

Viatran Corporation warrants that its products shall be free from defective workmanship and/or material for a period of twelve (12) months from the date of shipment, provided that Viatran's obligation hereunder shall be limited to correcting any defective workmanship and/or replacing any defective material f.o.b. factory. No allowance will be made for any expense incurred for correcting any defective workmanship and/or material without written consent by Viatran. This warranty is in lieu of all other warranties expressed or implied.

REPAIR INSTRUCTIONS

Viatran's Transmitters are designed to be easily repaired and recalibrated if necessary. If a failure occurs, the transmitter should be returned to the factory for inspection and testing. Please contact the Customer Support Department at 1-800-688-0030 for a return tracking number and/or a repair cost estimate. A nominal inspection fee is charged on all units returned to the factory which are not subsequently repaired.

OPTIONAL APPROVALS

Model 570

570_TF_(A)

[All product except as noted in labels 570TF(B-D)]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CLASS I, II, III, DIV. 1, GROUPS A, B, C, D, E, F, G
CLASS I, ZONE 0, AEx ia IIC
T4, Ta=80°C, T5, Ta=40°C
NEMA/TYPE 4X,
HAZ. LOC.

INSTALL PER CD0633
DUAL SEAL for Process Temps -40°F to 300°F

570_TF_(B)

['G' Gage format and/or TB option]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CLASS I, DIV. 1, GROUPS A, B, C, D,
CLASS I, ZONE 0, AEx ia IIC
T4, Ta=80°C, T5, Ta=40°C
HAZARDOUS LOCATIONS
INSTALL PER CD0633

DUAL SEAL for Process Temps -40°F to 300°F

570_TF_(C)

[All product <299 PSIA/S/V]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CLASS I, II, III, DIV. 1, GROUPS A, B, C, D, E, F, G
CLASS I, ZONE 0, AEx ia IIC
T4, Ta=80°C, T5, Ta=40°C
NEMA/TYPE 4X,
HAZ. LOC.

INSTALL PER CD0633

570_TF_(D)

[All alternate electrical connections]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CLASS I, DIV. 1, GROUPS A, B, C, D,
CLASS I, ZONE 0, AEx ia IIC
T4, Ta=80°C, T5, Ta=40°C
HAZARDOUS LOCATIONS
INSTALL PER CD0633

570NZ(A)

[All product except as noted in labels 570NZ(B-D)]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, II & III, DIV. 2,
GRPS A, B, C, D, F, G
CL I, ZN 2, GRP IIC
T4, Ta=80°C, T5, Ta=40°C
NEMA/TYPE 4X, HAZ LOC
DUAL SEAL
for Process Temps -40°F to 300°F

570_NY_(A)

[All product >=300 PSIS/A]



APPROVED
EXPLOSION PROOF FOR USE
IN CLASS I, DIV. 1, GROUPS A, B, C, D
CLASS II/III, DIV. 1, GROUPS E, F, G
CLASS I, ZONE 1, AEx d IIC
T5 at Ta=88°C NEMA 4X
HAZARDOUS LOCATIONS
Factory Sealed, Conduit Seal not Required
DUAL SEAL
for Process Temps -40°F to 300°F

570NZ(B)

['G' Gage format and/or TB option]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, DIV. 2, GRPS A, B, C, D
CL I, ZN 2, GRP IIC
T4, Ta=80°C, T5, Ta=40°C HAZ LOC
DUAL SEAL
for Process Temps -40°F to 300°F

570_NY_(B)

[All product (All Ranges) PSIG/PSIN/TB]



APPROVED
EXPLOSION PROOF FOR USE
IN CLASS I, DIV. 1, GROUPS A, B, C, D
CLASS II/III, DIV. 1, GROUPS E, F, G
T5 at Ta=88°C NEMA 4X
HAZARDOUS LOCATIONS
Factory Sealed, Conduit Seal not Required
DUAL SEAL
for Process Temps -40°F to 300°F

570NZ(C)

[All product <299 PSIA/S/V]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, II & III, DIV. 2,
GRPS A, B, C, D, F, G
CL I, ZN 2, GRP IIC
T4, Ta=80°C, T5, Ta=40°C
NEMA/TYPE 4X, HAZ LOC

570_NY_(C)

[All product <300 PSIS/A]



APPROVED
EXPLOSION PROOF FOR USE
IN CLASS I, DIV. 1, GROUPS A, B, C, D
CLASS II/III, DIV. 1, GROUPS E, F, G
CLASS I, ZONE 1, AEx d IIC
T5 at Ta=88°C NEMA 4X
HAZARDOUS LOCATIONS
Factory Sealed, Conduit Seal not Required

570NZ(D)

[ZU option only]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, DIV. 2, GRPS A, B, C, D
CL I, ZN 2, GRP IIC
T4, Ta=80°C, T5, Ta=40°C HAZ LOC

570_TW_



570_KN_

[For 'S' Sealed format and 'A' Absolute format only]
IECEX CSA 18.0002X
Ex db IIC Gb T5
-20°C ≤ Ta ≤ 88°C

570_NG_

[For 'S' Sealed format and 'A' Absolute format only]



Ex db IIC T4...T8 Gb
T6...T4: -20°C<Ta<80°C
PRESAFE 18 ATEX 8250X



570_NK_(A)

[For < 1 Meter Wire]



Ex ia IIC Gb
T4: -20°C<Ta<75°C
T5: -20°C<Ta<40°C
Ui=28V, Ii=100mA
Li=1.2uH, Ci=14nF
Pi<1W

LCIE 03 ATEX 6373 X



570_NK_(B)

[For 100 Meters Wire]



Ex ia IIC Gb
T4: -20°C<Ta<75°C
T5: -20°C<Ta<40°C
Ui=28V, Ii=100mA
Li=101.2uH, Ci=34nF
Pi<1W

LCIE 03 ATEX 6373 X



570_TK_



Ex nA IIC T4 Gc
(-20°C<Ta<80°C)

PRESAFE 18 ATEX 8251X



570_NJ_



570_NX_(A)

[All product except as noted in labels 570NX(B)]



CSA 03.1000784
CLASS I, DIV. 1,
GRPS A, B, C, D;
CLASS II, DIV. 1, GRPS E, F, G;
CLASS III, DIV. 1,
Ex ia IIC
T4, Ta=80°C, T5, Ta=40°C
Type 4 Encl.
Per drawing CD0627

570_NX_(B)

['G' Gage format and/or any alt. electrical connections]



CSA 03.1000784
CLASS I, DIV. 1,
GRPS A, B, C, D;
Ex ia IIC
T4, Ta=80°C, T5, Ta=40°C
Per drawing CD0627

570_ME_



CERTIFIED EXPLOSION
PROOF FOR
CLASS I, DIV. 1,
GRPS A, B, C, D;
CLASS II, DIV. 1,
GRPS E, F, G;
CLASS III
HAZARDOUS LOCATIONS
Type 4 Encl.

OPTIONAL APPROVALS

Model 770

770_NY_(A)

[All product ≥ 300 PSS/A]



APPROVED
EXPLOSION PROOF FOR USE
IN CL I, DIV. 1, GPs A,B,C,D
CL II/III, DIV. 1, GPs E,F,G
CL I, ZN 1, AEx d IC
TS AT $T_a=88^\circ\text{C}$ TYPE 4X
HAZ. LOC.
FACTORY SEALED, CONDUIT SEAL NOT REQUIRED
DUAL SEAL
FOR PROCESS TEMPS -40°F TO 300°F

770_NY_(B)

[All product (All Ranges) PSIG/PSIV/TB Option]



APPROVED
EXPLOSION PROOF FOR USE
IN CL I, DIV. 1, GPs A,B,C,D
CL II/III, DIV. 1, GPs E,F,G
TS AT $T_a=88^\circ\text{C}$ TYPE 4X
HAZ. LOC.
FACTORY SEALED, CONDUIT SEAL NOT REQUIRED
DUAL SEAL
FOR PROCESS TEMPS -40°F TO 300°F

770_NY_(C)

[All product < 300 PSS/A]



APPROVED
EXPLOSION PROOF FOR USE
IN CL I, DIV. 1, GPs A,B,C,D
CL II/III, DIV. 1, GPs E,F,G
CL I, ZN 1, AEx d IC
TS AT $T_a=88^\circ\text{C}$ TYPE 4X
HAZ. LOC.
FACTORY SEALED, CONDUIT SEAL NOT REQUIRED

770_TW



770_TF_(A)

[All product except as noted in labels 770TF(B-D)]



APPROVED
INT. SAFE FOR USE IN
CL I,II,III, DIV. 1, GPs A,B,C,D,E,F,G
CL I, ZN 0, AEx Ia IC T4, $T_a=80^\circ\text{C}$,
TS, $T_a=40^\circ\text{C}$ TYPE 4X, HAZ. LOC.
INSTALL PER C00850
DUAL SEAL FOR PROCESS TEMPS -40°F TO 300°F

770_TF_(B)

[G, V formats, TB, ZU]



APPROVED
INT. SAFE FOR USE IN
CL I, DIV. 1, GPs A,B,C,D,
CL I, ZN 0, AEx Ia IC T4, $T_a=80^\circ\text{C}$,
TS, $T_a=40^\circ\text{C}$ HAZ. LOC.
INSTALL PER C00850
DUAL SEAL FOR PROCESS TEMPS -40°F TO 300°F

770_TF_(C)

[All product ≤ 299 PSA/S/V]



APPROVED
INT. SAFE FOR USE IN
CL I,II,III, DIV. 1, GPs A,B,C,D,E,F,G
CL I, ZN 0, AEx Ia IC T4, $T_a=80^\circ\text{C}$,
TS, $T_a=40^\circ\text{C}$ TYPE 4X, HAZ. LOC.
INSTALL PER C00850

770-TF_(D)

[T4, All alternate electrical connections except ZU]



APPROVED
INT. SAFE FOR USE IN
CL I, DIV. 1, GPs A,B,C,D,
CL I, ZN 0, AEx Ia IC T4, $T_a=80^\circ\text{C}$,
TS, $T_a=40^\circ\text{C}$ HAZ. LOC.
INSTALL PER C00850

770_NZ_(A)

[All product except as noted in labels 770NZ(B-C)]



APPROVED
NONINCENDIVE FOR USE IN
CL I, II & III, DIV. 2,
GPs A,B,C,D,F,G
CL I, ZN 2, GP IC
T4, $T_a=80^\circ\text{C}$, TS, $T_a=40^\circ\text{C}$
TYPE 4X, HAZ. LOC.
DUAL SEAL
FOR PROCESS TEMPS -40°F TO 300°F

770_NZ_(B)

[‘g’ Gage format, TH, TB, ZU]



APPROVED
NONINCENDIVE FOR USE IN
CL I, DIV. 2, GPs A,B,C,D
CL I, ZN 2, GP IC
T4, $T_a=80^\circ\text{C}$, TS, $T_a=40^\circ\text{C}$ HAZ. LOC.
DUAL SEAL
FOR PROCESS TEMPS -40°F TO 300°F

770_NZ_(C)

[All product ≤ 299 PSA/S/V]



APPROVED
NONINCENDIVE FOR USE IN
CL I, II & III, DIV. 2,
GPs A,B,C,D,F,G
CL I, ZN 2, GP IC
T4, $T_a=80^\circ\text{C}$, TS, $T_a=40^\circ\text{C}$
TYPE 4X, HAZ. LOC.

770_NZ_(D)

[All Alt. Connectors]



APPROVED
NONINCENDIVE FOR USE IN
CL I, DIV. 2, GPs A,B,C,D,
T4, $T_a=80^\circ\text{C}$, TS, $T_a=40^\circ\text{C}$
HAZ. LOC.
WARNING: DO NOT DISCONNECT THE
CONNECTOR WHILE THE CIRCUIT IS
LIVE WHEN A FLAMMABLE OR
COMBUSTIBLE ATMOSPHERE IS PRESENT.

770_DE_NK



Ex Ia IC T4 Ga
($-20^\circ\text{C}<T_a<80^\circ\text{C}$)
U=28V, I=100mA
Li=2.4mH, Ci=12nF
PLS1W

PRESAFE 16 ATEX 8249X



770_NK_ZU



Ex Ia IC T4 Ga
($-20^\circ\text{C}<T_a<80^\circ\text{C}$)
U=28V, I=100mA
Li=66mH, Ci=20nF
PLS1W

PRESAFE 16 ATEX 8249X



770_DE_NK_ZU

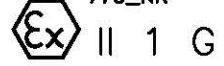


Ex Ia IC T4 Ga
($-20^\circ\text{C}<T_a<80^\circ\text{C}$)
U=28V, I=100mA
Li=70mH, Ci=23nF
PLS1W

PRESAFE 16 ATEX 8249X

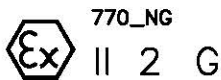


770_NK



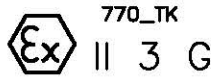
Ex Ia IC T4 Ga
($-20^\circ\text{C}<T_a<80^\circ\text{C}$)
U=28V, I=100mA
Li=1.8mH, Ci=9nF
PLS1W

PRESAFE 16 ATEX 8249X



Ex db IC TS...T4 Gb
TB...T4: $-20^\circ\text{C}<T_a<80^\circ\text{C}$

PRESAFE 16 ATEX 8250X



Ex nA IC T4 Gc
($-20^\circ\text{C}<T_a<80^\circ\text{C}$)

PRESAFE 16 ATEX 8251X



770_NX_(A)

[All product except as noted in label 770_NX_(B)]



CSA 04 1507558
CL I, DIV 1,
GPs A,B,C,D;
CL II, DIV 1, GPs E,F,G;
CLS III, DIV 1,
Ex Ia IC T4, $T_a=80^\circ\text{C}$,
TS, $T_a=40^\circ\text{C}$
TYPE 4 ENCL
PER DRAWING C00649.
DUAL SEAL

770_NX_(B)

[‘g’ gage format, TH, or any alt. electrical connections]



CSA 04 1507558
CL I, DIV. 1,
GPs A,B,C,D;
Ex Ia IC T4, $T_a=80^\circ\text{C}$,
TS, $T_a=40^\circ\text{C}$
PER DRAWING C00649.

770_NJ



OPTIONAL APPROVALS

Model 870

870_NY_(A)
[All product ≥ 300 PSIS/A]



APPROVED
EXPLOSION PROOF FOR USE
IN CL I, DIV. 1, GFS A,B,C,D
CL II/III, DIV. 1, GFS E,F,G
CL I, ZN 1, AEx d IIC
TS AT $T_a=85^\circ\text{C}$ TYPE 4X
HAZ. LOC. FACTORY SEALED,
CONDUIT SEAL NOT REQUIRED
DUAL SEAL
FOR PROCESS TEMPS -40°F TO 300°F

870_NY_(B)
[All product (All Ranges) PSIG/PSN/TB Option]



APPROVED
EXPLOSION PROOF FOR USE
IN CL I, DIV. 1, GFS A,B,C,D
CL II/III, DIV. 1, GFS E,F,G
TS AT $T_a=85^\circ\text{C}$ TYPE 4X
HAZ. LOC. FACTORY SEALED,
CONDUIT SEAL NOT REQUIRED
DUAL SEAL
FOR PROCESS TEMPS -40°F TO 300°F

870_NY_(C)
[All product < 300 PSIS/A]



APPROVED
EXPLOSION PROOF FOR USE
IN CL I, DIV. 1, GFS A,B,C,D
CL II/III, DIV. 1, GFS E,F,G
CL I, ZN 1, AEx d IIC
TS AT $T_a=85^\circ\text{C}$ TYPE 4X
HAZ. LOC. FACTORY SEALED,
CONDUIT SEAL NOT REQUIRED

870_TW



870_NZ_(A)
[All product except as
noted in labels 870NZ(B-C)]



APPROVED
NONINCENDIVE FOR USE IN
CL I, II & III, DIV. 2,
GPS A,B,C,D,F,G
CL I, ZN 2, GP IIC
T4, $T_a=80^\circ\text{C}$, T5, $T_a=40^\circ\text{C}$
TYPE 4X, HAZ. LOC.
DUAL SEAL
FOR PROCESS TEMPS -40°F TO 300°F

870_NZ_(B)
[‘G’ Gage format, TH, TB, ZU]



APPROVED
NONINCENDIVE FOR USE IN
CL I, DIV. 2, GPS A,B,C,D
CL I, ZN 2, GP IIC
T4, $T_a=80^\circ\text{C}$, T5, $T_a=40^\circ\text{C}$ HAZ. LOC.
DUAL SEAL
FOR PROCESS TEMPS -40°F TO 300°F

870_NZ_(C)
[All product ≤ 299 PSIA/S/V]



APPROVED
NONINCENDIVE FOR USE IN
CL I, II & III, DIV. 2,
GPS A,B,C,D,F,G
CL I, ZN 2, GP IIC
T4, $T_a=80^\circ\text{C}$, T5, $T_a=40^\circ\text{C}$
TYPE 4X, HAZ. LOC.

870_NZ_(D)
[All Alt. Connectors]



APPROVED
NONINCENDIVE FOR USE IN
CL I, DIV. 2, GPS A,B,C,D,
T4, $T_a=80^\circ\text{C}$, T5, $T_a=40^\circ\text{C}$
HAZ. LOC.
WARNING: DO NOT DISCONNECT THE
CONNECTOR WHILE THE CIRCUIT IS
LIVE WHEN A FLAMMABLE OR
COMBUSTIBLE ATMOSPHERE IS PRESENT.

870_TF_(A)
[All product except as
noted in labels 870TF(B-D)]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CL I, II, III, DIV. 1, GFS A,B,C,D,E,F,G
CL I, ZN 0, AEx to IIC T4, $T_a=80^\circ\text{C}$,
T5, $T_a=40^\circ\text{C}$ TYPE 4X, HAZ. LOC.
INSTALL PER CDO847
DUAL SEAL FOR PROCESS TEMPS -40°F TO 300°F

870_TF_(B)
[G, V formats, TB, ZU]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CL I, DIV. 1, GFS A,B,C,D,
CL I, ZN 0, AEx to IIC T4, $T_a=80^\circ\text{C}$,
T5, $T_a=40^\circ\text{C}$ HAZ. LOC.
INSTALL PER CDO847
DUAL SEAL FOR PROCESS TEMPS -40°F TO 300°F

870_TF_(C)
[All product ≤ 299 PSIA/S/V]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CL I, II, III, DIV. 1, GFS A,B,C,D,E,F,G
CL I, ZN 0, AEx to IIC T4, $T_a=80^\circ\text{C}$,
T5, $T_a=40^\circ\text{C}$ TYPE 4X, HAZ. LOC.
INSTALL PER CDO847

870_TF_(D)
[TH, All alternate
electrical connections
except ZU]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CL I, DIV. 1, GFS A,B,C,D,
CL I, ZN 0, AEx to IIC T4, $T_a=80^\circ\text{C}$,
T5, $T_a=40^\circ\text{C}$ HAZ. LOC.
INSTALL PER CDO847

870_NG
[PSIA/S/V units only]

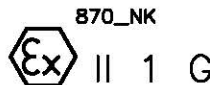


Ex db IIC T5...T4 Gb
 $T_5, T_4: -20^\circ\text{C} < T_a < 80^\circ\text{C}$

PRESAFE 16 ATEX 8250X



2480

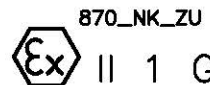


Ex Ia IIC T4 Gc
 $(-20^\circ\text{C} < T_a < 80^\circ\text{C})$
U=28V, I=100mA
L=2.4mH, C=12nF
P<1W

PRESAFE 16 ATEX 8240X



2480

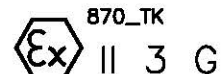


Ex Ia IIC T4 Gc
 $(-20^\circ\text{C} < T_a < 80^\circ\text{C})$
U=28V, I=100mA
L=70mH, C=23nF
P<1W

PRESAFE 16 ATEX 8240X



2480



Ex nA IIC T4 Gc
 $(-20^\circ\text{C} < T_a < 80^\circ\text{C})$

PRESAFE 16 ATEX 8251X



870_NX_(A)
[All product except as
noted in label 870_NX_(B)]



CSA 04 1507558
CL I, DIV. 1,
GPS A,B,C,D;
CL II, DIV. 1, GPS E,F,G;
CL III, DIV. 1,
Ex Ia IIC T4, $T_a=80^\circ\text{C}$,
T5, $T_a=40^\circ\text{C}$
TYPE 4 ENCL.
PER DRAWING CDO846,
DUAL SEAL

870_NX_(B)
[‘G’ formats or any
alt. electrical connections]



CSA 04 1507558
CL I, DIV. 1,
GPS A,B,C,D;
Ex Ia IIC T4, $T_a=80^\circ\text{C}$,
T5, $T_a=40^\circ\text{C}$
PER DRAWING CDO846.

870_TJ_(A)
[All product except as
noted in 870_TJ_(B)]



CSA 04 1507558
CL I, DIV. 2,
GPS A,B,C,D;
CL II, DIV. 2,
GPS F,G;
CL III, DIV. 2
TS AT $T_a=80^\circ\text{C}$
TYPE 4 ENCL.
DUAL SEAL

870_TJ_(B)
[‘G’ format or alt.
electrical connections]



CSA 04 1507558
CL I, DIV. 2,
GPS A,B,C,D;
TS AT $T_a=80^\circ\text{C}$

870_ME
[PSIA/S/V units only]



CERTIFIED EXPLOSION
PROOF FOR
CL I, DIV. 1,
GPS A,B,C,D;
CL II, DIV. 1,
GPS E,F,G;
CL III
HAZ. LOC.
TYPE 4 ENCL.
DUAL SEAL

870_NJ



OPTIONAL APPROVALS

Model LP770

LP770NY(A)

[All product <300 PSM/A]



APPROVED
EXPLOSION PROOF FOR USE
IN CLASS I, DIV. 1, GROUPS A,B,C,D
CLASS I/II, DIV. 1, GROUPS E,F,G
CLASS I, ZONE 1, AEx d IC
T5 at T_a=85°C NEMA 4X
HAZARDOUS LOCATIONS
Factory Sealed, Conduit Seal not Required
DUAL SEAL
for Process Temps -40°F to 300°F

LP770NY(B)

[All product (All Ranges) PSM/PSM/TB Option]



APPROVED
EXPLOSION PROOF FOR USE
IN CLASS I, DIV. 1, GROUPS A,B,C,D
CLASS I/II, DIV. 1, GROUPS E,F,G
T5 at T_a=85°C NEMA 4X
HAZARDOUS LOCATIONS
Factory Sealed, Conduit Seal not Required
DUAL SEAL
for Process Temps -40°F to 300°F

LP770NY(C)

[All product <300 PSM/A]



APPROVED
EXPLOSION PROOF FOR USE
IN CLASS I, DIV. 1, GROUPS A,B,C,D
CLASS I/II, DIV. 1, GROUPS E,F,G
CLASS I, ZONE 1, AEx d IC
T5 at T_a=85°C NEMA 4X
HAZARDOUS LOCATIONS
Factory Sealed, Conduit Seal not Required

LP770NZ(A)

[All product except as noted in labels LP770NZ(B-F)]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, II & III, DIV. 2,
GRPS A,B,C,D,F,G
CL I, ZN 2, GRP IC
T4, T_a=80°C, T5, T_a=40°C
NEMA/TYPE 4X HAZ LOC
DUAL SEAL
for Process Temps -40°F to 300°F

LP770NZ(B)

[“V” Format, TH, TB, ZU]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, DIV. 2, GRPS A,B,C,D
CL I, ZN 2, GRP IC
T4, T_a=80°C, T5, T_a=40°C HAZ LOC
DUAL SEAL
for Process Temps -40°F to 300°F

LP770NZ(C)

[All product <290 PSM/S]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, II & III, DIV. 2,
GRPS A,B,C,D,F,G
CL I, ZN 2, GRP IC
T4, T_a=80°C, T5, T_a=40°C
NEMA/TYPE 4X, HAZ LOC

LP770NZ(D)

[All product with BK or ZIA, except as noted in labels LP770NZ(E & F)]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, II & III, DIV. 2,
GRPS A,B,C,D,F,G
CL I, ZN 2, GRP IC
T4, T_a=80°C, T5, T_a=40°C
(For “ZM” only) NEMA 4X & IP67 RATED
OR (For “BK” only) IP67 RATED
HAZARDOUS LOCATIONS
for Process Temps -40°F to 300°F
Connector must be fully engaged

LP770NZ(E)

[“V” Format, BK, ZIA]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, DIV. 2, GRPS A,B,C,D
CL I, ZN 2, GRP IC
T4, T_a=80°C, T5, T_a=40°C
HAZARDOUS LOCATIONS
for Process Temps -40°F to 300°F
Connector must be fully engaged

LP770NZ(F)

[All product <290 PSM/S BK, ZIA]



APPROVED
NONINCENDIVE FOR USE IN
CLASS I, II & III, DIV. 2,
GRPS A,B,C,D,F,G
CL I, ZN 2, GRP IC
T4, T_a=80°C, T5, T_a=40°C
(For “ZM” only) NEMA 4X & IP67 RATED
OR (For “BK” only) IP67 RATED
HAZARDOUS LOCATIONS
Connector must be fully engaged

LP770TF(A)

[All product except as noted in labels LP770TF(B-D)]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CLASS I, DIV. 1, GROUPS A,B,C,D,E,F,G
CLASS I, ZONE 0, AEx Ia IC T4, T_a=80°C,
T5, T_a=40°C NEMA/TYPE 4X, HAZ. LOC.
INSTALL PER C00650
DUAL SEAL for Process Temps -40°F to 300°F

LP770TF(B)

[G, V formats, TB, ZU]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CLASS I, DIV. 1, GROUPS A,B,C,D,
CLASS I, ZONE 0, AEx Ia IC T4, T_a=80°C,
T5, T_a=40°C HAZARDOUS LOCATIONS
INSTALL PER C00650
DUAL SEAL for Process Temps -40°F to 300°F

LP770TF(C)

[All product <290 PSM/S/V]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CLASS I, DIV. 1, GROUPS A,B,C,D,E,F,G
CLASS I, ZONE 0, AEx Ia IC T4, T_a=80°C,
T5, T_a=40°C NEMA/TYPE 4X, HAZ. LOC.
INSTALL PER C00650

LP770TF(D)

[TH, All alternate electrical connections except ZU]



APPROVED
INTRINSICALLY SAFE FOR USE IN
CLASS I, DIV. 1, GROUPS A,B,C,D,
CLASS I, ZONE 0, AEx Ia IC T4, T_a=80°C,
T5, T_a=40°C HAZARDOUS LOCATIONS
INSTALL PER C00650

LP770_NX_(A)

[All product except as noted in label LP770_NX_(B)]



CSA 04 1807555
CLASS I, DIV. 1,
GRPS A,B,C,D,
CLASS II, DIV. 1, GRPS E,F,G;
CLASS III, DIV. 1,
Ex Ia IC T4, T_a=80°C,
T5, T_a=40°C
Type 4 Encl.
per drawing C00649.
Dual Seal

LP770_NX_(B)

[“G” gage format, TH, or any alt. electrical connections]



CSA 04 1807555
CLASS I, DIV. 1,
GRPS A,B,C,D,
Ex Ia IC T4, T_a=80°C,
T5, T_a=40°C
per drawing C00649.

LP770_TJ_(A)

[All product except as noted in label LP770_NX_(B)]



CSA 04 1807555
CLASS I, DIV. 2,
GRPS A,B,C,D,
CLASS II, DIV. 2,
GRPS F,G;
CLASS III, DIV. 2,
T5 at T_a=80°C
Type 4 Encl.
Dual Seal

LP770_TJ_(B)

[“G” gage format or any alt. electrical connections]



CSA 04 1807555
CLASS I, DIV. 2,
GRPS A,B,C,D,
T5 at T_a=80°C

LP770NG



Ex db IC T4 Gb
T5...T4: -20°C to <80°C



PRESAFE 16 ATEX 8250X
2450

LP770_NK



Ex Ia IC T4 Gb
(-20°C to <80°C)
U=25V, I=100mA
L=1.8mH, C=8nF
PES1W



PRESAFE 16 ATEX 8248X
2450

LP770_DE_NK



Ex Ia IC T4 Gb
(-20°C to <80°C)
U=25V, I=100mA
L=2.4mH, C=12nF
PES1W



PRESAFE 16 ATEX 8248X
2450

LP770_NK_ZU



Ex Ia IC T4 Gb
(-20°C to <80°C)
U=25V, I=100mA
L=88mH, C=20nF
PES1W



PRESAFE 16 ATEX 8248X
2450

LP770_DE_NK_ZU



Ex Ia IC T4 Gb
(-20°C to <80°C)
U=25V, I=100mA
L=70mH, C=23nF
PES1W



PRESAFE 16 ATEX 8248X
2450

LP770TK



Ex nA IC T4 Gc
(-20°C to <80°C)



PRESAFE 16 ATEX 8251X

LP770_NK



Ex Ia IC T4 Gb
(-20°C to <80°C)
U=25V, I=100mA
L=1.8mH, C=8nF
PES1W



PRESAFE 16 ATEX 8248X
2450

LP770_DE_NK



Ex Ia IC T4 Gb
(-20°C to <80°C)
U=25V, I=100mA
L=2.4mH, C=12nF
PES1W



PRESAFE 16 ATEX 8248X
2450

LP770_NK_ZU



Ex Ia IC T4 Gb
(-20°C to <80°C)
U=25V, I=100mA
L=88mH, C=20nF
PES1W



PRESAFE 16 ATEX 8248X
2450

LP770_DE_NK_ZU



Ex Ia IC T4 Gb
(-20°C to <80°C)
U=25V, I=100mA
L=70mH, C=23nF
PES1W



PRESAFE 16 ATEX 8248X
2450

LP770TK



Ex nA IC T4 Gc
(-20°C to <80°C)



PRESAFE 16 ATEX 8251X