

PRESSURE & LEVEL TRANSMITTERS

Series 625, 626 and 627
Intrinsically Safe



It is important that these transmitters be installed, operated and maintained in accordance with all NEC and applicable codes. Also, these products may not be modified in any way. Failure to adhere to this requirement will void the IS approval rating.

Model 627 comes standard with a polyurethane jacketed cable containing a strength member which allows it to support the transmitter without additional supports. Also, this cable has a vent tube which provides an ambient pressure reference. The end of the vent tube should be protected from moisture. If moisture finds its way into the transmitter electronics it could adversely affect the performance of the product.

For some applications the use of a gortex filter inserted into the end of the vent tube will be adequate. In more humid conditions a desiccant cartridge plugged into the end of the vent tube is recommended. A teflon jacketed cable is available for applications that are not compatible with the standard polyurethane material.

Wiring of all the transmitters is based upon a 4 mA to 20 mA, 2-wire current loop. The DC power supply, transmitter and receiving instrumentation are wired in series. The transmitter controls the current in the loop which is directly proportionate to the measured pressure.

Maintenance

NOSHOK model 625, 626 and 627 transmitters require no maintenance. They are calibrated at the factory using pressure standards traceable to NIST. However, models 625 and 626 have user accessible zero and span potentiometers located under the top cap. These are trimming adjustments with about $\pm 10\%$ adjustment capability. Model 627 is sealed and does not have any user accessible adjustments.

The
Instrumentation
Company

NOSHOK
INCORPORATED

NUMIS 03-1

CORPORATE HEADQUARTERS

1010 West Bagley Road
Berea, Ohio 44017
440.243.0888
440.243.3472 Fax
E-mail: noshok@noshok.com
Web: www.noshok.com

(Factory Mutual and Canadian
Standards Association Approved)



NOSHOK

General

NOSHOK Model 625, 626 and 627 transmitters are approved for use in hazardous location applications as follows:

Intrinsically Safe, entity approval for Class I, II and III, Division 1, Groups A, B, C, D, E, F and G; and Class I Zone 0 Aex ia IIC

Dust Ignition-proof for Class II and III, Division 1, Groups E, F and G

Non incensive for Class I, Division 2, Groups A, B, C and D

FMRC 3600, 3610, 3611, 3810 (including supplement #1), ISA-S12.0. 01, IEC 60529 (including amendment #1)

Installation and Commissioning

Model 625 pressure transmitter is connected to the pressure source using the the threaded stainless steel pressure port. Several pressure port sizes are available.

Model 626 pressure transmitter incorporates a stainless steel (or optional material) diaphragm at the end of the pressure connection, providing a flush diaphragm configuration. It is connected to the pressure source

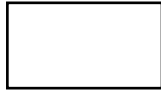
using the G1/2 B or G1 B threads directly or through the use of the available weld on adapters. Model 627 is a submersible level transmitter and is suspended by the attached cable in a tank. The hydrostatic pressure produced by the liquid rising above the location of the level transmitter is directly related to the actual liquid level. Unless the metal body of the model 627 is grounded directly in the mounting of the transmitter, the drain wire in the cable needs to be grounded to a suitable system ground. It is essential to do this for the built in noise protection to be effective.

HAZARDOUS (CLASSIFIED) LOCATION

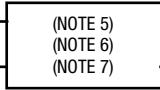
CLASS I, ZONE 0, GROUP IIC
 CLASS I, DIVISION I, GROUPS A, B, C, AND D
 CLASS I, DIVISION I, GROUPS E, F AND G
 CLASS I
 (NOTE 2)

NON-HAZARDOUS LOCATION

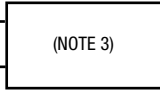
625, 626 and 627 SERIES



ASSOCIATED APPARATUS



CONTROL EQUIPMENT



4 mA to 20 mA 2-WIRE SYSTEM

	Hirschmann	Cable	M12	Bendix	Internal Junction Box
+Supply	1	Red/Brown	1	A	1
+Output	2	Black/Green	3	B	2

ENTITY PARAMETERS:

$V_{max} = 30\text{ V}$, $I_{max} = 100\text{ mA}$, $P_1 = 1\text{ W}$

$C_i = 22\text{ nF}$ (FLYING LEADS: $+ 0.2\text{ nF/m}$). $L_i = 0.1\text{ mH}$ (FLYING LEADS: $+ 2\text{ nH/m}$)

NOTES:

1. THE INTRINSIC SAFETY ENTITY CONCEPT ALLOWS THE INTERCONNECTION OF TWO FM APPROVED INTRINSICALLY SAFE DEVICES WITH ENTITY PARAMETERS NOT SPECIFICALLY EXAMINED IN COMBINATION AS A SYSTEM WHEN: U_o OR V_{oc} OR $V_1 \leq V_{max}$, I_o OR I_{sc} OR $I_t \leq I_{max}$, C_a OR $C_o \geq C_i$; $+ C_{cable}$, L_a OR $L_o \geq L_i + L_{cable}$, $P_o \leq P_i$
2. DUST-TIGHT CONDUIT SEAL MUST BE USED WHEN INSTALLED IN CLASS II AND CLASS III ENVIRONMENTS
3. CONTROL EQUIPMENT CONNECTED TO THE ASSOCIATED APPARATUS MUST NOT USE OR GENERATE MORE THAN 250 Vrms OR Vdc
4. INSTALLATION SHOULD BE IN ACCORDANCE WITH ANSI / ISA RP12.6 "INSTALLATION OF INTRINSICALLY SAFE SYSTEMS FOR HAZARDOUS (CLASSIFIED) LOCATIONS AND THE NATIONAL ELECTRICAL CODE 9 (ANS 1 / NFPA70) SECTIONS 504 AND 505
5. THE CONFIGURATION OF ASSOCIATED APPARATUS MUST BE FACTORY MUTUAL APPROVED UNDER ENTITY CONCEPT
6. ASSOCIATED APPARATUS MANUFACTURER'S INSTALLATION DRAWING MUST BE FOLLOWED WHEN INSTALLING THIS EQUIPMENT
7. THE 625, 626, 627 SERIES ARE APPROVED FOR CLASS I, ZONE 0 APPLICATIONS. IF CONNECTING AE x [ib] ASSOCIATED APPARATUS OR AE x ib I.S. APPARATUS TO THE 625, 626 AND 627 SERIES THE I.S. CIRCUIT IS ONLY SUITABLE FOR CLASS I, ZONE 1 OR CLASS I, ZONE 2 AND IS NOT SUITABLE FOR CLASS I, ZONE 0 OR CLASS I, DIVISION I HAZARDOUS (CLASSIFIED) LOCATIONS
8. NO REVISION TO DRAWING WITHOUT PRIOR FACTORY MUTUAL RESEARCH APPROVAL