MODEL IST200 INTELLIGENT SYSTEM TRANSLATOR FOR USE WITH MODEL 2251EIS INTRINSICALLY SAFE DETECTORS INSTALLATION AND MAINTENANCE INSTRUCTIONS

BEFORE INSTALLING

This information is included as a quick reference installation guide. Refer to the control panel installation manual for detailed system information. If the IST200 will be installed in an existing operational system, inform the operator and local authority that the system will be temporarily out of service. Disconnect power to the control panel before installing the IST200.

GENERAL DESCRIPTION

The IST200 Translator Module is intended for use in analogue addressable systems in conjunction with System Sensor 2251EIS intrinsically safe smoke detectors. The IST200 Translator serves as an interface between the control panel and up to 15 2251EIS optical smoke detectors. It must be used in conjunction with the Y72221 Galvanic Isolator Barrier.

To ensure proper operation, the IST200 must only be connected to listed compatible system control panels only.

SPECIFICATIONS

Input Voltage (V in):	15 to 32 VDC
Output Voltage:	20 to 24 VDC
Input Current:	17mA @ V in = 15V
	9.7mA @ V in = 24V
Short circuit output current:	7.6mA Maximum
Operating Temperature Range	0°C to 60°C
Operating Humidity Range	5 to 95%RH
Maximum 2251EIS detectors:	15

NOTE: Input currents assume there are no wiring faults and that the IST200 is loaded per the panel manufacturer's instructions.

MOUNTING IST200 DEVICES

The IST200 mounts directly to a 100mm (4") square electrical box with a minimum depth of 54mm (2 1/8"), such as the SMB500 as shown in Figure 1.

WARNING

Disconnect the loop power before installing the IST200

WIRING

Notes: All wiring must conform to applicable local codes, ordinances and regulations.

The IST200 translator must be mounted in a suitable electrical box.

The capacitance and inductance or inductance/resistance (L/R) ratio of the cable connected to the hazardous area between the B501 power terminals (1 and 2) must not exceed the values indicated in table 1.

1. See figure 2 for wiring details.

2. Loop wiring from control panel to the IST200 should be shielded, and the shield connected to ground only at the control panel. Cable from the IST200 to the barrier can be shielded, but if so, the shield should not be connected directly to ground, but either left floating or connected to the loop input cable shield. Cable from the barrier to the sensors can be shielded but if so, the shield must not be connected to ground.

3. Secure translator to SMB500 mounting box as shown in Figure 1.

Group	Capacitance µF	Inductance mH	L/R Ratio µH/ohm
IIB	0.65	12.6	210
IIA	2.15	33.6	444

Table 1: Maximum permissible Capacitance, Inductance and Impedance figures across terminals 1 and 2 on a B501 Base
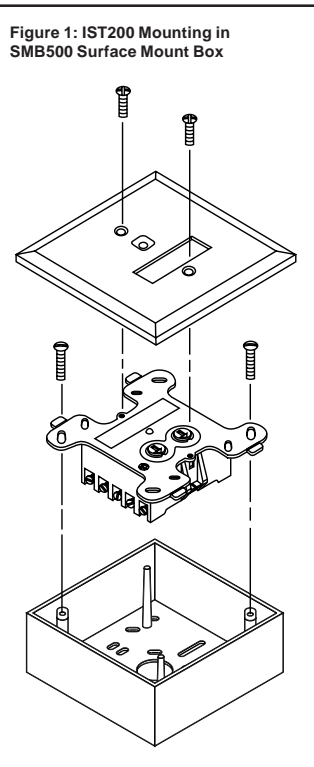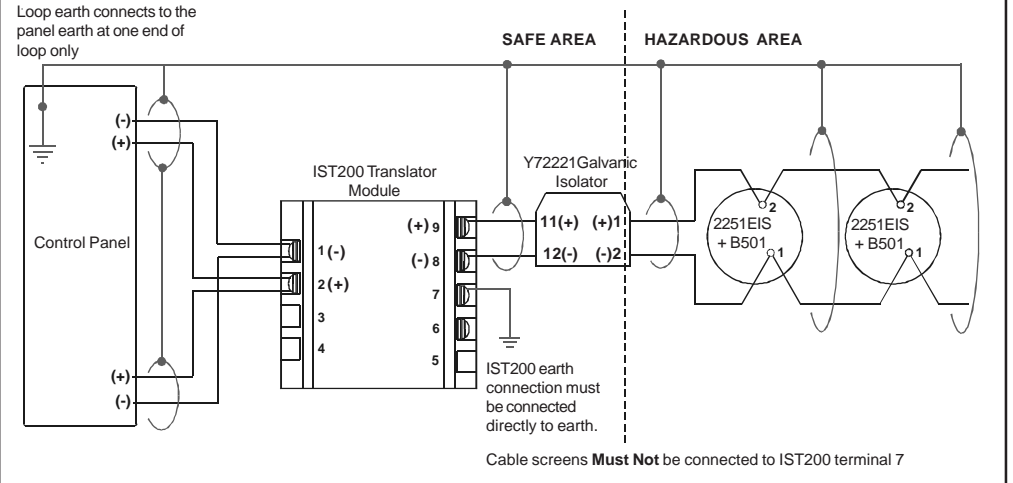

Figure 1: IST200 Mounting in SMB500 Surface Mount Box

Figure 2: Wiring of IST200 Translator Module with Y72221 Galvanic Isolator and 2251EIS Intrinsically Safe Smoke Detector Mounted in a B501 Detector Base

MODEL Y72221 GALVANIC ISOLATORS

The Y72221 is a single channel transformer isolated repeater especially designed and manufactured by Pepperl and Fuchs for use as an intrinsically safe isolator between the IST200 translator module and up to 15 2251EIS optical smoke detectors. The Y72221 is certified intrinsically safe EEx ia IIC.

SPECIFICATIONS

Voltage Range	Input (Safe Side)	20 to 24VDC
	Output (To Hazardous Area)	0.6 to 24VDC
Current Range	1 to 20mA	
Short Circuit Current (Output)	65mA maximum	
Working Temperature Range	-20°C to 60°C	
Weight	100g approx	

INSTALLATION AND WIRING

The Y72221 should be mounted inside a suitable enclosure in the safe area. See figures 2 and 3 for wiring details.

CAUTION

Y72221 Galvanic isolators comprise part of an intrinsically safe system for use in potentially flammable atmospheres, and must be installed in accordance with all appropriate international, national and local standard codes of practice and site regulations for intrinsically safe apparatus.

Figure 3: Y72221 Galvanic Isolator IS Barrier