

## Model WH-IS Mini-Seal™ Intrinsically Safe Wire Harnesses



Model WH-IS-4-100-0  
INTRINSICALLY SAFE WIRE HARNESS



### Description

Because of the compact design of the 4000 series purge unit, the WH-IS-4 provides an explosion-proof seal that will fit between the EPCU's explosion-proof enclosure and the pressurized enclosure. The WH-IS-4 wiring harness features a 10 to 15-inch wire length on one end for termination in the EPCU and a 15-foot wire length on the opposing end for field termination. The ends are separated by Pepperl+Fuchs' exclusive Mini-Seal™ conduit fitting, which installs easily between the purging system and protected enclosure. This extremely compact fitting requires a 3/4 inch conduit "knockout" entry through the protected enclosure's bulkhead. After insertion, a gasketed locknut is provided to firmly secure the fitting and seal the protected enclosure.

#### IMPORTANT NOTE:

Due to liability restrictions and approval limitations, the Pepperl+Fuchs Mini-Seal™ may not be sold as an approved device when used in any manner other than prescribed herein.

### Model WH-IS-4 Configurations

The model WH-IS-4 wire harness contains one 5-conductor cable with 22 AWG stranded copper wires for the EPV-3-SA-\_\_-SM vent. The cable has a light blue insulating jacket indicating I.S. cable circuit. The vent cabling is required for the 4000 series to operate. There are three options available on this wire harness: (1) I.S. Bypass Mode (ISB), (2) Emergency Shutdown (ESD) and (3) Rapid Exchange Override (REO). A separate cable is used for each option and is part of the wire harness. WH-IS-4 wire harness is installed between the EPCU and the pressurized enclosure. Because they are intrinsically safe, they should be separated from all other wiring. The EPCU's other I.S. port is used for the Rapid Exchange® Solenoid Valve. It is installed when the "FA" (fully automatic) or "SA" (semiautomatic) option is selected on the 4000 series.

Wiring harnesses are available in several configurations. In addition to the vent sensor module cable, the Model WH-IS-4 harness will accommodate several options within the top chamber of the EPCU. Each switch cable is furnished with one Pepperl+Fuchs Model SRM-4000 switch resistor module that is intended for in-line termination near the field-mounted switch. The modules provide continuous closed-loop circuit monitoring capability. With WH-IS-4 wire harnesses, the opposite port will always have the Rapid Exchange Solenoid Valve (RESV) cable to provide I.S. power and to switch the RESV.

### Factory Installation

Pepperl+Fuchs wire harnesses are suitable for field installation, but may also be installed by factory technicians upon request. Factory installed harnesses are thoroughly tested, reduce system integration effort and significantly reduce costly field wiring labor. Please consult with your Pepperl+Fuchs sales representative for more information.

### Material Specifications

#### MINI-SEAL™ FITTING

Mini-Seal™ Body: Copper-Free Aluminum  
Mini-Seal™ Plug: Zinc Plated Steel  
Sealing Compound: Chico® "A" Powder  
Internal Wire Separator: Lexan®

#### WH-IS-4 WIRE HARNESS

##### Sensor Module, Solenoid Valve & Switch Cables

Cable Length: 15 feet

Sensor & Solenoid Cable Jackets: 35 mil PVC  
Switch Cable Jacket: 20 mil PVC  
Wire Insulation: THW 15 mil PVC  
Sensor Module: (5) 22 AWG 7 Strand Copper  
Solenoid Valve: (3) 20 AWG 7 Strand Copper  
Switches: (2) 20 AWG 7 Strand Copper

##### Sensor Module Cable Shield

Tape Shield: 2.35 mil Aluminum/Mylar  
Drain Wire: 20 AWG 7 Strand Tinned Copper

#### Isolated Ground Wires

Wire Jacket: 4 mil Nylon  
Wire Insulation: THHN 15 mil PVC  
Wire Conductor: 12 AWG 19 Strand Copper

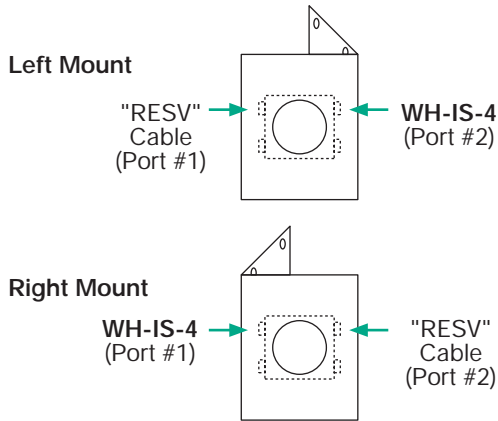
#### Model 4000 Switch Resistor Module

Wire Insulation: THW 15 mil PVC  
Wire Conductor: 18 AWG 10 Strand Copper  
Encapsulation: Polyurethane

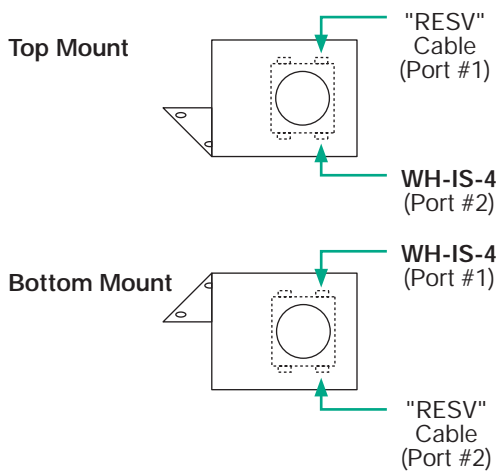
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## Mounting Configurations

### Vertical System EPCU

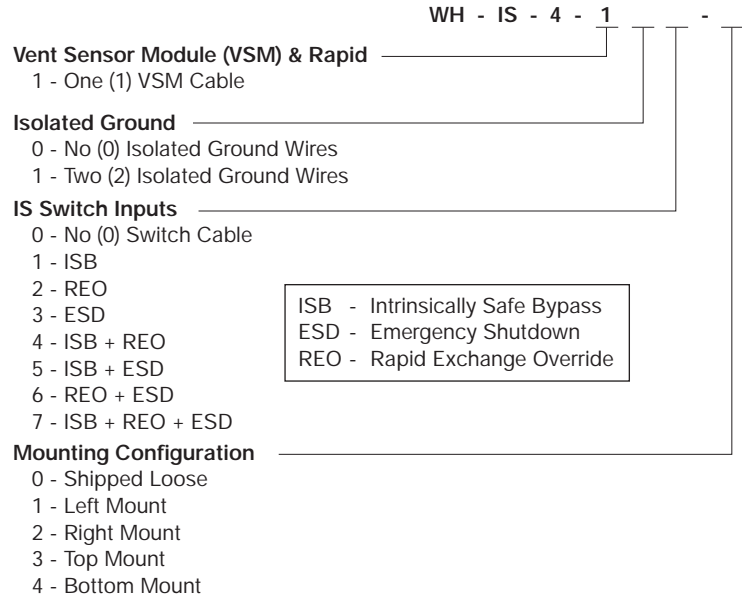


### Horizontal System EPCU

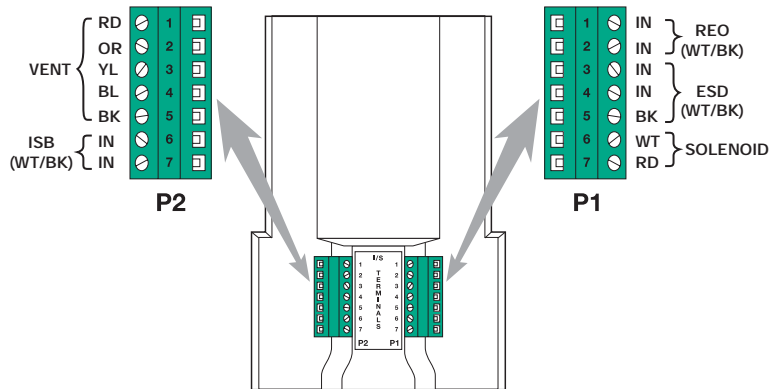


If the wiring harness is installed from the factory, all wires inside the EPCU will be connected. Any loose wire ends will be tagged for easy identification.

## Model WH-IS-4 Harness Codes:



## Predesignated IS Harness Location



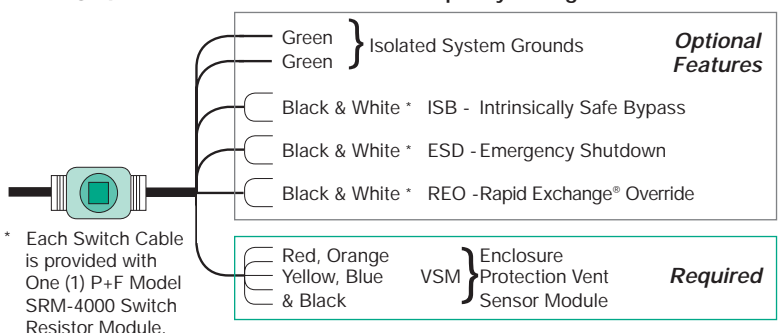
### NOTE:

Fully automatic and semiautomatic style systems are equipped with "RESV" cable mounted in port #1 for left or top mounted units and port #2 for right or bottom mounted units. No "RESV" cable required for standard style. "RESV" = Rapid Exchange Solenoid Valve.

## Example Harness Configuration

### WH-IS-4-117 -X

### Maximum Capacity Wiring Schedule



4000 SERIES

Type X & Ex [p]