

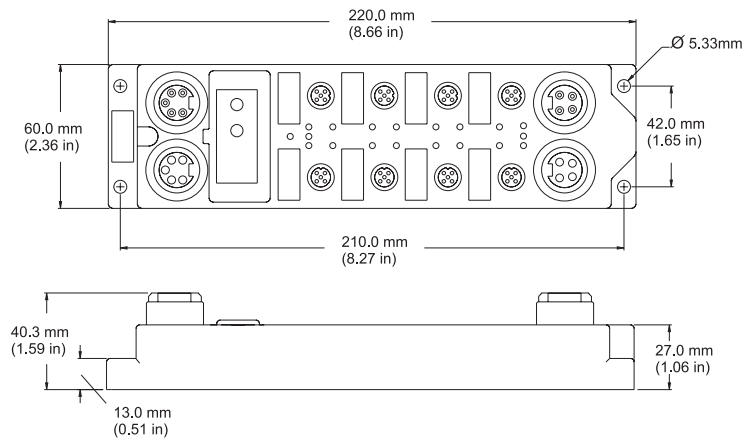
This *busstop*<sup>®</sup> station is designed specifically for use with machine safety switches. It provides a convenient way to connect redundant circuits to the machine safety switches using off the shelf cordsets. The station monitors the machine safety switch state. The state of the switch is reported to the PLC via DeviceNet™.

The machine safety switches are connected via eight pin *euromast*<sup>®</sup> connectors. Four pins are required to provide redundant safety switch circuits. Two pins are used to monitor the state of the machine safety switches. Two pins are used as an output circuit. This output can be set by the PLC on DeviceNet.

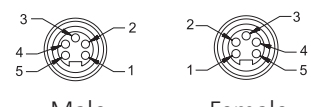
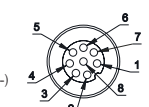
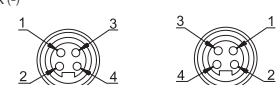
The auxiliary power is connected via four pin *minifast*<sup>®</sup> connector. Two of the pins are used to provide external power for the station's input and output circuits. Two of the pins are used to provide redundant safety switch circuits.

**FDNP-ES88-TT**

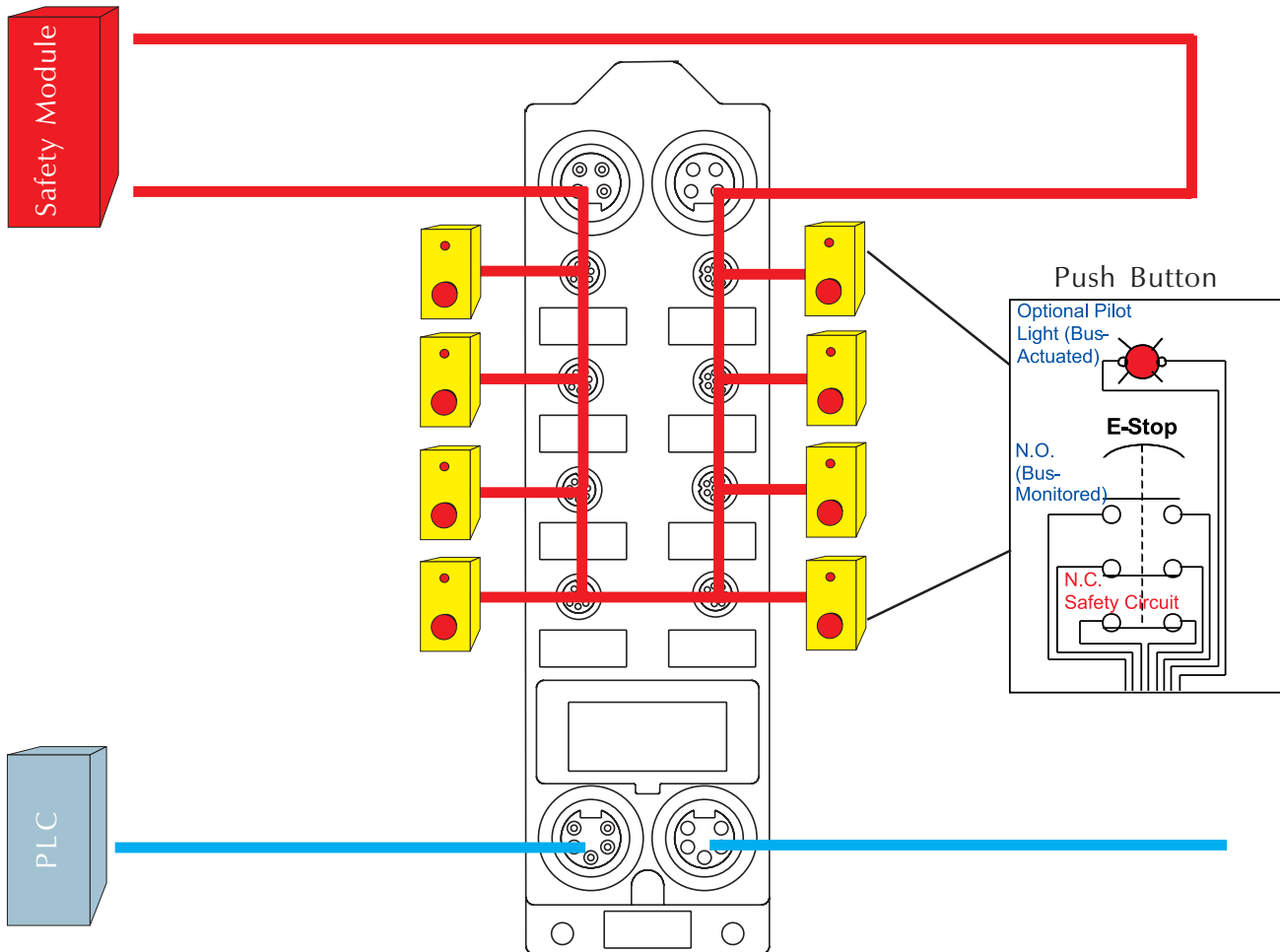
**Dimensions**



**Connectors**

<p><b>DeviceNet</b></p> <p>Style: 5-Pin <i>minifast</i><sup>®</sup></p> <p>Cordset: Bus Line use RSM RKM 579- *M</p> <p>Tee : Bus Line use RSM 2RKM 57</p>	<p>1 = Shield 2 = V + 3 = V - 4 = CAN_H 5 = CAN_L</p>  <p>Male Female</p> <p><b>DeviceNet</b></p>
<p><b>Safety Switch</b></p> <p>Style: 8-Pin <i>euromast</i></p> <p>Cordset: RKC 8T-* RSC 8T</p>	<p>1 = IN 2 = OUT 3 = AUX (+) 4 = SC1 5 = SC1c 6 = SC2 7 = SC2c 8 = AUX (-)</p>  <p>Female</p>
<p><b>Auxiliary Power, E1 &amp; E2 Circuit</b></p> <p>Style: 4-Pin <i>minifast</i></p> <p>Cordset: RKC 4.4T-* RSC 4.4T</p>	<p>1 = Aux(+) 2 = SC1 3 = SC2 4 = Aux(-)</p>  <p>Male Female</p>

# Wiring Configuration



**WARNING!** NEVER bypass or otherwise defeat the protective function of a safety switch. To do so may create an unsafe situation which could lead to serious injury or death.

# Module Specifications

## FDNP-ES88-TT

### Supply Voltage

Bus power	11-26 VDC
Internal current consumption	<40 mA
Auxiliary power	18-26 VDC

### Input Circuits

Input voltage	18-26 VDC auxiliary powered (optically isolated from bus)
Input signal current	OFF <2 mA ON 3.0-3.4 mA at 24 VDC
Input delay	2.5 ms

### Output Circuits

Output voltage	18-26 VDC auxiliary powered (optically isolated from bus)
Output load current	0.5 A per output
Maximum switching frequency	100 HZ

### I/O LED Indications

Off=Off  
Green=On

### Module Status LED

Green: working properly  
Flashing green: detecting autobaud rate

### Network Status LED

Green: established connection  
Flashing Green: ready for connection  
Flashing red: connection time-out  
Red: connection not possible

### Adjustments

Address	0-63 via Rotary Switch
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### Housing

Material	glass filled nylon with nickel plated brass connectors
Enclosure	NEMA 1,3,4,12,13 and IEC IP 67
Operating temperature	-25° to 70°C (-13° to 158°F)

### I/O Data Map

Product Code: 7/2513

EDS File: FDNP-ES88-TT

	Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Input Data	0	I-7	I-6	I-5	I-4	I-3	I-2	I-1	I-0
	1	APS	-	-	-	-	-	-	-
Output Data	Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
	0	O-7	O-6	O-5	O-4	O-3	O-2	O-1	O-0

### Abbreviations

I = Input Data (0=OFF, 1=ON)  
ISS = Input Short Status (0=Working, 1=Fault)  
IOS = Input Open Status (0=Working, 1=Fault)  
IGS = Input Group Status (0=Working, 1=Fault)

O = Output Data (0=OFF, 1=ON)  
OS = Output Status (0=Working, 1=Fault)  
OGS = Output Group Status (0=Working, 1=Fault)  
APS = Aux Power Status (0=OFF, 1=ON)