E5

CONNECTOR CODE

P - ** P11 -

| K | 3 | R | F | 0 |

HOUSING/ NEMA CODES   POWER OPTIONS CODES

GracePort® E5 Unmanaged Industrial Ethernet Switch

Keep Panel Doors Closed...Save Panel Space

The GracePort® Unmanaged Ethernet Switch gives you more reasons to keep your control panel door closed and limit exposure to voltage. Under NFPA 70E, opening control panel doors is a time consuming process. Combining safety, productivity, and cost savings into one thru-door package offer you these benefits:

- ➤ Interior status LED's (port P2 - P5) duplicated on front for thru-door diagnostics.
- ➤ Program multiple devices safely from outside the panel.
- ➤ Reduced cost due to panel space savings.
- ➤ Convenient external RESET and Power LED indication.
- ➤ Required external power supply: 24VDC only
- ➤ Available in UL Type 12/4/4X configurations to maintain enclosure rating.
- ➤ Designed to fit the Inside-Outlet® GFCI for NFPA 79 Compliance.
- ➤ Provisions available for other outlets types and interfaces to meet all your needs.
- ➤ Robust design: (0-60°C) with an MTBF 938,570 hours.

Unmanaged Ethernet switches provide simple communication between Ethernet devices. With diagnostics limited to the LED's, you must be able to see the LED's to diagnose communication problems. Our dual 'inside-out' LED design allows you to see the status of each port from the inside and outside the panel.

Unlimited Combos Available!

Some Common Configurations:	Part Numbers
UL Type 4 (IP-65)	
with GFCI* and Type A(F) USB	P-E5P11-M3RF0
with GFCI* and 15 Amp CB	P-E5-M3RF15
Ethernet Switch only	P-E5-M3RX
UL Type 4X (IP-65)	
with GFCI* and Type A(F) USB	P-E5P11-M2RF0
with GFCI* and 15 Amp CB	P-E5-M2RF15
Ethernet Switch only	P-E5-M2RX
UL Type 12	
with GFCI* and Type A(F) USB	P-E5P11-M4RF0
with GFCI* and 15 Amp CB	P-E5-M4RF15
Ethernet Switch only	P-E5-M4RX

All GracePorts® ordered with a GFCI are automatically upgraded to our patent Inside-Outlet® free of charge!
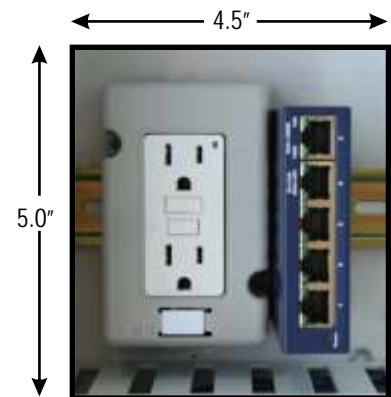
FRONT

P-E5P11-M3RF0: Ethernet Switch with Port P1 on front, Type A USB, and our patented Inside-Outlet® in a UL Type 4 Enclosure.

REAR

P-E5-M3RF3: Interior View Ports P2 - P5, Inside-Outlet® ,3A Circuit Breaker in a UL Type 4 Enclosure.

PANEL SPACE SAVINGS

4.5″

5.0″

SPECIFICATIONS: ELECTRICAL OUTLET

Low voltage (data), limited to 30 VDC
High voltage supply (for computer use only)
120 VAC, 15A (UL), 5A (CSA)
230-240 VAC, 16A (CE only)

SPECIFICATIONS: HOUSING

Housing: Cast aluminum base
Latch: Type 304 Stainless Steel (1CR18NI19)
Cover: Polycarbonate, UV rated, V-O Flame rated
Gasket: Thermoplastic elastomer
Insert Material: Acrylic UL94HB

APPROVALS:
UL RECOGNIZED: E207344 (Outdoor Use)
CE: EN61010/EN60950

RoHS

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Davenport, IA 52807
(800) 280-9517   Fax: (563) 386-9639
www.graceport.com

Physical Ports	
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	(5) Total, 'P1' located on front, "P2-P5' on rear

Technology	
Ethernet Standards (Layer 2)	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for Flow control
MAC Table	1024 MAC addresses
Processing	Store-and-Forward
Maximum Throughput Rate	148,800pps (100Mbps) 148,80pps (10Mbps)

LED indicators	
Power indicator:	Green - Power LED x 1
10/100TX RJ45 port indicator:	Front: Green for port Link/Act. Yellow for Duplex/Collision.
Rear Ports (P2 - P5):	Identical LED indicators on RJ45 jack.

Power	
Input power:	24VDC (9VDC min./30VDC max.) input on 3-pin terminal block.
Power consumption (Typical):	2.5 Watts max
Overload current protection:	Yes
Reverse polarity protection:	Yes

Physical Characteristic	
Dimensions in GracePort®	Per figure 1
Weight (approx. with GFCI outlet) :	1.85 lbs / .84 Kg

Environmental	
Storage Temperature:	-40 to 85°C (-40 to 185°F)
Operating Temperature;	-10 to 60°C (14 to 140°F)
Operating Humidity:	10% to 90% Non-condensing

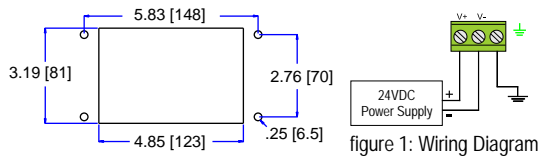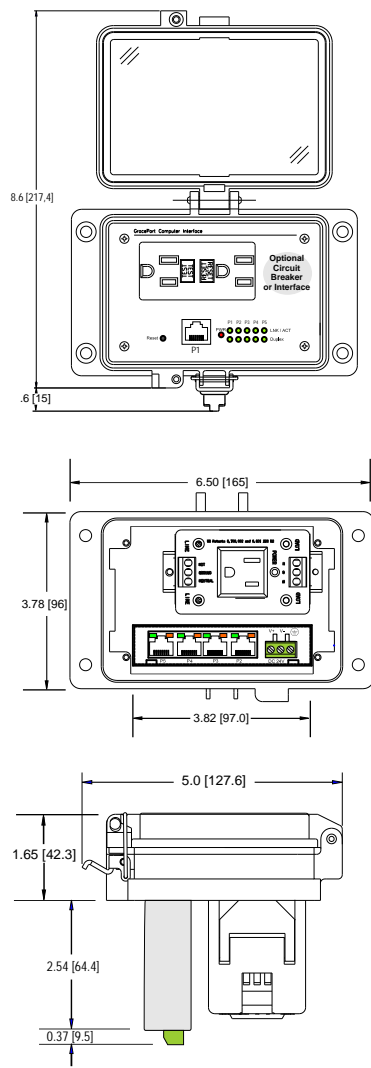| Regulatory approvals	
EMI/EMS:	FCC Part 15, CISPR (EN55022) class B, EN6100-3-2, EN61000-4-2 (ESD), EN61000-4-3 (RS),EN6100-3-3, EN61000-4-4 (EFT),EN61000-4-5 (Surge), EN55024, EN61000-4-6 (CS),EN61000-4-8, EN61000-4-11
Shock:	IEC60068-2-27
Drop Test:	ISTA-1A
Vibration:	IEC60068-2-6
Safety:	En60950, UL60950-1

Frequently Asked Questions:

Why doesn't my Ethernet Switch respond after I turned on the power?

The green power LED should illuminate after the power is properly connected. If the green LED is not ON, check the voltage of the power supply to issue that the input voltage range is between 9V~30V.

I can't make an Ethernet connection?

Verify that the ethernet cable is plugged in correctly. If so, try a different Ethernet cable.

What can I do if the Ethernet switch does not function properly?

Press the reset button on the front of the GracePort® Ethernet switch to restart it.

What type of Ethernet cable do I need?

This switch supports auto MDI/MDI-X operation, so the Ethernet switch should function properly no matter the Ethernet cable is Straight-Through or Cross-Over.

Warranty: Grace Engineered Products Inc.("GEP") warrants for a period of (18) months from the date on the invoice or (12) months from installation, that its products will be merchantable quality free from defects in material, workmanship or design each as determined, by the date of shipment by GEP, by generally recognized, applicable practices, procedures in the industry. GEP will not be liable for customer modifications or designs made to the standard products. Repair and replacement hardware is warranted for 6 months from date of shipment or the remainder of the original warranty term, whichever is longer.

figure 1: Wiring Diagram

Instructions:

The E5 has no serviceable parts inside and the product should be returned to GEP for service. P1, P2, P4, and P5 are for functions like "LAN", "PROGRAM INTERFACE", "PLC", etc.

1. Unpack the GracePort® with the E5 Ethernet Switch. Mount assembly with gasket to the enclosure.

2. Remove orange warning label and connect 24VDC nominal (9-30VDC range) to the green terminal block on the rear of the unit as per above wiring diagram.

3. Connect ethernet device cable(s) to the E5 ethernet switch as per IEEE 802.3 applicable standards.

4. Apply Isolated Limited Voltage souce to the unit. Verify that the power LED in the front is illuminated. Verify that the LINK/ACT and DUPLEX status LED's properly indicate that the connected device(s) are communicating with the E5 Ethernet switch as per above.