

# IP67/IP68 HARSH ENVIRONMENT CONNECTORS

## EN3™ SERIES 9-18 PINS



EN3P18M26S



EN3C18F26

The EN3™ Series is a popular plastic connector series that meets a number of harsh weather environmental ratings. It's now available from 2 through 18 pins. The 9-18 pin versions are only available with solder terminals. The solder terminals come in two styles, straight or staggered. The straight style has equal length terminals, all facing the same way. The staggered version has the inner set of terminals longer than the outer set. Also, the staggered terminals face radially away from the center of the connector, to make soldering much easier. The 9-18 versions carry the same environmental ratings as the 2-8, which include IP66/IP68 and NEMA 250, when mated.

### Features and Benefits

- Available in solder terminals only, either straight or staggered for easier soldering
- Exceeds enclosure rating IP16/IP18 when not mated or covered, IP66/IP68 when mated
- Exceeds Coast Guard specifications for water tightness (CFR 46 Part 110.20)
- UL 94V-O rated material
- Gold-plated pins and contacts to reduce contact resistance



Tel: +44 (0)1962 773004

Fax: +44 (0)1962 773104

[sales@in2connect.uk.com](mailto:sales@in2connect.uk.com)

<[www.in2connect.uk.com](http://www.in2connect.uk.com)>

## Specifications

### Materials

- Panel connector shells and contact locking disk: Thermoplastic polymer glass fibre, flame retardant
- Connector shell interior: Thermoplastic rubber
- Contacts: Copper base alloy gold-plated over nickel underplate

### Mechanical

- Shock: Mil-Std 202 Method 213B, condition K
- Vibration: Mil-Std 202 Method 201
- Life: 600 insertion/withdrawal cycles (minimum)

### Electrical

- Voltage Rating (sea level): Tested at 600 VRMS
- Insulation Resistance: 100 Megohms (minimum) at 77° F
- Contact Resistance: 5 milliohms (maximum)
- Current Rating: 3.0 Amps (#26 contact)

### Environmental

- Temperature Limits: -40°C to +65°C (non-operating)
- Moisture Resistance: Mil-Std 202 Method 106F
- Insulation Resistance: Mil-Std 202 Method 302 condition B
- Thermal Shock: Mil-Std 202 Method 107G
- Salt Spray: Mil-Std 202 Method 101D condition B

### Ratings

- IP16/IP18
- IP66/IP68
- NEMA 250 (6P)
- CFR 46 Part 110.20
- UL 94V-O



Tel: +44 (0)1962 773004  
Fax: +44 (0)1962 773104

[sales@in2connect.uk.com](mailto:sales@in2connect.uk.com)  
<[www.in2connect.uk.com](http://www.in2connect.uk.com)>

# WEATHERTIGHT CONNECTORS

# PRODUCT BULLETIN 541

## EN3™ Series 9-18 Pins

Switchcraft expands the EN3™ Series up to 18 pins. The EN3™ Series is a popular plastic connector series that meets a number of harsh weather environmental ratings. It's now available from 2 through 18 pins. The 9-18 pin versions are only available with solder terminals. The solder terminals come in two styles, straight or staggered. The straight style has equal length terminals, all facing the same way. The staggered version has the inner set of terminals longer than the outer set. Also, the staggered terminals face radially away from the center of the connector, to make soldering much easier. The 9-18 versions carry the same environmental ratings as the 2-8, which include IP66/IP68 and NEMA 250, when mated.

### Features and Benefits

- Available in solder terminals only, either straight or staggered for easier soldering
- Exceeds enclosure rating IP16/IP18 when not mated or covered, IP66/IP68 when mated
- Exceeds Coast Guard specifications for water tightness (CFR 46 Part 110.20)
- UL 94V-O rated material
- Gold-plated pins and contacts to reduce contact resistance

### Specifications

#### Materials

**Panel connector shells and contact locking disk:**  
Thermoplastic polymer glass fiber, flame retardant  
**Connector shell interior:** Thermoplastic rubber  
**Contacts:** Copper base alloy gold-plated over nickel underplate

#### Mechanical

**Shock:** Mil-Std 202 Method 213B, condition K  
**Vibration:** Mil-Std 202 Method 201  
**Life:** 600 insertion/withdrawal cycles (minimum)

#### Electrical

**Voltage Rating (sea level):** Tested at 600 VRMS  
**Insulation Resistance:** 100 megohms (minimum) at 77° F  
**Contact Resistance:** 5 milliohms (maximum)  
**Current Rating:** 3.0 Amps (#26 contact)

Continued



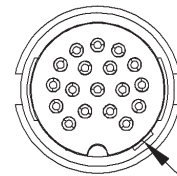
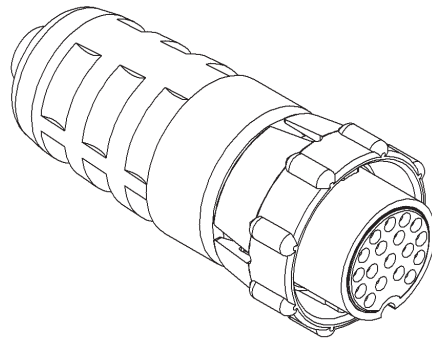
EN3P18M26S



EN3C18F26

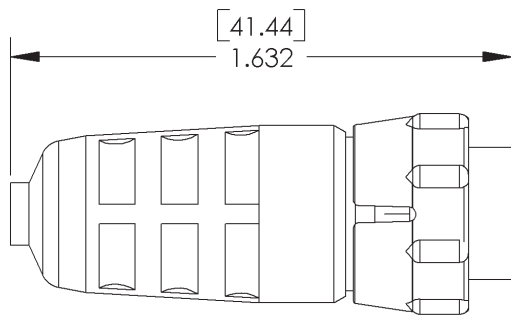
# Switchcraft®

www.switchcraft.com

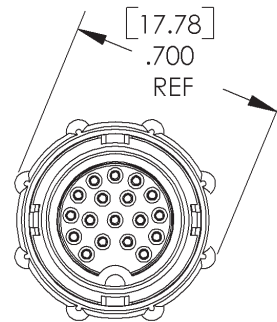


PIN # 1 INDICATOR

BACK VIEW OF CONNECTOR  
WITHOUT RUBBER BOOT &  
COUPLING RING AS SHOWN



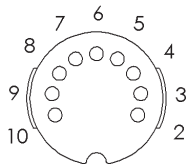
SIDE VIEW



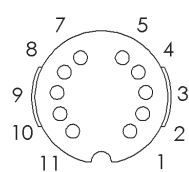
FRONT VIEW

DIMENSIONS ARE FOR REFERENCE ONLY  $\frac{[MM]}{[INCH]}$

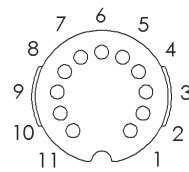
## CORD CONNECTOR CONTACT ARRANGEMENTS (REAR VIEW)



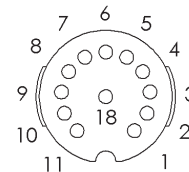
9 PIN



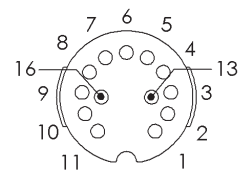
10 PIN



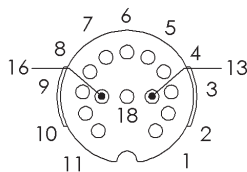
11 PIN



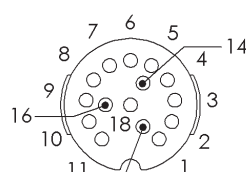
12 PIN



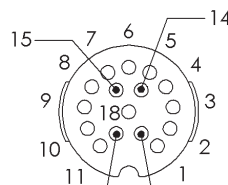
13 PIN



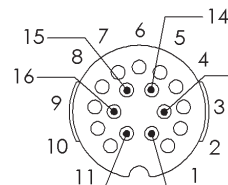
14 PIN



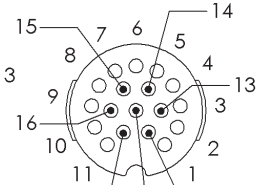
15 PIN



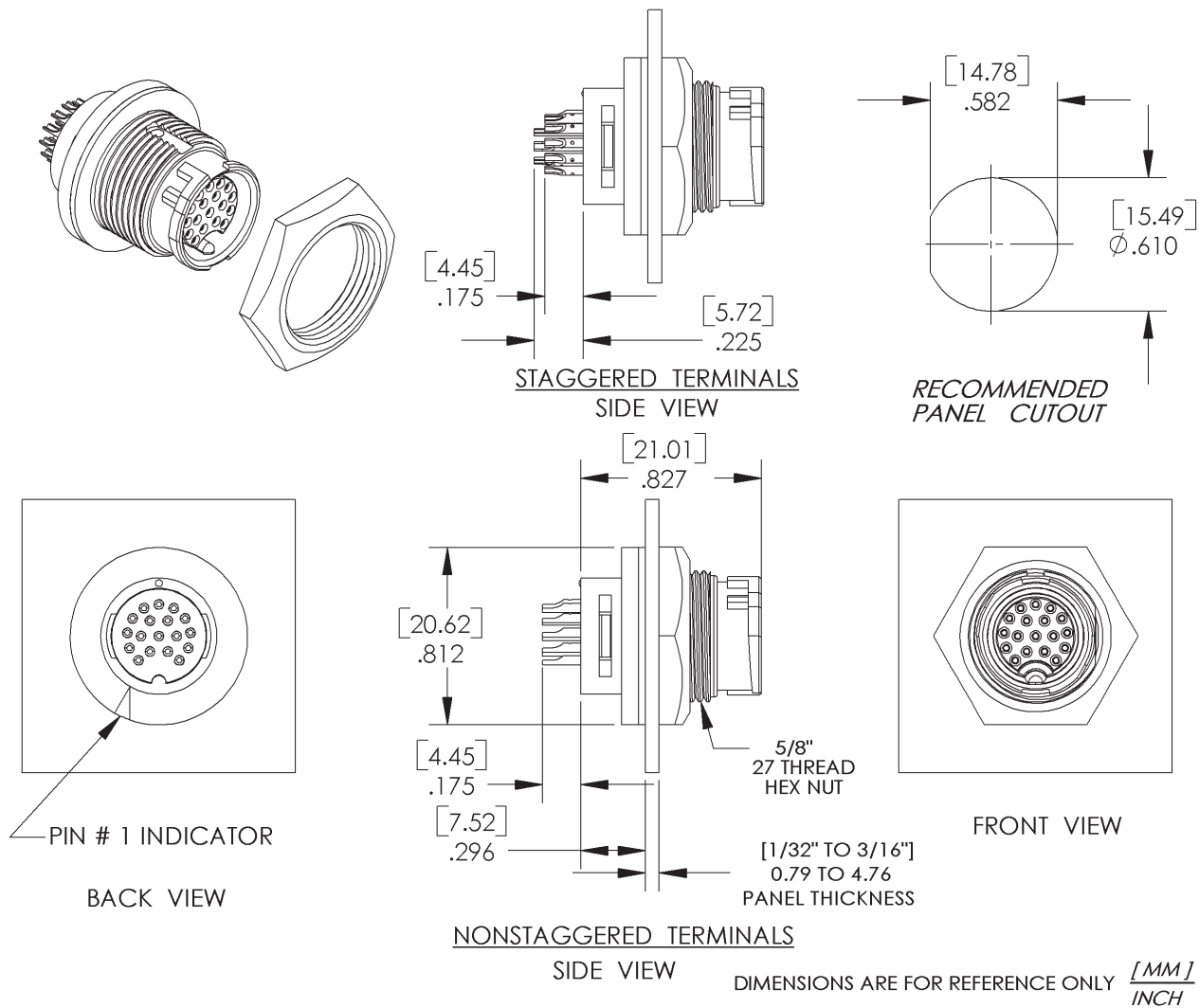
16 PIN



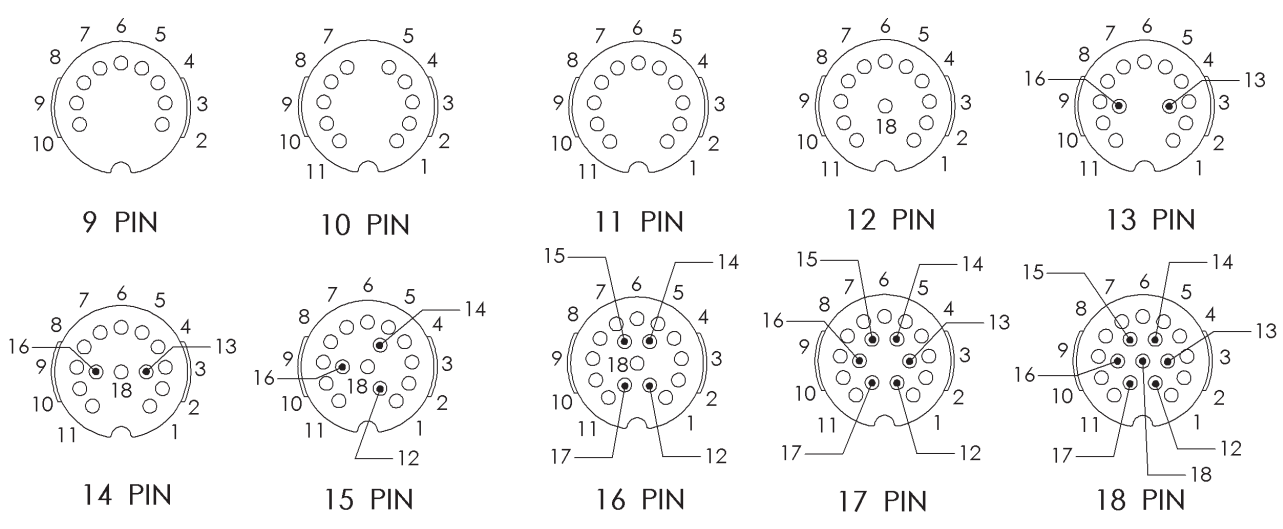
17 PIN



18 PIN



PANEL CONNECTOR CONTACT ARRANGEMENTS (FRONT VIEW)



---

## Environmental

**Temperature Limits:** -40°C to +65°C (non-operating)

**Moisture Resistance:** Mil-Std 202 Method 106F

**Insulation Resistance:** Mil-Std 202 Method 302 condition B

**Thermal Shock:** Mil-Std 202 Method 107G

**Salt Spray:** Mil-Std 202 Method 101D condition B

## Ratings

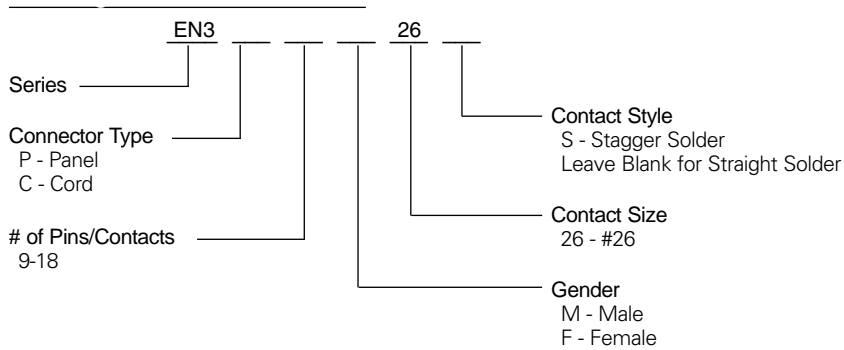
IP16/IP18

IP66/IP68

NEMA 250 (6P)

CFR 46 Part 110.20

UL 94V-O



See Engineering Design Guide or website for details on the complete EN3 product line. The EN3 Series is available in a wide assortment of pin counts, configurations, plating materials, and styles. Contact the factory for details.