# 16A Plug & Connector - H07RN-F ExtremeFlex90®

## Description

Bespoke 16A Plug & connector extension lead adaptor, cut to length, available in multiple cable variants. Designed for secure and reliable power connections. Durable, high-quality solutions for professional and commercial use.

## Key Features

**Minimum Bending Radius**
(Less than 12mm²): 3 X Overall Diameter
(More than 12mm²): 4 X Overall Diameter

**Flame Retardancy**
BS EN 60332-1-2

**Temperature Limits**
Temperature Range: -40 to 90°C

## Core Colours

3 Core: Brown | Blue | Green Yellow

## Standards

- BS EN 60811-2-1
- BS EN 60228
- Conforms to H07RN-F
- BS EN/IEC 60332-1-2
- UV Resistant Sheath
- BS EN 50363
- AD8 water resistance

## Construction

- **Conductor**: Class 5 flexible, stranded copper
- **Insulation**: Ethylene Propylene Rubber (EPR)
- **Outer Sheath**: UV Resistant Chlorinated Polyethylene (CPE)
- **Sheath Colour**: Black

## Training & Testing Lab

AN ISO/IEC 17025 ACCREDITED FACILITY

**Cleveland Cable Test & Training Lab**
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing.

ISO/IEC 17025 Accredited Testing Laboratory
31196

**CPR**
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

## Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

**ecovadis**
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

## 16A Plug & Connector - H07RN-F ExtremeFlex90® - Dimensions

| Reference | Conductor Size (mm2) | No Of Cores | Stranding(mm) | Insulation Thickness (mm) | Sheath Thickness (mm) | Overall Diameter(Lower) | Overall Diameter(Upper) | Length(m) | Voltage |
|---|---|---|---|---|---|---|---|---|---|
| 3183P1/5EXT1M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 1 | 230V |
| 3183P1/5EXT2M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 2 | 230V |
| 3183P1/5EXT3M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 3 | 230V |
| 3183P1/5EXT4M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 4 | 230V |
| 3183P1/5EXT5M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 5 | 230V |
| 3183P1/5EXT10M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 10 | 230V |
| 3183P1/5EXT15M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 15 | 230V |
| 3183P1/5EXT20M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 20 | 230V |
| 3183P1/5EXT25M/16B | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 25 | 230V |
| 3183P1/5EXT1M/110V | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 1 | 110V |
| 3183P1/5EXT2M/110V | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 2 | 110V |
| 3183P1/5EXT3M/110V | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 3 | 110V |
| 3183P1/5EXT5M/110V | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 5 | 110V |
| 3183P1/5EXT10M/110V | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 10 | 110V |
| 3183P1/5EXT15M/110V | 1.5 | 3 | 30/0.25 | 0.8 | 1.5 | 9.6 | 10.6 | 15 | 110V |
| 3183P2/5EXT1M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 1 | 230V |
| 3183P2/5EXT2M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 2 | 230V |
| 3183P2/5EXT3M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 3 | 230V |
| 3183P2/5EXT4M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 4 | 230V |
| 3183P2/5EXT5M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 5 | 230V |
| 3183P2/5EXT10M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 10 | 230V |
| 3183P2/5EXT15M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 15 | 230V |
| 3183P2/5EXT20M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 20 | 230V |

| Reference | Conductor Size (mm2) | No Of Cores | Stranding(mm) | Insulation Thickness (mm) | Sheath Thickness (mm) | Overall Diameter(Lower) | Overall Diameter(Upper) | Length(m) | Voltage |
|---|---|---|---|---|---|---|---|---|---|
| 3183P2/5EXT25M/16B | 2.5 | 3 | 50/0.25 | 0.9 | 1.7 | 11.4 | 12.6 | 25 | 230V |

## EXTREMEFLEX90 FLEXIBLE CABLE - CURRENT CARRYING CAPACITY (AMPS)

| CONDUCTOR CROSS SECTIONAL AREA | SINGLE CORE CABLES | 2 CORE CABLE WITH OR WITHOUT PROTECTIVE CONDUCTOR | 3 CORE CABLE | 4 OR 5 CORE CABLE |
|---|---|---|---|---|
| ($MM^2$) | (AMPS) | (AMPS) | (AMPS) | (AMPS) |
| 1* | 16 | 16 | 21 | 17 |
| 1.5* | 27 | 23 | 26 | 23 |
| 2.5* | 35 | 30 | 36 | 32 |
| 4 | 49 | 39 | 49 | 42 |
| 6 | 60 | 51 | 63 | 54 |
| 10 | 83 | 70 | 86 | 75 |
| 16 | 111 | 95 | 115 | 100 |
| 25 | 147 | 125 | 149 | 127 |
| 35 | 181 | 154 | 185 | 158 |
| 50 | 226 | 193 | 225 | 192 |
| 70 | 279 | 238 | 289 | 246 |
| 95 | 338 | 288 | 352 | 298 |
| 120 | 391 | - | 410 | 346 |
| 150 | 449 | - | 473 | 399 |
| 185 | 513 | - | 421 | 456 |
| 240 | 603 | - | 542 | 538 |
| 300 | 694 | - | 641 | - |
| 400 | 825 | - | - | - |
| 500 | 946 | - | - | - |
| 630 | 1044 | - | - | - |

## EXTREMEFLEX90 FLEXIBLE CABLE - VOLTAGE DROP

| NOMINAL CROSS SECTIONAL AREA MM² | 2 CORE CABLE DC mV/A/m | TWO CORE CABLE SINGLE-PHASE AC mV/A/m | | | 1 X THREE CORE, FOUR CORE OR FIVE CORE CABLE, THREE PHASE AC | | | 2 X SINGLE CORE CABLES TOUCHING | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | DC mV/A/m | SINGLE PHASE AC * mV/A/m | | |
| 1 | 46 | 46 | | | 34,0 | | | - | 27,0 | | |
| 1,5 | 32 | 32 | | | 23,3 | | | - | 23,3 | | |
| 2,5 | 19 | 19 | | | 14 | | | - | 14 | | |
| 4 | 12 | 12 | | | 8,7 | | | - | 8,7 | | |
| 6 | 7,8 | 7,8 | | | 5,8 | | | - | 5,90 | | |
| 10 | 4,6 | 4,6 | | | 3,4 | | | - | 3,40 | | |
| 16 | 2,9 | 2,9 | | | 2,2 | | | - | 2,20 | | |
| | | R | X | Z | R | X | Z | | R | X | Z |
| 25 | 1,8 | 1,8 | 0,175 | 1,85 | 1,44 | 0,15 | 1,44 | - | 1,40 | 0,25 | 1,40 |
| 35 | - | - | - | - | 1,05 | 0,15 | 1,04 | 1,31 | 1,31 | 0,21 | 1,32 |
| 50 | - | - | - | - | 0,78 | 0,145 | 0,75 | 0,91 | 0,91 | 0,21 | 0,93 |
| 70 | - | - | - | - | 0,57 | 0,14 | 0,56 | 0,64 | 0,64 | 0,2 | 0,67 |
| 95 | - | - | - | - | 0,42 | 0,135 | 0,44 | 0,49 | 0,49 | 0,195 | 0,53 |
| 120 | - | - | - | - | 0,33 | 0,135 | 0,36 | 0,38 | 0,38 | 0,19 | 0,43 |
| 150 | - | - | - | - | 0,27 | 0,13 | 0,3 | 0,31 | 0,31 | 0,19 | 0,36 |
| 185 | - | - | - | - | 0,22 | 0,13 | 0,26 | 0,25 | 0,25 | 0,19 | 0,32 |
| 240 | - | - | - | - | 0,17 | 0,13 | 0,21 | 0,19 | 0,195 | 0,185 | 0,27 |
| 300 | - | - | - | - | 0,135 | 0,125 | 0,185 | 0,15 | 0,155 | 0,18 | 0,24 |
| 400 | - | - | - | - | - | - | - | 0,115 | 0,12 | 0,175 | 0,21 |
| 500 | - | - | - | - | - | - | - | 0,09 | 0,099 | 0,17 | 0,20 |
| 630 | - | - | - | - | - | - | - | 0,068 | 0,079 | 0,17 | 0,185 |

R = RESISTIVE COMPONENT X = REACTIVE COMPONENT Z = IMPEDANCE VALUE

* A LARGER VOLTAGE DROP WILL RESULT IF THE CABLES ARE SPACED APART

| | |
|---|---|
| AMBIENT TEMPERATURE: | 30 °C |
| CONDUCTOR OPERATING TEMPERATURE: | 90°C |
| GROUND TEMPERATURE: | 20°C |
| BURIAL DEPTH: | 0.8M |
| THERMAL RESISTIVITY: | 1.5KMV |

FOR OTHER VARIABLES - REFER TO TABLES BELOW

### FOR AMBIENT GROUND TEMPERATURES OTHER THAN 20°C

| AMBIENT TEMPERATURE (°C) | 10 | 15 | 25 | 30 |
|---|---|---|---|---|
| DERATING FACTOR | 1,07 | 1,04 | 0,96 | 0,89 |

### FOR SOIL THERMAL RESISTIVITY OTHER THAN 1.5 Km/W

| THERMAL RESISTIVITY (Km/W) | 1 | 1,2 | 2,0 | 2,5 |
|---|---|---|---|---|
| DERATING FACTOR | 1,06 | 1,04 | 0,98 | 0,8 |

### FOR DEPTHS OTHER THAN 0.8M

| DEPTH (METRES) | 0,5 | 0,8 | 1,00 | 1,2 |
|---|---|---|---|---|
| DERATING FACTOR | 1,02 | 1,00 | 0,98 | 0,8 |

ALL ELECTRICAL CALCULATIONS REGARDING THE ABOVE DERATING VARIABLES MUST BE CARRIED OUT BY A CERTIFIED ELECTRICAL ENGINEER IN CONJUNCTION WITH THE CORRECT APPENDICES WITHIN THE 18TH EDITION WIRING REGULATIONS, OFFICIALLY KNOWN AS BS 7671:2018

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.



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