



Cheat Sheet: H07RN-F and H07BN4-F

INTRODUCTION

These cables are intended for a variety of applications, where appliances or equipment, including heavy industrial equipment require flexible connection to the power supply. Used extensively for trailing and flexible supply leads in either single or multicore versions, these rubber cables remain flexible even at sub zero temperatures. The improved abrasion resistance and the ability to withstand many oils and chemicals make the cables suitable for the most arduous environments.

CONSTRUCTION

H07RN-F BS EN 50525-2-21

- Class 5 Flexible Copper Conductors
- Insulation: EPR (Ethylene Propylene Rubber) Type EI4
- Sheath: Polychloroprene (PCP) Type EM2
- Voltage Rating: 450/750V
- Operating Temperature
Fixed: -30°C to +85°C, Flexed: -15°C to +60°C

H07BN4-F BS EN 50525-2-21

- Class 5 Flexible Tinned Copper Conductors
- Insulation: EPR (Ethylene Propylene Rubber)
- Sheath: HOFR CSP (Heat, Oil and Flame Retardant Chlorosulphonated Polyethylene)
- Voltage Rating: 450/750V
- Operating Temperature: Fixed: -40°C to +90°C, Flexed -15°C to +90°C



APPLICATIONS

- DC Telecoms
- Uninterruptable Power Supply
- General EC
- Renewable Energy Systems
- Power Perfector/ Power star Installers
- Back up Power-Generators/Load Banks/
- Battery Systems

WHY USE H07RN-F & H07BN4-F FLEXIBLE CABLES?

H07RN-F & H07BN4-F flexible cables have high flexibility and are suitable for indoor and outdoor use. They are weather resistant and suitable for hot, cold, or damp environments (They are not suitable for permanent submersion - look to H07RN8 instead). They are also resistant to oil and grease, abrasion, thermal stresses, and light mechanical resistance.

FAQs

What does H07RN-F stand for?

H07RN-F is a harmonised code — created by CENELEC to provide a standardised way of talking about specific cables. The H means the H07RN-F Cable conforms with harmonised standards. The 07 identifies the cable's voltage rating as 450/750V. The R refers to the EPR insulation. The N relates to its PCP sheath. The -F highlights the fact H07RN-F Cable has flexible copper conductors.

What does H07BN4-F stand for?

H07BN4-F is a harmonised code. The H means the H07BN4-F Cable conforms with harmonised standards. The 07 identifies the cable's voltage rating as 450/750V. The B refers to the EPR insulation. The N4 relates to its CSP sheath. The -F highlights the fact H07BN4-F Cable has flexible copper conductors. H07BN4-F cables are also referred to as 6381TQ as a legacy from their British Standard days.

What standard are they manufactured to?

Previously covered under British standard BS7919, these cables are now manufactured in accordance with the harmonised European standard EN 50525-2-21. There was no change to the cable specification with this standard change.



FAQs

Why are the operating temperatures different?

Both cables are identified as general purpose, however due to the different material types: R types are 60°C, B types are 90°C

Where are single core cables used?

Single-core, H07RN-F & H07BN4-F can be used for short circuit-proof and short-to-ground-proof installations.

How can they be used in Automation and Process Control?

Similar to control cables, the cables can be applied in automation & process control environments with whitenumbers on black cores to enable fast "right first time" termination, vital when working with large numbers of cores.

What are the core colours available for H07RN-F?

2 Core: ● Blue, ● Brown

3 Core: ● Green/Yellow, ● Blue, ● Brown

4 Core: ● Green/Yellow, ● Brown, ● Black, ● Grey

5 Core: ● Green/Yellow, ● Blue, ● Brown, ● Black, ● Grey

7, 12, and 19 Cores: ● Black with ○ White numbers, ● Green/Yellow

What are the minimum bend radius?

H07RN-F: Fixed: 4 x overall diameter, flexed: 6 x overall diameter

H07BN4-F: Up to 25mm² - Flexed: 6 x overall diameter. Above 25mm² - Flexed: 8 x overall diameter

What does HOFR sheath mean?

Heat, Oil Resistant & Flame Retardant

What is the difference between PVC/PVC cables?

They are designed for greater flexibility and are manufactured with cross-linked material, which provides greater resistance to weathering, oil and grease and thermal stresses. They have greater insulation and sheath thicknesses, as well as superior abrasion resistance.

Why does H07BN4-F have tinned conductors?

Tin plating helps to prevent oxidization and corrosion of the copper conductor which is a problem particularly at elevated temperatures. The oxidation of the copper conductor is likely to cause problems with electrical contact. It also improves the solderability of the conductor.



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