ANHUI FEICHUN SPECIAL CABLE CO., LTD.
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INDUSTRIAL & POWER CABLE SPECIALIST · WWW.FEICHUNCABLES.COM

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CLASS Product Data Sheet | Rubber & PVC Flexible Power Cables
STANDARDS EN 50525-2-21 | EN 50525-2-31 | IEC 60245-4

PRODUCT SPECIFICATION — RUBBER-INSULATED FLEXIBLE POWER CABLE (H07RN-F) & PVC SINGLE-CORE FLEXIBLE CONDUCTOR (H07V-K)

H07RN-F & H07V-K

H07RN-F — Heavy-Duty Rubber Flexible Power Cable | 450/750 V (up to 0.6/1 kV w/ protection) | Oil-Resistant · Flame-Retardant
H07V-K — PVC Flexible Single-Core Conductor | 450/750 V | Class 5 Bare Copper | Fixed & Protected Installations

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FC RUBBER POWER | OIL-RESISTANT | ATEX-COMPATIBLE | FLAME-RETARDANT | ROHS COMPLIANT

★ RANGE OVERVIEW
H07RN-F & H07V-K
6 Variants · 0.6/1 kV–0.75 kV Rated
1.5 mm² – 35 mm² Cross-Sections
Rubber (EPR/CSP) & PVC · Class 5 Cu · EN/IEC Compliant

H07V-K — PVC FLEXIBLE SINGLE-CORE CONDUCTOR

PRODUCT OVERVIEW — H07V-K

The **H07V-K** is a single-pole, unsheathed flexible copper conductor insulated with a shock- and abrasion-resistant PVC compound. Designed for **fixed or protected installations**, it is routed in conduit, trunking, or enclosed systems in dry areas. Its Class 5 stranded construction provides superior flexibility during laying, making it especially practical for installations with complex routing.

KEY SPECIFICATION — H07V-K 35 MM²

Type designation	H07V-K 35
Rated voltage (Uo/U)	450 / 750 V
Conductor	Class 5, fine-stranded bare Cu
Cross-section	35 mm²
No. of cores	1 (single-core, no sheath)
Insulation material	PVC (abrasion-resistant)
Max. conductor temp.	+70 °C (service)
Approx. OD	~8.5 mm
Conductor resistance @ 20 °C	≤ 0.524 Ω/km
Approx. current capacity	~135–170 A (conduit/trunking)*

* At 30 °C ambient, single circuit in conduit. De-rating required for grouped cables or elevated temperatures per IEC 60364-5-52.

H07V-K TYPE DESIGNATION DECODE

H	**Harmonised** — European HAR designation (CENELEC)
07	Rated voltage class: **450/750 V**
V	Insulation: **PVC** compound
K	**Flexible conductor** (Class 5 per IEC 60228) for fixed installations
35	Nominal cross-section: **35 mm²**

APPLICATIONS — H07V-K

- **Panel & switchgear wiring** — power distribution cabinets, MCC panels, and control gear

H07RN-F — HEAVY-DUTY RUBBER FLEXIBLE POWER CABLE

PRODUCT OVERVIEW — H07RN-F

The **H07RN-F** is a heavy-duty industrial flexible power cable featuring a **cross-linked synthetic elastomer (EPR-type) insulation** and a **chlorosulphonated polyethylene (CSP) outer sheath**. Designed for installations with moving equipment, the range delivers outstanding flexibility, superior oil resistance, and flame retardance. Where the installation incorporates built-in protection devices, these cables may be rated up to **0.6/1 kV**.

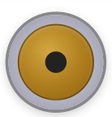
H07RN-F TYPE DESIGNATION DECODE

H	**Harmonised** — European HAR designation (CENELEC)
07	Rated voltage class: **450/750 V**
R	Insulation: **cross-linked synthetic rubber** (elastomer, EI4 type)
N	Sheath: **chlorosulphonated polyethylene** (CSP / neoprene-type)
F	**Flexible** — Class 5 stranded fine-wire copper conductor
nG	**n** cores including one Green/Yellow PE earth conductor
nX	**n** cores with *no* dedicated PE (all cores numbered)

CABLE CONSTRUCTION



H07RN-F 3G — 3 cores
2× phase + 1× PE (G/Y)
Black CSP sheath



H07V-K — Single core
Class 5 bare Cu
PVC insulation only

- **Conductor:** Fine-stranded bare copper, Class 5 per IEC 60228 / VDE 0295 — available 1.5 mm² to 35 mm² (and beyond on request)
- **Core insulation:** Cross-linked synthetic elastomer (EI 4 type) — cores are colour-coded per HD 308 / harmonised identification scheme
- **Stranding:** Cores assembled in layers; PVC or rubber fillers maintain circular profile; no inner sheath in standard configuration
- **Outer sheath:** Chlorosulphonated polyethylene (CSP) — **black**, oil-resistant, UV-stable, providing robust mechanical protection and environmental sealing

TEMPERATURE & OPERATING LIMITS

PRODUCT VARIANTS — STOCKED RANGE

FAMILY	TYPE / CONFIG	VOLTAGE	CU COND. R* (Ω/KM)	APPROX. OD (MM)	APPROX. WEIGHT (KG/KM)	TYPICAL ICC† (A)
H07RN-F	3G1.5 (3-core + PE, 1.5 mm²)	0.75 kV	≤ 13.3	10.5	≈ 130	18–20 A
H07RN-F	7×1.5 (7-core, no PE, 1.5 mm²)	0.75 kV	≤ 13.3	13.5	≈ 230	18–20 A
H07RN-F	4×2.5 (4-core, no PE, 2.5 mm²)	0.75 kV	≤ 7.98	13.0	≈ 200	27–30 A
H07RN-F	4G6 (4-core + PE, 6 mm²)	0.6 kV	≤ 3.30	17.0	≈ 380	45–52 A
H07RN-F	3G10 (3-core + PE, 10 mm²)	0.6 kV	≤ 1.91	19.0	≈ 520	65–75 A
H07V-K	35 mm² (single-core, no sheath)	0.75 kV	≤ 0.524	≈ 8.5	≈ 330	135–170 A†

* Conductor DC resistance at 20 °C per IEC 60228. † Approximate free-air / conduit current rating at 30 °C ambient. Apply de-rating per IEC 60364-5-52 for bundled or enclosed installations. All values are nominal.

TYPICAL APPLICATIONS

✓ H07RN-F APPLICATION ENVIRONMENTS

The H07RN-F range is specified for **mobile and flexible installations** with moving equipment, electric motors, lifting appliances, machine tools, and building-site power supplies. Its rubber sheath makes it equally suited to **outdoor use, wet workshops, ATEX-classified zones** (per local regulation), agricultural environments, and refrigerating installations operating below 0 °C.

ı H07V-K APPLICATION ENVIRONMENTS

The H07V-K is installed in conduit or enclosed raceways in **dry, protected areas**. It is the preferred conductor for switchgear and distribution panel wiring, lighting feeds, HVAC control power, and

- **Building services** — lighting systems, HVAC power feeds, heating equipment
- **Industrial equipment** — power generation, transformer connections, motor terminals
- **Protected conduit routing** — in dry areas, enclosed wiring systems and raceways

STANDARDS — H07V-K

- `EN 50525-2-31` — Low-voltage energy cables, PVC insulated (harmonised)
- `HD 21.3` — Harmonised cables with PVC insulation, 450/750 V
- `IEC 60227-2` — PVC-insulated cables of rated voltages up to 450/750 V
- `UNE 21022` / `UNE 21031-3` — National equivalent standards
- `IEC 60228 Class 5` — Flexible conductor construction

CABLE MARKING (HAR)

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SY+ USE < HAR > H07V-K [Plant n°] [cross-section mm²]
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450/750 V	PVC Insulated	No Sheath
Class 5 Cu	Fixed Install	RoHS Compliant

MOBILE USE	FIXED / PROTECTED	SHORT CIRCUIT
+60 °C	**+85 °C**	**+200 °C**
Max. conductor temp.	Max. conductor temp.	Transient peak

−40 °C ——— +85 °C

⚠ AMPACITY REFERENCE TEMPERATURE

Current ratings are measured at **30 °C ambient** with maximum operating conductor temperature of **60 °C** (mobile use). Apply correction factors for higher ambient temperatures and grouped cable installations per IEC 60364-5-52.

STANDARDS — H07RN-F

- `EN 50525-2-21` — Rubber-insulated flexible cables, harmonised
- `HD 22.4` / `HD 516` — Harmonised heavy-duty rubber cables
- `IEC 60245-4 Type 66` — International equivalent specification
- `NF C32-102-4` — French national standard equivalent
- `IEC 60332-1-2` — Flame retardance, single cable vertical test
- RoHS / SY+ Compliant — lead-free materials throughout

KEY PERFORMANCE PROPERTIES

450/750 V (≤1 kV)	Rubber / CSP Sheath
Oil Resistant	UV Resistant
Flame Retardant	RoHS Compliant
ATEX Compatible*	Refrigeration Use

* Subject to applicable national ATEX/Ex regulations and additional recommendations from the authority having jurisdiction.

all general-purpose fixed electrical installations requiring a HAR-certified, flexible single-core conductor.

MECHANICAL & BENDING DATA

BENDING RADII — MINIMUM PERMISSIBLE

TYPE	FIXED INSTALLATION	FLEXIBLE / MOVING USE
H07RN-F (all cores)	`4 × OD`	`7–10 × OD`
H07V-K (single core)	`4 × OD`	`N/A (fixed only)`

H07RN-F OIL RESISTANCE	H07V-K FLEXIBILITY
Excellent	**Very Good**
CSP sheath — mineral oils, coolants	Class 5 — easy conduit routing

✓ FLAME RETARDANCE — BOTH RANGES

Both H07RN-F and H07V-K are self-extinguishing and comply with **IEC 60332-1-2** (single-cable vertical flame propagation test). The cable will not propagate flame once the ignition source is removed. Note: bundled-cable flame tests (IEC 60332-3) require additional protective measures.

ELECTRICAL CHARACTERISTICS SUMMARY

KEY ELECTRICAL DATA — COMMON TO BOTH RANGES	
Rated voltage (U_0/U) — H07RN-F std.	`450 / 750 V`
Rated voltage — H07RN-F w/ protection	`Up to 600 V / 1 000 V`
Rated voltage — H07V-K	`450 / 750 V`
Conductor class (both)	`Class 5 (IEC 60228)`
Conductor material	`Fine-stranded bare copper`
Insulation withstand test	`2 500 V AC (routine)`

ORDER REFERENCE & CONTACT

Reference cables by full type designation, e.g. `H07RN-F 3G1.5`, `H07RN-F 4G6`, `H07V-K 35`. Custom lengths, drum quantities, and extended core/cross-section variants available on request.
Tech@feichuncables.com | **+86 138 5512 3218** | **www.feichuncables.com**
H07RN-F available in 1–37 cores · 1.5–50 mm² · H07V-K: 1.5–35 mm² standard range.

All values are nominal unless otherwise stated. Manufacturing tolerances apply. Specifications subject to change without prior notice. For use in regulated or safety-critical applications, consult the technical department for certified test data and full compliance documentation.