ANHUI FEICHUN SPECIAL CABLE CO., LTD.

安徽飞纯特种电缆有限公司

COMMUNICATION, DATA & SIGNAL CABLE SPECIALIST · WWW.FEICHUNCABLES.COM

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CLASS Product Data Sheet | Communication & Data Cable Range
STANDARDS EN 50288 | IEC 61156 | IEC 60794 | VDE 0815 / 0816

PRODUCT SPECIFICATION — INDUSTRIAL PROFIBUS · OPTICAL FIBRE · INDUSTRIAL ETHERNET · INSTRUMENTATION & SIGNAL CABLES

HAFL-S PROFIBUS-DP THERM | HITRONIC HUN1500 ISF4-C5E-P-IO | J-Y(ST)2Y | JE-LIYCY | JE-Y(ST)Y

Six-product communication & data cable range for industrial automation, fieldbus, structured cabling, instrumentation, and building services applications.
Single-pair to 8-core fibre · 0.5 mm² – 0.8 mm Ø conductors · 225 V – 300 V signal rating · OM3 10-Gigabit fibre

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FC PROFIBUS-DP | OM3 FIBRE | CAT5E INDUSTRIAL | OUTDOOR PE | SHIELDED SIGNAL | BAS / FIRE ALARM

★ CABLE RANGE OVERVIEW

6-Cable Range
Comm & Data

PROFIBUS · Fibre · Cat5e · Instrumentation
Signal · Building Automation · Fire Alarm

IEC / EN / VDE · RoHS Compliant · Industrial Grade

● HAFL-S PROFIBUS-DP THERM — 1 × 2 × 0.64 MM

● HAFL-S PROFIBUS-DP THERM — OVERVIEW

A specialised **PROFIBUS-DP fieldbus cable** designed for high-temperature industrial environments. The designation **"THERM"** indicates an enhanced sheath and insulation system capable of sustained service up to **+105 °C**, distinguishing it from standard PVC-sheathed PROFIBUS cables that are limited to 60–80 °C. This cable is mandatory in environments such as steel plants, glass furnaces, and process industry hot zones where ordinary PVC insulation would soften, causing characteristic impedance drift and communication packet loss.

SPECIFICATION — HAFL-S PROFIBUS-DP THERM 1×2×0.64

Core configuration	1 twisted pair × 0.64 mm Ø
Conductor cross-section (approx.)	≈ 0.32 mm² (AWG 22)
Characteristic impedance	150 Ω ± 10%
Peak working voltage	250 V (signal use)
Max. sustained conductor temp.	+105 °C (THERM rated)
Outer diameter (Ø)	7.8 – 8.2 mm
Cu weight	≈ 26 kg/km
Cable weight (approx.)	≈ 74 kg/km
Sheath colour (standard PROFIBUS)	Violet / Purple
Recommended max. current	Signal only — max. 1 A

Z₀ = 150 Ω



1×2×0.64 mm
Twisted pair · Al/Cu shield
THERM sheath

- **Shielding:** Aluminium-foil + drain wire (pair-screen) — essential for PROFIBUS signal integrity in electrically noisy environments
- **Impedance critical:** At baud rates up to 12 Mbit/s (PROFIBUS-DP max), any impedance variation caused by thermal deformation causes reflection errors
- **THERM advantage:** FEP or cross-linked compound sheath resists deformation above 80 °C where standard PVC fails

⚠ HIGH-TEMPERATURE INSTALLATION NOTE

Confirm sheath material (FEP, XLPE, or equivalent) prior to installation above **80 °C**. Standard PVC softens between 60–80 °C. In high-temperature zones, verify the specific THERM variant — do not substitute a standard PROFIBUS cable.

● ISF4-C5E-P-IO — INDUSTRIAL CAT5E ETHERNET 4×2×0.51 MM

● ISF4-C5E-P-IO — INDUSTRIAL ETHERNET OVERVIEW

The **ISF4-C5E-P-IO** is an industrial-grade **Cat5e structured data cable** carrying four twisted pairs (4×2×0.51 mm conductor diameter). The designation suffix encodes: **C5E** = Category 5e; **P** = PUR (polyurethane) outer sheath, providing excellent abrasion and chemical resistance; **IO** = Indoor/Outdoor dual-rated construction. This cable supports **Power over Ethernet (PoE / PoE+)** data and power delivery over the same four pairs.

SPECIFICATION — ISF4-C5E-P-IO 4×2×0.51 MM

Core configuration	4 pairs × 0.51 mm Ø (AWG 24)
Conductor cross-section (approx.)	≈ 0.205 mm²
Characteristic impedance	100 Ω ± 15%
Category / Standard	Cat5e / IEC 11801 Class D
Outer sheath	PUR (P) — abrasion-resistant
Installation rating	Indoor / Outdoor (IO)
Outer diameter (Ø)	6.2 – 6.8 mm
Cu weight	≈ 19 kg/km
Cable weight (approx.)	≈ 45 kg/km
PoE/PoE+ support	Yes — ≈ 0.5 A per pair

Z₀ = 100 Ω



4×2×0.51 mm
4 twisted pairs
PUR-IO sheath

- **PUR sheath advantage:** Superior to standard PVC for routing in machinery — resists oils, mechanical abrasion, and repeated flexing
- **PoE constraint:** For PoE+ (25.5 W per port), ensure each pair current does not exceed 0.5 A — verify total wire resistance per IEEE 802.3at
- **IO rating:** UV-stable sheath allows short-term outdoor exposure; for permanent direct burial, specify an armoured or gel-filled variant

● J-Y(ST)2Y — OUTDOOR TELECOM / SIGNAL CABLE 2×2×0.8 MM

● J-Y(ST)2Y — OUTDOOR COMMUNICATION CABLE

● JE-LIYCY — SHIELDED INDUSTRIAL ELECTRONIC CABLE 2×2×0.5 MM²

● JE-LIYCY — SHIELDED ELECTRONIC CONTROL CABLE

SPECIFICATION — JE-LIYCY 2×2×0.5 MM²

Core configuration	2 pairs × 0.5 mm² (AWG 20)
Working voltage	225 V (signal / control)
Shield construction	Dense tinned-Cu braid (CY)
Outer diameter (Ø)	7.5 – 8.2 mm
Cu weight (incl. braid)	≈ 49 kg/km
Cable weight (approx.)	≈ 93 kg/km
Typical current capacity	Max. 2.5 – 4 A (ref. only)*

* The elevated Cu weight (49 kg/km) compared to cable weight reflects the high-density tinned-copper braided shield. This cable is not intended for power transmission; the 2.5–4 A figure is a conductor thermal limit, not a design operating point.

✓ JE-LIYCY — CONSTRUCTION NOTE

The designation "LiYCY" identifies: **Li** = stranded (flexible) conductor; **Y** = PVC insulation; **C** = tinned-copper braid screen; **Y** = PVC outer sheath. The braided CY shield provides superior EMC screening versus a simple foil, making JE-LIYCY the preferred choice for analogue signal loops, sensor cables, and instrumentation wiring in high-interference environments such as VFD-driven machinery.

● JE-Y(ST)Y — INDUSTRIAL SIGNAL / BAS / FIRE ALARM 4×2×0.8 MM

● JE-Y(ST)Y — INDOOR SIGNAL & BUILDING AUTOMATION CABLE

SPECIFICATION — JE-Y(ST)Y 4×2×0.8 MM

Core configuration	4 pairs × 0.8 mm Ø (AWG 20)
Peak working voltage	300 V (signal)
Screen / shield	Steel tape (ST) — pair screen
Outer sheath	PVC (Y) — flame retardant
Outer diameter (Ø)	9.5 – 10.5 mm
Cu weight	≈ 41 kg/km
Cable weight (approx.)	≈ 95 – 110 kg/km

HITRONIC HUN1500 — 8G 50/125 OM3 OPTICAL FIBRE

HITRONIC HUN1500 — FIBRE OPTIC OVERVIEW

The **HITRONIC HUN1500** is an **8-fibre, OM3-grade multimode optical cable** providing 10-Gigabit-capable transmission completely immune to electromagnetic interference (EMI). The "HUN" designation identifies it as a **Universal cable** — suitable for both vertical riser/backbone cabling and light-duty outdoor installation. The "1500" references its rated tensile load of **1 500 N**, appropriate for vertical drops in building infrastructure.

SPECIFICATION — HITRONIC HUN1500 8G 50/125 OM3	
Fibre count	8 fibres (8G)
Fibre type	50/125 µm multimode (OM3)
Bandwidth — 850 nm (laser)	≥ 2 000 MHz·km (OM3)
Max. 10G transmission distance	300 m @ 850 nm (10GBase-SR)
Max. 1G transmission distance	≥ 550 m
Outer diameter (Ø)	6.5 – 7.5 mm
Cable weight (approx.)	≈ 48 kg/km
Rated tensile load (HUN)	1 500 N
Current carrying capacity	None — optical transmission

✓ OM3 VS OM2 — KEY DISTINCTION

OM3 uses a **laser-optimised 50/125 µm core**, enabling 10G Ethernet over 300 m. For links exceeding 300 m at 10G, transition to **single-mode OS2** fibre. The HUN1500 universal construction avoids the need for separate indoor/outdoor fibre runs for most building backbone applications.

The **J-Y(ST)2Y** is a general-purpose twisted-pair signal cable rated for **outdoor, direct-burial, and damp-location installation**. The final **"2Y" designates a polyethylene (PE) outer sheath**, which provides significantly superior moisture resistance and UV stability compared to PVC — a critical distinction for outdoor projects in tropical, high-UV, or direct-buried environments. The "(ST)" indicates a steel tape or foil screen providing both electromagnetic shielding and structural protection.

SPECIFICATION — J-Y(ST)2Y 2×2×0.8 MM	
Core configuration	2 pairs × 0.8 mm Ø (AWG 20)
Peak working voltage	300 V (signal)
Screen / shield	Steel tape / Al-foil (ST)
Outer sheath	PE (2Y) — moisture & UV resistant
Outer diameter (Ø)	7.0 – 8.5 mm
Cu weight	≈ 21 kg/km
Cable weight (approx.)	≈ 60 – 65 kg/km
Typical reference current	≤ 5 A (signal reference only)
Installation	Outdoor, conduit, direct burial

ℹ PE VS PVC SHEATH — WHY IT MATTERS

The PE ("2Y") sheath on J-Y(ST)**2Y** resists moisture ingress and UV degradation — essential for direct-buried or outdoor tropical installations. By contrast, **JE-Y(ST)Y** (the indoor variant with PVC "Y" sheath) offers superior flame retardance but poor UV resistance. Specify the correct sheath for the installation environment.

DESIGNATION DECODE — J-Y(ST)2Y

J	**Telecommunication / instrumentation cable** (German VDE designation)
Y	Core insulation: **PVC**
(ST)	Screen: **steel tape or Al-foil** longitudinally applied under sheath
2Y	Outer sheath: **Polyethylene (PE)** — moisture-proof, direct-burial suitable
2×2	2 **twisted pairs**
0.8	Conductor diameter: **0.8 mm** (≈ AWG 20; cross-section ≈ 0.5 mm²)

Typical current (ref. only)	≤ 5 A (signal reference)
Primary applications	BAS, HVAC controls, fire alarm

✓ JE-Y(ST)Y — PREFERRED FOR BUILDING AUTOMATION

The PVC ("Y") outer sheath confers **flame retardance per IEC 60332-1**, making this cable compliant for use in fire alarm wiring, BMS/BAS control loops, and indoor HVAC instrumentation. The "(ST)" foil screen provides effective interference rejection. For outdoor runs, substitute **J-Y(ST)2Y** (PE sheath) to ensure adequate moisture and UV resistance.

CONSOLIDATED PRODUCT VARIANT TABLE

TYPE	CONFIG.	AWG	Ø MM	CU WT KG/KM	WT KG/KM	KEY ELECTRICAL / SIGNAL SPEC
HAFL-S PROFIBUS-DP THERM	1×2×0.64Ø	22	7.8–8.2	≈ 26	≈ 74	Z_0 = 150 Ω · 250 V signal · THERM +105 °C · max. 1 A
HITRONIC HUN1500 8G 50/125 OM3	8-fibre optical	—	6.5–7.5	0	≈ 48	10G/300 m · 1G/550 m @ 850 nm · 1500 N tensile · EMI-immune
ISF4-C5E-P-IO	4×2×0.51Ø	24	6.2–6.8	≈ 19	≈ 45	Z_0 = 100 Ω · Cat5e · PUR-IO · PoE ≈ 0.5 A/pair
J-Y(ST)2Y	2×2×0.8Ø	20	7.0–8.5	≈ 21	60–65	300 V signal · PE sheath · outdoor/burial · Al-foil screen · ≤5 A ref.
JE-LIYCY	2×2×0.5 mm²	20	7.5–8.2	≈ 49	≈ 93	225 V · Cu-braid screen · instrumentation · ≤ 2.5–4 A ref.
JE-Y(ST)Y	4×2×0.8Ø	20	9.5–10.5	≈ 41	95–110	300 V signal · PVC/FR sheath · BAS / fire alarm · ≤5 A ref.

Note: Conductor diameters (Ø) and cross-sections (mm²) are not interchangeable. Comm. cables (PROFIBUS, J-Y, JE-Y) are specified by conductor diameter Ø; control cables (JE-LIYCY) are specified by cross-sectional area mm². Consult the technical team for application-specific ampacity verification. All values nominal.

ORDER REFERENCE & CONTACT

Quote the full type designation including core/cross-section: e.g. `HAFL-S PROFIBUS-DP THERM 1×2×0.64`, `HITRONIC HUN1500 8G 50/125 OM3`, `JE-LIYCY 2×2×0.5`. Custom drum lengths, extended core counts, and armoured variants available on request.
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