



INSTALLATION, USE AND MAINTENANCE MANUAL CABFLIX® CABLES AND WIRE

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1. INTENDED USE

CABFLIX® hybrid cables are designed for combined power and control/signal transmission in industrial equipment and automation systems (e.g., inverter–motor connections). Installation must be performed by qualified personnel in accordance with applicable electrical regulations and OEM instructions.

2. ELECTRICAL USE – POWER CONDUCTORS (MAINS / DRIVE)

Voltage application: up to 400 VAC $\pm 10\%$

Important: the CABFLIX® cable construction referenced in the datasheets is marked as UL STYLE 2464 equivalent with 300 V rating. The OEM must verify insulation coordination and suitability for the intended system (including inverter PWM peak voltages), and ensure compliance with the applicable machine standard.

Conductor section	Base current @30°C (A)	Derating @40°C	Recommended current @40°C (A)
0.75 mm ² (power cores)	6.0	0.87	≤ 5.0
1.0 mm ² (power cores)	10.0	0.87	≤ 8.5

Note: values are indicative and based on typical flexible PVC multi-core mains cable ratings in free air at 30°C, derated to 40°C. Actual permissible current depends on installation method, number of loaded conductors, bundling, duty cycle, ventilation and permissible temperature rise. The OEM shall validate sizing and protection.

3. ELECTRICAL USE – CONTROL / SIGNAL PAIRS

Voltage application: 12–24 VDC $\pm 10\%$.

Conductor section	Base current @30°C (A)	Derating @40°C	Recommended current @40°C (A)
0.25 mm ² (twisted pairs)	2.5	0.87	≤ 2.0

Note: for control circuits, voltage drop and signal integrity may become limiting factors before thermal limits. Use appropriate fusing/protection and follow OEM recommendations for encoder/signal wiring and shielding/grounding.

4. SAFETY INSTRUCTIONS

- Do not install damaged cables or cables with compromised sheath/insulation.
- Do not exceed the recommended continuous currents in the tables above without OEM verification.
- Do not route the cable across sharp edges; use grommets/cable glands and mechanical protection where needed.
- Do not apply excessive pulling force; avoid crushing and repeated torsion.
- Do not bend below the minimum bending radius (recommended $\geq 6 \times$ ~ overall cable diameter).
- Do not energize the system before verifying terminations and protective earth (PE) continuity.
- Do not leave the shielding ungrounded where EMC performance is required.

5. INSTALLATION GUIDELINES

- Disconnect power before installation, inspection or maintenance.
- Secure the cable to avoid mechanical stress on terminations and connectors.
- Ensure correct grounding of braid/shield according to EMC practices.
- Avoid routing near high-temperature components and sources of chemical attack (oils/solvents) unless verified compatible.

6. MAINTENANCE

CABFLIX® cables are maintenance-free. Periodic visual inspection is recommended to verify sheath integrity, connector condition, strain relief, and correct grounding of shielding.

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