Anhui Feichun Special Cable Co., Ltd.

安徽飞纯特种电缆有限公司

TECHNICAL SPECIFICATION SHEET / ТЕХНИЧЕСКИЙ ПАСПОРТ ИЗДЕЛИЯ

PUR-HF-J Cable Series

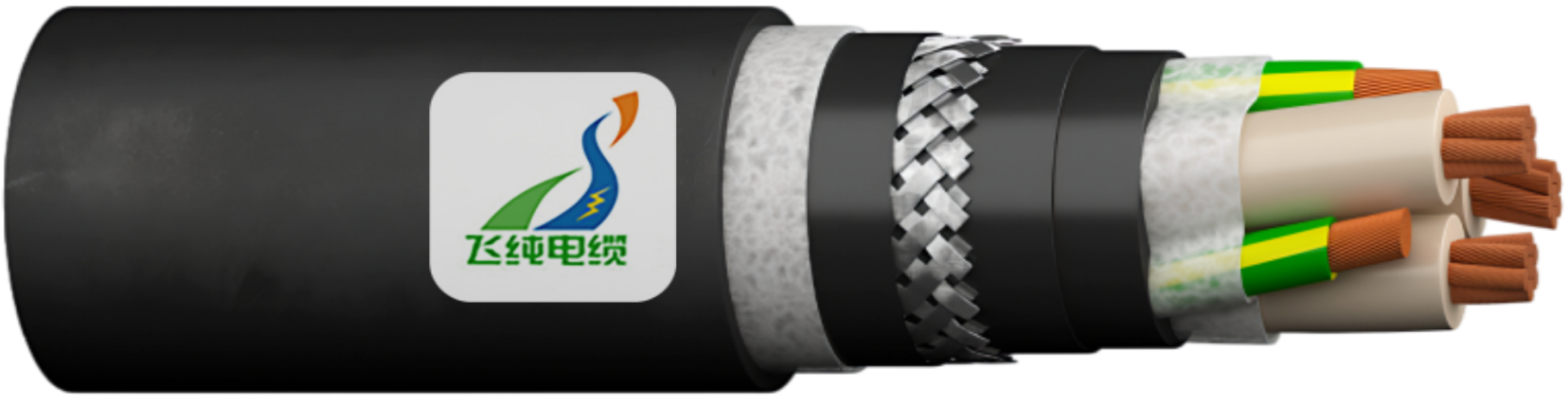
Halogen-Free Polyurethane Sheathed Power and Control Cable

Rated Voltage: 0.6/1 kV (600/1000 V) | Type Designation: FC-D12Y11Y

APPLICATION SCOPE

Engineered for deployment as power supply and control cabling in festoon configurations subjected to extreme operational conditions, including continuous flexing cycles. Optimal for implementation in drag chain systems, automated machinery, and material handling equipment. Additionally certified for moderate-duty drum reel applications with controlled mechanical loading parameters.

- Festoon system installations with high-frequency movement cycles
- Energy chain and drag line configurations
- Automated production machinery and robotic systems
- Material handling and conveyor equipment
- Moderate-stress drum reel operations



CONSTRUCTION DETAILS

Conductor Configuration

Material Composition:	Bare electrolytic copper, oxygen-free grade
Flexibility Classification:	Class 5 according to IEC 60228 / VDE 0295
Stranding Configuration:	Fine-wire stranded construction

Insulation System

Material Type:	Halogen-free thermoplastic polyester compound
Environmental Compliance:	RoHS compliant, halogen-free formulation

Core Assembly

Core Identification:	≤5 cores: Color-coded per VDE 0293-308 ≥6 cores: White base with sequential black numerals
Stranding Method:	Cores stranded with optimized short-pitch lay around central support element

Outer Sheath

Material Specification:	Halogen-free polyurethane (PUR), flame-retardant grade
Color Standard:	Black (RAL 9005), UV-stabilized
Cable Marking:	White inkjet print: FEICHUN PUR-HF-J (cores)×(mm²) 0.6/1kV (year/week)

ELECTRICAL CHARACTERISTICS

Nominal Voltage U_0/U:	0.6/1 kV (600/1000 V)
Maximum Operating Voltage (AC):	0.72/1.2 kV
Maximum Operating Voltage (DC):	0.9/1.8 kV
Test Voltage (AC, 50 Hz):	4000 V for 5 minutes
Current Rating Basis:	According to IEC 60364-5-52 / VDE 0298-4

THERMAL PERFORMANCE

Conductor Temperature (Continuous):	+90°C maximum
Short-Circuit Temperature:	+250°C (max. 5 seconds)
Fixed Installation Range:	-50°C to +80°C
Flexible Operation Range:	-40°C to +80°C

MECHANICAL PROPERTIES

Tensile Strength (Conductor):	15 N/mm² maximum
Torsional Capability:	±25°/m
Minimum Bending Radius:	6 × outer diameter (dynamic application)
Flexing Test Compliance:	Verified per EN 50396 / HD 22.2 Part 3.1

Operating Speed Limits:

- Festoon Systems: up to 200 m/min
- Reeling Applications: up to 60 m/min
- Cable Chain Systems: up to 200 m/min*

*Performance depends on chain length and installation parameters. Extended chain systems may require reduced speeds.

ENVIRONMENTAL & CHEMICAL RESISTANCE

Flame Propagation:	Compliant with IEC 60332-1-2
Water Immersion:	Suitable for permanent submersion to 50m depth (non-potable water)
Oil Resistance:	Resistant to mineral oils per VDE 0473-811-404
UV Resistance:	UV-stabilized for outdoor applications

TECHNICAL DATA TABLES

Single Core Power Cables (FC-D12Y11Y-O)

Cross Section (mm²)	Part Number	Conductor Dia. Max (mm)	Cable O.D. Min (mm)	Cable O.D. Max (mm)	Min. Bend Radius (mm)	Weight (kg/km)	Max. Tensile Force (N)	Conductor Resistance 20°C (Ω/km)	Current Rating (A)	Short Circuit Current (kA)
1×16	FC20165443	5.1	8.6	9.6	58	175	245	1.24	102	2.31
1×25	FC20156874	6.3	10.0	11.2	68	275	375	0.795	135	3.61
1×35	FC20154575	7.9	11.8	13.0	78	385	525	0.565	167	5.05
1×50	FC20154574	9.0	14.0	15.2	92	535	755	0.393	208	7.21
1×70	FC20154573	11.2	16.3	17.5	105	745	1055	0.272	259	10.09
1×95	FC20166593	12.7	18.0	19.2	116	945	1425	0.206	312	13.71
1×120	FC20156873	14.9	20.3	21.6	131	1205	1805	0.158	365	17.31
1×150	FC20168951	16.1	21.9	23.3	140	1495	2255	0.126	419	21.64
1×185	FC20169874	17.8	24.4	25.8	155	1835	2775	0.106	478	26.69
1×240	FC20171235	20.3	27.8	29.4	177	2305	3605	0.0775	560	34.62
1×300	FC20172456	22.8	30.1	32.1	193	3205	4505	0.0615	643	43.28

Multi-Core Power Cables (FC-D12Y11Y-J)

Configuration	Part Number	Conductor Dia. Max (mm)	Cable O.D. Min (mm)	Cable O.D. Max (mm)	Min. Bend Radius (mm)	Weight (kg/km)	Max. Tensile Force (N)	Conductor Resistance 20°C (Ω/km)	Current Rating (A)	Short Circuit Current (kA)
3×1.5	FC20185631	1.55	6.6	7.6	46	118	62	13.7	23	0.22
3×2.5	FC20156877	2.05	8.6	9.6	58	133	112	8.21	31	0.37
4×1.5	FC20186542	1.55	8.2	9.2	56	123	92	13.7	23	0.22
4×2.5	FC20156878	2.05	9.3	10.3	62	163	152	8.21	31	0.37
4×4	FC20160347	2.65	10.4	11.6	70	233	243	5.09	42	0.58
4×6	FC20187963	3.25	12.2	13.3	81	323	363	3.39	55	0.87
4×10	FC20154577	4.05	15.1	16.3	98	523	603	1.95	76	1.45
4×16	FC20156879	5.05	17.8	19.0	114	753	963	1.24	102	2.31
4×25	FC20160348	6.25	21.2	22.6	136	1163	1503	0.795	135	3.61
4×35	FC20188741	7.85	25.9	27.5	165	1653	2103	0.565	167	5.05
4×50	FC20189852	9.65	31.1	33.1	199	2413	3003	0.393	208	7.21
4×70	FC20190963	11.15	38.2	40.7	245	3073	4203	0.272	259	10.09
4×95	FC20192074	12.65	42.1	44.6	268	4153	5703	0.206	312	13.71
5×1.5	FC20193185	1.55	8.1	9.1	55	153	112	13.7	23	0.22

Configuration	Part Number	Conductor Dia. Max (mm)	Cable O.D. Min (mm)	Cable O.D. Max (mm)	Min. Bend Radius (mm)	Weight (kg/km)	Max. Tensile Force (N)	Conductor Resistance 20°C (Ω/km)	Current Rating (A)	Short Circuit Current (kA)
5×2.5	FC20194296	2.05	9.9	11.1	67	183	183	8.21	31	0.37
5×4	FC20154579	2.65	11.7	12.8	78	293	303	5.09	42	0.58
5×6	FC20154578	3.25	14.1	15.3	92	423	453	3.39	55	0.87
5×10	FC20195407	4.05	16.3	17.6	106	633	753	1.95	76	1.45
5×16	FC20166492	5.05	19.5	20.7	125	923	1203	1.24	102	2.31
5×25	FC20196518	6.25	23.3	24.6	149	1383	1873	0.795	135	3.61

Control Cables (FC-D12Y11Y-J)

Configuration	Part Number	Conductor Dia. Max (mm)	Cable O.D. Min (mm)	Cable O.D. Max (mm)	Min. Bend Radius (mm)	Weight (kg/km)	Max. Tensile Force (N)	Conductor Resistance 20°C (Ω/km)	Current Rating (A)	Short Circuit Current (kA)
7×1.5	FC20197629	1.55	9.1	10.1	61	223	152	13.7	23	0.22
12×1.5	FC20198740	1.55	14.4	15.6	94	323	273	13.7	23	0.22
18×1.5	FC20154580	1.55	14.6	15.8	95	383	403	13.7	23	0.22
24×1.5	FC20157942	1.55	16.6	17.9	108	503	543	13.7	23	0.22
30×1.5	FC20199851	1.55	19.7	21.1	127	683	673	13.7	23	0.22
36×1.5	FC20200962	1.55	21.2	22.6	136	773	813	13.7	23	0.22
7×2.5	FC20166594	2.05	11.6	12.8	77	253	263	8.21	31	0.37
12×2.5	FC20160349	2.05	16.6	17.8	107	463	453	8.21	31	0.37
18×2.5	FC20149380	2.05	16.8	18.0	108	583	673	8.21	31	0.37
24×2.5	FC20149192	2.05	19.3	20.5	123	763	903	8.21	31	0.37
30×2.5	FC20202073	2.05	25.0	26.6	160	1083	1123	8.21	31	0.37
36×2.5	FC20203184	2.05	26.0	27.6	166	1303	1353	8.21	31	0.37

Notes:

(1) Current ratings based on ambient temperature of 30°C for installations in free air per IEC 60364-5-52

(2) All values subject to manufacturing tolerances of ±5%

(3) Custom configurations available upon request

FEICHUN SPECIAL CABLES

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