# TECHNICAL SPECIFICATION DOCUMENT

## SANYFLEX(N)SHTOU-G-J-0.6/1kV Reeling Cables

High Performance Flexible Power & Fiber Optic Cables

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**SANYFLEX(N)SHTOU-G-J-0.6/1kV**




## APPLICATION

Reeling cables specifically designed for winding operations with simultaneous tensile stress and/or torsional stress and/or forced cable guidance. These cables are suitable for deployment in dry, humid, and wet environments, outdoor applications, construction sites, commercial facilities, and agricultural installations.

### SPECIAL FEATURES

- Free from lacquer-damaging substances and silicone during production
- Suitable for travelling speeds up to 180 m/min
- Engineered for high dynamic tensile forces and acceleration figures
- Failure-free data transmission via fiber optic integration
- Enhanced durability for demanding industrial applications

### COMPLIANCE & STANDARDS

- RoHS compliant
- Compliant with 2014/35/EU Directive (Low Voltage Directive)
- CE marking
- DIN VDE 0295 class 5 / IEC 60228 cl. 5
- VDE 0293-308 core identification

## TECHNICAL SPECIFICATIONS

**Conductor Material:**
Bare copper strand; FO: Graded index-fiber 62.5/125 µm

**Conductor Class:**
DIN VDE 0295 class 5 / IEC 60228 cl. 5

**Core Insulation:**
Rubber compound; FO: PETP tubes with jelly filling in special rubber compound envelope

**Core Identification:**
VDE 0293-308 coloured cores and GN/YE earth conductor

**Overall Stranding:**
Cores stranded in layers with split earth conductors and FO element in interstices

**Inner Sheath:**

Special rubber compound

**Anti-torsion Protection:**

Wide-meshed polyester braid

**Outer Sheath:**

Special rubber compound, black color

**Rated Voltage:**

AC IEC Uo/U: 0.6/1 kV

**Testing Voltage:**

2.5 kV

**Current Carrying Capacity:**

According to DIN VDE (see Technical Guidelines)

**Min. Bending Radius (Fixed):**

DIN VDE 0298 part 3

**Min. Bending Radius (Moved):**

DIN VDE 0298 part 3

**Traverse Speed (Festoon):**

Maximum 3 m/s

## PRIMARY ELECTRICAL & DIMENSIONAL SPECIFICATIONS

### SANYFLEX(N)SHTOU-G-J-0.6/1KV RATED VOLTAGE REEL CABLE

| NUMBER OF CORES × CROSS SECTION | CONDUCTOR DIAMETER MAX. | OUTER DIAMETER MAX. | WEIGHT (CA.) | 20°C MAX CONDUCTOR RESISTANCE | 40°C MONOSPIRAL REEL AT 30°C(1) |
|---|---|---|---|---|---|
| NR×MM² | MM | MM | KG/KM | Ω/KM | A |
| 3×120+3×16 | 15.2/5.6 | 53.0 | 5602 | 0.164 | 310 |
| 3×150+3×16 | 17.0/5.6 | 58.5 | 6823 | 0.132 | 350 |

***Notes:***

*(1) The ampacity ratings of the cable are based on an ambient temperature of 40°C and refer to ICEA S-75-381.*

*(2) For the usage conditions of winding and moving types, cables are consumable and vulnerable items. They should be adjusted and replaced according to actual usage conditions on site.*

## CORRECTION FACTORS

### 1. CORRECTION FACTORS FOR DIFFERENT WINDING TYPES

| WINDING TYPE | MULTI-LAYER WINDING | | | | | SINGLE LAYER WINDING | |
|---|---|---|---|---|---|---|---|
| NUMBER OF LAYERS | 1 | 2 | 3 | 4 | 5 | VENTILATED | NON-VENTILATED |
| Correction Factor | 0.80 | 0.61 | 0.49 | 0.42 | 0.38 | 0.83 | 0.76 |

### 2. CORRECTION FACTORS FOR DIFFERENT AMBIENT TEMPERATURES

| °C | 20 | 30 | 35 | 40 | 45 | 50 |
|---|---|---|---|---|---|---|
| Correction Factor | 1.18 | 1.1 | 1.05 | 1.00 | 0.95 | 0.90 |

**Important Application Notes:**

- Current ratings are based on ICEA S-75-381 standard at 40°C ambient temperature
- For dynamic applications, apply appropriate correction factors based on winding configuration
- Cables for winding and moving applications are considered consumable items requiring periodic replacement
- Custom configurations and assembly with connectors available upon request

## ELECTRICAL PERFORMANCE CALCULATIONS

### CURRENT RATING EXAMPLES (USING CORRECTION FACTORS)

**3×120+3×16 Configuration (Base: 310A at 40°C):**

- Single layer ventilated drum at 30°C: 310A × 0.83 × 1.1 = **283A**
- Double layer winding at 40°C: 310A × 0.61 × 1.0 = **189A**
- Triple layer winding at 35°C: 310A × 0.49 × 1.05 = **159A**

**3×150+3×16 Configuration (Base: 350A at 40°C):**

- Single layer ventilated drum at 30°C: 350A × 0.83 × 1.1 = **319A**
- Double layer winding at 40°C: 350A × 0.61 × 1.0 = **214A**
- Triple layer winding at 35°C: 350A × 0.49 × 1.05 = **180A**

## QUALITY ASSURANCE

All SANYFLEX cables are manufactured under strict quality control procedures in accordance with international standards. Each cable undergoes comprehensive testing including electrical, mechanical, and environmental performance validation to ensure reliable operation in demanding industrial applications.



FEICHUN SPECIAL CABLES

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