FEICHUN CABLE

TECHNICAL SPECIFICATION SHEET

Cable EpN 78/53 3×50+2×25+1×10 mm²

Manufactured in accordance with JUS Standard PSN 03J080

CABLE CONFIGURATION

Cable EpN 78/53 3×50+2×25+1×10 mm², 3.6/6 kV

Technical Designation: NTSCGEWöu .../3E+St+ül NFK EpN 78/53

GENERAL SPECIFICATIONS

3.6/6 kV Configuration

Nominal Voltage (U_0/U):	3.6/6 kV
Test Voltage:	11 kV

6/10 kV Configuration

Nominal Voltage (U_0/U):	6/10 kV
Test Voltage:	17 kV

Standard:	PSN 03J080	**Sheath Color:**	Red
Cable Type:	EpN 78/53	**Fire Rating:**	Flame Retardant
Classification:	Flexible Medium Voltage Mining	**Oil Resistance:**	Oil and Abrasion Resistant

	Cable
Conductor Class:	Class 5 (Flexible)
Application Environment:	Extremely Heavy Conditions

CORE STRUCTURE

Power Cores

Quantity:	3 cores
Cross-section:	50 mm²
Conductor:	Tinned Copper

Protective Cores

Quantity:	2 cores
Cross-section:	25 mm²
Conductor:	Tinned Copper

Control Core

Quantity:	1 core
Cross-section:	10 mm²
Conductor:	Tinned Copper

CONSTRUCTION DETAILS

Power Cores Construction:

Conductor:	Tinned copper conductor, Class 5 flexibility
Semi-conductive Layer:	Rubber compound/tape application
Insulation:	Ethylene Propylene Rubber (EPR) based compound
Semi-conductive Layer:	Rubber compound/tape application
Screen:	Braid of tinned copper wires

Control and Protective Conductors:

Conductor:	Tinned copper conductor, Class 5 flexibility
Insulation:	EPR rubber based compound

Semi-conductive Layer: Rubber compound/tape application

Cable Assembly:

Cable Core: 3 power cores with 1 control core and 2 protective cores placed in spaces between power cores

Inner Sheath: Natural/synthetic rubber based compound

Outer Sheath: Polychloroprene rubber, oil and abrasion resistant, flame retardant (Red)

CONSTRUCTION DATA

Configuration $3\times q + 2\times q_1 + 1\times q_2$ [mm²]	3.6/6 kV			6/10 kV	
	Copper Content [kg/km]	Cable Diameter [mm]	Cable Mass [kg/km]	Cable Diameter [mm]	Cable Mass [kg/km]
3×16 + 2×6 + 1×10	672	44	2,688	-	-
3×25 + 2×10 + 1×10	1,008	45	3,008	52	3,636
3×35 + 2×10 + 1×10	1,296	49	3,451	-	-
3×35 + 2×16 + 1×10	1,412	49	3,667	57	4,543
3×50 + 2×16 + 1×16	1,901	53	4,465	-	-
3×50 + 2×25 + 1×10	**2,016**	**53**	**4,750**	**-**	**-**
3×50 + 2×25 + 1×16	2,074	53	4,931	-	-
3×70 + 2×35 + 1×16	2,842	60	6,093	-	-

Legend:
• q = Nominal cross-section of power conductor [mm²]
• q_1 = Nominal cross-section of protective conductor [mm²]
• q_2 = Nominal cross-section of control conductor [mm²]
• Highlighted row indicates the specified 3×50+2×25+1×10 mm² configuration

OPERATING PARAMETERS

Conductor Temperature Limits

Maximum Operating:	+90°C
Short Circuit (max 5s):	+250°C

Ambient Temperature Limits

Mobile Installation:	-25°C to +40°C
Fixed Installation:	-30°C to +40°C

Minimum Bending Radius: 12D (where D = cable diameter)

APPLICATIONS

Primary Application: Flexible medium voltage mining cable designed for use in extremely heavy conditions requiring exceptional durability and flexibility.

Specific Applications:

- Surface pit mining operations and equipment
- Shipyard electrical installations and mobile cranes
- Quarry operations and heavy machinery
- Industrial excavator power supply systems
- Mobile crane electrical connections
- Heavy industrial machinery requiring flexible power cables

Environmental Suitability: Engineered for extreme conditions with superior resistance to oil, mechanical abrasion, flame propagation, and environmental stresses typical in heavy industrial applications.

Important Safety Notice: This cable is designed for extremely heavy conditions. Installation and operation must comply with applicable safety regulations for mining, industrial, and heavy machinery applications. Regular inspection and maintenance are critical for safe operation.

COMPLIANCE & STANDARDS

Manufacturing Standard:	PSN 03J080
Cable Classification:	Flexible Medium Voltage Mining Cable
Safety Classification:	Heavy Duty Industrial Application
Quality Assurance:	Factory tested to specified parameters

FEICHUN SPECIAL CABLES

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