



# Caledonian

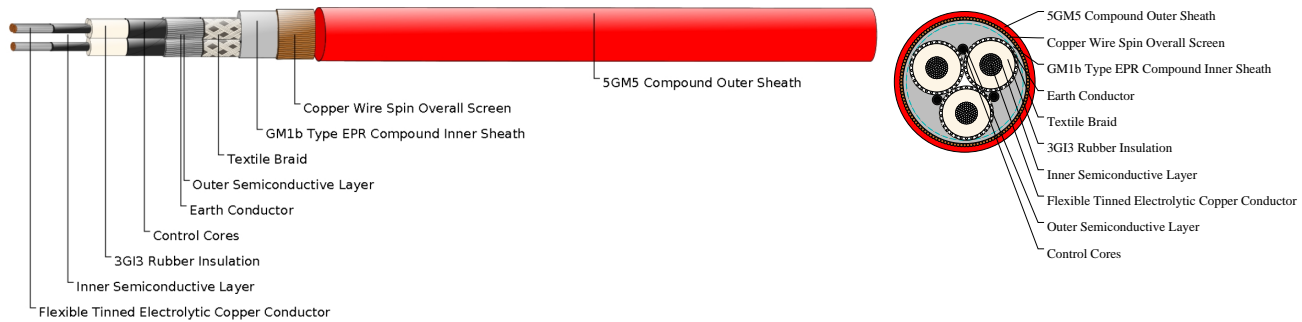
## Tunnel Cables

www.caledonian-cables.com

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### Tunnel Cable

(N)TSCGEWöU-TBM 3x70+3x16/3E+3x2.5ST+6ÜLKON



### APPLICATIONS

The cables are suitable for reeling power supply cables for TBM's machines and in underground mines for tunnel constructions.

### STANDARDS

Construction: DIN VDE 0250-813

General Requirements: DIN VDE 0250-1

Guide Use: DIN VDE 0298-3

Electrical Tests: DIN VDE 0472-501, 503, 508

Non-Electrical Tests: DIN VDE 0472-401, 402, 602, 303, 615

Flame Retardant: VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1

Under Fire Condition Tests: DIN VDE 0472-803, 804

Oil Resistant: HD/EN/IEC 60811-2-1, DIN VDE 0473-811-2-1

### VOLTAGE RATING

12/20kV

### CABLE CONSTRUCTION

Conductors: Flexible Tinned Electrolytic copper conductor DIN VDE 0295 Class 5.

Insulation: 3GI3 type EPR compound

Electrical Field Control: Inner and Outer semiconductive layer of semiconductive rubber.

Control core: Tinned Copper conductor with semiconductive layer.

Protective-Earth Conductor: Tinned Copper/ Textile braiding combined cores laying concentric around each power core.

Lay Up: Three main conductors laid-up with three control cores in the outer interstice.

Inner Sheath: GM1b Type EPR Compound.

Screen: Overall concentric lay of copper wire spinning.

Outer Sheath: 5GM5 Type elastomer compound. Red.

### COLOUR CODE



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Core Identification:

Main Cores: Natural coloring with black semiconductive rubber.

Control cores: Black

## PHYSICAL AND THERMAL PROPERTIES

Rated Voltage:12/20 KV

AC Test Voltage:29 KV

Max.Permissible Operating Voltage AC:13.9/24 KV

Max.Permissible Operating Voltage DC:18/36 KV

Min Bending Radius:DIN VDE 0298-3

Current Carrying Capacities:DIN VDE 0298-4

Working Temperature:

Fixed:-40°C- +80°C

Mobile:-25°C- +80°C

Max.Tensile Load of Cable:15N/mm<sup>2</sup>

Max.Torsion:25°/m

Trawl Speed For Tunnelling App:Max.30 m/min

Minimum Distance For Change Of Direction:20×D

## DIMENSION AND PARAMETERS

Nominal Cross-sectional Area	Overall Diameter (min.)	Overall Diameter (max.)	Approx. Weight
mm <sup>2</sup>	mm	mm	kg/km
3x70+3x16/3E +3x2.5ST+6ÜLKON	64.2	68.4	6200