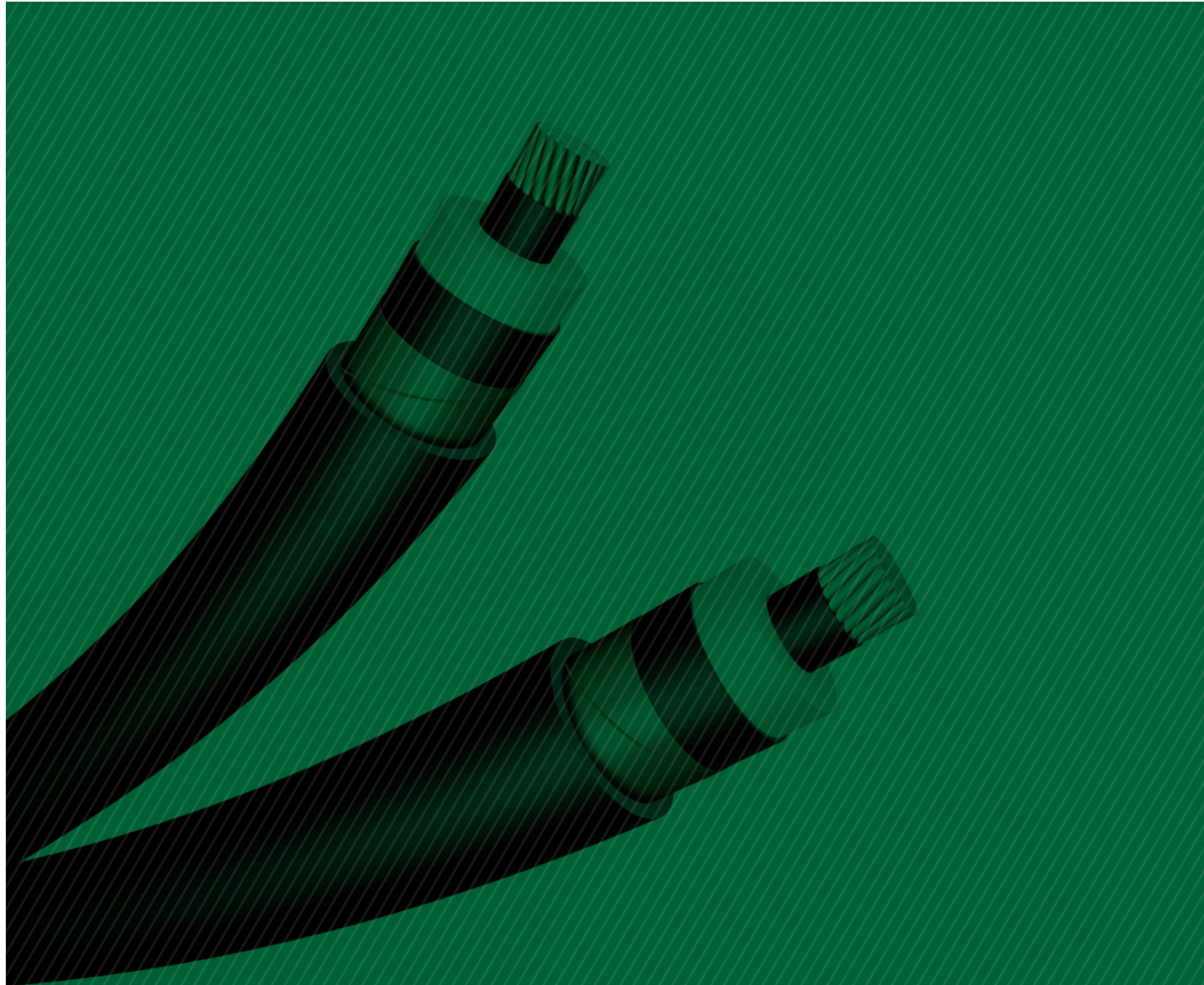




Connecting globally



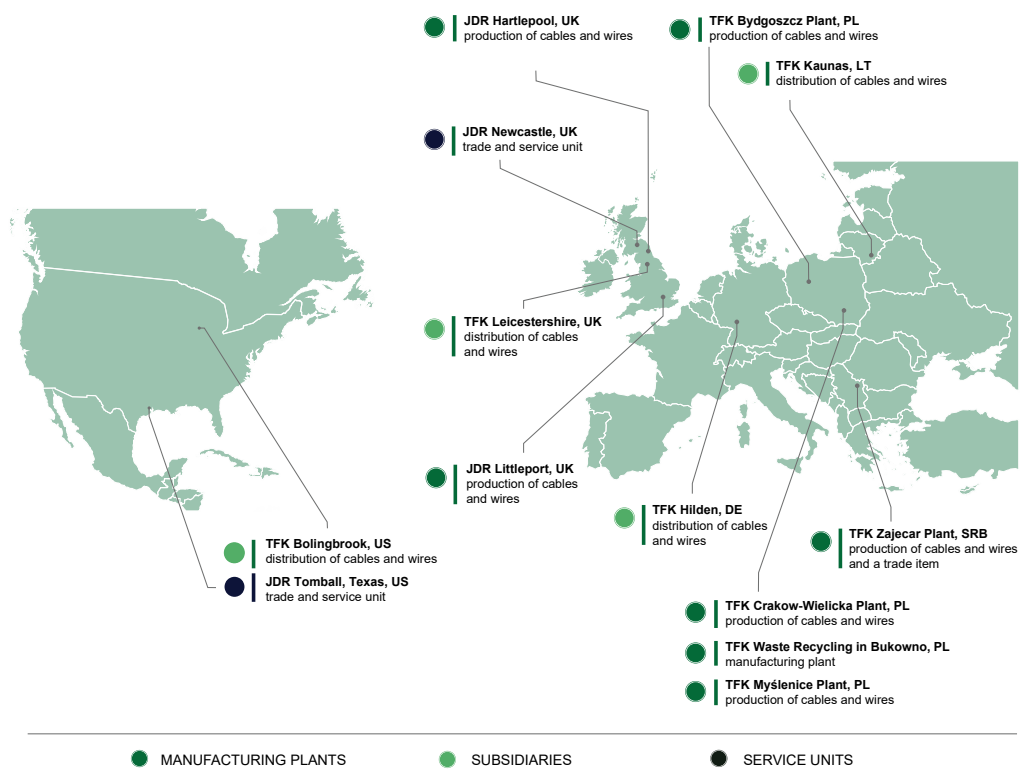
**MV-105 Power Cables**  
**5kV-15kV**

# TELE-FONIKA Kable

TELE-FONIKA Kable SA, a privately held wire and cable manufacturer headquartered in Myślenice, Poland, is one of the largest wire and cable companies in the world. TF operates 8 plants in Central and Eastern Europe with a distribution network stretching 90 countries. Formed through a series of acquisitions and mergers, TFKable has developed world-class technology centers of excellence with state of the art manufacturing operations. Founded in 1992, TFKable grew rapidly and the operations today are a result of internal development projects supported by strategic investments.

TF is the leading medium and high voltage cable manufacturer in Europe with significant market share in rubber insulated portable power cables used by HEAVY INDUSTRY & MINING. Additionally, the company manufactures products for the TELECOMMUNICATION, SHIP BUILDING, ELECTRONIC and ENERGY sectors.

All manufacturing facilities are ISO 9001 and ISO 14001 certified. All products are manufactured to public, utility and industrial standards including ICEA, IEEE, and ASTM. TELE-FONIKA has over 380 individual certificates issued by more than 30 certification bodies which include UL, CSA, MSHA, SABS, VDE etc.



# TELE-FONIKA Cable Americas

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TELE-FONIKA Cable AMERICAS (TFCA) is a U.S. corporation with offices and main warehouse located in Bolingbrook, Illinois. TFCA is a wholly owned subsidiary of TELE-FONIKA Kable (TFK) with responsibility for North and South American markets. TFK, one of the largest manufacturers of wire and cable in Europe, is a fully integrated manufacturer, recognized by the industry as a world-class producer of wire and cable products. The company specializes in products for heavy industry, mining, and utility applications. The company is a recognized global supplier of Portable Power Cords, Mining Cable, and Medium and High Voltage Utility Cables. TFKable has been active in the Americas since 1987, providing products through a network of authorized distributors, international agents, and domestic sales representatives. TFKable markets include utility power distribution, alternative energy, entertainment, portable power, mass transit, military, and a number of other commercial applications.

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## TELE-FONIKA Kable GROUP KEY STATISTICS

- 1 billion USD in annual turnover
- 3rd largest wire and cable supplier in Europe and one of the TOP global producers
- No. 1 European POWER CABLE SUPPLIER
- 3000 Group Employees
- 15 Global Facilities
- 25,000 Different types of wire and cable constructions
- Sales & Distribution network stretching 90 countries

## TFKable IS THE MEDIUM POWER SOLUTION

## APPLICATIONS

- Chemical Plants
- Petrochemical Plants
- Electrical Utility Plants
- Water Treatment Facilities
- Textile Mills
- Steel Mills
- Paper Mills
- Airports
- Shopping Malls
- Military Bases
- Medical Facilities
- Sports Stadiums

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## INSTALLATIONS

- In Cable Tray
- Conduit in Air
- Aerial with Messenger Supported
- Direct Buried
- Underground Duct
- Wet and Dry Locations

## BENEFITS AND FEATURES

- Durable construction allows for installations in practically any environment
- 105°C insulation rating allows for higher ampacity rating of a cable
- Continuous Conductor Operating Temperature 105°C
- Short Circuit Rating 250°C
- UL listed as Type MV-105
- Oil and sunlight resistant
- Flame retardant PVC jacket
- Listed for CT use for sizes 1/0 AWG and larger

### 100% Insulation Level

- Used for cables installed in grounded systems and systems equipped with a protective device that will clear ground faults within 1 minute

### 133% Insulation Level

- Used for cables installed in ungrounded systems and systems where faults will be de-energized within 1 hour but not quicker than 1 minute

# Standard Construction

## CONDUCTOR

A compressed-stranded copper or aluminum conductor. Cable element that allows for the flow of electrical current.

## CONDUCTOR SHIELD

The semiconducting thermoset extruded layer equalizes electrical charge across the conductor surface. It also minimizes electrical stresses should the conductor surface become uneven due to voids between conductor and insulation. The semiconducting layer eliminates potential for corona discharge by reduction of air voids between the conductor and the insulation. This greatly improves insulation life expectancy.

## INSULATION

Thermoset extruded EPR layer whose main function is to contain electricity and resist leakage of electrical charges. Insulation also serves as a protective layer

## INSULATION SHIELD

The semiconducting thermoset extruded layer transfer insulation charging current to the metallic shield. It provides symmetrical distribution of voltage stress within insulation. Its function is also to restrict the electric field within the insulation

## METALLIC SHIELD

The bare copper tape reduces the risk of shock to personnel by safely carrying and transferring leaked current in case of a cable fault. The metallic shield provides additional mechanical damage protection for the cable core.

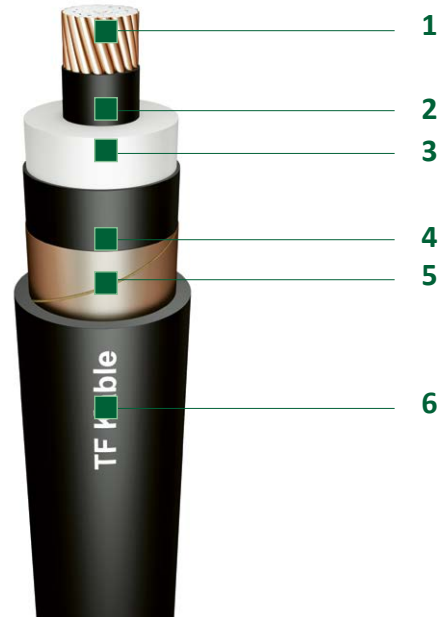
## JACKET

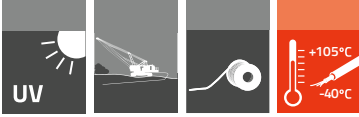
External layer of extruded thermoplastic PVC provides protection for all internal cable elements from any mechanical, chemical or thermal abuse it may experience during cable installation and operation.

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## MV-105

1. CONDUCTOR - compressed stranded class B per ASTM (Copper or Aluminum)
2. CONDUCTOR SHIELD - semiconducting thermoset layer
3. INSULATION - EPR (Ethylene Propylene Rubber)
4. INSULATION SHIELD - semiconducting thermoset layer
5. METALLIC SHIELD - 5 mil bare copper tape shield with a 25% overlap
6. JACKET - sunlight resistant PVC (Polyvinyl Chloride)





# MV-105 5kV & 15kV

**UL 1072, IEEE 1202, ASTM B-8, AEIC CS8, ICEA S-97-682, ICEA S-93-639 /NEMA WC 74**

Medium Voltage 5kV & 15kV 133% Copper Conductor, Copper Tape Shielded Power Cable

## APPLICATIONS

### INDUSTRIAL AND COMMERCIAL

- Chemical Plants
- Petrochemical Plants
- Electrical Utility Plants
- Water Treatment Facilities
- Textile Mills
- Steel Mills
- Paper Mills
- Airports
- Shopping Malls
- Military Bases
- Medical Facilities
- Sports Stadiums

### INSTALLATIONS

- In Cable Tray
- Conduit in Air
- Aerial with Messenger Supported
- Direct Buried
- Underground Duct
- Wet and Dry Locations



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## CONSTRUCTION

Conductor	Class B compressed annealed uncoated copper
Conductor shield	Extruded layer of semiconducting compound applied under simultaneous triple extrusion process
Insulation	Extruded layer of 105°C rated Ethylene Propylene Rubber (EPR)
Insulation shield	Extruded layer of semiconducting compound applied by triple extrusion process
Metallic shield	5 mil bare copper tape applied helically with a 25% overlap.
Jacket	Extruded layer of black sunlight resistant Polyvinyl Chloride (PVC)

## Characteristic

Maximum conductor operating temperature:	+105°C
Maximum emergency overload temperature:	+140°C
Maximum short-circuit conductor temperature:	+250°C
Maximum sidewall pressure:	1000lbs/FT
Lowest ambient temperature for fixed installation:	-40°C
Lowest installation temperature:	-5°C
Minimum bending radius:	12xD (D-overall diameter of cable)

- Flame Retardant PVC jacket
- Listed for CT use for sizes 1/0 AWG and larger

## Approvals

(UL) E231073

## 5kV 133% INSULATION LEVEL

Part Number	Conductor Size	Insulation Thickness	Diameter over Insulation	Jacket Thickness	Outer Diameter	Cable Weight	Ampacities *		
							Isolated in Air	Direct Buried	Underground Duct
	AWG / MCM	mils	inches	mils	inches	lbs /kft	A		
MV105-5kV2-1	2 AWG	115	0.55	60	0.78	524	215	250	155
MV105-5kV1-1	1 AWG		0.60		0.80	520	250	280	180
MV105-5kV1/0-1	1/0 AWG		0.65		0.85	677	290	320	210
MV105-5kV2/0-1	2/0 AWG		0.69		0.95	792	330	365	235
MV105-5kV3/0-1	3/0 AWG		0.75	1.00	925	385	415	270	
MV105-5kV4/0-1	4/0 AWG		0.80	1.05	1093	445	465	310	
MV105-5kV250-1	250 MCM		80	0.85	1.10	1130	495	510	345
MV105-5kV350-1	350 MCM			0.95	1.20	1624	615	615	415
MV105-5kV500-1	500 MCM			1.10	1.35	2185	775	745	505
MV105-5kV750-1	750 MCM			1.30	1.55	3102	1000	910	630
MV105-5kV1000-1	1000 MCM			1.40	1.70	3715	1200	1055	720

## 15kV 133% INSULATION LEVEL

Part Number	Conductor Size	Insulation Thickness	Diameter over Insulation	Jacket Thickness	Outer Diameter	Cable Weight	Ampacities *		
							Isolated in Air	Direct Buried	Underground Duct
	AWG / MCM	mils	inches	mils	inches	lbs /kft	A		
MV105-15kV2-1	2 AWG	220	0.75	80	1.03	700	215	225	165
MV105-15kV1-1	1 AWG		0.79		1.05	710	250	260	185
MV105-15kV1/0-1	1/0 AWG		0.82		1.09	867	290	295	215
MV105-15kV2/0-1	2/0 AWG		0.86		1.13	995	335	335	245
MV105-15kV3/0-1	3/0 AWG		0.92	1.17	1135	385	380	275	
MV105-15kV4/0-1	4/0 AWG		0.97	1.21	1314	445	435	315	
MV105-15kV250-1	250 MCM		110	1.02	1.30	1471	495	475	345
MV105-15kV350-1	350 MCM			1.12	1.40	1902	610	575	415
MV105-15kV500-1	500 MCM			1.26	1.52	2459	765	700	500
MV105-15kV750-1	750 MCM			1.41	1.77	3471	990	865	610
MV105-15kV1000-1	1000 MCM			1.58	1.95	4150	1185	1005	690

\* Ampacities „Underground Duct“ per NEC 2011 Table 310.60 (C) (78). Ampacities „Isolated in Air“ per NEC 2011 Table 310.60 (C) (70). Ampacities „Direct Buried“ per NEC 2011 Table 310.60 (C) (82).

### Standard print legend:

TF Cable (VOLTAGE) (SIZE) TYPE MV-105 SHIELDED COPPER EPR 133% INS LEVEL SUN RES FOR CT USE DIRECT BURIAL (UL) E231073

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