

MMV-VFD Power Cable

Three Conductor: 8kV - 15kV • 133% Insulation Level • Rated 90°C

Conductors (3)

Soft annealed flexible stranded tinned copper per IEEE 1580 Table 11.

Insulation

Extruded thermosetting 90°C Ethylene Propylene Rubber (EPR), meeting UL 1309 (Type E), IEEE 1580 (Type E) and UL 1072.

Insulation Shield

Composite shield consisting of 0.0126" tinned copper braided with nylon providing 60% copper Shielded coverage meeting UL 1309, IEEE Std. 1580, and UL 1072. The nylon is colored for easy phase identification (three conductor = black, blue, red) without the need to remove the shield to find an underlying colored tape.

Low smoke halogen-free jacket available.
Contact your AmerCable rep.

Conductor Shield

A combination of semi-conducting tape and extruded thermosetting semi-conducting material meeting UL 1309, IEEE 1580 and UL1072.

Insulation Shield

Semi-conducting layer meeting UL 1309, IEEE 1580 and UL 1072.

Symmetrical Insulated Grounding Conductors (3)

Soft annealed flexible stranded tinned copper conductor per IEEE 1580 Table 11. Gexol Insulation sized per Table 23.2 of UL1072. Color: Green

Jacket

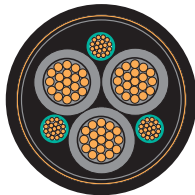
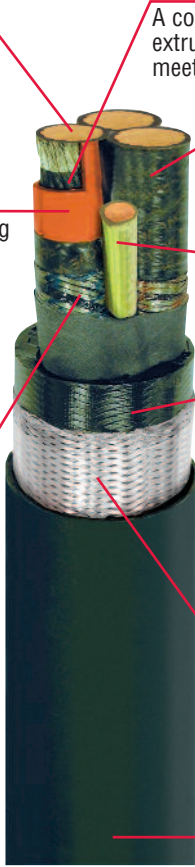
A black, arctic grade, flame retardant, oil, abrasion, chemical and sunlight resistant thermosetting compound meeting UL 1309/CSA 245, IEEE 1580, and UL 1072. This jacket allows for isolation between the insulation shields and overall shield. Shields can then be terminated on opposite ends to minimize circulating currents.

Armor/EMI Shield

Overall tinned copper braid plus aluminum/polyester tape provides 100% coverage. This braid serves as both an armor and EMI shield meeting both IEEE 1580 and UL 1307/CSA 245.

Sheath (optional)

A black, arctic grade, flame retardant, oil, abrasion, chemical and sunlight resistant thermosetting compound meeting UL 1309/CSA 245, IEEE 1580, and UL 1072. Colored jackets for signifying different voltage levels are also available on special request (orange = 8kV and red = 15kV).



Applications

A flexible, braid and foil shielded, power cable specifically engineered for use in medium voltage variable frequency AC drive (VFD) applications.

Features

- Flexible stranded conductors and braided shields. Suitable for applications involving repeated flexing and high vibration.
- Small minimum bending radius (8x OD) for easy installation.
- Insulation has a very low dielectric constant. This allows for longer output cable distances and minimizes common mode current.
- Overall braid plus foil shield is engineered with 100% coverage and a surface transfer impedance <50 milliohms at 10MHz to contain EMI.
- Symmetrical insulated ground conductors reduce induced voltage imbalances and carry common mode noise back to the drive.
- High strand count conductors and braid shield design is much more flexible, easier to install and more resistant to vibration than Type MC cable.
- Severe cold durability: exceeds CSA cold bend/cold impact (-40°C/-35°C).
- Flame retardant: IEC 332-3 Category A and IEEE 1202.
- Suitable for use in Class I, Division 1, and Zone 1 environments.

Ratings & Approvals

- UL Listed as Marine Shipboard Cable (E111461)
- American Bureau of Shipping (ABS)
- Det Norske Veritas (DNV) Pending
- Lloyd's Register of Shipping (LRS) Pending
- 90°C Temperature Rating
- Voltage Rating – 8kV to 15kV (25kV available on request)



Three Conductor Type MMV-VFD Medium Voltage – 8kV • 133% Insulation Level

		Ampacity										
Size AWG/ kcmil	mm2	Part No. 37-105	Nominal Diameter (inches)	Weight (Lbs./ 1000 Ft.)	In Free Air (amps)	Single Banked in Trays (amps)	DC Resistance at 25°C (ohms/1000 Ft.)	AC Resistance at 90°C, 60Hz (ohms/1000 Ft.)	Inductive Reactance (ohms/ 1000 Ft.)	Voltage Drop (Volts per amp per 1000 Ft.)	Green Insulated Grounding Conductor (3x) Size (AWG)	
6	12.5	-332TSVFD	1.687	1634	88	75	0.445	0.556	0.048	0.820	10	
4	21	-333TSVFD	1.868	2074	116	99	0.300	0.376	0.043	0.564	10	
2	34	-334TSVFD	2.071	2625	152	129	0.184	0.230	0.040	0.359	10	
1	43	-335TSVFD	2.161	3022	175	149	0.147	0.184	0.038	0.294	8	
1/0	54	-336TSVFD	2.262	3373	201	171	0.117	0.147	0.037	0.242	8	
2/0	70	-337TSVFD	2.381	3826	232	197	0.093	0.117	0.036	0.199	8	
3/0	86	-338TSVFD	2.489	4411	266	226	0.074	0.094	0.035	0.166	6	
4/0	109	-339TSVFD	2.631	5093	306	260	0.058	0.075	0.033	0.139	6	
262	132	-340TSVFD	3.857	5993	348	296	0.048	0.063	0.032	0.121	6	
313	159	-341TSVFD	3.030	6867	386	328	0.040	0.053	0.032	0.106	6	
373	189	-342TSVFD	3.164	7810	429	365	0.034	0.045	0.031	0.094	4	
444	227	-343TSVFD	3.319	8855	455	387	0.028	0.039	0.030	0.085	4	
535	273	-344TSVFD	3.492	9905	528	449	0.024	0.033	0.030	0.076	4	

• Cable diameters are subject to a +/- 5% manufacturing tolerance

Three Conductor Type MMV-VFD Medium Voltage – 15kV • 133% Insulation Level

		Ampacity										
Size AWG/ kcmil	mm2	Part No. 37-105	Nominal Diameter (inches)	Weight (Lbs./ 1000 Ft.)	In Free Air (amps)	Single Banked in Trays (amps)	DC Resistance at 25°C (ohms/1000 Ft.)	AC Resistance at 90°C, 60Hz (ohms/1000 Ft.)	Inductive Reactance (ohms/ 1000 Ft.)	Voltage Drop (Volts per amp per 1000 Ft.)	Green Insulated Grounding Conductor (3x) Size (AWG)	
2	34	-357TSVFD	2.403	3231	156	133	0.184	0.230	0.0440	0.364	10	
1	43	-358TSVFD	2.468	2959	178	151	0.147	0.184	.0430	0.299	8	
1/0	54	-359TSVFD	2.596	4090	205	174	0.117	0.147	.041	0.246	8	
2/0	70	-360TSVFD	2.714	4615	234	199	0.093	0.117	0.0390	0.203	8	
3/0	86	-361TSVFD	2.875	5306	269	229	0.074	0.094	.038	0.170	6	
4/0	109	-362TSVFD	3.028	6131	309	263	0.058	0.075	0.037	0.142	6	
262	132	-363TSVFD	3.260	7074	352	299	0.048	0.063	0.035	0.124	6	
313	159	-364TSVFD	3.363	7787	389	331	0.040	0.053	0.034	0.109	6	
373	189	-365TSVFD	3.500	8703	432	367	0.034	0.045	0.034	0.097	4	
444	227	-366TSVFD	3.652	9912	456	388	0.028	0.039	0.033	0.080	4	

• Cable diameters are subject to a +/- 5% manufacturing tolerance

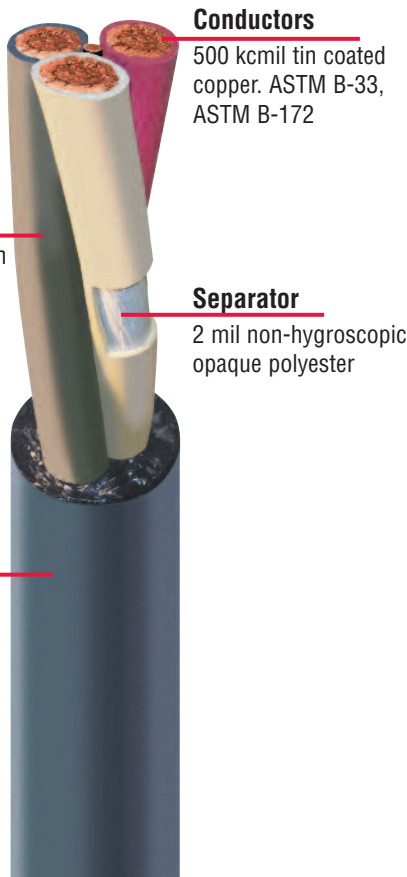
• Ampacity in Free Air: Based on 105°C conductor temperature and 40°C ambient temperature per 2008 NEC Table 310.71

• Ampacity in Conduit Air: Based on 105°C conductor temperature and 40°C ambient temperature per 2008 NEC Table 310.75



Enhanced THOF Ship-to-Shore Power Cable • 90°C

600 Volts • Flexible



Insulation

Type I EPR rated for 90°C in wet or dry locations. Meets requirements of UL 44 RHH, RHW-2

Color coded

- white
- red
- black

Jacket

Reinforced, flame retardant extra heavy duty black thermoset CPE specially formulated to resist the abrasive nature of the application

Application

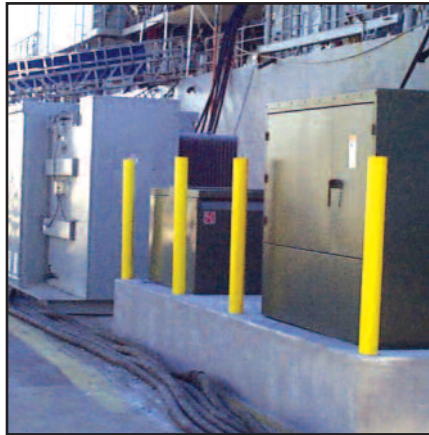
A flexible 600V cable used for ship-to-shore power. Replaces former MIL-C 915 design for most applications.

Features

- Complies with OPNAVINST 11310.3B
- Integral filled inner jacket for enhanced toughness and crush resistance
- Water migration minimized
- Mold cured reinforced jacket for enhanced abrasion and tear resistance
- Pigment colored jacketed singles for phase identification
- Tinned copper conductors for reduced corrosion
- Indent printed for long term identification
- Functional testing to ensure flexibility in both summer and winter conditions

Ratings & Approvals

- ICEA S 75-381: Portable and Power Feeder Cables for Use in Mines and Similar Applications



Product	Part No.	Size AWG/kcmil	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.
Enhanced THOF	37-449-5020PNAV	500	2.875	7563

- Cable diameters and weights are subject to +/- 5% manufacturing tolerance
- Consult factory for availability of other conductor sizes
- MIL-C 915 cable is also available. Consult factory for details.

Enhanced *PLUS* THOF Ship-to-Shore Power Cable • 90°C

600 Volts • Flexible



**Conductor
Insulation**

EPR per ICEA S-75-381
Meets requirements of
UL 44 RHH, RHW-2

Conductor

Class I, 500 kcmil tin
coated copper.
ASTM B-33, ASTM B-172

**Conductor
Jacket**

Enhanced Plus Only.
CPE Composite
meets requirements
of UL 44 RHH,
RHW-2. Pigment
colored red,
white and black.



Jacket

Extra-Heavy duty reinforced,
flame retardant black thermoset
CPE per ICEA S-75-381.
Specially formulated to resist
the abrasive nature of the
application.

Application

A tough flexible 3/C 600V ungrounded power cable specifically designed for naval shore-to-ship and other pier side power applications. Enhanced *Plus* THOF is specially designed for additional sunlight and weather resistance.

Features

- **Complies with OPNAVINST 11310.3B**
- Integral filled inner jacket for enhanced toughness and crush resistance
- Water migration minimized
- Mold cured reinforced jacket for enhanced abrasion and tear resistance
- Jacketed singles (Enhanced *Plus*) for increased resistance to sunlight and weather
- Pigment colored jacketed singles for phase identification
- Tinned copper conductors for reduced corrosion
- Indent printed for long term identification
- Functional testing to ensure flexibility in both summer and winter conditions

Ratings & Approvals

- ICEA S-75-381: Portable and Power Feeder Cables for Use in Mines and Similar Applications



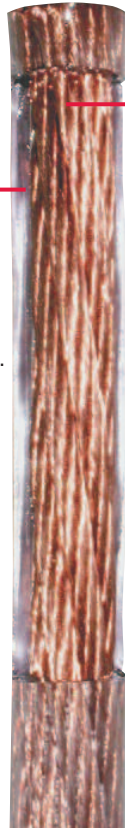
Product	Part No.	Size AWG/ kcmil	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.
Enhanced Plus THOF	37-449-5030PNAV	500	3.003	7854

- Cable diameters and weights are subject to +/- 5% manufacturing tolerance
- Consult factory for availability of other conductor sizes
- MIL-C 915 cable is also available. Consult factory for details.

37-003

Flexible Grounding Cable

Clear • Yellow • Other Colors



Jacket

Transparent thermoplastic for ease of installation and flexible use at temperatures ranging from -25°C to 90°C. This material meets Type II requirements of ASTM F 855. Material meeting a -50°C cold bend is available on a special order basis.

Conductor

Bunched strands of bare copper annealed dead soft in accordance with ASTM B-3. Other strand is available upon request.

Identification

A marker tape printed AMERCABLE-SIZE-GROUNDING CABLE is readily visible under the transparent jacket.

Application

Flexible jacketed cable used for grounding jumpers installed temporarily for protective grounding of de-energized circuits.

Features

- Transparent jacket provides easy confirmation of continuity and ease of trouble shooting
- Extremely flexible stranding for ease of bending and installation
- Transparent thermoplastic jacket for installation and flexible use at temperatures ranging from -25°C to 90°C
- Jacket material meets Type II requirements of ASTM F-855
- Jacket material meeting Type I (-50°C) requirements of ASTM F-855 available upon request

Ratings & Approvals

- ASTM B-3: Standard Specification for Soft or Annealed Copper Wire
- ASTM F-855: Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment

Part No. 37-003-	Size AWG/ kcmil	Minimum Wires per Conductor	Nominal Jacket Thickness in.	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.
002	2	665	0.100	0.530	293
010	1/0	1050	0.100	0.650	458
020	2/0	1323	0.105	0.700	557
040	4/0	2107	0.110	0.850	857

• Cable diameters and weights are subject to +/- 5% manufacturing tolerance

Other ground jacketing materials and colors available. Consult factory for details.

**Order Your Grounding Cables with
Factory Installed
Connectors**

Lead Covered Grounding Cable

Conductor

Uncoated annealed copper meeting the requirements of ASTM B-3



Lead Sheath

An extruded layer of lead for enhanced performance

Application

A grounding conductor for use in power distribution systems where a lead sheath is required over the copper conductor to provide additional protection against corrosion. Also suitable for use in lightning protection applications.

Features

- Lead sheath offers rugged, durable construction

Ratings & Approvals

- ASTM B-3: Standard Specification for Soft or Annealed Copper Wire
- ASTM B-8: Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard or Soft

Part No. 37-409-	Size AWG/ kcmil	Minimum Wires per Conductor	Nominal Lead Sheath Thickness in.	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.
004	4	7	0.045	0.319	366
005	2	7	0.045	0.377	508
366	1/0	19	0.065	0.497	836
020	2/0	19	0.065	0.542	984
360	3/0	19	0.065	0.600	1202
615	4/0	19	0.065	0.648	1420
250	250	37	0.065	0.694	1528
351	350	37	0.065	0.797	1985
147	400	37	0.065	0.842	2478
361	500	37	0.065	0.931	2684

• Cable diameters and weights are subject to +/- 5% manufacturing tolerance

Red Jumper Cable

Flexible • 5000/15000 Volts • 90°C

Conductors

Flexible-stranded, tinned, annealed coated copper per ASTM B-33

Conductor Shield

Combination semiconducting tape and/or extruded semiconductive thermosetting material. The semiconductive tape prevents any penetration of the extruded conductor shield into the inner layers of the flexible conductor.

Jacket

Thermosetting bright red jacket, 90°C rated



Insulation

Heat resisting 90°C Ethylene-Propylene rubber (EPR), meeting ASTM D-2802. It has excellent dielectric properties and is highly resistant to heat, moisture, and ozone.

Identification

Cable is surface printed showing manufacturer's name, size, voltage rating, and temperature rating

Application

Portable dual rated 5000/15000 volt jumper cables can be used as temporary jumper leads for portable or mobile substations, or for temporarily by-passing damaged or faulted sections of power cable. The finely stranded conductor provides an exceptionally flexible cable that can be easily trained and connected in confined areas such as transformer vaults and switch gear enclosures.

Features

- Extremely flexible stranding
- Bright red thermosetting jacket
- The conductor shield is bonded to the insulation – providing easy, clean stripping
- The 90°C insulation has excellent dielectric properties and is highly resistant to heat, moisture and ozone.

Ratings & Approvals

- ASTM B-33: Standard Specification for Tinned Soft or Annealed Copper Wire for Electrical Purposes
- ASTM D2802: Standard Specification for Ozone-Resistant Ethylene-Alkene Polymer Insulation for Wire and Cable

Application Note

Jumper cables should NOT be used in place of normal high voltage cables. They should be isolated in areas where contact with people is limited. Because jumper cables cannot be protected against prolonged contact with other conductors or grounds by shielding, these cables must be positioned away from contact with grounds, transformer cases, cross-arms, etc., to avoid possible high stress and capacitance leakage. Cables should be installed with at least one cable diameter of separation between adjacent conductors and between conductors and all metallic and/or electrically grounded parts. These cables are not intended for permanent service.

37-221 • Red Jumper Cable • 5000/15000 Volts

Part No. 37-221-	Size AWG/ kcmil	Minimum Wires per Conductor	Nominal Insulation Thickness in.	Nominal Jacket Thickness in.	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.	Ampacity 90°C at 5kV/15 kV
008	8	133	0.210	0.065	0.777	310	83/NA*
006	6	133	0.210	0.065	0.816	360	110/110
004	4	259	0.210	0.065	0.875	449	145/150
003	3	259	0.210	0.065	0.903	495	170/170
002	2	259	0.210	0.065	0.944	563	190/195
001	1	259	0.210	0.065	0.981	635	225/225
010	1/0	266	0.210	0.065	1.040	742	260/260
020	2/0	323	0.210	0.065	1.090	869	300/300
030	3/0	418	0.210	0.065	1.133	976	345/345
040	4/0	532	0.210	0.065	1.215	1181	400/400
250	250	627	0.210	0.065	1.216	1281	445/445
350	350	888	0.210	0.065	1.327	1692	550/550
500	500	1221	0.210	0.065	1.456	2192	695/685

- 8 AWG Jumper recommended only for use at 5kv
- Cable diameters and weights are subject to +/- 5% manufacturing tolerance
- Ampacity is calculated with a 90°C conductor temperature and 40°C ambient air, per 2008 NEC, Table 310.69

**Order Your Red Jumper Cable with
Factory Installed
Connectors**



**SAVE
TIME**

**SAVE
MONEY**

Mobile Substation Power Cable • Type SH Single Conductor • 5000 to 35000 Volts • 90°C

Conductor

Flexible tin-coated soft annealed bunch stranded copper meeting ASTM B-33

Conductor Shield

Combination semi-conducting tape and/or extruded semiconductive thermosetting material

Insulation

Heat, moisture and ozone resisting 90°C Ethylene-Propylene rubber (EPR) meeting ICEA S-75-381/NEMA WC58

Insulation Shield

Tin-coated copper braid applied over a semiconductive tape (5-15kV). Extruded semi-conductive thermosetting material (25-35kV)

Jacket

CPE meeting ICEA S-75-381/NEMA WC58. Consult factory for availability of other jacket materials.

Identification

Cable shall be surface printed showing manufacturer, size, voltage rating, type and temperature rating



Application

These single conductor portable power cables are extremely flexible and specifically designed for use on mobile substation equipment. The Type SH cable is often necessary for supplying power while replacing damaged utility poles or during routine maintenance of substations.

Features

- Extremely flexible stranding for ease of bending
- The conductor shield is bonded to the insulation – providing easy, clean stripping
- Jacket is heat, oil, flame and chemical resistant
- Continuous conductor temperature 90°C
- Jackets available in voltage colors, yellow (5 & 8kV), orange (15kV), red (25 & 35kV). Consult factory for availability of other colors.

Ratings & Approvals

- ASTM B-33: Standard Specification for Tinned Soft or Annealed Copper Wire for Electrical Purposes
- ICEA S-75-381/NEMA WC-58: Portable and Power Feeder Cables for Use in Mines and Similar Applications
- UL 1072 Medium Voltage Cable MV-105 (pending)

**CSA approval
available by
special order**



5kV Single Conductor Portable Power Cable – Type SH

Part No. 37-550-	Size AWG/kcmil	Minimum Wires per Conductor	Nominal Insulation Thickness in.	Nominal Jacket Thickness in.	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.	Ampacity 90°C
002	2	259	.110	.125	0.975	674	190
004	1/0	266	.110	.140	1.058	825	260
005	2/0	323	.110	.140	1.170	1039	300
007	4/0	532	.110	.155	1.300	1393	400
008	250	627	.120	.155	1.330	1477	445
022	350	888	.120	.170	1.484	1926	550
010	500	1221	.120	.190	1.700	2662	695



15kV Single Conductor Portable Power Cable – Type SH

Part No. 37-550-	Size AWG/kcmil	Minimum Wires per Conductor	Nominal Insulation Thickness in.	Nominal Jacket Thickness in.	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.	Ampacity 90°C
016	2	259	.210	.155	1.203	881	195
017	1/0	266	.210	.155	1.320	1147	260
018	2/0	323	.210	.155	1.350	1226	300
020	4/0	532	.210	.170	1.497	1594	400
021	250	627	.210	.170	1.547	1758	445
009	350	888	.210	.190	1.765	2364	550
024	500	1221	.210	.190	1.900	2937	685

**Order Your
Type SH
Cables
Connectorized!**

*Factory installed
assemblies
from AmerCable help
lower your overall
connectivity costs.*

- Lugs
- Elbows
- Stress Cones

25kV Single Conductor Portable Power Cable – Type SH

Part No. 37-550-	Size AWG/kcmil	Minimum Wires per Conductor	Nominal Insulation Thickness in.	Nominal Jacket Thickness in.	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.	Ampacity 90°C
030	1/0	266	.295	.170	1.500	1350	260
031	2/0	323	.295	.170	1.555	1507	300
033	4/0	532	.295	.190	1.713	1909	395
034	250	627	.295	.190	1.763	2085	440
035	350	888	.295	.190	1.886	2517	545
037	500	1221	.295	.205	2.048	3168	680

35kV Single Conductor Portable Power Cable – Type SH

Part No. 37-550-	Size AWG/kcmil	Minimum Wires per Conductor	Nominal Insulation Thickness in.	Nominal Jacket Thickness in.	Nominal Outside Diameter in.	Approx. Weight lbs. per 1,000 ft.	Ampacity 90°C
050	1/0	266	.380	.170	1.175	1632	260
051	2/0	342	.380	.205	1.840	1898	300
053	4/0	532	.380	.205	1.915	2235	395
054	250	627	.380	.205	1.975	2509	440
055	350	888	.380	.205	2.100	2901	545
057	500	1221	.380	.205	2.280	3396	680

- Cable diameters and weights are subject to +/- 5% manufacturing tolerance
- Ampacity is calculated with a 90°C conductor temperature and 40°C ambient air, per 2008 NEC, Table 310.69