



BUILDING WIRES





QUALITY

Our commitment to quality is assured by a number of systems, standards, practices and processes:

PDITL spares no effort when it comes to quality. Every stage of production is closely monitored to ensure highest standards. Indeed, PDITL's quality commitment begins with the careful scrutiny of raw materials and continues to the testing of final products, where every finished length of cable undergoes a series of rigorous tests to meet their specification criteria before being shipped to customers. Furthermore, PDITL is the only wire & cable supplier in Thailand that boasts complete in-house facilities for testing power cable up to 400 kV.

A natural result of unwavering dedication to quality, PDITL has obtained the prestigious ISO 9001:2008 certification as well as other top-quality certifications from internationally-renowned independent laboratories such as KEMA, and Technology Lab.

Product Quality: The design, material selection, process control and optimized production involved in the development of our products ensures a total quality performance that meets our customers' exacting needs.



SAFETY

WORKING SAFER BY WORKING TOGETHER Safety is at the very core of our manufacturing excellence, and is an integral part of our industry leadership and performance.

We know a safe and healthy environment for associates around the world is critical. The best way to provide it? By working together to eliminate or manage all conditions and behaviors that could lead to personal injury or occupational illness.

In the past, we have focused primarily on preventing injuries by engineering solutions to address inherent risks such as reel handling assist devices, revamped machine guards, sound abatement and eliminating open-blade knife use. While we continue to evaluate engineering solutions to reduce risks, we are also training our associates on "consequence thinking" to further enhance our safety culture and remind associates to reduce unintended consequences by eliminating unsafe behaviors. We continue to encourage all associates to take individual responsibility for their decisions and actions, and to be role models of safety excellence for co-workers, families and communities. We strive for ongoing improvement in safety while complying with all applicable health and safety laws and regulations. We believe this combined approach to safety will allow us to achieve **our safety vision of Zero & Beyond** — because nothing else is acceptable.



A World Leader in Wire And Cable Technology

Phelps Dodge International (Thailand) Limited (PDITL) was established in 1968 as a joint-venture between an existing Thai firm and Phelps Dodge Corporation. We have been a pioneer in the local industry and were the first company to introduce the majority of new processes, products and technology related to wire and cable manufacturing.

PDITL is the only supplier in Thailand with complete in-house facilities for testing power cable up to 400 kV. PDITL has got its certification type test from International Independent Laboratories such as KEMA, Cable Technology Lab, etc. for LSFOH cable, fire resistant cable, medium voltage, high voltage and extra high voltage XLPE cables up to 245 kV cables. PDITL manufactures world-class quality wire and cable, not only for the local market but also for international markets, complying with strict international standards. It is proud of its customer services and long term relationship.

PDITL has a team of about 700 employees, which are most important assets. We promote safety, health and environmental protection both within the company and in the community where we operate.





สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
กระทรวงอุตสาหกรรม

รางวัลผู้รักษามาตรฐานดีเด่น
จากกระทรวงอุตสาหกรรม และ สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
The Prime Minister's Industry Award
From Ministry of Industry Thailand and Thai Industrial Standards Institute

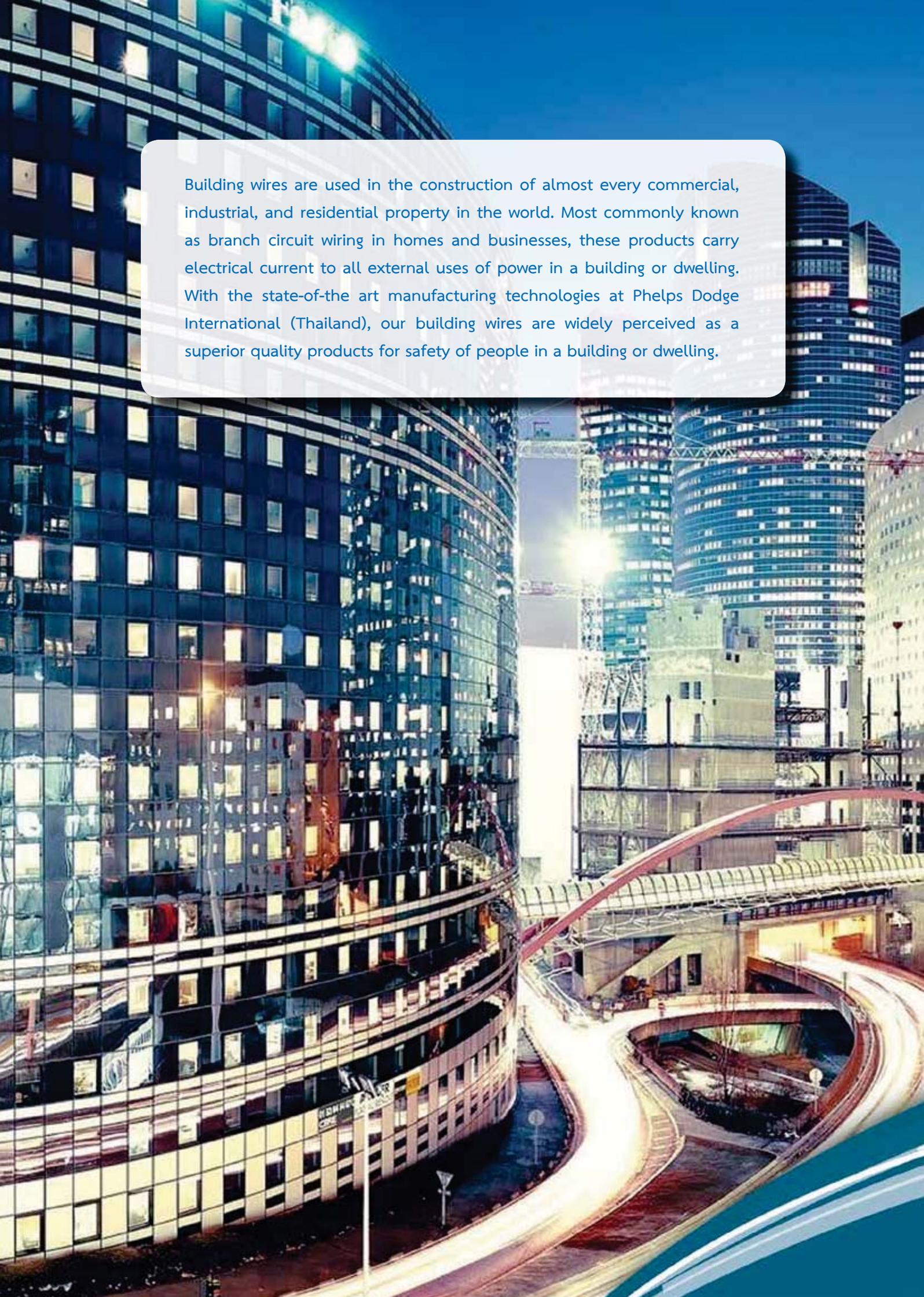


Banglee Factory located in Samutprakarn province is the only wire & cable manufacturer in Thailand that supply high voltage and extra high voltage XLPE POWER CABLE upto 245 kv and having complete in-house facilities for testing power cable upto 400kV

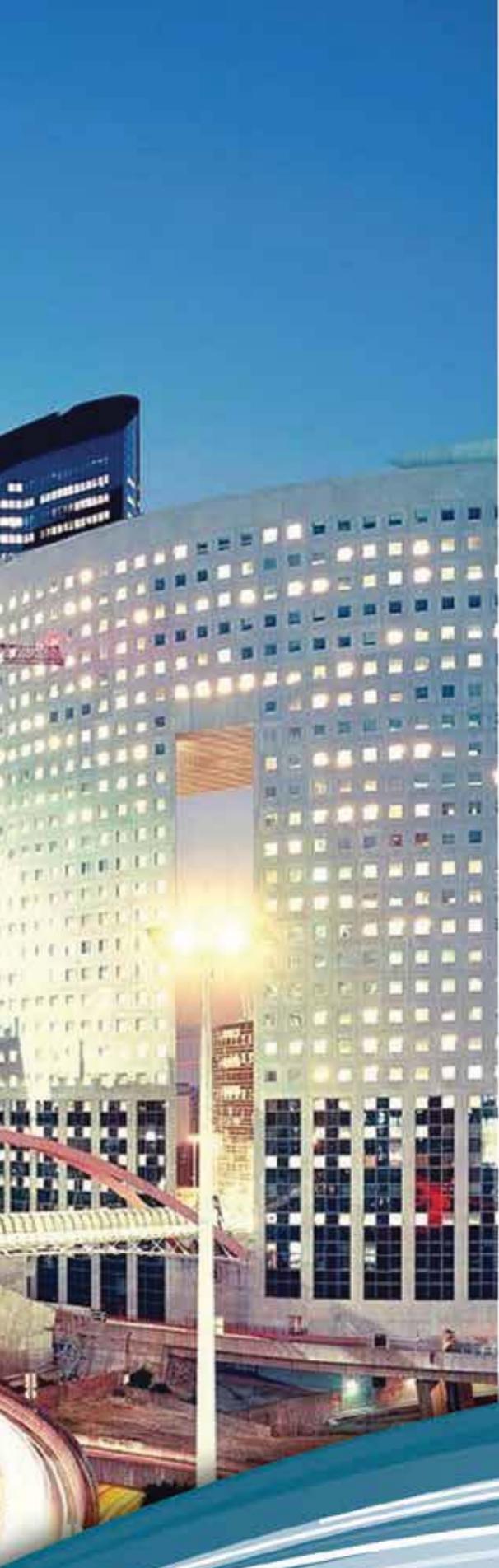
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A vibrant cityscape at night, featuring several illuminated skyscrapers with glowing windows. In the foreground, a curved walkway or bridge structure is visible, illuminated with warm lights. The overall scene is a mix of modern architecture and urban infrastructure.

Building wires are used in the construction of almost every commercial, industrial, and residential property in the world. Most commonly known as branch circuit wiring in homes and businesses, these products carry electrical current to all external uses of power in a building or dwelling. With the state-of-the-art manufacturing technologies at Phelps Dodge International (Thailand), our building wires are widely perceived as a superior quality products for safety of people in a building or dwelling.



Building Wires :

Polyvinyl Chloride Insulated Copper Cables for Rated Voltage up to and including 450/750V

- **Non-sheathed Cables**
- **Sheathed Cables**
- **Flexible Cables**

PHELPS DODGE CABLE TYPE 60227 IEC 01 (THW) 450/750 V 70 °C PVC/C INSULATED, SINGLE CORE



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested)

Conductor Sizes : 1.5 mm² up to 400 mm²

Insulation : Polyvinyl chloride type PVC/C (Any color as requested)

APPLICATION :

Building wiring for installation on insulator or in raceway dry location.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 3 - 2553 TABLE 1

PHELPS DODGE CABLE TYPE 60227 IEC 01 (THW) 450/750 V 70 °C PVC/C INSULATED, SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Diameter of Conductor (max)	Conductor Type	Nominal Thickness of Insulation	Overall Diameter (min-max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	Class	mm	mm	MΩ.km	kg / km	m
60227 IEC 01 1x1.5	1.5	1.5	1	0.7	2.6 - 3.2	0.011	21	100/C
60227 IEC 01 1x1.5	1.5	1.7	2	0.7	2.7 - 3.3	0.010	22	100/C
60227 IEC 01 1x2.5	2.5	1.9	1	0.8	3.2 - 3.9	0.010	33	100/C
60227 IEC 01 1x2.5	2.5	2.2	2	0.8	3.3 - 4.0	0.009	35	100/C
60227 IEC 01 1x4	4	2.4	1	0.8	3.6 - 4.4	0.0085	47	100/C
60227 IEC 01 1x4	4	2.7	2	0.8	3.8 - 4.6	0.0077	51	100/C
60227 IEC 01 1x6	6	3.3	2	0.8	4.3 - 5.2	0.0065	74	100/C
60227 IEC 01 1x10	10	4.2	2	1.0	5.6 - 6.7	0.0065	123	100/C
60227 IEC 01 1x16	16	5.3	2	1.0	6.4 - 7.8	0.0050	185	100/C
60227 IEC 01 1x25	25	6.6	2	1.2	8.1 - 9.7	0.0050	289	100/C
60227 IEC 01 1x35	35	7.9	2	1.2	9.0 - 10.9	0.0043	390	100/C
60227 IEC 01 1x50	50	9.1	2	1.4	10.6 - 12.8	0.0043	519	1000/R
60227 IEC 01 1x70	70	11.0	2	1.4	12.1 - 14.6	0.0035	729	1000/R
60227 IEC 01 1x95	95	12.9	2	1.6	14.1 - 17.1	0.0035	1,007	1000/R
60227 IEC 01 1x120	120	14.5	2	1.6	15.6 - 18.8	0.0032	1,246	1000/R
60227 IEC 01 1x150	150	16.2	2	1.8	17.3 - 20.9	0.0032	1,533	1000/R
60227 IEC 01 1x185	185	18.0	2	2.0	19.3 - 23.3	0.0032	1,921	1000/R
60227 IEC 01 1x240	240	20.6	2	2.2	22.0 - 26.6	0.0032	2,505	500/R
60227 IEC 01 1x300	300	23.1	2	2.4	24.5 - 29.6	0.0030	3,132	500/R
60227 IEC 01 1x400	400	26.1	2	2.6	27.5 - 33.2	0.0028	3,987	500/R

C = Packing in coil
R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 02 450/750 V 70 °C PVC/C INSULATED, SINGLE CORE



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 1.5 mm² up to 240 mm²
Insulation : Polyvinyl chloride type PVC/C
(Any color as requested)

APPLICATION :

Building wiring for installation on insulator or in raceway, dry location.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 3 - 2553 TABLE 3

PHELPS DODGE CABLE TYPE 60227 IEC 02

450/750 V 70 °C PVC/C INSULATED, SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Conductor Type	Diameter of Conductor (max)	Nominal Thickness of Insulation	Overall Diameter (min-max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	Class	mm	mm	mm	MΩ.km	kg / km	m
60227 IEC 02 1x1.5	1.5	5	1.8	0.7	2.8 - 3.4	0.0100	22	100/C
60227 IEC 02 1x2.5	2.5	5	2.4	0.8	3.4 - 4.1	0.0090	35	100/C
60227 IEC 02 1x4	4	5	3.0	0.8	3.9 - 4.8	0.0070	48	100/C
60227 IEC 02 1x6	6	5	3.9	0.8	4.4 - 5.3	0.0060	69	100/C
60227 IEC 02 1x10	10	5	5.1	1.0	5.7 - 6.8	0.0056	127	100/C
60227 IEC 02 1x16	16	5	6.3	1.0	6.7 - 8.1	0.0046	187	100/C
60227 IEC 02 1x25	25	5	7.8	1.2	8.4 - 10.2	0.0044	291	100/C
60227 IEC 02 1x35	35	5	9.2	1.2	9.7 - 11.7	0.0038	409	100/C
60227 IEC 02 1x50	50	5	11.0	1.4	11.5 - 13.9	0.0037	560	1000/R
60227 IEC 02 1x70	70	5	13.1	1.4	13.2 - 16.0	0.0032	792	1000/R
60227 IEC 02 1x95	95	5	15.1	1.6	15.1 - 18.2	0.0032	1,055	1000/R
60227 IEC 02 1x120	120	5	17.0	1.6	16.7 - 20.2	0.0029	1,352	1000/R
60227 IEC 02 1x150	150	5	19.0	1.8	18.6 - 22.5	0.0029	1,612	1000/R
60227 IEC 02 1x185	185	5	21.0	2.0	20.6 - 24.9	0.0029	2,021	1000/R
60227 IEC 02 1x240	240	5	24.0	2.2	23.5 - 28.4	0.0028	2,694	500/R

C = Packing in coil
R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 05 (IV) 300/500 V 70 °C PVC/C INSULATED, SINGLE CORE



CONSTRUCTION :

Conductor : Annealed solid copper
Conductor Sizes : 0.5 mm² up to 1 mm²
Insulation : Polyvinyl chloride type PVC/C
(Any color as requested)

APPLICATION :

Building wiring, for installation on insulator or in raceway.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 3 - 2553 TABLE 5

PHELPS DODGE CABLE TYPE 60227 IEC 05 (IV) 300/500 V 70 °C PVC/C INSULATED, SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Conductor Type	Diameter of Conductor (max)	Nominal Thickness of Insulation	Overall Diameter (min-max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	Class	mm	mm	mm	MΩ.km	kg / km	m
60227 IEC 05 1x0.5	0.5	1	0.9	0.6	1.9 - 2.3	0.015	9	100/C
60227 IEC 05 1x0.75	0.75	1	1.0	0.6	2.1 - 2.5	0.012	12	100/C
60227 IEC 05 1x1	1	1	1.2	0.6	2.2 - 2.7	0.011	15	100/C

C = Packing in coil
R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 06 (VSF) 300/500 V 70 °C PVC/C INSULATED, SINGLE CORE



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.5 mm² up to 1 mm²
Insulation : Polyvinyl chloride type PVC/C
(Any color as requested)

APPLICATION :

Building wiring, for installation on insulator or in raceway and widely used in electrical home apparatus.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

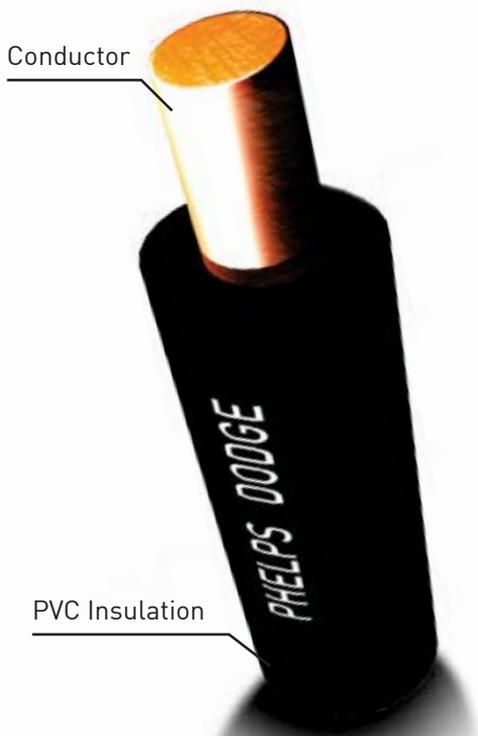
TIS 11 PART 3 - 2553 TABLE 7

PHELPS DODGE CABLE TYPE 60227 IEC 06 (VSF) 300/500 V 70 °C PVC/C INSULATED, SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Conductor Type	Diameter of Conductor (max)	Nominal Thickness of Insulation	Overall Diameter (min-max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	Class	mm	mm	mm	MΩ.km	kg / km	m
60227 IEC 06 1x0.5	0.5	5	1.1	0.6	2.1 - 2.5	0.013	10	100/C
60227 IEC 06 1x0.75	0.75	5	1.3	0.6	2.2 - 2.7	0.011	13	100/C
60227 IEC 06 1x1	1	5	1.5	0.6	2.4 - 2.8	0.010	16	100/C

C = Packing in coil
R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 07 (HIV) 300/500 V 90 °C PVC/E INSULATED HEAT RESISTANT, SINGLE CORE



CONSTRUCTION :

Conductor : Annealed solid copper
Conductor Sizes : 0.5 mm² up to 2.5 mm²
Insulation : Heat resistant polyvinyl chloride type PVC/E
(Any color as requested)

APPLICATION :

Building wiring, for installation on insulator or in raceway.

CLASSIFICATION :

Maximum conductor temperature 90 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 3 - 2553 TABLE 9

PHELPS DODGE CABLE TYPE 60227 IEC 07 (HIV)

300/500 V 90 °C PVC/E INSULATED HEAT RESISTANT, SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Conductor Type	Diameter of Conductor (max)	Nominal Thickness of Insulation	Overall Diameter (min-max)	Minimum Insulation Resistance at 90 °C	Cable Weight (approx)	Standard Packing
	mm ²	Class	mm	mm	mm	MΩ.km	kg / km	m
60227 IEC 07 1x0.5	0.5	1	0.9	0.6	1.9 - 2.3	0.015	9	100/C
60227 IEC 07 1x0.75	0.75	1	1.0	0.6	2.1 - 2.5	0.013	11	100/C
60227 IEC 07 1x1	1	1	1.2	0.6	2.2 - 2.7	0.012	14	100/C
60227 IEC 07 1x1.5	1.5	1	1.5	0.7	2.6 - 3.2	0.011	20	100/C
60227 IEC 07 1x2.5	2.5	1	1.9	0.8	3.2 - 3.9	0.009	31	100/C

C = Packing in coil
R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 08 (HVSF) 300/500 V 90 °C PVC/E INSULATED HEAT RESISTANT, SINGLE CORE



CONSTRUCTION :

Conductor : Annealed Flexible Copper
Conductor Sizes : 0.5 mm² up to 2.5 mm²
Insulation : Heat resistant polyvinyl chloride type PVC/E
(Any color as requested)

APPLICATION :

Building wiring, for installation on insulator or in raceway and widely used in electrical home apparatus.

CLASSIFICATION :

Maximum conductor temperature 90 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

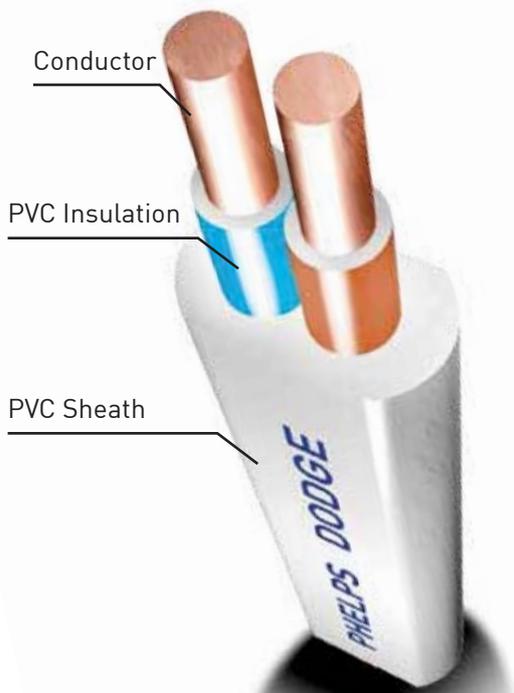
TIS 11 PART 3 - 2553 TABLE 11

PHELPS DODGE CABLE TYPE 60227 IEC 08 (HVSF) 300/500 V 90 °C PVC/E INSULATED HEAT RESISTANT, SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Conductor Type	Diameter of Conductor (max)	Nominal Thickness of Insulation	Overall Diameter (min-max)	Minimum Insulation Resistance at 90 °C	Cable Weight (approx)	Standard Packing
	mm ²	Class	mm	mm	mm	MΩ.km	kg / km	m
60227 IEC 08 1x0.5	0.5	5	1.1	0.6	2.1 - 2.5	0.013	9	100/C
60227 IEC 08 1x0.75	0.75	5	1.3	0.6	2.2 - 2.7	0.012	12	100/C
60227 IEC 08 1x1	1	5	1.5	0.6	2.4 - 2.8	0.010	15	100/C
60227 IEC 08 1x1.5	1.5	5	1.8	0.7	2.8 - 3.4	0.009	22	100/C
60227 IEC 08 1x2.5	2.5	5	2.4	0.8	3.4 - 4.1	0.009	34	100/C

C = Packing in coil
R = Packing in reel

PHELPS DODGE CABLE TYPE VAF 300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 SHEATHED FLAT TYPE, TWO CORES



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested)

Conductor Sizes : 1 mm² up to 16 mm²

Insulation : Polyvinyl chloride PVC/C (Light Blue and Brown color)

Sheath : Polyvinyl chloride PVC/ST4 (White color)

APPLICATION :

For surface or above ceiling wiring or direct embedded in plaster

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 1

COLOR CODE :



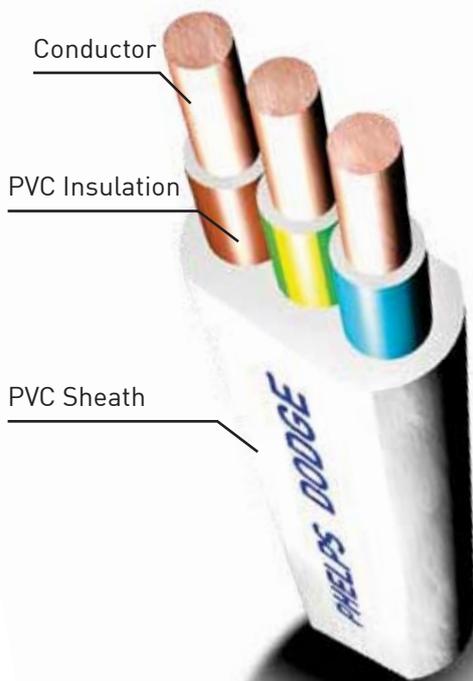
PHELPS DODGE CABLE TYPE VAF

300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 SHEATHED FLAT TYPE, TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Diameter of conductor (max)	Conductor Type	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Overall Diameter (min-max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	Class	mm	mm	mm	MΩ.km	kg / km	m
VAF 2 x 1	1	1.2	1	0.6	0.9	4.0x6.2 - 4.7x7.4	0.0110	54	100/C
VAF 2 x 1.5	1.5	1.5	1	0.7	0.9	4.4x7.0 - 5.4x8.4	0.0110	72	100/C
VAF 2 x 2.5	2.5	1.9	1	0.8	1.0	5.2x8.4 - 6.2x9.8	0.0100	106	100/C
VAF 2 x 4	4	2.7	2	0.8	1.1	5.6x9.6 - 7.2x11.5	0.0077	156	100/C
VAF 2 x 6	6	3.3	2	0.8	1.1	6.4x10.5 - 8.0x13.0	0.0065	205	100/C
VAF 2 x 10	10	4.2	2	1.0	1.2	7.8x13.0 - 9.6x16.0	0.0065	326	100/C
VAF 2 x 16	16	5.3	2	1.0	1.3	9.0x15.5 - 11.0x18.5	0.0052	470	100/C

*C = Packing in coil
R = Packing in reel*

PHELPS DODGE CABLE TYPE VAF-G 300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 SHEATHED FLAT TYPE, TWO CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested) Sizes 1 mm² up to 16 mm² (Phase), Sizes 1 mm² up to 16 mm² (Ground)
Insulation : Polyvinyl chloride PVC/C (Light Blue, Brown and Green with yellow stripe color)
Sheath : Polyvinyl chloride PVC/ST4 (White color)

APPLICATION :

For surface or above ceiling wiring or direct embedded in plaster

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 1

COLOR CODE :



PHELPS DODGE CABLE TYPE VAF-G

300/500 V 70 °C PVC/C INSULATED

AND PVC/ST4 SHEATHED FLAT TYPE, TWO CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Diameter of Phase Conductor (max) mm	Diameter of Ground Conductor (max) mm	Conductor Type Class	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
VAF-G 2x1/1	1	1.2	1.2	1	0.6	0.9	4.0x8.4 - 4.7x9.8	0.0110	76	100/C
VAF-G 2x1.5/1.5	1.5	1.5	1.5	1	0.7	0.9	4.4x9.8 - 5.4x11.5	0.0110	101	100/C
VAF-G 2x2.5/2.5	2.5	1.9	1.9	1	0.8	1.0	5.2x11.5 - 6.2x13.5	0.0100	148	100/C
VAF-G 2x4/4	4	2.7	2.7	2	0.8	1.1	5.8x13.4 - 7.4x16.5	0.0077	218	100/C
VAF-G 2x6/6	6	3.3	3.3	2	0.8	1.1	6.4x15.0 - 8.0x18.0	0.0065	302	100/C
VAF-G 2x10/10	10	4.2	4.2	2	1.0	1.2	7.8x19.0 - 9.6x22.5	0.0065	483	100/C
VAF-G 2x16/16	16	5.3	5.3	2	1.0	1.3	9.0x22.0 - 11.0x26.5	0.0052	700	1000/R

C = Packing in coil
R = Packing in reel

PHELPS DODGE CABLE TYPE NYY 450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 SHEATHED, SINGLE CORE



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested)

Conductor Sizes : 1 mm² up to 500 mm²

Insulation : Black polyvinyl chloride PVC/C (Other colors available upon request)

Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, dry location, or direct burial in ground.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 3

PHELPS DODGE CABLE TYPE NYY

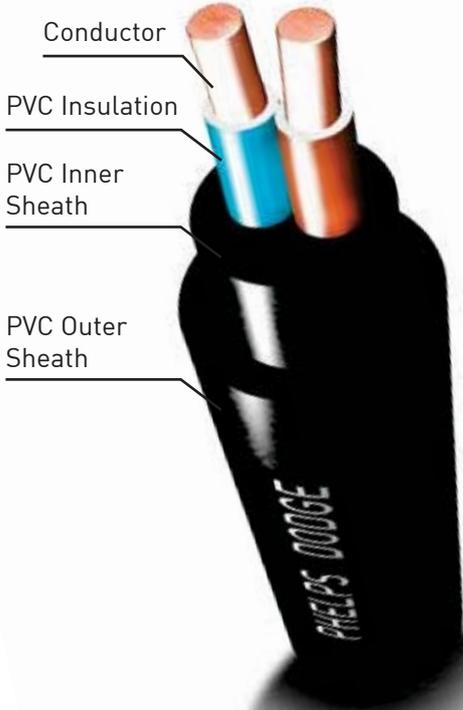
450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 SHEATHED, SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Diameter of Conductor (max)	Conductor Type	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Overall Diameter (Max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	Class	mm	mm	mm	MΩ.km	kg / km	m
NY 1x1	1	1.2	1	1.5	1.8	8.6	0.0207	87	100/C
NY 1x1	1	1.4	2	1.5	1.8	8.8	0.0200	88	100/C
NY 1x1.5	1.5	1.5	1	1.5	1.8	9.0	0.0184	95	100/C
NY 1x1.5	1.5	1.7	2	1.5	1.8	9.2	0.0175	98	100/C
NY 1x2.5	2.5	1.9	1	1.5	1.8	9.4	0.0157	110	100/C
NY 1x2.5	2.5	2.2	2	1.5	1.8	9.8	0.0146	116	100/C
NY 1x4	4	2.4	1	1.5	1.8	10.0	0.0135	130	100/C
NY 1x4	4	2.7	2	1.5	1.8	10.5	0.0124	140	100/C
NY 1x6	6	3.3	2	1.5	1.8	11.0	0.0107	168	100/C
NY 1x10	10	4.2	2	1.5	1.8	12.0	0.0088	222	1000/R
NY 1x16	16	5.3	2	1.5	1.8	13.0	0.0074	296	1000/R
NY 1x25	25	6.6	2	1.5	1.8	14.5	0.0061	406	1000/R
NY 1x35	35	7.9	2	1.5	1.8	16.0	0.0053	513	1000/R
NY 1x50	50	9.1	2	1.5	1.8	17.0	0.0046	649	1000/R
NY 1x70	70	11.0	2	1.5	1.8	19.0	0.0039	875	1000/R
NY 1x95	95	12.9	2	1.7	1.8	21.5	0.0038	1,173	1000/R
NY 1x120	120	14.5	2	1.7	1.8	23.0	0.0034	1,427	1000/R
NY 1x150	150	16.2	2	1.9	2.0	26.0	0.0034	1,756	1000/R
NY 1x185	185	18.0	2	2.1	2.0	28.0	0.0034	2,166	1000/R
NY 1x240	240	20.6	2	2.3	2.2	31.5	0.0033	2,808	500/R
NY 1x300	300	23.1	2	2.5	2.2	35.0	0.0032	3,465	500/R
NY 1x400	400	26.1	2	2.7	2.2	38.5	0.0030	4,355	500/R
NY 1x500	500	29.2	2	3.1	2.4	43.0	0.0031	5,489	500/R

C = Packing in coil,
R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND
PVC/ST4 DOUBLE SHEATHED, TWO CORES



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested)
Conductor Sizes : 1.5 mm² up to 35 mm²
Insulation : Polyvinyl chloride PVC/C (Light Blue and Brown color)
Inner sheath : Black polyvinyl chloride (Other colors available upon request)
Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location.
Do not allow for underground installing neither directly burial or in conduit in ground

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 4 - 2553 TABLE 1

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Approx. Thickness of Inner Sheath mm	Nominal Thickness of Outer Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 10 2x1.5	1.5	1	1.5	0.7	0.4	1.2	7.6 - 10.0	0.011	115	1000/R
60227 IEC 10 2x1.5	1.5	2	1.7	0.7	0.4	1.2	7.8 - 10.5	0.010	120	1000/R
60227 IEC 10 2x2.5	2.5	1	1.9	0.8	0.4	1.2	8.6 - 11.5	0.010	154	1000/R
60227 IEC 10 2x2.5	2.5	2	2.2	0.8	0.4	1.2	9.0 - 12.0	0.009	168	1000/R
60227 IEC 10 2x4	4	1	2.4	0.8	0.4	1.2	9.6 - 12.5	0.0085	196	1000/R
60227 IEC 10 2x4	4	2	2.7	0.8	0.4	1.2	10.0 - 13.0	0.0077	217	1000/R
60227 IEC 10 2x6	6	2	3.3	0.8	0.4	1.2	11.0 - 14.0	0.0065	277	1000/R
60227 IEC 10 2x10	10	2	4.2	1.0	0.6	1.4	13.5 - 17.5	0.0065	454	1000/R
60227 IEC 10 2x16	16	2	5.3	1.0	0.6	1.4	15.5 - 20.0	0.0052	621	1000/R
60227 IEC 10 2x25	25	2	6.6	1.2	0.8	1.4	18.5 - 24.0	0.0050	935	1000/R
60227 IEC 10 2x35	35	2	7.9	1.2	1.0	1.6	21.0 - 27.5	0.0044	1256	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE NYY

450/750 V 70 °C PVC/C INSULATED AND
PVC/ST4 DOUBLE SHEATHED, TWO CORES



CONSTRUCTION :

Conductor : Annealed copper, stranded (concentric or compact as requested)
Conductor Sizes : 50 mm² up to 300 mm²
Insulation : Polyvinyl chloride PVC/C (Light Blue and Brown color)
Inner sheath : Black polyvinyl chloride (Other colors available upon request)
Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, dry location, or direct burial in ground.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 4

COLOR CODE :



PHELPS DODGE CABLE TYPE NYY

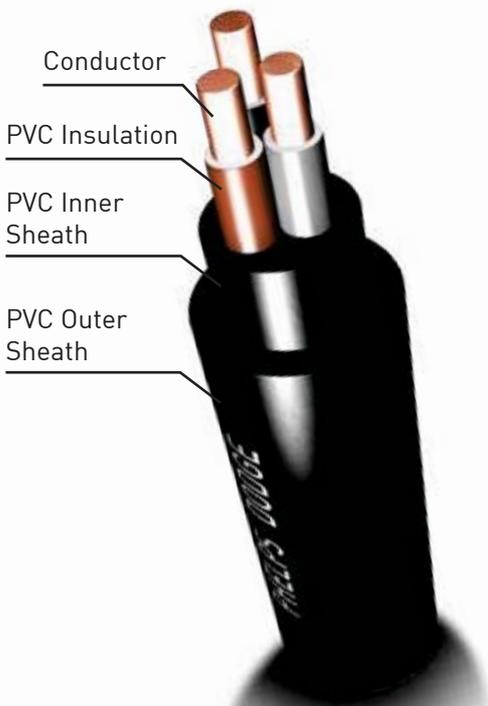
450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Diameter of Conductor (max) mm	Conductor Type Class	Nominal Thickness of Insulation mm	Approx. Thickness of Inner Sheath mm	Nominal Thickness of Outer Sheath mm	Overall Diameter (Max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
NY 2 x 50	50	9.1	2	1.5	1.2	2.2	33.5	0.0046	1,874	500/R
NY 2 x 70	70	11.0	2	1.5	1.5	2.2	38.0	0.0039	2,522	500/R
NY 2 x 95	95	12.9	2	1.7	1.5	2.2	42.5	0.0038	3,343	500/R
NY 2 x 120	120	14.5	2	1.7	1.5	2.4	46.5	0.0034	4,062	500/R
NY 2 x 150	150	16.2	2	1.9	1.8	2.6	52.0	0.0034	5,017	300/R
NY 2 x 185	185	18.0	2	2.1	1.8	2.8	57.0	0.0034	6,186	300/R
NY 2 x 240	240	20.6	2	2.3	2.0	3.0	64.0	0.0033	7,965	250/R
NY 2 x 300	300	23.1	2	2.5	2.0	3.2	70.5	0.0032	9,801	200/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND
PVC/ST4 DOUBLE SHEATHED, THREE CORES



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested) Sizes 1.5 mm² up to 35 mm²
 Insulation : Polyvinyl chloride PVC/C (Brown, Black and Gray)
 Inner sheath : Black polyvinyl chloride (Other colors available upon request)
 Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location.
 Do not allow for underground installing neither directly burial or in conduit in ground

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 4 - 2553 TABLE 1

COLOR CODE :



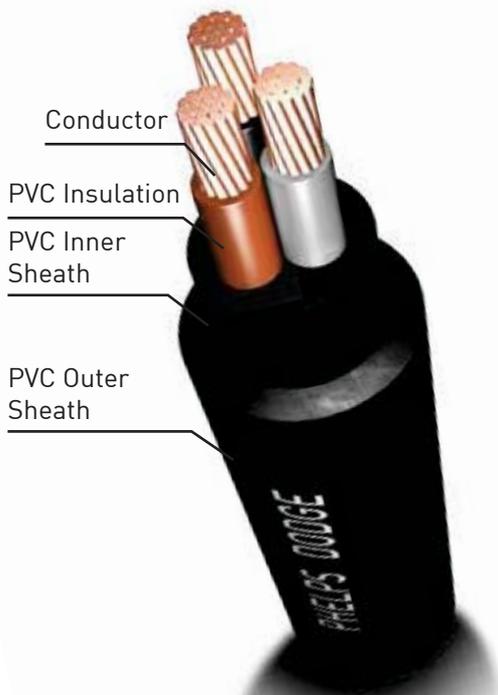
PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, THREE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Approx. Thickness of Inner Sheath mm	Nominal Thickness of Outer Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 10 3x1.5	1.5	1	1.5	0.7	0.4	1.2	8.0 - 10.5	0.011	141	1000/R
60227 IEC 10 3x1.5	1.5	2	1.7	0.7	0.4	1.2	8.2 - 11.0	0.010	147	1000/R
60227 IEC 10 3x2.5	2.5	1	1.9	0.8	0.4	1.2	9.2 - 12.0	0.010	193	1000/R
60227 IEC 10 3x2.5	2.5	2	2.2	0.8	0.4	1.2	9.4 - 12.5	0.009	211	1000/R
60227 IEC 10 3x4	4	1	2.4	0.8	0.4	1.2	10.0 - 13.0	0.0085	251	1000/R
60227 IEC 10 3x4	4	2	2.7	0.8	0.4	1.2	10.5 - 13.5	0.0077	279	1000/R
60227 IEC 10 3x6	6	2	3.3	0.8	0.4	1.4	12.0 - 15.5	0.0065	376	1000/R
60227 IEC 10 3x10	10	2	4.2	1.0	0.6	1.4	14.5 - 19.0	0.0065	596	1000/R
60227 IEC 10 3x16	16	2	5.3	1.0	0.8	1.4	16.5 - 21.5	0.0052	850	1000/R
60227 IEC 10 3x25	25	2	6.6	1.2	0.8	1.6	20.5 - 26.0	0.0050	1285	1000/R
60227 IEC 10 3x35	35	2	7.9	1.2	1.0	1.6	22.0 - 29.0	0.0044	1675	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE NYY 450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, THREE CORES



CONSTRUCTION :

Conductor : Annealed copper, stranded (concentric or compact as requested)

Conductor Sizes : 50 mm² up to 300 mm²

Insulation : Polyvinyl chloride PVC/C (Brown, Black and Gray color)

Inner sheath : Black polyvinyl chloride (Other colors available upon request)

Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, dry location, or direct burial in ground.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 4

COLOR CODE :



PHELPS DODGE CABLE TYPE NYY

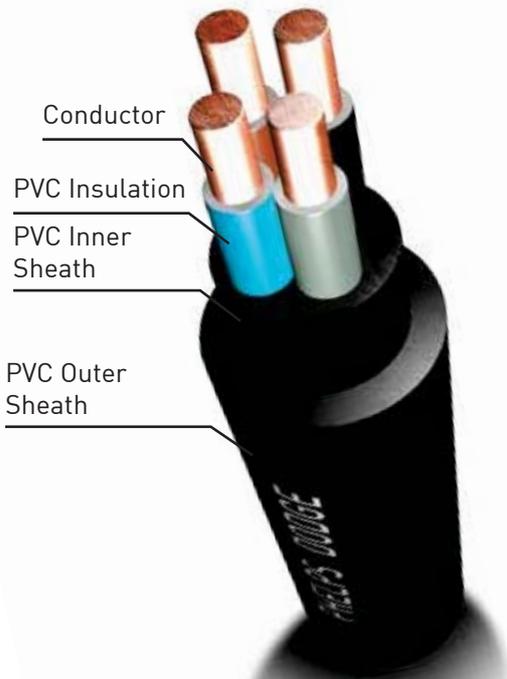
450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, THREE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Diameter of Conductor (max)	Conductor Type	Nominal Thickness of Insulation	Approx. Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Overall Diameter (Max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	Class	mm	mm	mm	mm	MΩ.km	kg / km	m
NYY 3 x 50	50	9.1	2	1.5	1.5	2.2	36.0	0.0046	2,420	500/R
NYY 3 x 70	70	11.0	2	1.5	1.5	2.2	40.5	0.0039	3,218	500/R
NYY 3 x 95	95	12.9	2	1.7	1.5	2.4	46.0	0.0038	4,327	500/R
NYY 3 x 120	120	14.5	2	1.7	1.8	2.6	50.5	0.0034	5,346	300/R
NYY 3 x 150	150	16.2	2	1.9	1.8	2.8	56.0	0.0034	6,501	300/R
NYY 3 x 185	185	18.0	2	2.1	2.0	3.0	61.5	0.0034	8,091	300/R
NYY 3 x 240	240	20.6	2	2.3	2.0	3.2	69.0	0.0033	10,357	200/R
NYY 3 x 300	300	23.1	2	2.5	2.2	3.4	76.0	0.0032	12,848	150/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND
PVC/ST4 DOUBLE SHEATHED, FOUR CORES



CONSTRUCTION :

Conductor : Annealed copper, stranded (concentric or compact as requested)

Conductor Sizes : 1.5 mm² up to 35 mm²
Insulation : Polyvinyl chloride PVC/C (Light Blue, Brown, Black and Gray color)
Inner sheath : Black polyvinyl chloride (Other colors available upon request)
Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location.
Do not allow for underground installing neither directly burial or in conduit in ground

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 4 - 2553 TABLE 1

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 10

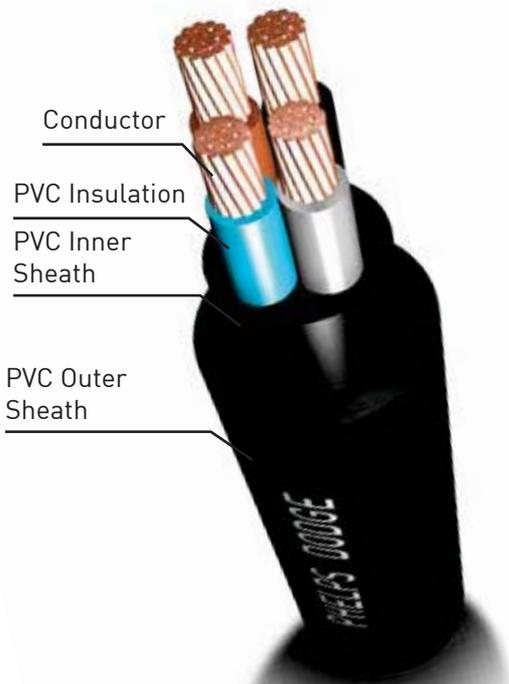
300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, FOUR CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Approx. Thickness of Inner Sheath mm	Nominal Thickness of Outer Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 10 4x1.5	1.5	1	1.5	0.7	0.4	1.2	8.6 - 11.5	0.011	172	1000/R
60227 IEC 10 4x1.5	1.5	2	1.7	0.7	0.4	1.2	9.0 - 12.0	0.010	179	1000/R
60227 IEC 10 4x2.5	2.5	1	1.9	0.8	0.4	1.2	10.0 - 13.0	0.010	237	1000/R
60227 IEC 10 4x2.5	2.5	2	2.2	0.8	0.4	1.2	10.0 - 13.5	0.009	262	1000/R
60227 IEC 10 4x4	4	1	2.4	0.8	0.4	1.4	11.5 - 14.5	0.0085	326	1000/R
60227 IEC 10 4x4	4	2	2.7	0.8	0.4	1.4	12.0 - 15.0	0.0077	363	1000/R
60227 IEC 10 4x6	6	2	3.3	0.8	0.6	1.4	13.0 - 17.0	0.0065	490	1000/R
60227 IEC 10 4x10	10	2	4.2	1.0	0.6	1.4	16.0 - 20.5	0.0065	755	1000/R
60227 IEC 10 4x16	16	2	5.3	1.0	0.8	1.4	18.0 - 23.5	0.0052	1085	1000/R
60227 IEC 10 4x25	25	2	6.6	1.2	1.0	1.6	22.5 - 28.5	0.0050	1674	1000/R
60227 IEC 10 4x35	35	2	7.9	1.2	1.0	1.6	24.5 - 32.0	0.0044	2177	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE NYY

450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, FOUR CORES



CONSTRUCTION :

Conductor : Annealed copper, stranded (concentric or compact as requested)

Conductor Sizes : 50 mm² up to 300 mm²

Insulation : Polyvinyl chloride PVC/C (Light Blue, Brown, Black and Gray color)

Inner sheath : Black polyvinyl chloride (Other colors available upon request)

Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, dry location, or direct burial in ground.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 4

COLOR CODE :



PHELPS DODGE CABLE TYPE NYY

450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, FOUR CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Diameter of Conductor (max) mm	Conductor Type Class	Nominal Thickness of Insulation mm	Approx. Thickness of Inner Sheath mm	Nominal Thickness of Outer Sheath mm	Overall Diameter (Max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
NYY 4 x 50	50	9.1	2	1.5	1.5	2.2	39.5	0.0046	3,009	500/R
NYY 4 x 70	70	11.0	2	1.5	1.5	2.4	44.5	0.0039	4,071	500/R
NYY 4 x 95	95	12.9	2	1.7	1.8	2.6	51.5	0.0038	5,558	300/R
NYY 4 x 120	120	14.5	2	1.7	1.8	2.8	56.0	0.0034	6,771	300/R
NYY 4 x 150	150	16.2	2	1.9	2.0	3.0	62.0	0.0034	8,299	300/R
NYY 4 x 185	185	18.0	2	2.1	2.0	3.2	68.0	0.0034	10,255	200/R
NYY 4 x 240	240	20.6	2	2.3	2.2	3.4	76.5	0.0033	13,220	200/R
NYY 4 x 300	300	23.1	2	2.5	2.2	3.8	85.0	0.0032	16,397	150/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND
PVC/ST4 DOUBLE SHEATHED, FIVE CORES



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested)

Conductor Sizes : 1.5 mm² up to 35 mm²
Insulation : Polyvinyl chloride PVC/C (Light Blue, Brown, Black, Gray and Black)
Inner sheath : Black polyvinyl chloride (Other colors available upon request)
Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location.
Do not allow for underground installing neither directly burial or in conduit in ground

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 4 - 2553 TABLE 1

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, FIVE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Conductor Type	Diameter of Conductor (max)	Nominal Thickness of Insulation	Approx. Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Overall Diameter (min-max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	Class	mm	mm	mm	mm	mm	MΩ.km	kg / km	m
60227 IEC 10 5x1.5	1.5	1	1.5	0.7	0.4	1.2	9.4 - 12.0	0.011	204	1000/R
60227 IEC 10 5x1.5	1.5	2	1.7	0.7	0.4	1.2	9.8 - 12.5	0.010	214	1000/R
60227 IEC 10 5x2.5	2.5	1	1.9	0.8	0.4	1.2	11.0 - 14.0	0.010	284	1000/R
60227 IEC 10 5x2.5	2.5	2	2.2	0.8	0.4	1.2	11.0 - 14.5	0.009	316	1000/R
60227 IEC 10 5x4	4	1	2.4	0.8	0.6	1.4	12.5 - 16.0	0.0085	407	1000/R
60227 IEC 10 5x4	4	2	2.7	0.8	0.6	1.4	13.0 - 17.0	0.0077	456	1000/R
60227 IEC 10 5x6	6	2	3.3	0.8	0.6	1.4	14.5 - 18.5	0.0065	594	1000/R
60227 IEC 10 5x10	10	2	4.2	1.0	0.6	1.4	17.5 - 22.0	0.0065	924	1000/R
60227 IEC 10 5x16	16	2	5.3	1.0	0.8	1.6	20.5 - 26.0	0.0052	1355	1000/R
60227 IEC 10 5x25	25	2	6.6	1.2	1.0	1.6	24.5 - 31.5	0.0050	2056	1000/R
60227 IEC 10 5x35	35	2	7.9	1.2	1.2	1.6	27.0 - 35.0	0.0044	2716	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, TWO CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested)
 Conductor Sizes : 1.5 mm² up to 16 mm² (both phase and ground)
 Insulation : Polyvinyl chloride PVC/C (Light Blue, Brown and Green with yellow stripe color)
 Inner sheath : Black polyvinyl chloride (Other colors available upon request)
 Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location.
 Do not allow for underground installing neither directly burial or in conduit in ground

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 4 - 2553 TABLE 1

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 10

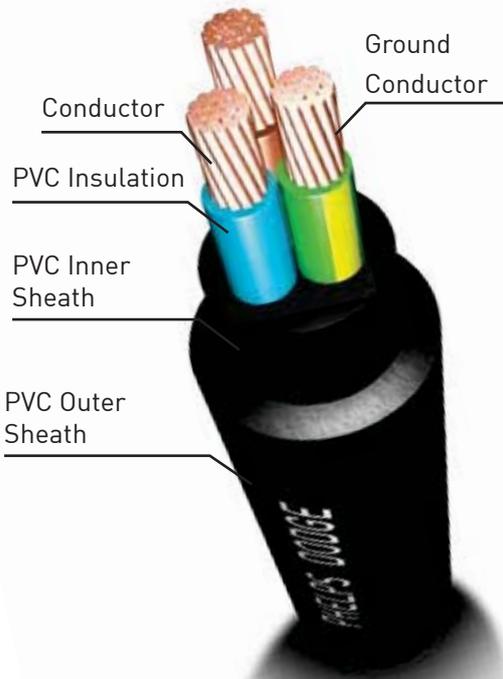
300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, TWO CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Conductor Type	Diameter of Conductor (max)	Nominal Thickness of Insulation	Approx. Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Overall Diameter (min-max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	Class	mm	mm	mm	mm	mm	MΩ.km	kg / km	m
60227 IEC 10 2x1.5/1.5	1.5	1	1.5	0.7	0.4	1.2	8.0 - 10.5	0.011	141	1000/R
60227 IEC 10 2x1.5/1.5	1.5	2	1.7	0.7	0.4	1.2	8.2 - 11.0	0.010	147	1000/R
60227 IEC 10 2x2.5/2.5	2.5	1	1.9	0.8	0.4	1.2	9.2 - 12.0	0.010	193	1000/R
60227 IEC 10 2x2.5/2.5	2.5	2	2.2	0.8	0.4	1.2	9.4 - 12.5	0.009	211	1000/R
60227 IEC 10 2x4/4	4	1	2.4	0.8	0.4	1.2	10.0 - 13.0	0.0085	251	1000/R
60227 IEC 10 2x4/4	4	2	2.7	0.8	0.4	1.2	10.5 - 13.5	0.0077	279	1000/R
60227 IEC 10 2x6/6	6	2	3.3	0.8	0.4	1.4	12.0 - 15.5	0.0065	376	1000/R
60227 IEC 10 2x10/10	10	2	4.2	1.0	0.6	1.4	14.5 - 19.0	0.0065	596	1000/R
60227 IEC 10 2x16/16	16	2	5.3	1.0	0.8	1.4	16.5 - 21.5	0.0052	850	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE NYY-G

450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, TWO CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, stranded (concentric or compact as requested)

Conductor Sizes : 25 mm² up to 300 mm² (Phase), Sizes 16 mm² up to 150 mm² (Ground)

Insulation : Polyvinyl chloride PVC/C (Light Blue, Brown and Green with yellow stripe color)

Inner sheath : Black polyvinyl chloride (Other colors available upon request)

Outer sheath : Black polyvinyl chloride PVC/ST4

(Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, dry location, or direct burial in ground.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 5

COLOR CODE :



PHELPS DODGE CABLE TYPE NYY-G

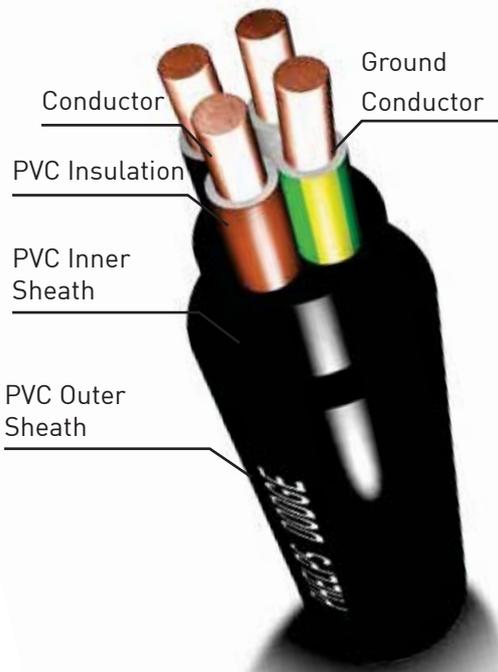
450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, TWO CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area (Phase)	Diameter of Conductor (Phase) (max)	Nominal Thickness of Insulation (Phase)	Nominal Sectional Area (Ground)	Diameter of Conductor (Ground) (max)	Nominal Thickness of Insulation (Ground)	Approx. Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Overall Diameter (Max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	mm	mm ²	mm	mm	mm	mm	mm	MΩ.km	kg / km	m
NYG-25/16	25	6.6	1.3	16	5.3	1.1	1.2	2.0	28.0	0.0054	1,286	500/R
NYG-35/16	35	7.9	1.3	16	5.3	1.1	1.2	2.0	30.0	0.0047	1,569	500/R
NYG-50/25	50	9.1	1.5	25	6.6	1.3	1.2	2.2	34.0	0.0046	2,089	500/R
NYG-70/35	70	11.0	1.5	35	7.9	1.3	1.5	2.2	38.5	0.0039	2,815	500/R
NYG-95/50	95	12.9	1.7	50	9.1	1.5	1.5	2.2	43.5	0.0038	3,716	500/R
NYG-120/70	120	14.5	1.7	70	11.0	1.5	1.5	2.4	47.5	0.0034	4,617	500/R
NYG-150/95	150	16.2	1.9	95	12.9	1.7	1.8	2.6	53.0	0.0034	5,822	200/R
NYG-185/95	185	18.0	2.1	95	12.9	1.7	1.8	2.8	57.5	0.0034	6,919	200/R
NYG-240/120	240	20.6	2.3	120	14.5	1.7	2.0	3.0	64.5	0.0033	8,863	150/R
NYG-300/150	300	23.1	2.5	150	16.2	1.9	2.0	3.2	71.0	0.0032	10,901	150/R

C = Packing in coil,
R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, THREE CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested)
 Conductor Sizes : 1.5 mm² up to 16 mm² (both phase and ground)
 Insulation : Polyvinyl chloride PVC/C (Brown, Black, Gray and Green with yellow stripe color)
 Inner sheath : Black polyvinyl chloride (Other colors available upon request)
 Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location.
 Do not allow for underground installing neither directly burial or in conduit in ground

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 4 - 2553 TABLE 1

COLOR CODE :



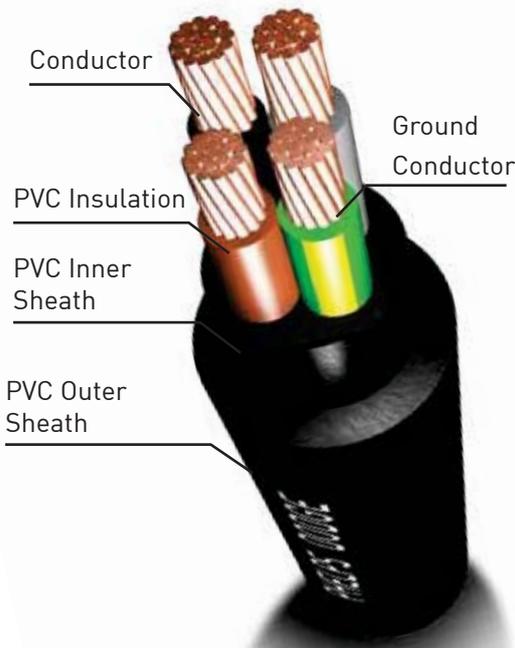
PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, THREE CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area	Conductor Type	Diameter of Conductor (max)	Nominal Thickness of Insulation	Approx. Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Overall Diameter (min-max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	Class	mm	mm	mm	mm	mm	MΩ.km	kg / km	m
60227 IEC 10 3x1.5/1.5	1.5	1	1.5	0.7	0.4	1.2	8.6 - 11.5	0.011	172	1000/R
60227 IEC 10 3x1.5/1.5	1.5	2	1.7	0.7	0.4	1.2	9.0 - 12.0	0.010	179	1000/R
60227 IEC 10 3x2.5/2.5	2.5	1	1.9	0.8	0.4	1.2	10.0 - 13.0	0.010	237	1000/R
60227 IEC 10 3x2.5/2.5	2.5	2	2.2	0.8	0.4	1.2	10.0 - 13.5	0.009	262	1000/R
60227 IEC 10 3x4/4	4	1	2.4	0.8	0.4	1.4	11.5 - 14.5	0.0085	326	1000/R
60227 IEC 10 3x4/4	4	2	2.7	0.8	0.4	1.4	12.0 - 15.0	0.0077	363	1000/R
60227 IEC 10 3x6/6	6	2	3.3	0.8	0.6	1.4	13.0 - 17.0	0.0065	490	1000/R
60227 IEC 10 3x10/10	10	2	4.2	1.0	0.6	1.4	16.0 - 20.5	0.0065	755	1000/R
60227 IEC 10 3x16/16	16	2	5.3	1.0	0.8	1.4	18.0 - 23.5	0.0052	1085	1000/R

C = Packing in coil,
R = Packing in reel

PHELPS DODGE CABLE TYPE NYY-G 450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, THREE CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, stranded (concentric or compact as requested)
 Conductor Sizes : 25 mm² up to 300 mm² (Phase), Sizes 16 mm² up to 150 mm² (Ground)
 Insulation : Polyvinyl chloride PVC/C (Brown, Black, Gray and Green with yellow stripe color)
 Inner sheath : Black polyvinyl chloride (Other colors available upon request)
 Outer sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 5

COLOR CODE :



PHELPS DODGE CABLE TYPE NYY-G

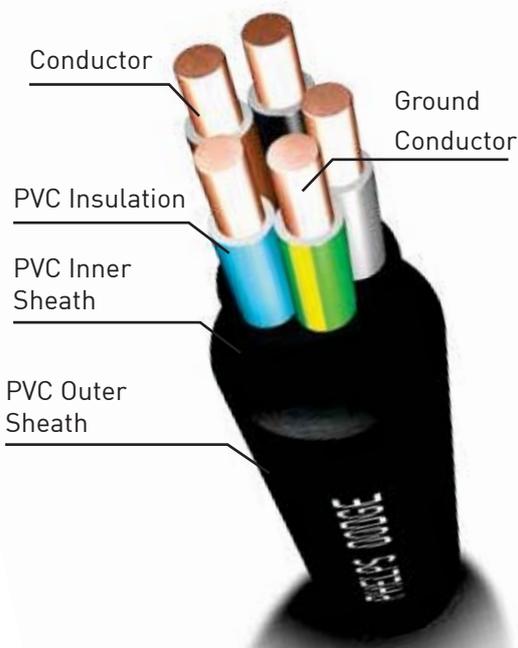
450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, THREE CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area (Phase)	Diameter of Conductor (Phase) (max)	Nominal Thickness of Insulation (Phase)	Nominal Sectional Area (Ground)	Diameter of Conductor (Ground) (max)	Nominal Thickness of Insulation (Ground)	Approx. Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Overall Diameter (Max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	mm	mm ²	mm	mm	mm	mm	mm	MΩ.km	kg / km	m
NYG 3x25/16	25	6.6	1.3	16	5.3	1.1	1.2	2.0	30.5	0.0054	1,640	500/R
NYG 3x35/16	35	7.9	1.3	16	5.3	1.1	1.2	2.0	33.0	0.0047	2,010	300/R
NYG 3x50/25	50	9.1	1.5	25	6.6	1.3	1.5	2.2	38.5	0.0046	2,755	300/R
NYG 3x70/35	70	11.0	1.5	35	7.9	1.3	1.5	2.2	42.5	0.0039	3,660	300/R
NYG 3x95/50	95	12.9	1.7	50	9.1	1.5	1.5	2.4	48.5	0.0038	4,909	300/R
NYG 3x120/70	120	14.5	1.7	70	11.0	1.5	1.8	2.6	53.5	0.0034	6,171	300/R
NYG 3x150/95	150	16.2	1.9	95	12.9	1.7	1.8	2.8	59.0	0.0034	7,646	200/R
NYG 3x185/95	185	18.0	2.1	95	12.9	1.7	2.0	3.0	64.5	0.0034	9,199	200/R
NYG 3x240/120	240	20.6	2.3	120	14.5	1.7	2.0	3.2	72.0	0.0033	11,705	150/R
NYG 3x300/150	300	23.1	2.5	150	16.2	1.9	2.2	3.4	79.5	0.0032	14,499	150/R

C = Packing in coil,
R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, FOUR CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, solid or stranded (concentric or compact as requested)
 Conductor Sizes : 1.5 mm² up to 16 mm² (both phase and ground)
 Insulation : Polyvinyl chloride PVC/C (Light Blue, Brown, Black, Gray and Green with yellow stripe color)
 Inner sheath : Black polyvinyl chloride (Other colors available upon request)
 Sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location.
 Do not allow for underground installing neither directly burial or in conduit in ground

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 4 - 2553 TABLE 1

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 10

300/500 V 70 °C PVC/C INSULATED

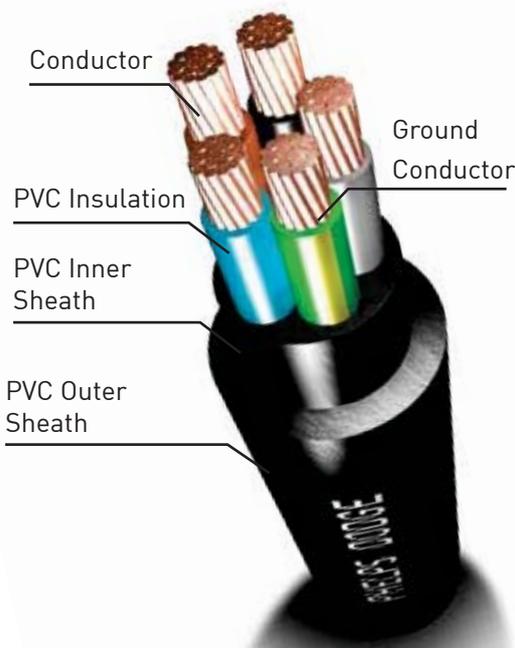
AND PVC/ST4 DOUBLE SHEATHED, FOUR CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Approx. Thickness of Inner Sheath mm	Nominal Thickness of Outer Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 10 4x1.5/1.5	1.5	1	1.5	0.7	0.4	1.2	9.4 - 12.0	0.011	204	1000/R
60227 IEC 10 4x1.5/1.5	1.5	2	1.7	0.7	0.4	1.2	9.8 - 12.5	0.010	214	1000/R
60227 IEC 10 4x2.5/2.5	2.5	1	1.9	0.8	0.4	1.2	11.0 - 14.0	0.010	284	1000/R
60227 IEC 10 4x2.5/2.5	2.5	2	2.2	0.8	0.4	1.2	11.0 - 14.5	0.009	316	1000/R
60227 IEC 10 4x4/4	4	1	2.4	0.8	0.6	1.4	12.5 - 16.0	0.0085	407	1000/R
60227 IEC 10 4x4/4	4	2	2.7	0.8	0.6	1.4	13.0 - 17.0	0.0077	456	1000/R
60227 IEC 10 4x6/6	6	2	3.3	0.8	0.6	1.4	14.5 - 18.5	0.0065	594	1000/R
60227 IEC 10 4x10/10	10	2	4.2	1.0	0.6	1.4	17.5 - 22.0	0.0065	924	1000/R
60227 IEC 10 4x16/16	16	2	5.3	1.0	0.8	1.6	20.5 - 26.0	0.0052	1355	1000/R

C = Packing in coil,
R = Packing in reel

PHELPS DODGE CABLE TYPE NYY-G

450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, FOUR CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, stranded (concentric or compact as requested)
 Conductor Sizes : 25 mm² up to 300 mm² (Phase), Sizes 16 mm² up to 150 mm² (Ground)
 Insulation : Polyvinyl chloride PVC/C (Light Blue, Brown, Black, Gray and Green with yellow stripe color)
 Inner sheath : Black polyvinyl chloride (Other colors available upon request)
 Outer sheath : Black polyvinyl chloride PVC/ST4 (Other colors available upon request)

APPLICATION :

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 5

COLOR CODE :



PHELPS DODGE CABLE TYPE NYY-G

450/750 V 70 °C PVC/C INSULATED AND PVC/ST4 DOUBLE SHEATHED, FOUR CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area (Phase)	Diameter of Conductor (Phase) (max)	Nominal Thickness of Insulation (Phase)	Nominal Sectional Area (Ground)	Diameter of Conductor (Ground) (max)	Nominal Thickness of Insulation (Ground)	Approx. Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Overall Diameter (Max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	mm	mm ²	mm	mm	mm	mm	mm	MΩ.km	kg / km	m
NYG 4x25/16	25	6.6	1.3	16	5.3	1.1	1.2	2.0	34.0	0.0054	2,095	300/R
NYG 4x35/16	35	7.9	1.3	16	5.3	1.1	1.5	2.2	39.0	0.0047	2,745	300/R
NYG 4x50/25	50	9.1	1.5	25	6.6	1.3	1.5	2.2	43.5	0.0046	3,575	300/R
NYG 4x70/35	70	11.0	1.5	35	7.9	1.3	1.5	2.4	49.0	0.0039	4,823	300/R
NYG 4x95/50	95	12.9	1.7	50	9.1	1.5	1.8	2.6	56.5	0.0038	6,568	300/R
NYG 4x120/70	120	14.5	1.7	70	11.0	1.5	1.8	2.8	61.5	0.0034	8,068	300/R
NYG 4x150/95	150	16.2	1.9	95	12.9	1.7	2.0	3.0	68.0	0.0034	9,973	200/R
NYG 4x185/95	185	18.0	2.1	95	12.9	1.7	2.0	3.2	75.0	0.0034	12,157	200/R
NYG 4x240/120	240	20.6	2.3	120	14.5	1.7	2.2	3.4	84.5	0.0033	15,639	150/R
NYG 4x300/150	300	23.1	2.5	150	16.2	1.9	2.2	3.8	93.5	0.0032	19,377	150/R

C = Packing in coil,
R = Packing in reel

PHELPS DODGE CABLE TYPE VCT 450/750 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE SINGLE CORE



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 4 mm² up to 35 mm²
Insulation : Black polyvinyl chloride PVC/D
(Other colors available upon request)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in
factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750
volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 7

PHELPS DODGE CABLE TYPE VCT

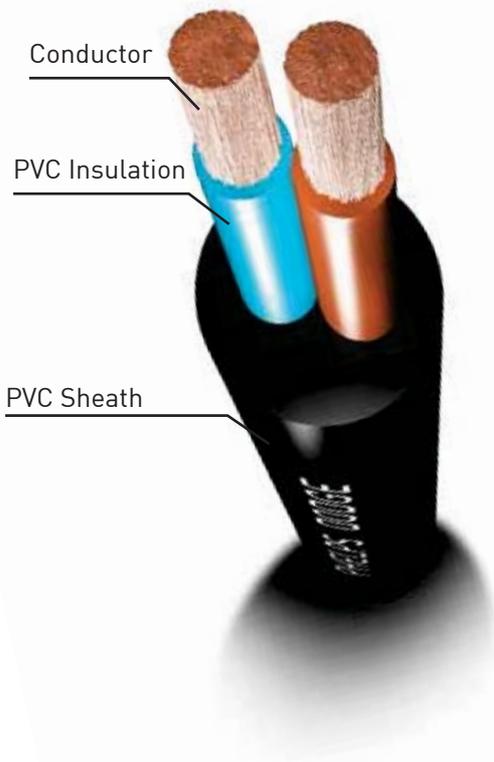
450/750 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Diameter of Conductor (max) mm	Conductor Type Class	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (Max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
VCT 1x4	4	3.0	5	0.9	1.4	8.6	0.0084	89	500/R
VCT 1x6	6	3.9	5	0.9	1.4	9.4	0.0071	116	500/R
VCT 1x10	10	5.1	5	1.1	1.8	12.0	0.0068	206	500/R
VCT 1x16	16	6.3	5	1.1	1.8	13.5	0.0050	277	500/R
VCT 1x25	25	7.8	5	1.3	2.2	16.0	0.0048	426	500/R
VCT 1x35	35	9.2	5	1.3	2.2	17.5	0.0041	560	500/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, ROUND TYPE FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.75 mm² up to 2.5 mm²
Insulation : Polyvinyl chloride PVC/D (Light Blue and Brown color)
Sheath : Black polyvinyl chloride PVC/ST5 (Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 9

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 53

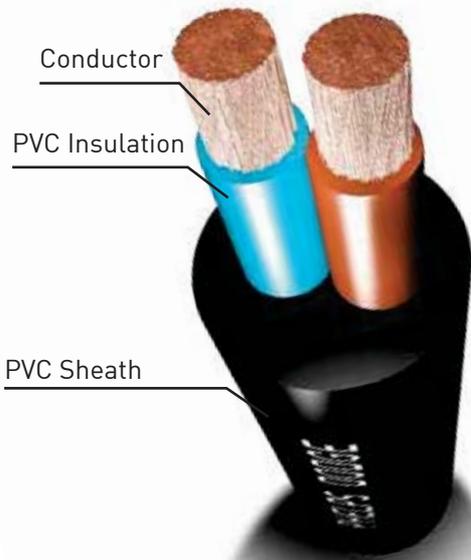
300/500 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, ROUND TYPE FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 53 2x0.75	0.75	5	1.3	0.6	0.8	5.7 - 7.2	0.011	61	1000/R
60227 IEC 53 2x1	1	5	1.5	0.6	0.8	5.9 - 7.5	0.010	71	1000/R
60227 IEC 53 2x1.5	1.5	5	1.8	0.7	0.8	6.8 - 8.6	0.010	93	1000/R
60227 IEC 53 2x2.5	2.5	5	2.4	0.8	1.0	8.4 - 10.6	0.009	143	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE VCT

450/750 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 4 mm² up to 35 mm²
Insulation : Polyvinyl chloride PVC/D
(Light Blue and Brown color)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in
factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750
volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 7

COLOR CODE :



PHELPS DODGE CABLE TYPE VCT

450/750 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Diameter of Conductor (max) mm	Conductor Type Class	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (Max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
VCT 2 x 4	4	3.0	5	0.9	1.6	14.5	0.0084	224	500/R
VCT 2 x 6	6	3.9	5	0.9	1.6	16.0	0.0071	305	500/R
VCT 2 x 10	10	5.1	5	1.1	1.8	20.0	0.0068	515	500/R
VCT 2 x 16	16	6.3	5	1.1	2.2	23.0	0.0050	734	500/R
VCT 2 x 25	25	7.8	5	1.3	2.4	27.5	0.0048	1097	500/R
VCT 2 x 35	35	9.2	5	1.3	2.6	31.0	0.0041	1,472	500/R

C = Packing in coil, R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 53 300/500 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE THREE CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.75 mm² up to 2.5 mm²
Insulation : Polyvinyl chloride PVC/D
(Brown, Black and Gray color)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 9

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE THREE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 53 3x0.75	0.75	5	1.3	0.6	0.8	6.0 - 7.6	0.011	72	1000/R
60227 IEC 53 3x1	1	5	1.5	0.6	0.8	6.3 - 8.0	0.010	85	1000/R
60227 IEC 53 3x1.5	1.5	5	1.8	0.7	0.9	7.4 - 9.4	0.010	117	1000/R
60227 IEC 53 3x2.5	2.5	5	2.4	0.8	1.1	9.2 - 11.4	0.009	179	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE VCT 450/750 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE THREE CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 4 mm² up to 35 mm²
Insulation : Polyvinyl chloride PVC/D
(Brown, Black and Gray)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in
factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750
volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 7

COLOR CODE :



PHELPS DODGE CABLE TYPE VCT

450/750 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE THREE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Diameter of Conductor (max) mm	Conductor Type Class	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (Max) mm	Minimum Insulation Resistance at 70°C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
VCT 3 x 4	4	3.0	5	0.9	1.6	15.5	0.0084	271	500/R
VCT 3 x 6	6	3.9	5	0.9	1.8	17.5	0.0071	383	500/R
VCT 3 x 10	10	5.1	5	1.1	2.0	21.5	0.0068	650	500/R
VCT 3 x 16	16	6.3	5	1.1	2.4	25.0	0.0050	931	500/R
VCT 3 x 25	25	7.8	5	1.3	2.6	30.0	0.0048	1,392	500/R
VCT 3 x 35	35	9.2	5	1.3	2.8	33.5	0.0041	1,881	500/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 53 300/500 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE FOUR CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.75 mm² up to 2.5 mm²
Insulation : Polyvinyl chloride PVC/D
(Light Blue, Brown, Black and Gray color)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 9

COLOR CODE :



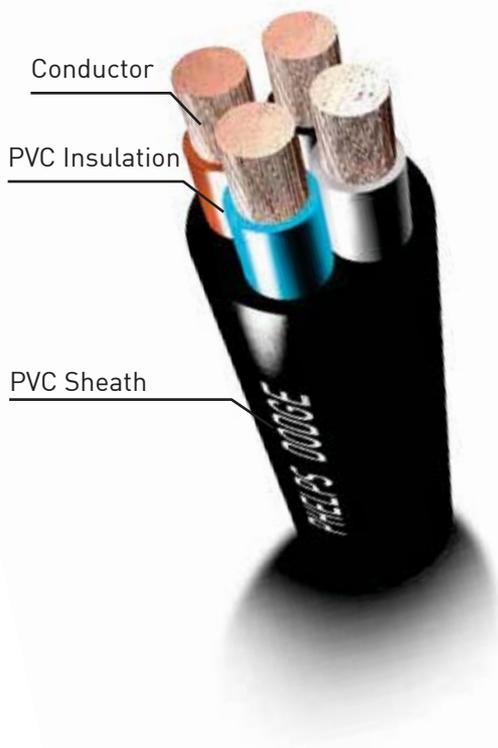
PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE FOUR CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 53 4x0.75	0.75	5	1.3	0.6	0.8	6.6 - 8.3	0.011	87	1000/R
60227 IEC 53 4x1	1	5	1.5	0.6	0.9	7.1 - 9.0	0.010	106	1000/R
60227 IEC 53 4x1.5	1.5	5	1.8	0.7	1.0	8.4 - 10.5	0.010	147	1000/R
60227 IEC 53 4x2.5	2.5	5	2.4	0.8	1.1	10.1 - 12.5	0.009	219	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE VCT 450/750 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE FOUR CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 4 mm² up to 35 mm²
Insulation : Polyvinyl chloride PVC/D
(Light Blue, Brown, Black and Gray color)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 7

COLOR CODE :



PHELPS DODGE CABLE TYPE VCT

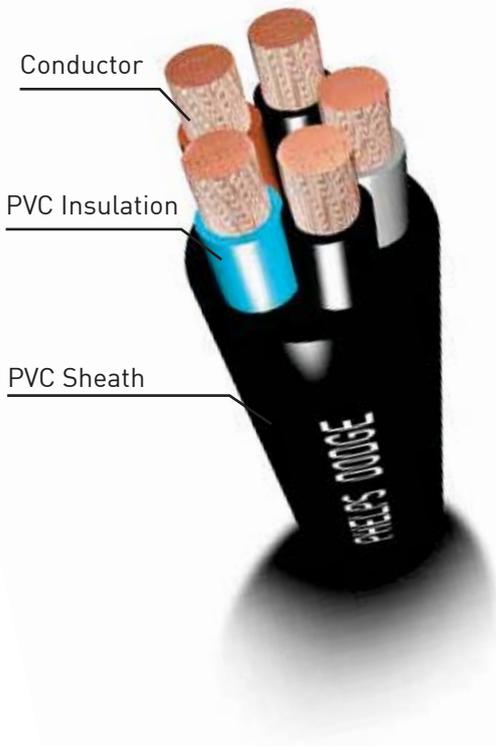
450/750 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE FOUR CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Diameter of Conductor (max) mm	Conductor Type Class	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (Max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
VCT 4 x 4	4	3.0	5	0.9	1.8	17.0	0.0084	343	500/R
VCT 4 x 6	6	3.9	5	0.9	2.0	19.5	0.0071	484	500/R
VCT 4 x 10	10	5.1	5	1.1	2.2	24.0	0.0068	823	500/R
VCT 4 x 16	16	6.3	5	1.1	2.6	28.0	0.0050	1,176	500/R
VCT 4 x 25	25	7.8	5	1.3	2.8	33.0	0.0048	1,760	500/R
VCT 4 x 35	35	9.2	5	1.3	3.1	37.0	0.0041	2,401	500/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE FIVE CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
 Conductor Sizes : 0.75 mm² up to 2.5 mm²
 Insulation : Polyvinyl chloride PVC/D
 (Light Blue, Brown, Black, Gray and Black)
 Sheath : Black polyvinyl chloride PVC/ST5
 (Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 9

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 53

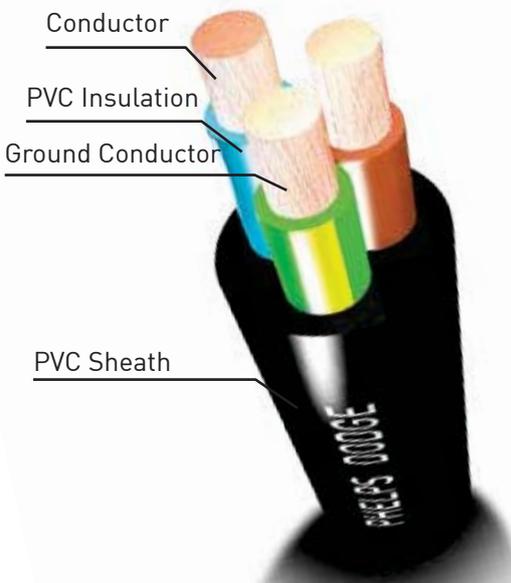
300/500 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE FIVE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 53 5x0.75	0.75	5	1.3	0.6	0.9	7.4 - 9.3	0.011	106	1000/R
60227 IEC 53 5x1	1	5	1.5	0.6	0.9	7.8 - 9.8	0.010	125	1000/R
60227 IEC 53 5x1.5	1.5	5	1.8	0.7	1.1	9.3 - 11.6	0.010	179	1000/R
60227 IEC 53 5x2.5	2.5	5	2.4	0.8	1.2	11.2 - 13.9	0.009	266	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE TWO CORES WITH GROUND



CONSTRUCTION : Conductor : Annealed flexible copper
 Conductor Sizes : 0.75 mm² up to 2.5 mm²
 Insulation : Polyvinyl chloride PVC/D
 (Light Blue, Brown and Green with yellow stripe color)
 Sheath : Black polyvinyl chloride PVC/ST5
 (Other colors available upon request)

APPLICATION : For small indoor electrical appliances.

CLASSIFICATION : Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD : TIS 11 PART 5 - 2553 TABLE 9

COLOR CODE : 

PHELPS DODGE CABLE TYPE 60227 IEC 53

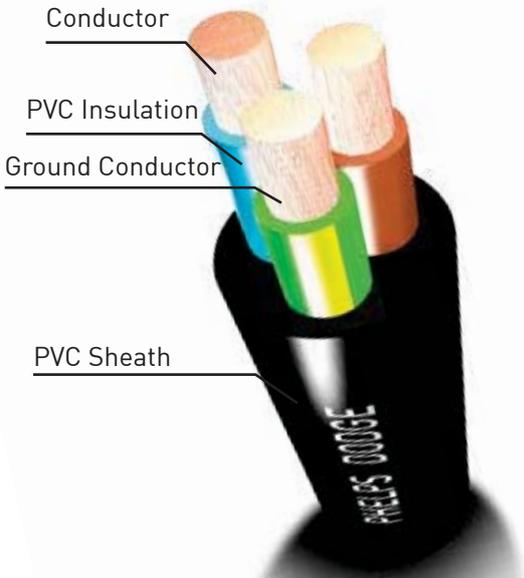
300/500 V 70 °C PVC/D INSULATED AND

PVC/ST5 SHEATHED, FLEXIBLE TWO CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 53 2x0.75/0.75	0.75	5	1.3	0.6	0.8	6.0 - 7.6	0.011	72	1000/R
60227 IEC 53 2x1/1	1	5	1.5	0.6	0.8	6.3 - 8.0	0.010	85	1000/R
60227 IEC 53 2x1.5/1.5	1.5	5	1.8	0.7	0.9	7.4 - 9.4	0.010	117	1000/R
60227 IEC 53 2x2.5/2.5	2.5	5	2.4	0.8	1.1	9.2 - 11.4	0.009	179	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE VCT-G 450/750 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE TWO CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, flexible
Conductors Sizes : 4 mm² up to 35 mm²
(Phase), Sizes 4 mm² up to 16 mm²
(Ground)
Insulation : Polyvinyl chloride PVC/D (Light
Blue, Brown and Green with yellow stripe
color)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in
factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 450/750
volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 8

COLOR CODE :



PHELPS DODGE CABLE TYPE VCT-G

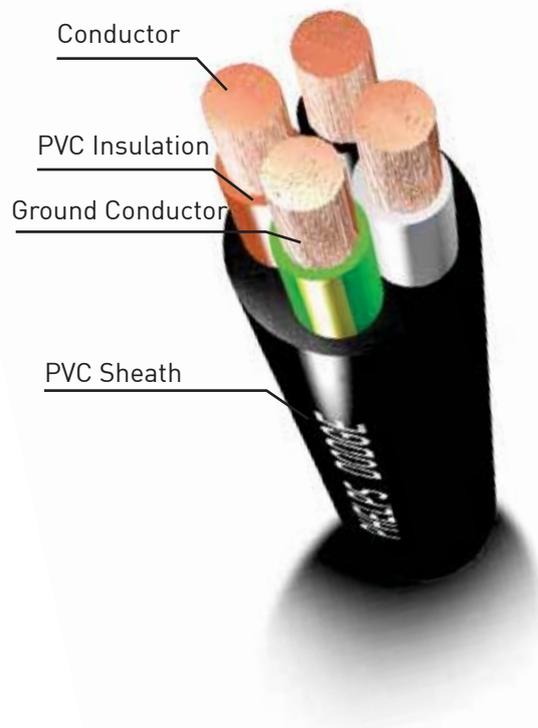
450/750 V 70 °C PVC/D INSULATED AND

PVC/ST5 SHEATHED, FLEXIBLE TWO CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area (Phase)	Diameter of Conductor (Phase) (max)	Nominal Thickness of Insulation (Phase)	Nominal Sectional Area (Ground)	Diameter of Conductor (Ground) (max)	Nominal Thickness of Insulation (Ground)	Nominal Thickness of Sheath	Overall Diameter (max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	mm	mm ²	mm	m	mm	mm	MΩ.km	kg / km	m
VCT-G 2x4/4	4	3.0	0.9	4	3.0	0.9	1.6	15.5	0.0084	278	500/R
VCT-G 2x6/6	6	3.9	0.9	6	3.9	0.9	1.8	17.5	0.0071	393	500/R
VCT-G 2x10/10	10	5.1	1.1	10	5.1	1.1	2.0	21.5	0.0068	665	500/R
VCT-G 2x16/16	16	6.3	1.1	16	6.3	1.1	2.4	25.0	0.0050	951	500/R
VCT-G 2x25/16	25	7.8	1.3	16	6.3	1.1	2.6	28.5	0.0048	1,319	500/R
VCT-G 2x35/16	35	9.2	1.3	16	6.3	1.1	2.8	31.5	0.0041	1,707	500/R

C = Packing in coil, R = Packing in reel

PHELPS DODGE CABLE TYPE 60227 IEC 53 300/500 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE THREE CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.75 mm² up to 2.5 mm²
Insulation : Polyvinyl chloride PVC/D
(Brown, Black, Gray and Green with
yellow stripe color)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500
volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 9

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND

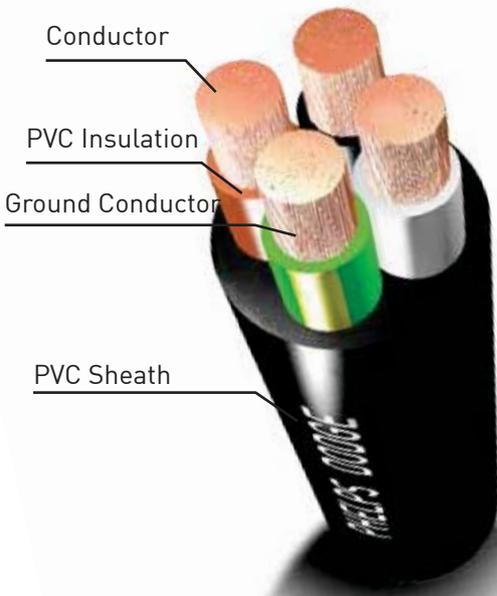
PVC/ST5 SHEATHED, FLEXIBLE THREE CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 53 3x0.75/0.75	0.75	5	1.3	0.6	0.8	6.6 - 8.3	0.011	87	1000/R
60227 IEC 53 3x1/1	1	5	1.5	0.6	0.9	7.1 - 9.0	0.010	106	1000/R
60227 IEC 53 3x1.5/1.5	1.5	5	1.8	0.7	1.0	8.4 - 10.5	0.010	147	1000/R
60227 IEC 53 3x2.5/2.5	2.5	5	2.4	0.8	1.1	10.1 - 12.5	0.009	219	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE VCT-G

450/750 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE THREE CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, flexible
 Conductors Sizes : 4 mm² up to 35 mm²
 (Phase), Sizes 4 mm² up to 16 mm²
 (Ground)
 Insulation : Polyvinyl chloride PVC/D
 (Brown, Black, Gray and Green with yellow
 stripe color)
 Sheath : Black polyvinyl chloride PVC/ST5
 (Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in
 factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 450/750
 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 8

COLOR CODE :



PHELPS DODGE CABLE TYPE VCT-G

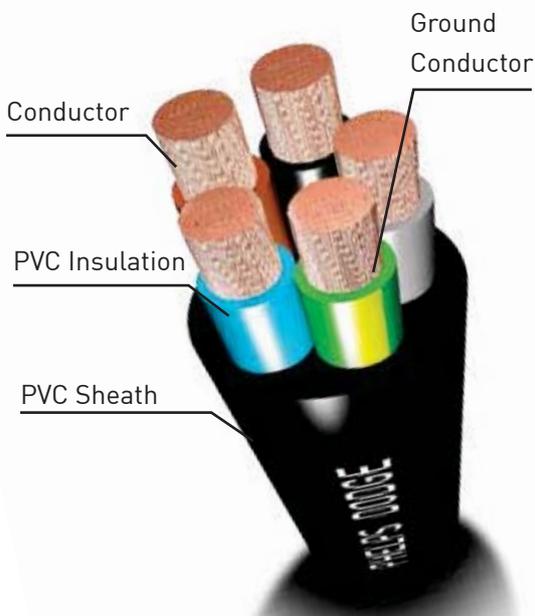
450/750 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE THREE CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area (Phase)	Diameter of Conductor (Phase) (max)	Nominal Thickness of Insulation (Phase)	Nominal Sectional Area (Ground)	Diameter of Conductor (Ground) (max)	Nominal Thickness of Insulation (Ground)	Nominal Thickness of Sheath	Overall Diameter (max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	mm	mm ²	mm	m	mm	mm	MΩ.km	kg / km	m
VCT-G 3x4/4	4	3.0	0.9	4	3.0	0.9	1.8	17.0	0.0084	362	500/R
VCT-G 3x6/6	6	3.9	0.9	6	3.9	0.9	2.0	19.5	0.0071	511	500/R
VCT-G 3x10/10	10	5.1	1.1	10	5.1	1.1	2.2	24.0	0.0068	865	500/R
VCT-G 3x16/16	16	6.3	1.1	16	6.3	1.1	2.6	28.0	0.0050	1233	500/R
VCT-G 3x25/16	25	7.8	1.3	16	6.3	1.1	2.8	33.0	0.0048	1,740	500/R
VCT-G 3x35/16	35	9.2	1.3	16	6.3	1.1	3.1	37.0	0.0041	2,287	500/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE FOUR CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed flexible copper
 Conductor Sizes : 0.75 mm² up to 2.5 mm²
 Insulation : Polyvinyl chloride PVC/D (Light Blue, Brown, Black, Gray and Green with yellow stripe color)
 Sheath : Black polyvinyl chloride PVC/ST5 (Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 9

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND

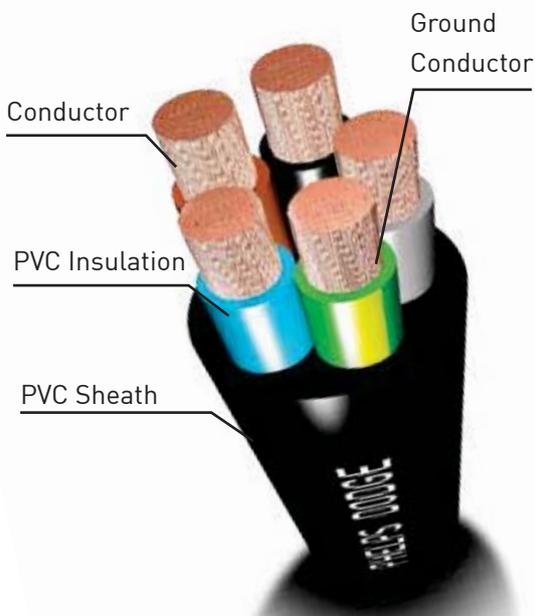
PVC/ST5 SHEATHED, FLEXIBLE FOUR CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 53 4x0.75/0.75	0.75	5	1.3	0.6	0.9	7.4 - 9.3	0.011	106	1000/R
60227 IEC 53 4x1/1	1	5	1.5	0.6	0.9	7.8 - 9.8	0.010	125	1000/R
60227 IEC 53 4x1.5/1.5	1.5	5	1.8	0.7	1.1	9.3 - 11.6	0.010	179	1000/R
60227 IEC 53 4x2.5/2.5	2.5	5	2.4	0.8	1.2	11.2 - 13.9	0.009	266	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE VCT-G

450/750 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED, FLEXIBLE FOUR CORES WITH GROUND



CONSTRUCTION :

Conductor : Annealed copper, flexible
 Conductors Sizes : 4 mm² up to 35 mm²
 (Phase), Sizes 4 mm² up to 16 mm²
 (Ground)
 Insulation : Polyvinyl chloride PVC/D (Light
 Blue, Brown, Black, Gray and Green
 with yellow stripe color)
 Sheath : Black polyvinyl chloride PVC/ST5
 (Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in
 factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
 Circuit voltage does not exceed 450/750
 volts.

REFERENCE STANDARD :

TIS 11 PART 101 - 2553 TABLE 8

COLOR CODE :



PHELPS DODGE CABLE TYPE VCT-G

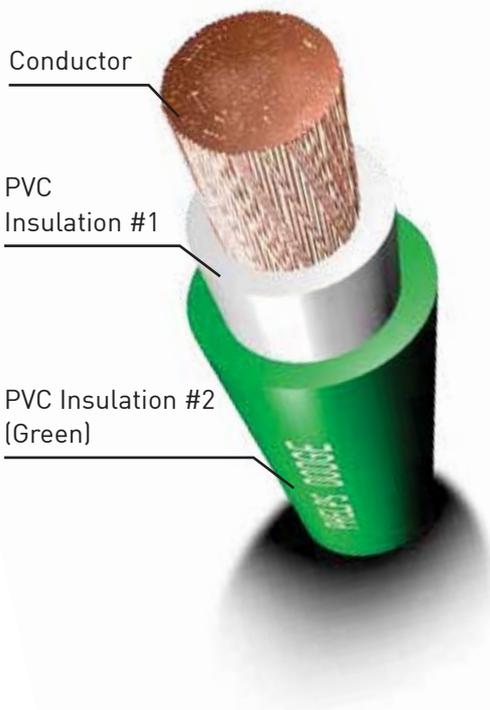
450/750 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED, FLEXIBLE FOUR CORES WITH GROUND

PHELPS DODGE TYPE LETTER	Nominal Sectional Area (Phase)	Diameter of Conductor (Phase) (max)	Nominal Thickness of Insulation (Phase)	Nominal Sectional Area (Ground)	Diameter of Conductor (Ground) (max)	Nominal Thickness of Insulation (Ground)	Nominal Thickness of Sheath	Overall Diameter (max)	Minimum Insulation Resistance at 70 °C	Cable Weight (approx)	Standard Packing
	mm ²	mm	mm	mm ²	mm	m	mm	mm	MΩ.km	kg / km	m
VCT-G 4x4/4	4	3.0	0.9	4	3.0	0.9	1.8	18.5	0.0084	439	500/R
VCT-G 4x6/6	6	3.9	0.9	6	3.9	0.9	2.0	21.5	0.0071	620	500/R
VCT-G 4x10/10	10	5.1	1.1	10	5.1	1.1	2.2	26.5	0.0068	1,057	500/R
VCT-G 4x16/16	16	6.3	1.1	16	6.3	1.1	2.6	30.5	0.0050	1,506	500/R
VCT-G 4x25/16	25	7.8	1.3	16	6.3	1.1	2.8	36.5	0.0048	2,196	500/R
VCT-G 4x35/16	35	9.2	1.3	16	6.3	1.1	3.1	41.5	0.0041	2,930	500/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 43

300/300 V 70 °C PVC/D DOUBLE INSULATED, FLEXIBLE SINGLE CORE



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.5 mm² up to 0.75 mm²
Insulation (1st layer) : Polyvinyl chloride PVC/D (Natural color)
Insulation (2nd layer) : Polyvinyl chloride PVC/D (Green)

APPLICATION :

For used in dry room for small indoor decorative lighting chains.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/300 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 5

PHELPS DODGE CABLE TYPE 60227 IEC 43

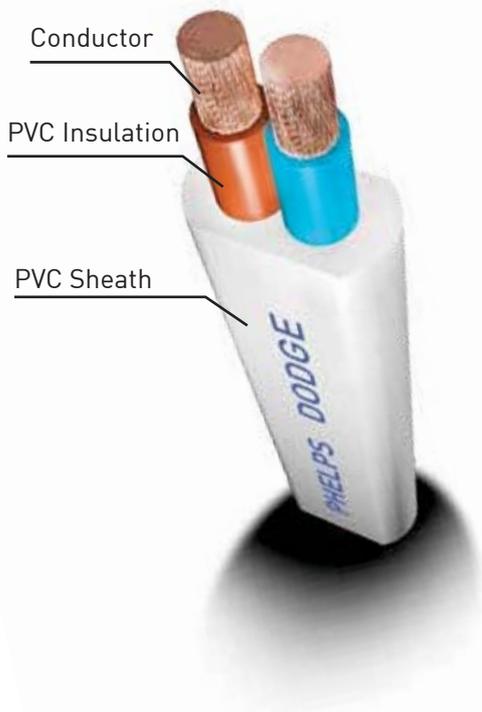
300/300 V 70 °C PVC/D DOUBLE INSULATED, FLEXIBLE SINGLE CORE

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Minimum Thickness of each Layer mm	Minimum Overall Thickness mm	Average Overall Thickness mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ. km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 43 1x0.5	0.5	5	1.1	0.2	0.6	0.7	2.3 - 2.7	0.014	11	100/C
60227 IEC 43 1x0.75	0.75	5	1.3	0.2	0.6	0.7	2.4 - 2.9	0.012	14	100/C

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 52

300/300 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED FLAT TYPE, FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.5 mm² up to 0.75 mm²
Insulation : Polyvinyl chloride PVC/D (Light Blue and Brown color)
Sheath : White Polyvinyl chloride PVC/ST5 (Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/300 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 7

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 52

300/300 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED FLAT TYPE, FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ. km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 52 2x0.5	0.5	5	1.1	0.5	0.6	3.0x4.9 - 3.7x5.9	0.012	30	1000/R
60227 IEC 52 2x0.75	0.75	5	1.3	0.5	0.6	3.2x5.2 - 3.8x6.3	0.010	37	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 52 300/300 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED ROUND TYPE, FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.5 mm² up to 0.75 mm²
Insulation : Polyvinyl chloride PVC/D
(Light Blue and Brown color)
Sheath : Black polyvinyl chloride PVC/ST5
(Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/300 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 7

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 52

300/300 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED ROUND TYPE, FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ. km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 52 2x0.5	0.5	5	1.1	0.5	0.6	4.6 - 5.9	0.012	40	1000/R
60227 IEC 52 2x0.75	0.75	5	1.3	0.5	0.6	4.9 - 6.3	0.010	49	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 52

300/300 V 70 °C PVC/D INSULATED AND PVC/ST5 SHEATHED ROUND TYPE, FLEXIBLE THREE CORES



CONSTRUCTION :

Conductor : Annealed copper, bunch stranded

Conductor Sizes : 0.5 mm² up to 0.75 mm²
Insulation : Polyvinyl chloride PVC/D (Light Blue, Brown and Green with yellow stripe color or Brown, Black and Gray color)

Sheath : Black polyvinyl chloride PVC/ST5 (Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/300 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 7

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 52

300/300 V 70 °C PVC/D INSULATED AND

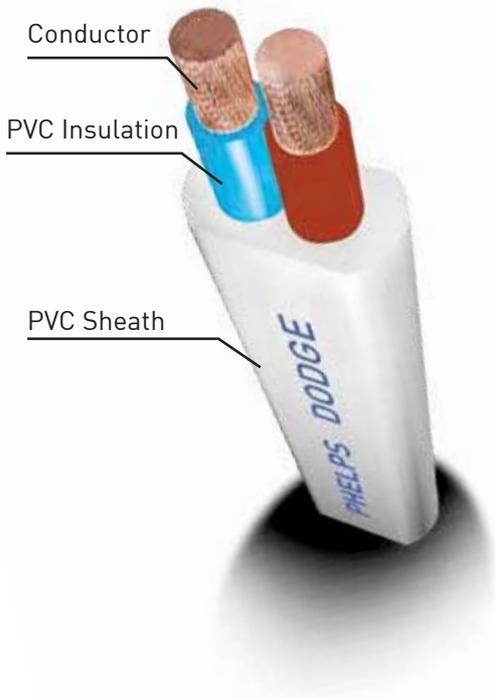
PVC/ST5 SHEATHED ROUND TYPE, FLEXIBLE THREE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 52 3x0.5 or 60227 IEC 52 2x0.5/0.5	0.5	5	1.1	0.5	0.6	4.9 - 6.3	0.012	47	1000/R
60227 IEC 52 3x0.75 or 60227 IEC 52 2x0.75/0.75	0.75	5	1.3	0.5	0.6	5.2 - 6.7	0.010	59	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 53

300/500 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED FLAT TYPE, FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.75 mm² up to 2.5 mm²
Insulation : Polyvinyl chloride PVC/D (Light Blue and Brown color)
Sheath : White Polyvinyl chloride PVC/ST5 (Other colors available upon request)

APPLICATION :

For small indoor electrical appliances.

CLASSIFICATION :

Maximum conductor temperature 70 °C
Circuit voltage does not exceed 300/500 volts.at

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 9

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 53

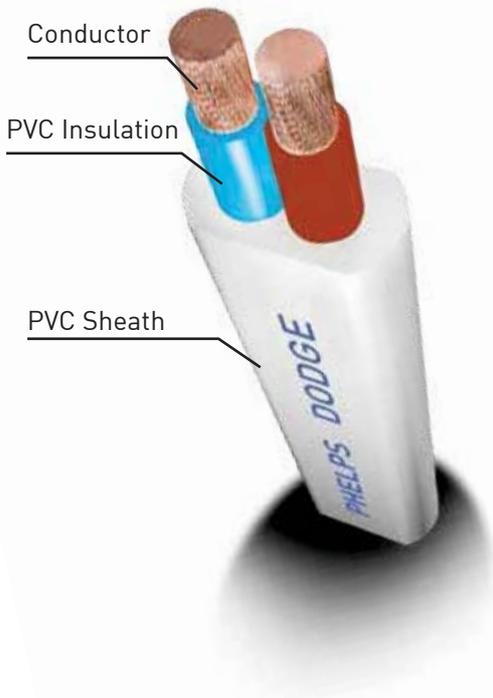
300/500 V 70 °C PVC/D INSULATED AND
PVC/ST5 SHEATHED FLAT TYPE, FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 70 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 53 2x0.75	0.75	5	1.3	0.6	0.8	3.7x6.0 - 4.5x7.2	0.011	46	1000/R
60227 IEC 53 2x1	1	5	1.5	0.6	0.8	3.9x6.2 - 4.7x7.5	0.010	53	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 56

300/300 V 90 °C PVC/E INSULATED AND PVC/ST10
SHEATHED HEAT RESISTANT, FLAT TYPE, FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes: 0.5 mm² up to 0.75 mm²
Insulation : Heat resistant polyvinyl chloride PVC/E (Light Blue and Brown color)
Sheath : White Heat resistant polyvinyl chloride PVC/ST10
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 90 °C
Circuit voltage does not exceed 300/300 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 11

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 56

300/300 V 90 °C PVC/E INSULATED AND PVC/ST10

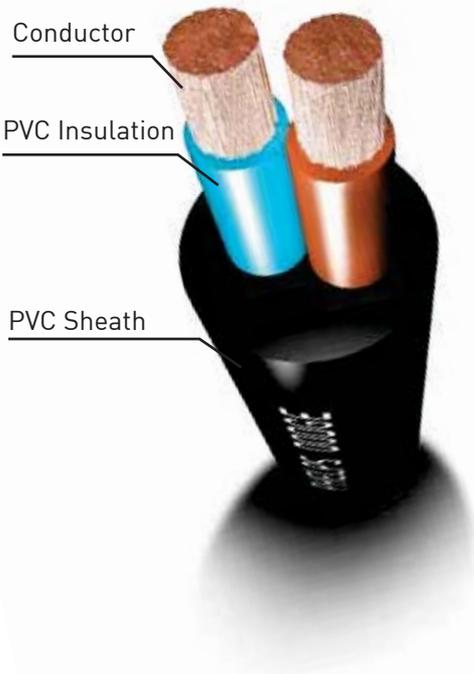
SHEATHED HEAT RESISTANT, FLAT TYPE, FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 90 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 56 2x0.5	0.5	5	1.1	0.5	0.6	3.0x4.9 - 3.7x5.9	0.012	30	1000/R
60227 IEC 56 2x0.75	0.75	5	1.3	0.5	0.6	3.2x5.2 - 3.8x6.3	0.010	37	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 56

300/300 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, ROUND TYPE FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes 0.5 mm² up to 0.75 mm²
Insulation : Heat resistant polyvinyl chloride PVC/E (Light Blue and Brown color)
Sheath : Heat resistant black polyvinyl chloride PVC/ST10
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 90 °C
Circuit voltage does not exceed 300/300 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 11

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 56

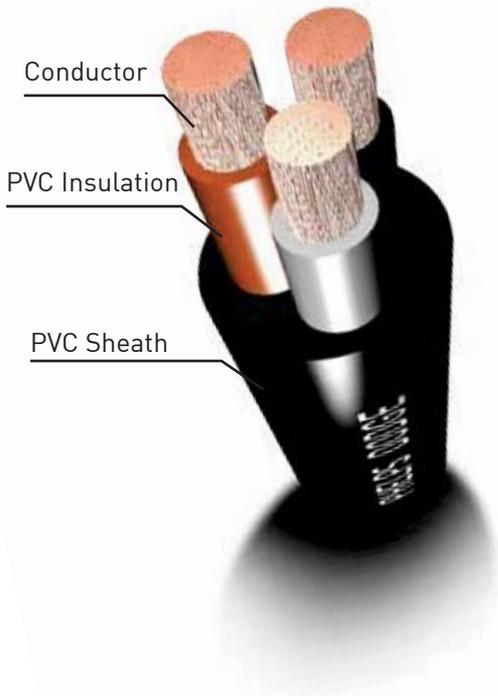
300/300 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, ROUND TYPE FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 90 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 56 2x0.5	0.5	5	1.1	0.5	0.6	4.6 - 5.9	0.012	40	1000/R
60227 IEC 56 2x0.75	0.75	5	1.3	0.5	0.6	4.9 - 6.3	0.010	49	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 56

300/300 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, FLEXIBLE THREE CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
 Conductor Sizes: 0.5 mm² up to 0.75 mm²
 Insulation : Heat resistant polyvinyl chloride PVC/E (Light Blue, Brown and Green with yellow stripe color or Brown, Black and Gray color)
 Sheath : Heat resistant black polyvinyl chloride PVC/ST10
 (Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 90 °C
 Circuit voltage does not exceed 300/300 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 11

COLOR CODE :

			3-CORE
			2C + G

PHELPS DODGE CABLE TYPE 60227 IEC 56

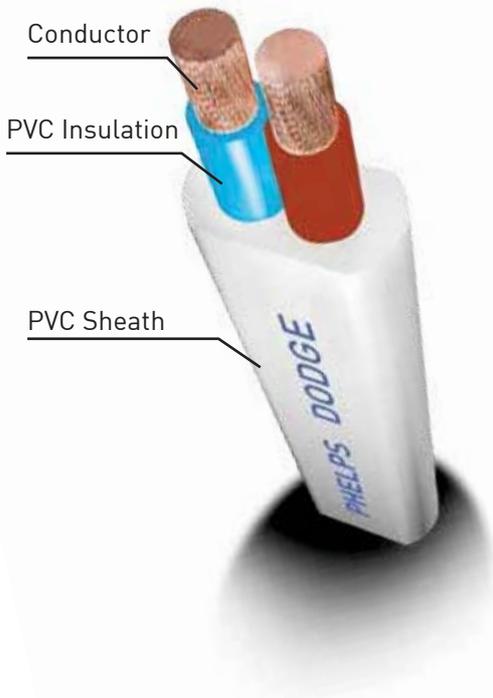
300/300 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, FLEXIBLE THREE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 90 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 56 3x0.5 or 60227 IEC 56 2x0.5/0.5	0.5	5	1.1	0.5	0.6	4.9 - 6.3	0.012	47	1000/R
60227 IEC 56 3x0.75 or 60227 IEC 56 2x0.75/0.75	0.75	5	1.3	0.5	0.6	5.2 - 6.7	0.010	59	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 57

300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED
HEAT RESISTANT, FLAT TYPE, FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.75 mm² up to 1 mm²
Insulation : Heat resistant polyvinyl chloride PVC/E (Light Blue and Brown color)
Sheath : White Heat resistant polyvinyl chloride PVC/ST10
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 90 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 13

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 57

300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED
HEAT RESISTANT, FLAT TYPE, FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 90 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 57 2x0.75	0.75	5	1.3	0.6	0.8	3.7x6.0 - 4.5x7.2	0.011	46	1000/R
60227 IEC 57 2x1	1	5	1.5	0.6	0.8	3.9x6.2 - 4.7x7.5	0.010	53	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 57 (PD-HVCT) 300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED, HEAT RESISTANT, ROUND TYPE FLEXIBLE TWO CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
Conductor Sizes : 0.75 mm² up to 2.5 mm²
Insulation : Heat resistant polyvinyl chloride PVC/E (Light Blue and Brown color)
Sheath : Heat resistant black polyvinyl chloride PVC/ST10
(Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 90 °C
Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 13

COLOR CODE :



PHELPS DODGE CABLE TYPE 60227 IEC 57 (PD-HVCT)

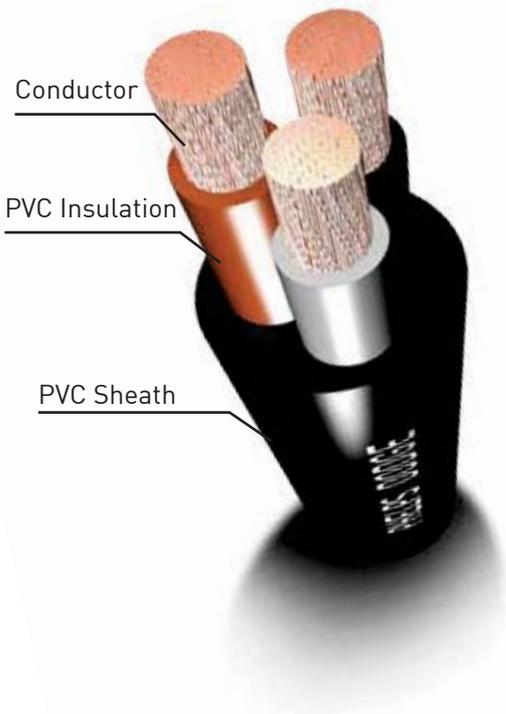
300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, ROUND TYPE FLEXIBLE TWO CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 90 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 57 2X0.75	0.75	5	1.3	0.6	0.8	5.7 - 7.2	0.011	61	1000/R
60227 IEC 57 2X1	1	5	1.5	0.6	0.8	5.9 - 7.5	0.010	71	1000/R
60227 IEC 57 2X1.5	1.5	5	1.8	0.7	0.8	6.8 - 8.6	0.010	93	1000/R
60227 IEC 57 2X2.5	2.5	5	2.4	0.8	1.0	8.4 - 10.6	0.009	143	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 57 (PD-HVCT)

300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, FLEXIBLE THREE CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
 Conductor Sizes : 0.75 mm² up to 2.5 mm²
 Insulation : Heat resistant polyvinyl chloride PVC/E (Light Blue, Brown and Green with yellow stripe color /or Brown, Black and Gray color)
 Sheath : Heat resistant black polyvinyl chloride PVC/ST10
 (Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 90 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 -2553 TABLE 13

COLOR CODE :

			3-CORE
			2C + G

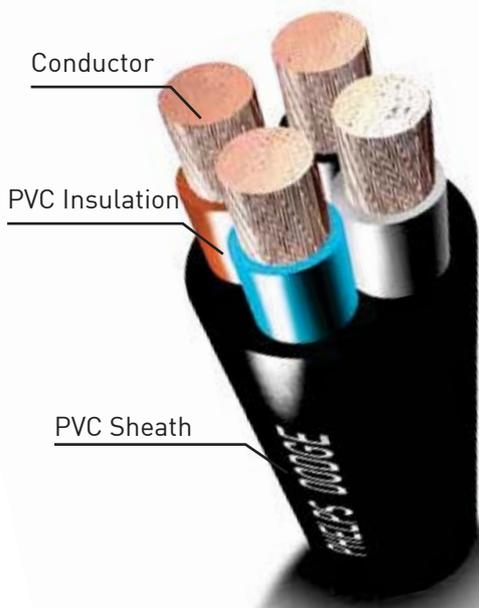
PHELPS DODGE CABLE TYPE 60227 IEC 57 (PD-HVCT) 300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED, HEAT RESISTANT, FLEXIBLE THREE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 90 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 57 3x0.75 or 60227 IEC 57 2x0.75/0.75	0.75	5	1.3	0.6	0.8	6.0 - 7.6	0.011	72	1000/R
60227 IEC 57 3x1 or 60227 IEC 57 2x1/1	1	5	1.5	0.6	0.8	6.3 - 8.0	0.010	85	1000/R
60227 IEC 57 3x1.5 or 60227 IEC 57 2x1.5/1.5	1.5	5	1.8	0.7	0.9	7.4 - 9.4	0.010	117	1000/R
60227 IEC 57 3x2.5 or 60227 IEC 57 2x2.5/2.5	2.5	5	2.4	0.8	1.1	9.2 - 11.4	0.009	179	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 57 (PD-HVCT)

300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, FLEXIBLE FOUR CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
 Conductor Sizes : 0.75 mm² up to 2.5 mm²
 Insulation : Heat resistant polyvinyl chloride PVC/E (Brown, Black, Gray and Green with yellow stripe color /or Light Blue, Brown, Black and Gray color)
 Sheath : Heat resistant black polyvinyl chloride PVC/ST10
 (Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 90 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 -2553 TABLE 13

COLOR CODE :

   	4-CORE
   	3C + G

PHELPS DODGE CABLE TYPE 60227 IEC 57 (PD-HVCT)

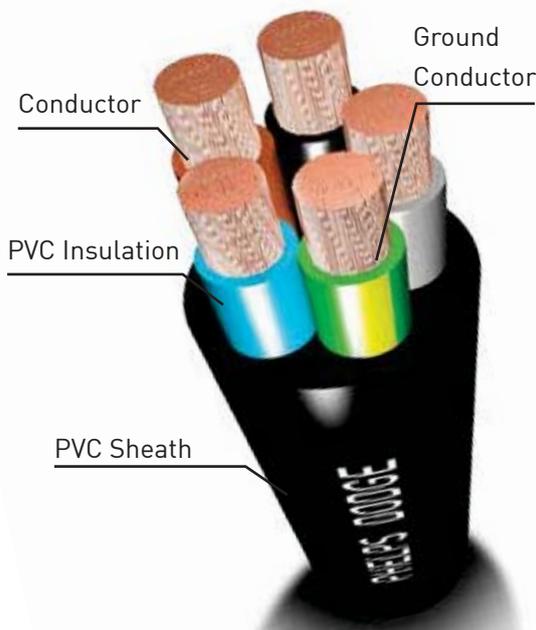
300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, FLEXIBLE FOUR CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 90 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 57 4x0.75 or 60227 IEC 57 3x0.75/0.75	0.75	5	1.3	0.6	0.8	6.6 - 8.3	0.011	87	1000/R
60227 IEC 57 4x1 or 60227 IEC 57 3x1/1	1	5	1.5	0.6	0.9	7.1 - 9.0	0.010	106	1000/R
60227 IEC 57 4x1.5 or 60227 IEC 57 3x1.5/1.5	1.5	5	1.8	0.7	1.0	8.4 - 10.5	0.010	147	1000/R
60227 IEC 57 4x2.5 or 60227 IEC 57 3x2.5/2.5	2.5	5	2.4	0.8	1.1	10.1 - 12.5	0.009	219	1000/R

*C = Packing in coil,
R = Packing in reel*

PHELPS DODGE CABLE TYPE 60227 IEC 57 (PD-HVCT)

300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, FLEXIBLE FIVE CORES



CONSTRUCTION :

Conductor : Annealed flexible copper
 Conductor Sizes : 0.75 mm² up to 2.5 mm²
 Insulation : Heat resistant polyvinyl chloride PVC/E (Light Blue, Brown, Black, Gray and Green with yellow stripe color/ or Light Blue, Brown, Black, Gray and Black)
 Sheath : Heat resistant black polyvinyl chloride PVC/ST10
 (Other colors available upon request)

APPLICATION :

For mobile-electrical equipment used in factories, farm or household appliances.

CLASSIFICATION :

Maximum conductor temperature 90 °C
 Circuit voltage does not exceed 300/500 volts.

REFERENCE STANDARD :

TIS 11 PART 5 - 2553 TABLE 13

COLOR CODE :

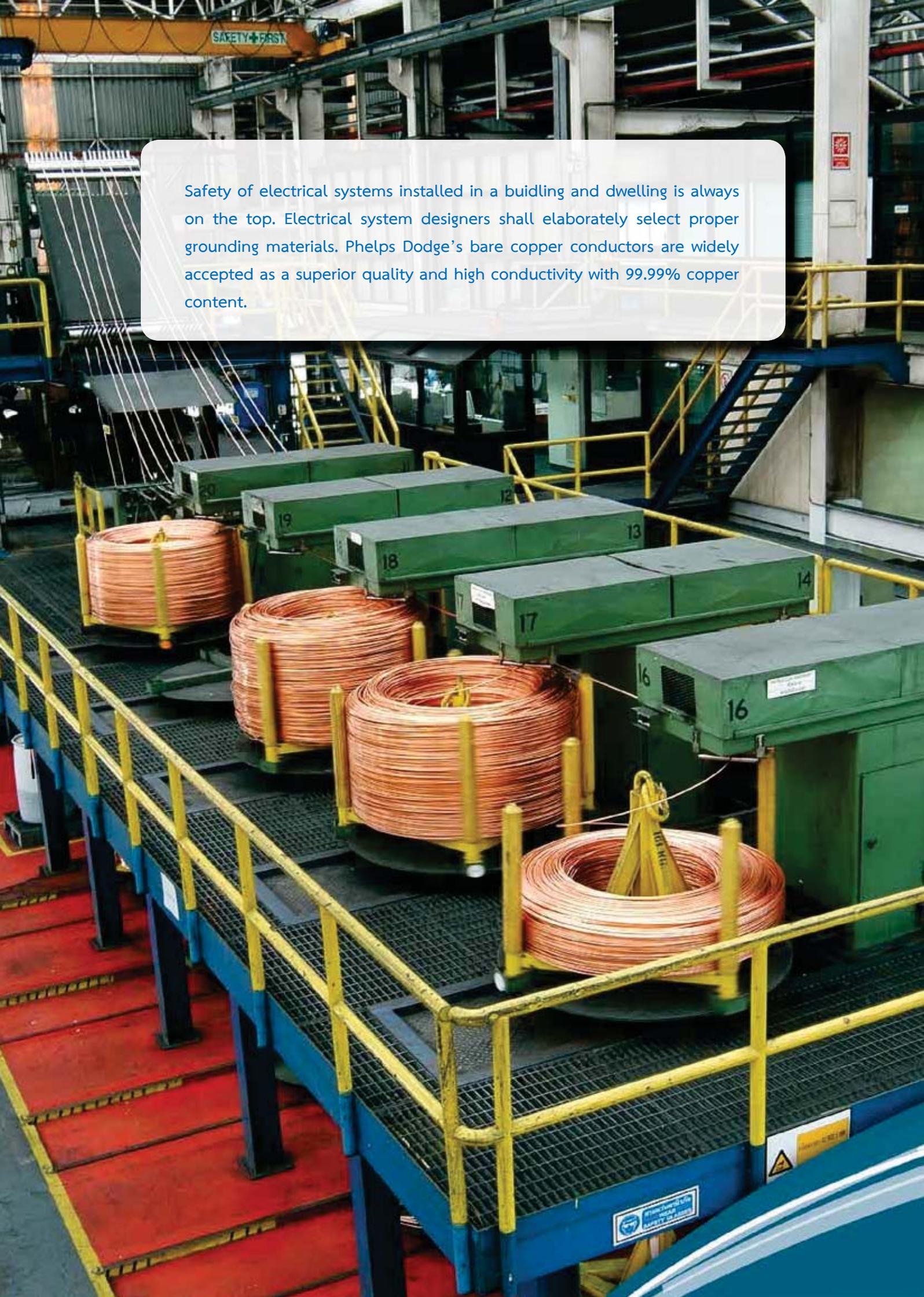


PHELPS DODGE CABLE TYPE 60227 IEC 57 (PD-HVCT)

300/500 V 90 °C PVC/E INSULATED AND PVC/ST10 SHEATHED,
HEAT RESISTANT, FLEXIBLE FIVE CORES

PHELPS DODGE TYPE LETTER	Nominal Sectional Area mm ²	Conductor Type Class	Diameter of Conductor (max) mm	Nominal Thickness of Insulation mm	Nominal Thickness of Sheath mm	Overall Diameter (min-max) mm	Minimum Insulation Resistance at 90 °C MΩ.km	Cable Weight (approx) kg / km	Standard Packing m
60227 IEC 57 5x0.75 or 60227 IEC 57 4x0.75/0.75	0.75	5	1.3	0.6	0.9	7.4 - 9.3	0.011	106	1000/R
60227 IEC 57 5x1 or 60227 IEC 57 4x1/1	1	5	1.5	0.6	0.9	7.8 - 9.8	0.010	125	1000/R
60227 IEC 57 5x1.5 or 60227 IEC 57 4x1.5/1.5	1.5	5	1.8	0.7	1.1	9.3 - 11.6	0.010	179	1000/R
60227 IEC 57 5x2.5 or 60227 IEC 57 4x2.5/2.5	2.5	5	2.4	0.8	1.2	11.2 - 13.9	0.009	266	1000/R

*C = Packing in coil,
R = Packing in reel*



Safety of electrical systems installed in a building and dwelling is always on the top. Electrical system designers shall elaborately select proper grounding materials. Phelps Dodge's bare copper conductors are widely accepted as a superior quality and high conductivity with 99.99% copper content.

Bare Copper Conductors



PHELPS DODGE CABLE TYPE CSC BARE HARD DRAWN COPPER STRANDED CONDUCTOR



CONDUCTOR :

Hard drawn copper wire, concentric stranded conductor sizes 10 mm² up to 500 mm²

APPLICATION :

Aerial power transmission and distribution line.

REFERENCE STANDARD :

TIS 64-2517

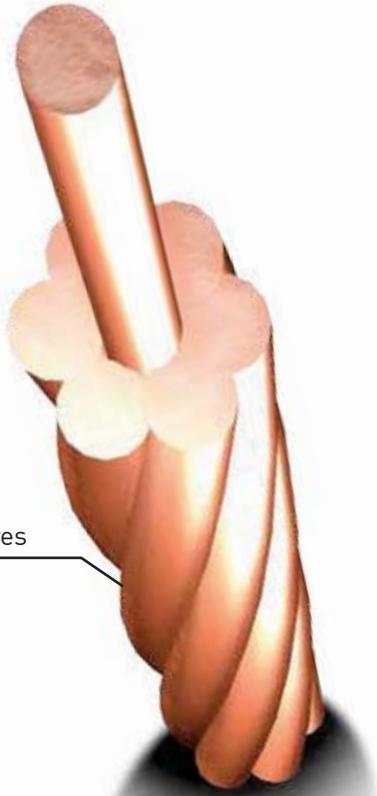
PHELPS DODGE CABLE TYPE CSC

BARE HARD DRAWN COPPER STRANDED CONDUCTOR

Nominal Sectional Area mm ²	Number & Diameter of Wire No. / mm	Overall Diameter mm	Maximum Conductor Resistance at 20 °C Ω / km	Breaking Strength kgf	Allowable Ampacities In Free Air A	Cable Weight kg / km	Standard Packing m
10	7/1.35	4.05	1.80548	438	90	90	1,000/R
16	7/1.70	5.10	1.13857	694	125	143	1,000/R
25	7/2.14	6.42	0.71851	1,076	160	227	1,000/R
35	7/2.52	7.56	0.51815	1,459	200	314	1,000/R
50	7/3.02	9.06	0.35896	2,095	250	452	1,000/R
50	19/1.78	8.90	0.38252	2,021	250	428	1,000/R
70	19/2.14	10.70	0.26466	2,921	310	618	1,000/R
95	19/2.52	12.60	0.19183	3,961	380	858	1,000/R
120	19/2.85	14.25	0.14922	5,067	440	1,097	1,000/R
150	37/2.25	15.75	0.12384	6,289	510	1,334	1,000/R
185	37/2.52	17.64	0.09813	7,713	585	1,673	1,000/R
240	61/2.25	20.25	0.07528	10,369	700	2,200	1,000/R
300	61/2.52	22.68	0.06002	12,717	800	2,760	1,000/R
400	61/2.85	25.65	0.04692	16,266	900	3,350	1,000/R
500	61/3.20	28.80	0.03703	20,506	1,110	4,451	1,000/R

R = Packing in reel

PHELPS DODGE CABLE TYPE CSC BARE ANNEALED COPPER STRANDED CONDUCTOR



Soft Drawn
(Annealed)
Copper Wires

CONDUCTOR :

Soft drawn copper wire, concentric stranded conductor sizes 10 mm² up to 500 mm²

APPLICATION :

Used as neutrals, in circuit ground connections as well as machinery and equipment grounding systems.

REFERENCE STANDARD :

TIS 2427-2552

PHELPS DODGE CABLE TYPE CSC

BARE ANNEALED COPPER STRANDED CONDUCTOR

Nominal Sectional Area mm ²	Number & Diameter of Wire (Nominal) No. / mm	Overall Diameter mm	Maximum Conductor Resistance at 20 °C Ω / km	Allowable Ampacities In Free Air A	Cable Weight kg / km	Standard Packing m
10	7/1.35	4.05	1.83	90	90	1,000/R
16	7/1.70	5.10	1.15	125	143	1,000/R
25	7/2.14	6.42	0.727	160	227	1,000/R
35	19/1.53	7.65	0.524	200	314	1,000/R
50	19/1.78	8.90	0.387	250	428	1,000/R
70	19/2.14	10.70	0.268	310	618	1,000/R
95	19/2.52	12.60	0.193	380	858	1,000/R
120	37/2.03	14.21	0.153	440	1,097	1,000/R
150	37/2.25	15.75	0.124	510	1,334	1,000/R
185	37/2.52	17.64	0.0991	585	1,673	1,000/R
240	61/2.25	20.25	0.0754	700	2,200	1,000/R
300	61/2.52	22.68	0.0601	800	2,760	1,000/R
400	61/2.85	25.65	0.0470	900	3,350	1,000/R
500	61/3.20	28.80	0.0366	1,110	4,451	1,000/R

R = Packing in reel

This appendix provides guidance for equipment manufacturers, installers and end-users on the properties of low-voltage electric cables, and the limitations that are deemed to be necessary in order to safeguard life, buildings and goods.

The information is given in the form of limiting values and is illustrated by examples which are not exhaustive but which indicate ways in which safety can be obtained. Additional information on installation practice is given in the IEC 60227 series

1. Normative reference

IEC 62440, Electric cables with a rated voltage not exceeding 450/750 V –Guide to use

2. Selection and installation

2.1 All conductors and cables shall be selected so as to be suitable for the voltages and currents likely to occur, and under all conditions which are anticipated in the equipment or installations or for the part in which they are to be used.

2.2 Cables shall be so constructed, installed, protected, used and maintained as to prevent danger so far as it is reasonably practicable.

2.3 Cables shall be selected so that they are suitable for the intended operating conditions and equipment classification. Examples of operation conditions include:

- a) Voltage
- b) Current
- c) Protective measures
- d) Grouping of cables
- e) Method of installation
- f) Accessibility

2.4 Cables shall be supported adequately. The recommended maximum spacing of supports is given in Table 1. In deciding the actual spacing, the mass of the cable between the supports shall be taken into account so that the limiting value of tension (see 4.2) is not exceeded. The cable shall not be damaged by any mechanical restraint used for its support.

In the case of single-core cables, the spacing also depends on the dynamic forces due to a short-circuit current; the manufacturer's recommendations shall be observed.

Table 1 – Spacing of supports for non-armored cables in accessible positions

Overall diameter (D) of cable ^a mm	Maximum spacing of supports ^b (mm)			
	General		In caravans	
	Horizontal	Vertical	Horizontal	Vertical
$D \leq 9$	250	400	150	150
$9 < D \leq 15$	300	400	150	150
$15 < D \leq 20$	350	450	150	150
$20 < D \leq 40$ ^c	400	550	-	-

^a For flat cables this is taken as the measurement of the major axis.

^b The spacings stated for horizontal runs may also be applied to runs at an angle of more than 30° from the vertical. For runs at an angle of 30° or less than the vertical, the vertical spacings are applicable.

^c For the spacing of supports for cables of overall diameter exceeding 40 mm, and for single core cables having conductors of cross-sectional area 300 mm² and larger, the manufacturer's recommendations shall be observed.

Cables which have been in use can be damaged if they are disturbed. This can arise from the effect of natural ageing on the physical properties of the materials used for cable insulation and sheathing which can ultimately result in hardening of these materials.

3. Limiting conditions

3.1 Voltage

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The rated voltage of a cable is the reference voltage for which the cable is designed.

The rated voltage in an alternating current system, is expressed by the combination of two values U_0/U , expressed in volts, where:

a) U_0 is the r.m.s. value between any insulated conductor and "earth" (metal covering of the cable or the surrounding medium);

b) U is the r.m.s. value between any two phase conductors of a multicore cable or of a system of single core cables.

In an alternating current system, the rated voltage of a cable or cord shall be at least equal to the nominal voltage of the system for which it is intended. This condition applies to the values of both U_0 and U .

In a direct current system, the maximum permanent operating voltage of the system is stated in Table 2.

Table 2 – Examples of maximum permitted voltages against rated voltage of cable

Rated voltage of cable U_0/U V	Maximum permanent permitted operating voltage of the system			
	a.c.	3-phase a.c.	d.c.	
	Conductor-earth U_0 max (V)	Conductor-conductor U max (V)	Conductor-earth V	Conductor-conductor V
300/300	320	320 ^a	410	410
300/500	320	550	410	820
450/750	480	825	620	1240

a Single phase power system only.

4. Mechanical stress

4.1 General

In assessing the potential risk of mechanical damage to cables, account shall be taken of any mechanical strains likely to be imposed during the normal process of installation of cables.

4.2 Tension

The tension applied to a cable shall not exceed the following values of tensile stress per conductor, subject to a total maximum tensile force of 1000 N, unless otherwise agreed by the cable manufacturer:

a) 50 N/mm² for non-flexible cables during installation;

b) 15 N/mm² for flexible cables under static tensile stress, and for non-flexible cables in service in fixed circuits.

NOTE: A mass of 1 kg is approximately equal to 10 N.

In circumstances where a stress exceeding these values would result, a separate stress-bearing member or device shall be used. The method of attaching such a member or device to the cable shall be such that the cable is not damaged.

In circumstances where flexible cables are under dynamic stress (including those due to inertia, e.g. reeling drums) the permissible tensions or fatigue life shall be agreed between the design engineer and the cable manufacturer.

Where cables are installed vertically, without intermediate support, and are inaccessible and unlikely to be moved or disturbed, they shall be supported at the top of the run such that the internal radius of the resultant bend is not less than the appropriate minimum bending radius for normal use according to Table 3. The unsupported vertical length shall not exceed 5 m.

4.3 Bending

The internal bending radii (R) (as shown in Figure 1) for different types of cable shall, under normal circumstances, be not less than those given in Table 3.

Care shall be taken when stripping the insulation to ensure that no damage occurs to the conductor, since this will severely affect the bending radii.

The bending radii (R) recommended are for ambient temperatures of $(20 \pm 10) ^\circ\text{C}$. For temperatures outside these limits, the cable manufacturer's recommendations shall be followed.

For flexible cables and cords, particularly at terminations and at the point of entry of moveable appliances, it can be necessary to use a device which ensures that the cable is not bent to an internal bend radius less than that recommended in Table 3. It is necessary to prevent the cable being flexed significantly too close to any internal and/or external anchorage point. If a cord guard or other device is used, it shall not prevent internal movement of the cores of the cable within the device.

NOTE: R is internal bending radius.

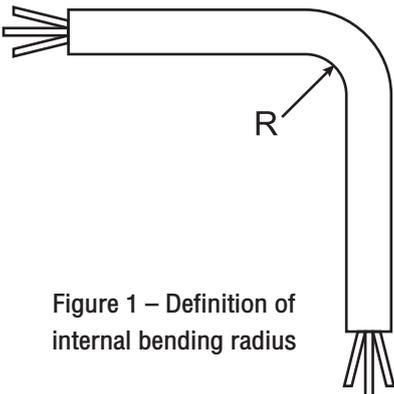


Figure 1 – Definition of internal bending radius

APPENDIX

Table 3 – Minimum recommended bending radii at cable temperatures of (20 ± 10) C

Cable type	Minimum bending radius			
	Cable diameter mm ≤ 8	Cable diameter mm >8 ≤ 12	Cable diameter mm >12 ≤ 20	Cable diameter mm >20
Cable for fixed installations:				
Normal use	4D	5D	6D	6D
Careful bending at termination	2D	3D	4D	4D
Flexible cables (thermoplastic, e.g. PVC):				
Fixed installation	3D	3D	4D	4D
Free movement	5D	5D	6D	6D
At inlet of portable appliance or mobile equipment ^a	5D	5D	6D	6D
Under mechanical load ^b	9D	9D	9D	10D
Festooned ^c	10D	10D	11D	12D
Repeated reeling ^b	7D	7D	8D	8D
Deflected by pulleys ^b	10D	10D	10D	10D
Flexible cables (thermosetting, e.g. rubber):				
Fixed installation	3D	3D	4D	4D
Free movement	4D	4D	5D	6D
At inlet of portable appliance or mobile equipment ^a	4D	4D	5D	6D
Under mechanical load ^b	6D	6D	6D	8D
Festooned ^c	6D	6D	6D	8D
Repeated reeling ^b	6D	6D	6D	8D
Deflected by pulleys ^b	6D	6D	6D	8D

D = the overall diameter of round cables or the smaller dimension of flat cables.

a No mechanical load on the cable.

b See 3.2 with regard to dynamic stress.

c As in gantry cranes.

5. Drum Handling

1. As received at stores or site, check the cable drums for any physical damages to the drum and outer wooden laggings. Also check that the cable end cover are proper and in position.

2. Loading/unloading of the drum to or from truck should be done by crane or use of a ramp. Do not drop the drum or throw from the truck since this is not only damage the drum, the cable may also be damaged. Follows the picture in next page.

3. Flanges shall be kept always in up-right position during storage and handling and paying off or during transportation of drum. Use pair of jacks with stand and shaft for mounting cable drums before paying off. Spindles of adequate size will be selected depending on the weight and size of the cable drum.

4. After removal of the drum lagging, a thorough physical inspection of the cable shall be carried out.

5. Roll the drum only in the direction of painted arrow on the drum flanges and only for short distances.

6. Keep a man stationed near the drum with a plank wedged against the flange so that overrunning of the drum could be prevented if rolling stops.

7. Cable end shall be taken out from the top side of the mounted drum of cable, and never from the bottom side.

8. Do not lay the damaged cables before repair and testing.

6. Storage

Cable should be stored in a dry place with roof in order to prevent the premature rotten of the wooden drum or lagging. The floor should be concrete or firm enough to prevent the drum from sinking. Chocks must be used to prevent the movement of the drum. The cable drum should be kept in a place where security and fire damage are protected during storage.

CERTIFICATE

CERTIFICATE

This is to certify that

Phelps Dodge International (Thailand) Limited
 100 Moo 10 Su Wattana Road, Tapanak Rd. 106 17
 Bangkok, Bangkok District, Metropolitan 10600 Thailand
 with the organizational activities as listed in the annex

has implemented and maintains a **Quality Management System**

Scope
 The design and manufacture of copper and aluminum cables for power applications and telecommunications applications in the system Thailand.
 The design and manufacture of copper and aluminum cables for power applications in Phrayang, Thailand.

Through an audit, documented in a report, it was verified that the management system fully meets requirements of the following standard:

ISO 9001 : 2008

Certificate registration no. 028711 0008
 Date of original certification: 2005-05-08
 Date of re-certification: 2014-11-12
 Valid until: 2017-11-12

UKAS

DNV UK Ltd

[Signature]
 Director

Information only: This is not a standard service. The certificate is issued on the condition that the certificate holder will comply with the requirements of the standard. The certificate is issued on the condition that the certificate holder will comply with the requirements of the standard.

Annex to Certificate
 Registration No. 438873 0008

Phelps Dodge International (Thailand) Limited
 100 Moo 10 Su Wattana Road, Tapanak Rd. 106 17
 Bangkok, Bangkok District, Metropolitan 10600 Thailand

Including the following site:

049710
 Phelps Dodge International (Thailand) Limited
 89 Moo 4, Muangphong, Muangphong District,
 Phrayang 21100 Thailand

Location

049802
 Phelps Dodge International (Thailand) Limited
 100 Moo 10 Su Wattana Road, Tapanak Rd. 106 17
 Bangkok, Bangkok District, Metropolitan 10600 Thailand

Management system: Human resource management, Training, Technical service, Marketing of customer companies

The annex address (2014-11-12) is only valid in connection with the accreditation certificate.

CERTIFICATE

This is to certify that

Phelps Dodge International (Thailand) Limited
 100 Moo 10 Su Wattana Road, Tapanak Rd. 106 17
 Bangkok, Bangkok District, Metropolitan 10600 Thailand
 with the organizational activities as listed in the annex

has implemented and maintains an **Environmental Management System**

Scope
 The Environmental Management System of Phelps Dodge International (Thailand) Limited complies with the design and manufacture of copper and aluminum cables for power applications and telecommunications applications in the system Thailand.
 The Environmental Management System of Phelps Dodge International (Thailand) Limited complies with the design and manufacture of copper and aluminum cables for power applications in Phrayang, Thailand.

Through an audit, documented in a report, it was verified that the management system fully meets requirements of the following standard:

ISO 14001 : 2004

Certificate registration no. 048910 000
 Date of original certification: 2005-05-08
 Date of re-certification: 2014-11-12
 Valid until: 2017-11-12

UKAS

DNV UK Ltd

[Signature]
 Director

Information only: This is not a standard service. The certificate is issued on the condition that the certificate holder will comply with the requirements of the standard. The certificate is issued on the condition that the certificate holder will comply with the requirements of the standard.

Annex to Certificate
 Registration No. 438870 000

Phelps Dodge International (Thailand) Limited
 100 Moo 10 Su Wattana Road, Tapanak Rd. 106 17
 Bangkok, Bangkok District, Metropolitan 10600 Thailand

Including the following site:

049710
 Phelps Dodge International (Thailand) Limited
 89 Moo 4, Muangphong, Muangphong District,
 Phrayang 21100 Thailand

The annex address (2014-11-12) is only valid in connection with the accreditation certificate.

CERTIFICATE

This is to certify that

Phelps Dodge International (Thailand) Limited
 100 Moo 10 Su Wattana Road, Tapanak Rd. 106 17
 Bangkok, Bangkok District, Metropolitan 10600 Thailand
 with the organizational activities as listed in the annex

has implemented and maintains an **Occupational Health and Safety Management System**

Scope
 The Occupational Health and Safety Management System of Phelps Dodge International (Thailand) Limited complies with the design and manufacture of copper and aluminum cables for power applications and telecommunications applications in the system Thailand.
 The Occupational Health and Safety Management System of Phelps Dodge International (Thailand) Limited complies with the design and manufacture of copper and aluminum cables for power applications in Phrayang, Thailand.

Through an audit, documented in a report, it was verified that the management system fully meets requirements of the following standard:

BS OHSAS 18001 : 2007

Certificate registration no. 048711 0000
 Date of original certification: 2005-05-08
 Date of re-certification: 2014-11-12
 Valid until: 2017-11-12

UKAS

DNV UK Ltd

[Signature]
 Director

Information only: This is not a standard service. The certificate is issued on the condition that the certificate holder will comply with the requirements of the standard. The certificate is issued on the condition that the certificate holder will comply with the requirements of the standard.

Annex to Certificate
 Registration No. 438871 850H

Phelps Dodge International (Thailand) Limited
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 89 Moo 4, Muangphong, Muangphong District,
 Phrayang 21100 Thailand

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NOTE

Why Phelps Dodge



Raw material

Each of raw materials is elaborately selected from specialized and reliable suppliers by concisely selection criteria and incoming inspection.

Copper

Phelps Dodge International Thailand (PDITL) possesses state-of-the-art technology of copper melting furnace producing high purity oxygen free copper rod. PDITL's copper rod provides high conductivity of conductor and ensures best quality of wires and cables.

Insulation

Because of best-in-class raw materials and manufacturing process, insulation employed on PDITL's wires and cables are ensured highest level of safety and quality over lifetime.

Testing

PDITL's quality commitment begins with the careful scrutiny of raw materials and continues to the testing of final products, where finish length of cable undergoes a series of rigorous tests to meet their specification criteria before being shipped to customers.



Technical service

PDITL's is willing to provide pre-purchased and post-purchased technical service by well-trained human resource with strong background and solid experience.

Customer

No wonder PDITL's products are chosen by various leading organizations in Thailand and worldwide, including; EGAT PEA MEA TOT PTT. Indeed, PDITL's industry-wide reputation speaks for itself.

Distribution center

PDITL and its business partners own entirely distribution and transportation facilities countrywide to offer superior delivery service to customer premises.

Safety

Safety is at the very core of our manufacturing excellence, and is an integral part of our industry leading and performance. Not only safety concern in internal manufacturing processes, but also concern safety in use of our products.



Address and Contact Point

Sales and Executive Office:

518/5 Maneeya Center Bldg., 16 Fl. Ploenchit Rd.,
Lumpinee, Pathumwan, Bangkok 10330 Thailand
Tel : [662] 680 5800
Fax : [662] 680 5896, 680 5898
Website: www.pdic.co.th

Bangplee Factory :

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Bangpla, Bangplee, Samut Prakarn 10540 Thailand.
Tel : [662] 769 2400
Fax : [662] 769 2440

Rayong Factory:

9/9 Moo4, Tambol Nikompattana,
Ampur Nikompattana, Rayong 21180 Thailand
Tel : [66] 038 877 155 [Auto 10 Lines]
Fax : [66] 038 877 166