



ENERGY BUILDS
POSSIBILITIES



**PRODUCT
CATALOGUE**



About Us

PHD Power is a South African distributor of cable, power electronics, and fans. Our products are sourced globally and adhere to high international standards in order to ensure that our clients are supplied with the best. With over 10 years experience in the power industry, our staff is well equipped with the knowledge to find the right products for a customer's applications. We strive to provide the best service at the most competitive prices



Our Product

Products are sourced both locally and globally with the assurance that they adhere to high international standards. A selection of sought-after cross sections and semiconductors are readily available, sparing our valued customers from prolonged waits from overseas.

Our Service

Cable is supplied in full drums or cut to specification at no extra cost. We deliver to the greater Johannesburg area, Pretoria and eMalahleni. In 2022 we extended our service to the Western Cape with a branch in Milnerton.

Our Team

With years of experience our team assists customers procure the ideal product for all their projects.

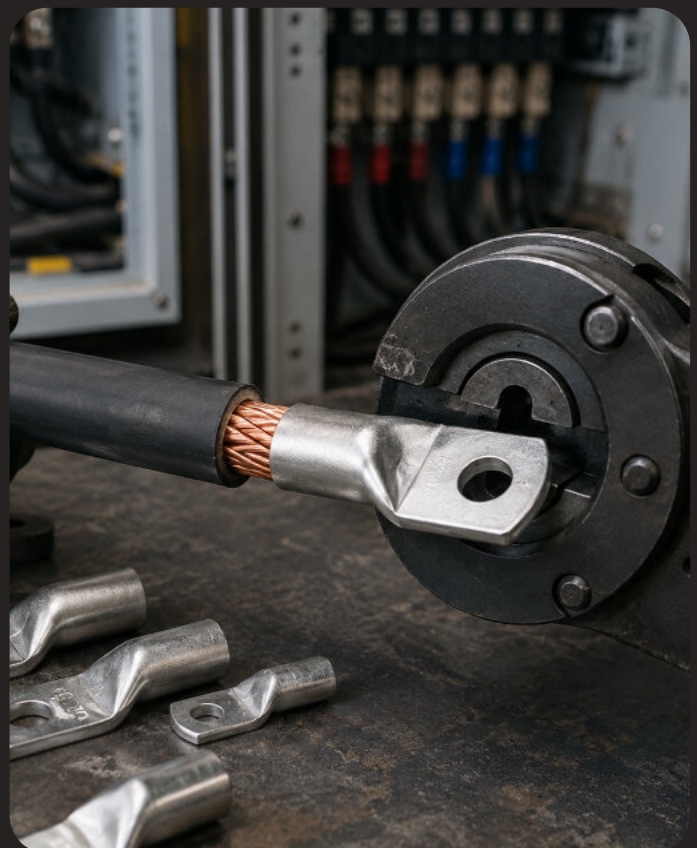


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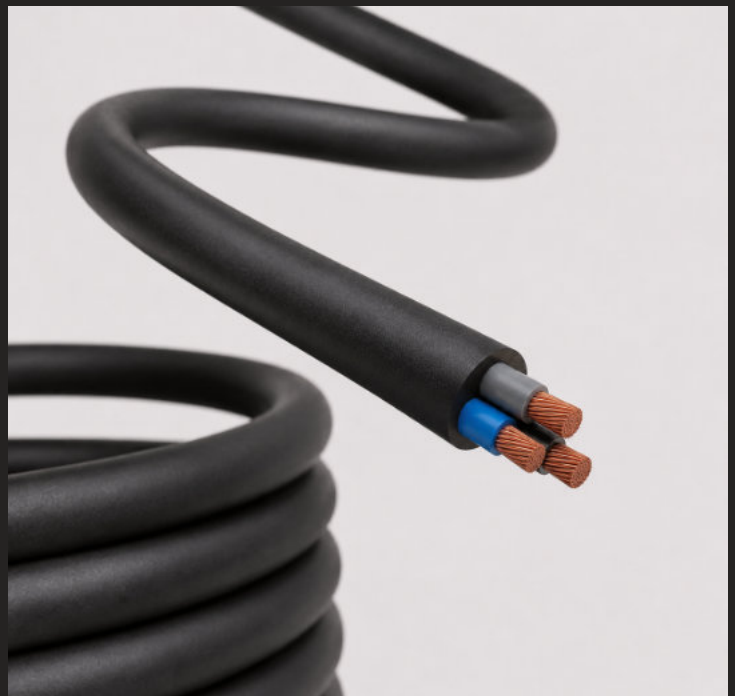
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RUBBER CABLES

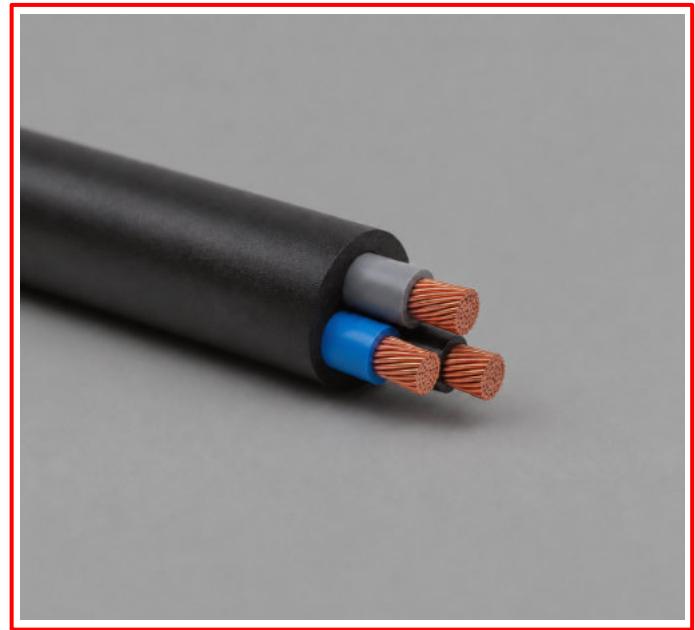


APPLICATION

H07RN-F is a highly flexible, heavy-duty rubber cable designed primarily for trailing applications and the connection of portable or mobile electrical equipment. It is particularly suitable for installations where the cable may be exposed to frequent movement and mechanical stress.

The cable offers excellent resistance to weather, oils, grease, abrasion, mechanical impact and thermal stress, making it suitable for demanding industrial and outdoor environments.

Typical applications include pumps, refrigeration and catering equipment, power tools, boilers, heating appliances, portable lighting, motors, generators and other heavy-duty electrical equipment. H07RN-F cable is suitable for use in dry, damp and wet environments, as well as for outdoor installations.



CONSTRUCTION



Flexible Class 5 Bare Copper Conductor



Ethylene Propylene Rubber Insulation



Polychloroprene Rubber (PCP) Outer Sheath



Rubber Compound Inner Sheath

PROPERTIES

Nominal Voltage	450/750V
Max. Voltage	Fixed and Protected Insulation: 1000V
Temperature Rating	Fixed: -40°C to +60°C Fixed and Protected: +85°C
Min. Binding Radius	Fixed: D<8= 3D<3D 12= D<20= 4D D>20= 4D Free: D<8= 4D <12= 4D D<5D= 20>20= 6D
Max. Pulling Stress	Fixed: 50 N/mm Copper Dynamic Applications: 15 N/mm

FEATURES



Flexible



Weather Resistant



Oil Resistant



Abrasion Resistant



Flame Retardant

PACKAGING



Full Drums



Cut to Spec.

Standards

Ozone Resistant	CEI EN 60811-2-1 (Test Method A) CEI EN 50396 (Test Method B) CEI EN 50525-2-21 CEI 20-107/2-21 CEI 20-19/4 (CENELEC HD 22.4 S4)
Other Standards	BS 7919:2001 NF C 32-102-4 VDE 0282 EN 50575:2014 EN 50575/A1:2016 SANS 1574-1

Core Identification

Single Core	Black
Two Cores	Blue - Brown
Three Cores	Brown - Black - Grey (or Y/G, Blue-Brown)
Four Cores	Blue-Brown-Black-Grey (or Y/G instead of Blue)
Five Cores	Y/G-Blue-Brown-Black-Grey

H07RN-F

Flexible Rubber Insulated Cable

Cores No.	Cross Section	Approx Conductor Diam.	Insulation Medium Thickness	Approx External Production Diam.	Approx Cable Weight	Electric Resistance at 20°C	Mobile Service Current Carrying Capacity at 60°C (Conductor Temp.)	Current Carrying Rate for Fixed Installation at 85°C of Conductor (Temp. Open Air)
(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(0hm/km)	(A)	(A)
SINGLE CORE								
1x	1.5	1.6	0.8	5.90	50	13.3	16	23
1x	2.5	2.0	0.9	6.50	65	7.98	25	32
1x	4	2.6	1.0	7.40	89	4.95	30	43
1x	6	3.4	1.0	8.10	115	3.3	38	56
1x	10	4.4	1.2	10.40	190	1.91	53	77
1x	16	5.7	1.2	11.62	259	1.21	70	102
1x	25	6.9	1.4	13.74	375	0.78	94	136
1x	35	8.1	1.4	15.35	492	0.554	117	168
1x	50	9.8	1.6	17.68	675	0.386	148	203
1x	70	11.6	1.6	20.00	908	0.272	185	254
1x	95	13.3	1.8	22.12	1171	0.206	222	299
1x	120	15.1	1.8	24.54	1445	0.161	260	363
1x	150	16.8	2.0	26.87	1783	0.129	300	416
1x	185	18.6	2.2	28.89	2125	0.106	341	475
1x	240	21.4	2.4	32.62	2733	0.0801	407	559
1x	300	23.9	2.6	36.46	3348	0.0641	468	637
1x	400	27.5	2.8	39.60	4800	0.0486	553	722
1x	500	35.0	3.0	45.50	5800	0.0384	620	833
1x	630	39.0	3.0	49.50	6800	0.0287	742	888

Cores No.	Cross Section	Approx Conductor Diam.	Insulation Medium Thickness	Approx External Production Diam.	Approx Cable Weight	Electric Resistance at 20°C	Mobile Service Current Carrying Capacity at 60°C (Conductor Temp.)	Current Carrying Rate for Fixed Installation at 85°C of Conductor (Temp. Open Air)
(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)	(A)	(A)
TWO CORES								
2x	1	1.3	0.8	8.40	90	19.5	10	18
2x	1.5	1.6	0.8	9.10	109	13.3	18	23
2x	2.5	2.0	0.9	10.80	158	7.98	27	32
2x	4	2.6	1.0	12.40	217	4.95	34	43
2x	6	3.4	1.0	13.80	282	3.3	43	56
2x	10	4.4	1.2	19.37	539	1.91	60	77
2x	16	5.7	1.2	21.76	722	1.21	79	102
2x	25	6.9	1.4	25.93	1043	0.78	105	136
2x	35	8.1	1.4	28.77	1169	0.554	129	168
2x	50	9.8	1.6	33.10	1606	0.386	150	203
2x	70	11.6	1.6	37.80	2140	0.272	185	254
THREE CORES								
3G	1	1.3	0.8	9.07	110	19.5	10	18
3G	1.5	1.6	0.8	10.18	134	13.3	16	23
3G	2.5	2	0.9	11.58	196	7.98	25	32
3G	4	2.6	1.0	13.30	271	4.95	29	43
3G	6	3.4	1.0	14.78	355	3.3	36	56
3G	10	4.4	1.2	20.73	674	1.91	51	77
3G	16	5.7	1.2	23.26	913	1.21	67	102

H07RN-F

Flexible Rubber Insulated Cable

Cores No.	Cross Section	Approx Conductor Diam.	Insulation Medium Thickness	Approx External Production Diam.	Approx Cable Weight	Electric Resistance at 20°C	Mobile Service Current Carrying Capacity at 60°C (Conductor Temp.)	Current Carrying Rate for Fixed Installation at 85°C of Conductor (Temp. Open Air)
(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)	(A)	(A)
THREE CORES								
3G	25	6.9	1.4	27.69	1324	0.78	89	136
3G	35	8.1	1.4	30.95	1754	0.554	110	168
3G	50	9.8	1.6	35.80	2409	0.86	138	203
3G	70	11.6	1.6	40.45	3211	0.272	172	254
3G	95	13.3	1.8	45.08	4210	0.206	204	299
3G	120	15.1	1.8	49.93	5205	0.161	238	363
3G	150	16.8	2.0	54.78	6389	0.129	273	416
3G	185	18.6	2.2	58.99	7591	0.106	309	475
3G	240	21.4	2.4	67.85	9944	0.0801	365	559
3G	300	23.9	2.6	75.56	10133	0.0641	450	637
FOUR CORES								
4G	1	1.3	0.8	10.00	136	19.5	10	16
4G	1.5	1.6	0.8	10.76	166	13.3	16	21
4G	2.5	2	0.9	12.73	241	7.98	20	29
4G	4	2.6	1.0	14.63	336	4.95	30	38
4G	6	3.4	1.0	16.44	449	3.3	37	50
4G	10	4.4	1.2	22.57	833	1.91	52	68
4G	16	5.7	1.2	25.36	1138	1.21	69	92
4G	25	6.9	1.4	30.75	1714	0.78	92	122

Cores No.	Cross Section	Approx Conductor Diam.	Insulation Medium Thickness	Approx External Production Diam.	Approx Cable Weight	Electric Resistance at 20°C	Mobile Service Current Carrying Capacity at 60°C (Conductor Temp.)	Current Carrying Rate for Fixed Installation at 85°C of Conductor (Temp. Open Air)
(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)	(A)	(A)
FOUR CORES								
4G	35	8.1	1.4	34.23	2204	0.554	114	150
4G	50	9.8	1.6	39.56	3029	0.386	143	182
4G	70	11.6	1.6	44.89	4121	0.272	178	232
4G	95	13.3	1.8	50.36	5361	0.206	210	281
4G	120	15.1	1.8	55.33	6546	0.161	246	325
4G	150	16.8	2.0	60.87	8095	0.129	282	373
4G	185	18.6	2.2	65.70	9652	0.100	319	425
4G	240	21.4	2.4	75.70	12614	0.0801	377	500
4G	300	23.9	2.6	86.33	13890	0.0641	460	588
FIVE CORES								
5G	1	1.3	0.8	11.0	168	19.5	10	16
5G	1.5	1.6	0.8	11.80	206	13.3	16	21
5G	2.5	2	0.9	13.95	297	7.98	20	29
5G	4	2.6	1.0	16.25	442	4.95	30	38
5G	6	3.4	1.0	18.07	567	3.3	38	50
5G	10	4.4	1.2	24.75	1010	1.91	54	68
5G	16	5.7	1.2	28.01	1400	1.21	71	92
5G	25	6.9	1.4	33.57	2096	0.78	94	122
5G	35	8.1	1.4	39.20	2697	0.554	114	150

H07RN-F

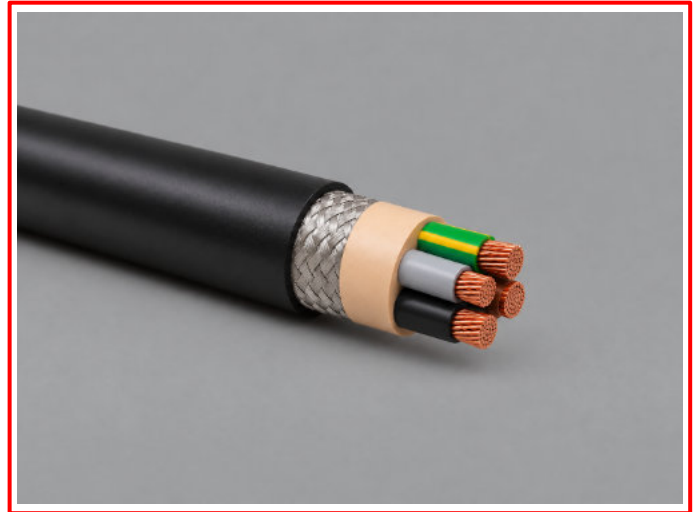
Flexible Rubber Insulated Cable

Cores No.	Cross Section	Approx Conductor Diam.	Insulation Medium Thickness	Approx External Production Diam.	Approx Cable Weight	Electric Resistance at 20°C	Mobile Service Current Carrying Capacity at 60°C (Conductor Temp.)	Current Carrying Rate for Fixed Installation at 85°C of Conductor (Temp. Open Air)
(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)	(A)	(A)
FIVE CORES								
5G	50	8.9	1.6	45.4	3740	0.386	143	182
5G	70	11.6	1.6	48.0	5033	0.272	178	232
5G	95	13.3	1.8	53.22	6271	0.206	210	281
MULTI-CORES								
7G	1.5	1.6	0.8	15.30	315	13.30	16	21
7G	2.5	2.0	0.9	17.90	445	7.98	20	29
7G	4	2.6	1.0	19.64	618	4.95	25	38
10G	1.5	1.6	0.8	17.9	420	13.30	16	21
12G	1.5	1.6	0.8	18.4	493	13.30	16	21
12G	2.5	2.0	0.9	22.17	702	7.98	20	29
12G	4	2.6	1.0	25.77	1004	4.95	25	38
19G	1.5	1.6	0.8	22.79	710	13.30	16	21
19G	2.5	2.0	0.9	26.52	1030	7.98	20	29
24G	1.5	1.6	0.8	25.04	898	13.30	16	21
24G	2.5	2.0	0.9	29.37	1312	7.98	20	29
36G	1.5	1.6	0.8	29.30	1246	13.30	16	11
36G	2.5	2.0	0.9	35.0	1851	7.98	20	29

APPLICATION

S07RC4N8-F is a flexible, screened rubber cable designed for submersible pumps and motors. Its copper-braid screen provides electrical protection, while the water-resistant rubber sheath offers excellent resistance to moisture, ozone, UV exposure, weathering and mechanical stress.

The cable is suitable for use in process water, cooling water, mine surface water, rainwater, and combined wastewater, and may also be used in groundwater and seawater at depths of up to 500m, subject to installation conditions.



CONSTRUCTION



Flexible Bare Class 5 Copper, Tinned up to and including 6mm



Vulcanised Rubber Insulation and Inner Sheath, Basis EPR Compound EI7



Polychloroprene Rubber (PCP) Outer Sheath



Vulcanised Rubber, Basis EPR Compound Em6, Light in Colour



Braid of tinned Copper Wire Screen

PROPERTIES

Nominal Voltage	450/750V
Max. Permissible Operating Voltage	AC: 0.476/0.825kV DC: 0.619/1.239kV
AC Test Voltage (Main Cores)	2.5kV (15 min.)
Max. Submersing Depth	500 meters
Temperature Rating	Fixed: -40°C to +90°C Free: -25°C
Max. Water Temperature	40°C
Min. Binding Radius	Fixed: 4 x ODmax Free: 6 x ODmax

Standards

Flame Propagation	DIN EN 60332-1-2
Resistance to Oil	DIN EN 60811-404
Water Resistance	DIN EN 50525-2-21 Based on EN 50525-2-21

Core Identification

Up to Five Cores	coloured in accordance with DIN VDE 0293-307
From Six Cores	Black with white numerals

FEATURES



Flexible



Weather Resistant



Oil Resistant



Abrasion Resistant



Flame Retardant



Submersible 500m



Chemical Resistant



Sea Water Resistant

PACKAGING



Full Drums



Cut to Spec.

S07RC4N8-F

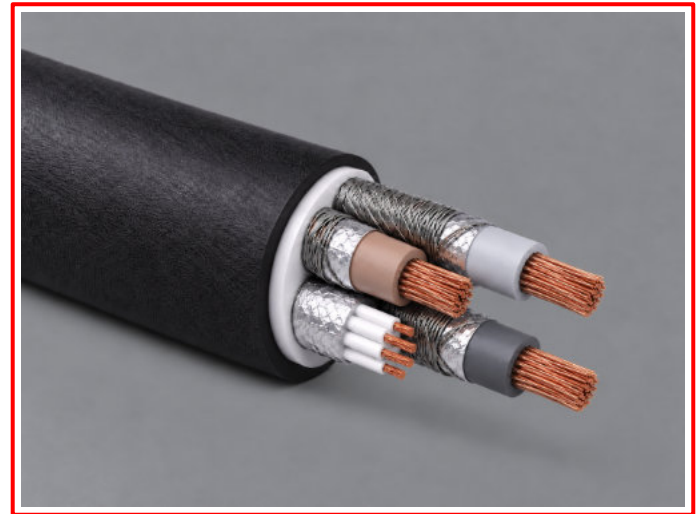
Cross Linked Elastometric Insulation Cable

Cores No.	Cross Section	Approx Conductor Diam.	Outer Diameter		Bending Radius		Cable Weight Net 1000m	Current Carrying Capacity at 30°C	Permissible Short Circuit Current (1s)	Permissible Pulling Force
			Min	Max	Fixed Install (Min)	Free Moving (Min)				Max
(N°)	(mm²)	(mm)	(mm)	(mm)	(mm)	(mm)	(kg)	(A)	(kA)	(N)
FOUR CORES										
4x	1.5	1.5	12.8	14.4	58	72	266	23	0.21	90
4x	2.5	1.9	15.2	17.2	69	86	388	30	0.36	150
4x	4	2.4	17.0	19.0	76	95	516	41	0.57	240
4x	6	2.9	18.9	20.9	84	105	630	53	0.86	360
4x	10	3.9	23.1	25.1	100	126	972	74	1.43	600
4x	16	5.7	26.6	29.6	118	148	1447	99	2.29	960
4x	25	6.8	31.8	34.8	139	174	2015	131	3.25	1500
4x	35	8.0	35.3	38.3	153	192	2539	162	5.01	2100
4x	50	9.4	40.5	43.5	174	218	3458	202	7.15	3000
4x	70	11.1	45.2	48.2	193	241	4586	250	10.01	4200
4x	95	12.1	50.0	54.0	216	270	5350	301	13.59	5700
MULTI-CORES										
7x	1.5	1.5	15.9	17.9	72	90	401	15	0.21	158
7x	2.5	1.9	18.8	20.8	83	104	580	19.5	0.36	263
8x	1.5	1.5	17.2	19.2	77	96	475	13.8	0.21	180
10x	2.5	1.9	24.0	26.0	104	130	854	16.5	0.36	375
12x	1.5	1.5	19.4	21.4	86	107	596	12	0.21	270
12x	2.5	1.9	22.4	24.4	98	122	809	15.6	0.36	450

APPLICATION

S1RN8-F is designed for submersible pumps, sewage tanks, and other electrical equipment operating in wastewater environments. Its flexible rubber sheath withstands medium mechanical stress and is suitable for submersion at depths of up to 2,000 m.

Each power core is individually screened with aluminium-laminated PET foil and tinned copper wire to minimise electromagnetic interference (EMI) while providing additional strength and insulation. The cable also includes four control cores for transmitting pump control signals, enabling a single cable solution for both power and control.



CONSTRUCTION



Plain or tinned, Finely Stranded Class 5 Copper Conductor



EPR Insulation



Chlorinated Polyethylene (CM/CPE) Outer Sheath



EPMD Rubber Inner Sheath



Screen of Aluminium Foil and Concentric Layer of Wires

PROPERTIES

Nominal Voltage	0.6/ 1 (1.2) kV
Test Voltage	4kV
Max. Submersing Depth	2000 meters
Temperature Rating	Fixed: -40°C to +90°C Free: -25°C
Max. Water Temperature	40°C
Min. Bending Radius	Fixed: 4 x OD > 12mm Free: 5 x OD > 12mm

Standards

Application	DIN EN 50565-2 DIN EN 50565-1 DIN VDE 0100-704/0165/0168
Conductor	DIN EN 60228
Compound	DIN EN 50363-1 DIN EN 50363-2-1
Core Identification	DIN VDE 0293-308 DIN EN 50525-1
Electrical Parameters	EN 50525-1 IEC 60502-1
Chemical Behaviour	DIN EN 50525-2-21 DIN EN 60811-404 DIN 4045 / DIN 4046
Fire Performance	DIN EN 60332-1-2

FEATURES



Flexible



Weather Resistant



Oil Resistant



Abrasion Resistant



Flame Retardant



Chemical Resistant



Submersible 2000m



Sea Water Resistant

PACKAGING



Full Drums



Cut to Spec.

S1RN8-F

Submersible Rubber Cable With Pilot Core

Basic Construction	Max. Wire Diam.	Min Outer Diam.	Max Outer Diam.	Bending Radius Fixed	Bending Radius Mobile	Conductor Resistance at 20°C	Current Carrying Capacity	Short Circuit Current Conductor	Cable Weight
	(mm)	(mm)	(mm)	(mm)	(mm)	(Ohmn/Km)	(A)	(1sec) [kA]	(kg/km)
3x2.5 + 3x2.5/3E + (4x0.5)St	2.0 plain / 0.9 tinned	18.0	20.0	75	94	7.98 40.1	38	0.36 0.072	410
3x6 + 3x6/3E + (4x0.5)St	2.0 plain / 0.9 tinned	20.0	22.0	84	105	30.3 40.1	67	0.86 0.072	580
3x10 + 3x10/3E + (4x0.5)St	3.8 plain / 0.9 tinned	24.0	26.0	98	123	1.91 40.1	93	1.43 0.072	940
3x16 + 3x16/3E + (4x0.5)St	5.0 plain / 0.9 tinned	24.0	26.0	100	126	1.21 40.1	125	2.29 0.072	1060
3x25 + 3x25/3E + (4x0.5)St	6.4 plain / 0.9 tinned	29.0	31.0	118	148	0.780 40.1	165	3.58 0.072	1480
3x35 + 3x35/3E + (4x0.5)St	7.5 plain / 0.9 tinned	32.0	34.0	131	164	0.554 40.1	205	5.01 0.072	1850
3x50 + 3x50/3E + (4x0.5)St	9.0 plain / 0.9 tinned	38.0	40.0	153	192	0.386 40.1	255	7.15 0.072	2650
3x70 + 3x70/3E + (4x0.5)St	10.7 plain / 0.9 tinned	42.0	44.0	172	215	0.272 40.1	316	10.0 0.072	3500

TYPE 41

Flexible Copper Screened Mining Cable

APPLICATION

Type 41 is suitable for mining operations around the world. This cable is applied for permanent use in waste water and in industrial water up to 40°C at a depth of max. 2000m. Typical applications include electrically driven machines, any movable electrical apparatus in hazardous area, small pumps, drills and for small shuttle cars.

CONSTRUCTION



Flexible Class 5
Adhered to SANS 1411-1
Tinned Annealed
Copper Wires Left Lay



Ethylene Propylene
Thermosetting
Compound Type RD 3
Comply to SANS 1411-3



Thermosetting
Compound Type RD 3
Adhere to SANS 1411-3



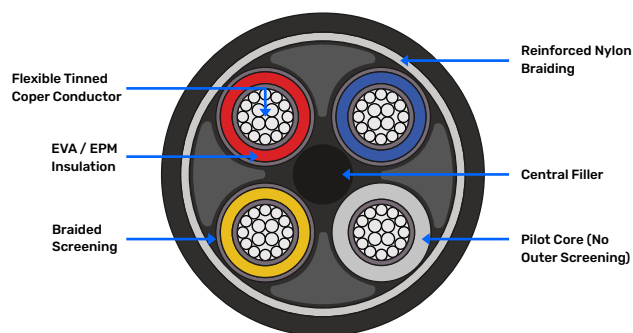
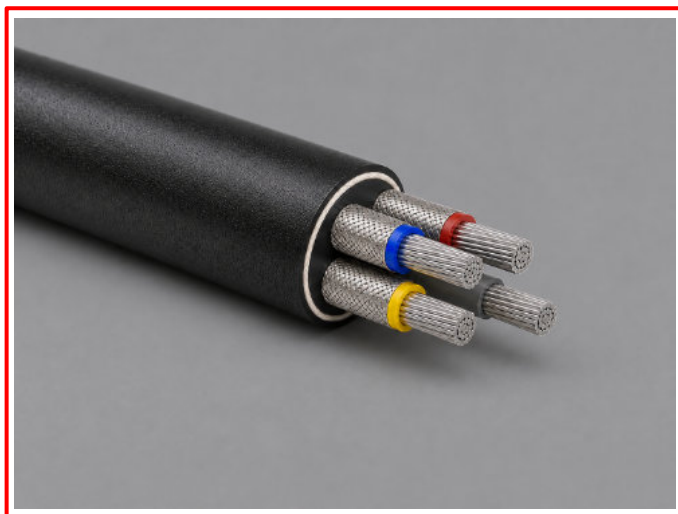
Thermosetting
Compound Type RD 3
Adhere to SANS 1411-3



Reinforced Nylon
Braiding



Individually Braided
Screened Cores



PROPERTIES

Nominal Voltage	640/1100V
Temperature Rating	-25°C to + 90°C
Min. Bending Radius	6 x ODmax

FEATURES



Flexible



Weather
Resistant



Oil
Resistant



Abrasion
Resistant



Flame
Retardant



Submersible

Standards	
Design Guidelines	SANS 1520-1
Materials	SANS 1411-3
Conductor Resistance	SANS 1411-3
Oil Resistance	SANS 1411-3

PACKAGING



Full Drums

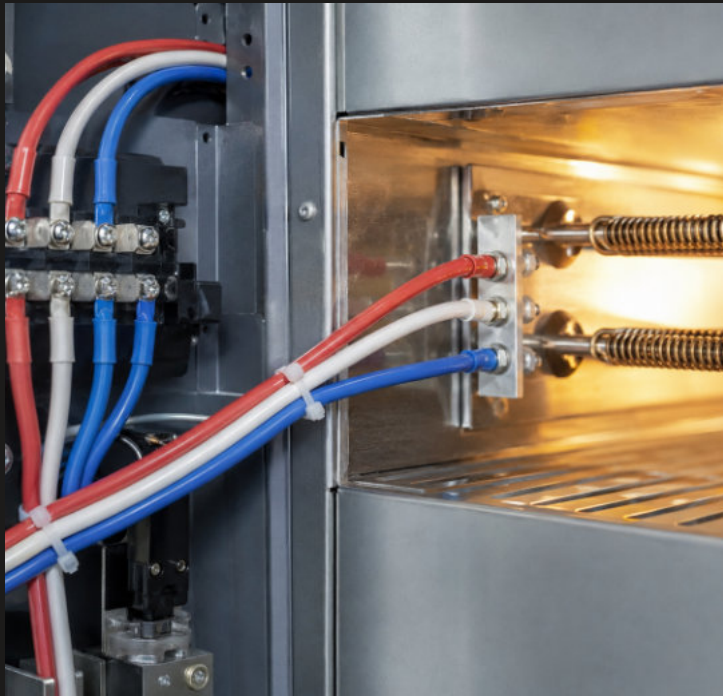


Cut to Spec.

TYPE 41

Flexible Copper Screened Mining Cable

Power Cores				Pilot Cores		
Conductor Size	Max. Wire Diam.	Max. Screen Wire Diam.	Braided Screen Filling Factor	Conductor Size	Cable Diam.	Approx. Cable Weight
(mm²)	(mm)	(mm)	%	(mm²)	(Mm %5)	(kg/km)
2.5	0.26	0.21	80	2.5	21.00	720
4	0.31	0.21	80	4	26.00	910
6	0.31	0.21	80	6	27.00	1110
10	0.41	0.31	80	10	30.00	1575
16	0.41	0.31	80	16	34.50	2125
25	0.41	0.31	80	16	40.00	2735



HEAT RESISTANT CABLES

APPLICATION

Silicone Cable is used for high temperatures such as fixed installation inside light instruments. The cable is suitable for both domestic and industrial use and is available in both bare or tinned. The silicone rubber insulation, in addition to giving high performance in high temperature environments, the cable is halogen free with excellent UV, ozone, oxygen, artificial light and atmospheric resistance. It also maintains its characteristics of elasticity in low temperatures of -50°C.

CONSTRUCTION



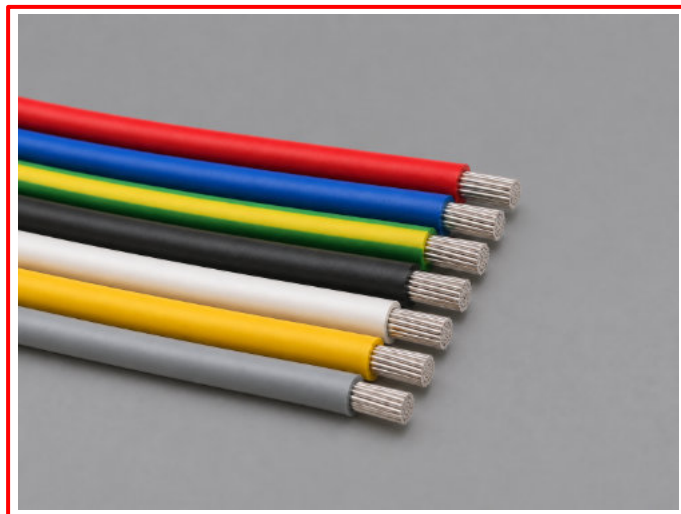
Tinned Flexible Class 5
Copper Conductor



Silicone Compound

PROPERTIES

Nominal Voltage	300/500V
Test Voltage	2000V
Temperature Rating	-50°C to 180°C
Min. Bending Radius	5 x ODmax
External $\varnothing$ Tolerance	0.5mm - 3.00mm : 0.1mm 0.4mm - 25.00mm : 0.2mm



FEATURES



Flexible



Weather
Resistant



Oil
Resistant



High
Temp Range



Halogen
Free

PACKAGING



100m Coils

Conductor Characteristics		Insulation				
Size	Diameter	Thickness	External	Resistance Max @ 20°C	(1) Max 20°C	Approx. Cable Weight
(mm²)	(mm)	(mm)	(mm)	(Ohm/km)	(A)	(kg/km)
0.50	0.70	0.45	1.60	81.00	5.00	5.40
0.50	0.90	0.60	2.10	39.00	12.00	9.10
0.75	1.20	0.60	2.40	26.00	15.00	12.60
1.00	1.30	0.60	2.50	19.50	17.00	15.10
1.50	1.60	0.60	2.80	13.30	23.00	20.40
2.00	1.80	0.60	3.00	9.75	28.00	25.80
2.50	2.00	0.70	3.40	7.98	33.00	32.60
3.00	2.20	0.70	3.60	6.50	37.00	36.00
4.00	2.70	0.75	4.20	4.95	41.00	50.00
6.00	3.30	0.85	5.00	3.30	50.00	74.50
10.00	4.40	1.05	6.50	1.91	80.00	125.00
16.00	5.50	1.25	8.00	1.21	100.00	196.00
25.00	6.80	1.50	9.80	0.78	145.00	304.00

APPLICATION

Silicone cabtrye is suitable for high temperature applications such as fixed installation inside light instruments. The silicone insulation is halogen free with excellent UV , ozone, oxygen and atmospheric resistance. It also maintains its characteristics of elasticity in low temperatures of -50°C

CONSTRUCTION



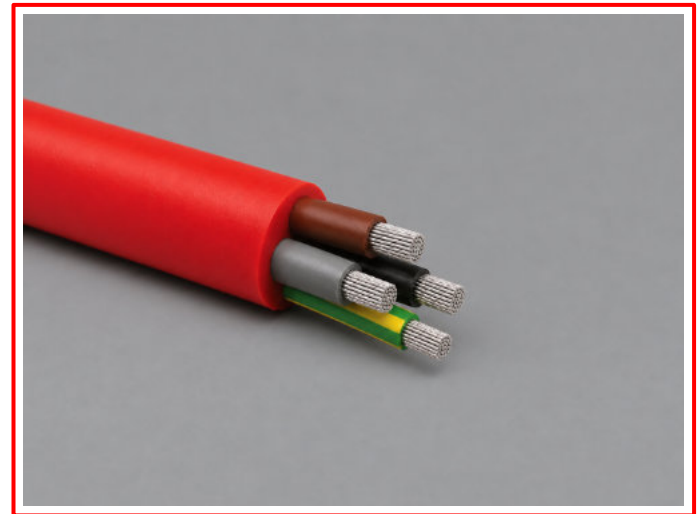
Tinned Flexible Class 5
Copper Conductor



Silicone Compound

PROPERTIES

Nominal Voltage	300/500V
Test Voltage	2000V
Temperature Rating	-60°C to 180°C
Min. Bending Radius	Fixed Installation: 3 x OD Mobile Installation: 4 x OD



Core Identification	
Three Cores	Yellow/Green - Blue - Brown
Four Cores	Yellow/Green - Blue - Brown - Black
Five Cores	Yellow/Green - Blue - Brown - Black - Grey

FEATURES



Flexible



Weather
Resistant



Oil
Resistant



High
Temp Range



Halogen
Free

PACKAGING



Full Drums



Cut to Spec.

Cores No.	Cross Section	Insulation Thickness	Sheath Thickness	Outer Diameter	Approx. Cable Weight	Electrical Resistance at 20°C
(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)
TWO CORES						
2G	0.50	0.6	0.8	5.8	52	39
2G	0.75	0.6	0.8	6.2	62	26
2G	1.00	0.6	0.8	6.5	71	19.5
2G	1.50	0.6	0.8	7.1	89	13.3
2G	2.50	0.7	1.0	8.9	141	7.98
2G	4.00	0.8	1.1	10.4	197	4.95
2G	6.00	0.8	1.1	11.6	257	3.3
2G	10.00	1.0	1.3	14.8	423	1.91
2G	16.00	1.2	1.4	17.8	603	1.21
2G	25.00	1.4	1.5	21.2	878	0.78
THREE CORES						
3G	0.50	0.6	0.8	6.1	61	39
3G	0.75	0.6	0.8	6.5	73	26
3G	1.00	0.6	0.8	6.9	85	19.5
3G	1.50	0.6	0.9	7.7	112	13.3
3G	2.50	0.7	1.1	9.6	177	7.98
3G	4.00	0.8	1.2	11.3	247	4.95
3G	6.00	0.8	1.2	12.6	326	3.3
3G	10.00	1.0	1.3	15.8	512	1.91
3G	16.00	1.2	1.5	19.2	767	1.21
3G	25.00	1.4	1.5	22.6	1112	0.78

Cores No.	Cross Section	Insulation Thickness	Sheath Thickness	Outer Diameter	Approx. Cable Weight	Electrical Resistance at 20°C
(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)
FOUR CORES						
4G	0.50	0.6	0.8	6.7	74	39
4G	0.75	0.6	0.8	7.1	89	26
4G	1.00	0.6	0.9	7.7	107	19.5
4G	1.50	0.6	1.0	8.6	142	13.3
4G	2.50	0.7	1.1	10.6	218	7.98
4G	4.00	0.8	1.2	12.3	306	4.95
4G	6.00	0.8	1.2	13.8	406	3.3
4G	10.00	1.0	1.4	17.6	648	1.91
4G	16.00	1.2	1.5	21.1	962	1.21
4G	25.00	1.4	1.6	25.2	1414	0.78
FIVE CORES						
5G	0.50	0.6	0.8	7.3	89	39
5G	0.75	0.6	0.9	8.0	112	26
5G	1.00	0.6	0.9	8.4	130	19.5
5G	1.50	0.6	1.0	9.4	173	13.3
5G	2.50	0.7	1.1	11.6	265	7.98
5G	4.00	0.8	1.3	13.7	381	4.95
5G	6.00	0.8	1.4	15.5	504	3.3

POLYBRAID

Flexible Silicone Insulated Polyester Braid

APPLICATION

Poly Braid Cable is typically used in control panels where high temperatures often resonate. The cable may be connected directly and permanently to a coil winding, motor or other electrical device components

CONSTRUCTION



Tinned, Flexible Class 5 Copper



Silicone Rubber Insulation



Orange Polyester Braid Outer Sheath

PROPERTIES

Nominal Voltage	1.5kV
Temperature Rating	-60°C to 180°C
Max. Short Circuit Temperature	350°C on the conductor
Min. Bending Radius	Fixed: 4 x ODmax

FEATURES



Flexible



Weather Resistant



Oil Resistant



Flame Retardant



Chemical Resistant



Wide Temp Range

PACKAGING



Full Drums



Cut to Spec.



Standards	
Fire	EN 60754-1/2 EN 61034-1/2 EN 60332-1-2
Other	EN 50361EC EN 60228

Nominal Size	Insulation Thickness	Outer Diam.	Cable Weight
(mm ²)	(mm)	(mm)	(kg/km)
1x16	6	17.6	396
1x25	6	19.2	504
1x35	6	20.4	613
1x50	6	21.7	780
1x70	6	23.4	1000
1x95	6	24.9	1213
1x120	6	26.7	1489
1x150	6	28.2	1575
1x185	6	29.9	2091



PVC CABLES

WELDING

Double Insulated Power Cable

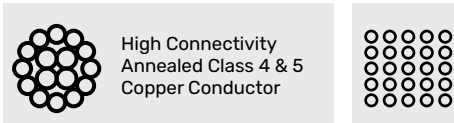
APPLICATION

Welding Cable is suitable for all types of indoor and outdoor electrical welding and power equipment. The PVC sheath provides extra resistance against moisture, abrasion, chemicals, and electrical leakage.

CONSTRUCTION



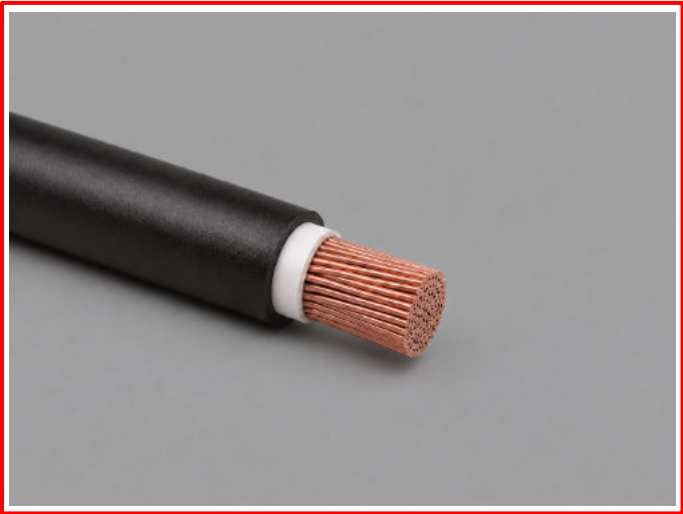
High Connectivity
Annealed Class 4 & 5
Copper Conductor



Soft Flexible Grade
PVC Insulation



PVC/Rubber Nitrile
Bland. Available in
Green, Blue, Grey,
Yellow, Red and Black



Standards
SANS 1507

PROPERTIES

Nominal Voltage	1000V
Test Voltage	6000V
Temperature Rating	-10°C to 80°C

FEATURES



Flexible



Abrasion
Resistant



Oil
Resistant



Chemical
Resistance

PACKAGING



Full Drums



Cut to Spec.

Cable Size	Outer Sheath Colour	Nominal Stranding	Approx. Overall Diam.	Current Rating		Volt Drop	Approx. Cable Weight.
				1ph 220V	3ph 380V		Mass Per 100m Coil
(mm²)		No x Diam	(mm)	(A)	(A)	(mV/A/M)	(kg)
16	Green	120x0.41	8.70	76	75	1.210	21.00
25	Blue	180x0.41	9.90	101	96	0.780	30.33
35	Grey	252x0.41	11.00	125	116	0.554	41.44
50	Red	366x0.41	13.40	151	138	0.386	59.88
70	Brown	516x0.41	15.40	192	171	0.272	83.00
95	Yellow	456x0.501	18.60	232	205	0.206	107.06
120	Black	582x0.501	21.30	269	234	0.161	136.92
150	Black	762x0.501	24.70	300	263		179.32
185	Black	924x0.501	26.80	341	298		220.10

APPLICATION

Orange nitrile cable is a flexible, heavy-duty electrical cord featuring a tough PVC-nitrile rubber blend outer sheath. It is designed to supply power to mobile and portable industrial equipment in harsh environments where it faces water, oil, chemicals, and physical wear

CONSTRUCTION



High Connectivity
Annealed Class 4 & 5
Copper Conductor



Tightly Bonded PVC/
Rubber Blend Nitrile
Sheath



PVC/Rubber Nitrile
Blend. Available in
Green, Blue, Grey,
Yellow, Red and Black

PROPERTIES

Nominal Voltage	1000V
Test Voltage	3000V
Temperature Rating	-10°C to 70°C



Standards

SANS 1507

FEATURES



Flexible



Abrasion
Resistant



Oil
Resistant



Chemical
Resistance

PACKAGING



Full Drums



Cut to Spec.

Cores No.	Cross Section	Nominal Stranding	Approx. Overall Diam.	Nominal Amp. Rating	Volt Drop		Approx Cable Weight
					1ph 220V	3ph 380V	Mass Per 100m Coil
(N°)	(mm²)	No x Diam	(mm)	(A)	(mV/A/M)	(mV/A/M)	(kg)
4G	1.5	28x0.26	10.90	15	29.00	25.00	17.38
4G	2.5	44x0.26	12.00	21	18.00	15.00	22.79
4G	4.0	49x0.31	14.70	28	11.00	9.50	34.80
4G	6.0	74x0.31	16.10	36	7.30	6.40	45.28
4G	10.0	126x0.31	19.10	50	4.40	3.80	69.80
4G	16.0	200x0.31	21.30	68	2.80	2.40	96.10

SUBMERSIBLE

Three & Four Cores PVC Submersible

APPLICATION

Submersible pump cable is designed to provide reliable electrical power to pumps operating in wet or fully submerged environments. Its durable, water-resistant insulation helps protect the conductors against moisture and demanding installation conditions.

It is commonly used with borehole, deep-well and submersible pumps, where the cable runs from the surface power supply down the pump riser to the motor below the water level.

CONSTRUCTION



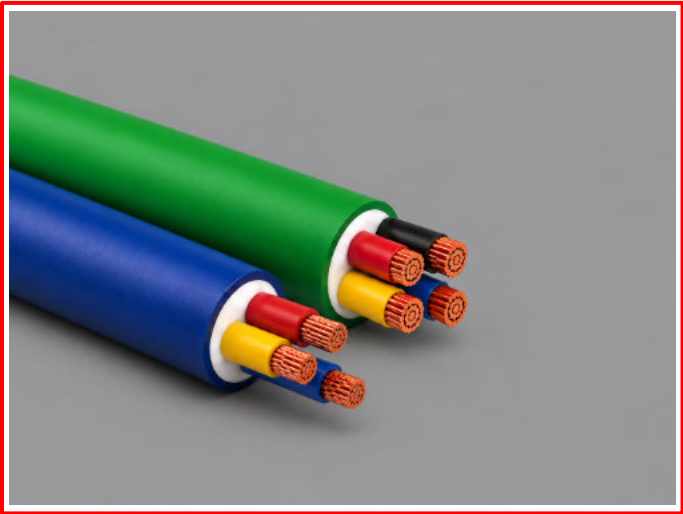
High Connectivity
Annealed Class 4 & 5
Copper Conductor



Flexible Grade
Waterproof PVC
Insulation



Blue - 3 Cores
Green - 4 Core



Core Identification

Three Cores	Red - Yellow - Blue
Four Cores	Red - Yellow - Blue - Black

Standards

SANS 1507

PROPERTIES

Nominal Voltage	600/1000V
Test Voltage	3000V
Temperature Rating	-10°C to 70°C

FEATURES



Flexible



Abrasion
Resistant



Oil
Resistant



Chemical
Resistance

PACKAGING



Full Drums



Cut to Spec.

Cores No.	Cross Section	Nominal Stranding	Volt Drop (Amp/m)		Mass
(N°)	(mm²)	No x Diam	1ph 220V	3ph 380V	(kg/100m)
3	1.5	28 x 0.26	29.00	25.00	17.38
3	2.5	44 x 0.26	18.00	15.00	22.79
3	4.0	49 x 0.31	11.00	9.50	34.80
3	6.0	74 x 0.31	7.30	6.40	45.28
3	10.0	126 x 0.31	4.40	3.80	69.80
3	16.0	200 x 0.31	2.80	2.40	96.10

APPLICATION

Panel Flex Cable is a flexible, PVC-insulated electrical cable designed for reliable internal wiring and control panel applications. Its flexibility allows for easy routing in confined spaces, making it ideal for switchboards, control panels, machinery and electrical equipment. The insulation is resistant to water, oil and abrasion.

CONSTRUCTION



High Connectivity
Annealed Class 5
Copper Conductor



Flexible Grade
Waterproof PVC
Insulation



Outer Sheath Available
in Various Colours



Standards

SABS 1574-3

FEATURES



Flexible



Abrasion
Resistant



Oil
Resistant



Chemical
Resistance

PROPERTIES

Nominal Voltage	300/500V
Test Voltage	6000V
Temperature Rating	-10°C to 70°C

PACKAGING



100m Coils

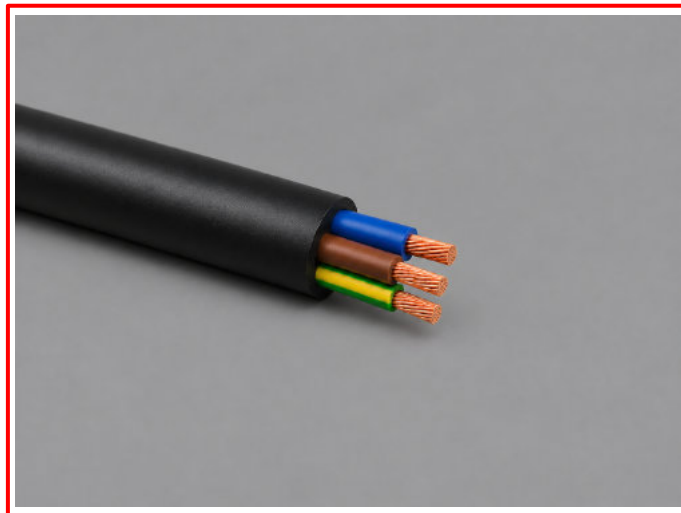
Cable Size	Nominal Stranding	Nominal Diameter	Nominal Current	Approx. Cable Weight
(mm ²)	No x Diam	(mm)	(A)	(kg/100m)
0.5	14 x 0.21	2.1	3	0.89
0.75	21 x 0.21	2.7	6	1.39
1.0	28 x 0.21	2.9	10	1.67
1.5	42 x 0.21	3.2	16	2.21
2.5	44 x 0.26	3.6	25	3.10
4.0	48 x 0.31	4.5	32	5.05
6.0	72 x 0.31	5.1	41	7.02

Cable Size	Nominal Stranding	Nominal Diameter	Nominal Current	Approx. Cable Weight
(mm ²)	No x Diam	(mm)	(A)	(kg/100m)
10.0	126 x 0.31	6.1	57	11.53
16.0	200 x 0.31	7.3	76	17.53
25.0	312 x 0.31	9.2	101	28.12
35.0	440 x 0.31	9.8	125	36.74
50.0	632 x 0.31	12.4	151	53.82
70.0	904 x 0.31	14.0	192	73.87
95.0	678 x 0.31	16.3	232	99.09
120.0	864 x 0.31	18.4	269	125.53

APPLICATION

Cabtyre Cable is a tough, flexible electrical cable designed for applications where durability and movement are required. Its robust outer sheath provides protection against abrasion, moisture and general wear.

It is commonly used for portable tools, machinery, pumps, extension leads and other industrial or workshop equipment.



CONSTRUCTION



High Connectivity
Annealed Class 5
Copper Conductor



Flexible Grade PVC
Insulation



Flexible Grade PVC
Available in Black &
White

PROPERTIES

Nominal Voltage	300/500V
Test Voltage	2000/3000V
Temperature Rating	-10°C to 80°C

Core Identification

Two Cores	Blue - Brown
Three Cores	Blue - Brown - Green/Yellow
Four Cores	Blue - Brown - Black - Green/Yellow
Five Cores	Blue - Brown - Black - Green/Yellow - Violet
Seven Cores	Blue - Brown - Black - Green/Yellow - Violet - Pink - Orange

Standards

SANS 157-2
IEC 60227-5

FEATURES



Flexible



Water
Resistant



Oil
Resistant



Chemical
Resistance



100m Coils

PACKAGING

Cable Size (mm²)	Nominal Amps		Nominal Diam.					Mass kg/100m				
	1ph 220V	3ph 380V	2C	3C	4C	5C	7C	2C	3C	4C	5C	7C
0.5	3	3	5.0	5.3	5.8			3.60	4.30	5.18		
0.75	6	6	5.4	5.8	6.3	8.0	8.7	4.41	5.34	6.48	9.67	11.98
1.0	13	11	6.6	7.0	7.8	8.5	9.3	6.33	7.61	9.54	11.55	14.30
1.5	16	15	7.5	8.2	9.2	10.2	11.1	8.60	10.81	13.59	16.89	21.34
2.5	23	20	9.2	10.0	10.9	12.1	13.2	13.45	16.45	20.29	25.58	32.13
4.0	30	27	10.7	11.3	12.4	14.0	15.2	18.8	23.09	28.50	36.14	45.67



CONTROL CABLES

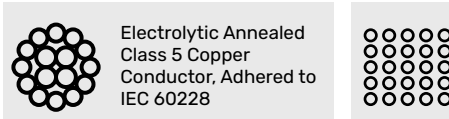
APPLICATION

Flextel is suitable for the control, transport, and distribution of electric power. It is special designed wiring cable for theater branches, for lighting and controlling. The cable structure and conductor lay-length make the cable more flexible and suitable for easy winding and unwinding.

CONSTRUCTION



Electrolytic Annealed
Class 5 Copper
Conductor, Adhered to
IEC 60228



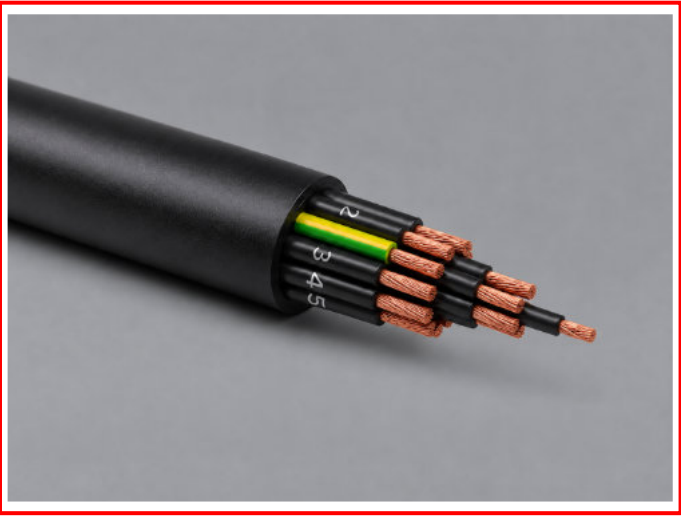
Flexible Grade
Waterproof PVC
Insulation



Flexible PVC Insulation
(IEC 60502) and PVC
90°C (UL 1581)

PROPERTIES

Nominal Voltage	0.6/1kV
Temperature Rating	Fixed: -40°C to 70°C Free: -5°C to 70°C
Max. Short Circuit Temperature	160°C
Min. Bending Radius	5 x ODmax.
Fire Performance	Low Halogen Emission



Standards	
Based On	IEC 60502-1
Flame Non-Propagation	EN 60332-1 IEC 60332-1
Oil Resistant	DIN EN 60811-404

FEATURES



Flexible



Flame
Retardant

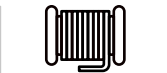


Oil
Resistant



Chemical
Resistant

PACKAGING



Full Drums



Cut to Spec.

APPLICATION

Overall Mylar Screened Instrumentation Cables are specifically designed for the transmission of low-level analogue and digital signals in process control and instrumentation systems. These cables are widely used in industrial environments where protection against electro-magnetic interference (EMI), radio frequency interference (RFI), and signal distortion is essential.

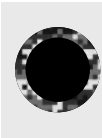
CONSTRUCTION



Tinned Class 4 Copper Conductor



PVC Insulation



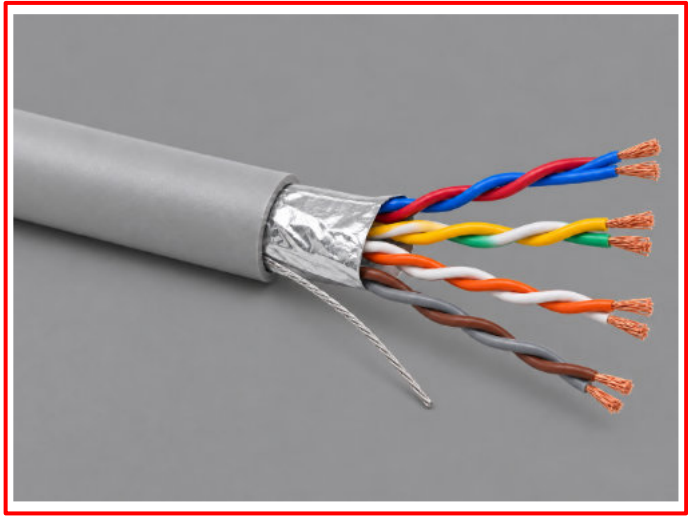
Overall Aluminium Mylar Screen



PVC Grey Outer Sheath

PROPERTIES

Nominal Voltage	300/500V
Test Voltage	3000V
Temperature Rating	-10°C to 80°C



PACKAGING



Full Drums



Cut to Spec.

SOLAR CABLES



APPLICATION

H1Z2Z2-K is suitable for interconnection of the various elements of photo-voltaic systems. It is suitable for fixed installation outside and inside without protection or inside pipes, ducting or similar closed systems, in direct or indirect buried installation and in environments that are subject to partial or total water submersion.

The cable has high resistance against Ozone, U.V rays, oils, moisture and weather conditions. The cable is suitable for use at an ambient temperature up to 90°C (120°C overload), thanks to the use of materials with a temperature-index of 120°C, determined according to Norm IEC 60216 (20000 h and 50% of residual elongation). The estimated lifetime of these cables is at least 25 years.

CONSTRUCTION



Flexible Tinned Class 5
Copper Conductor



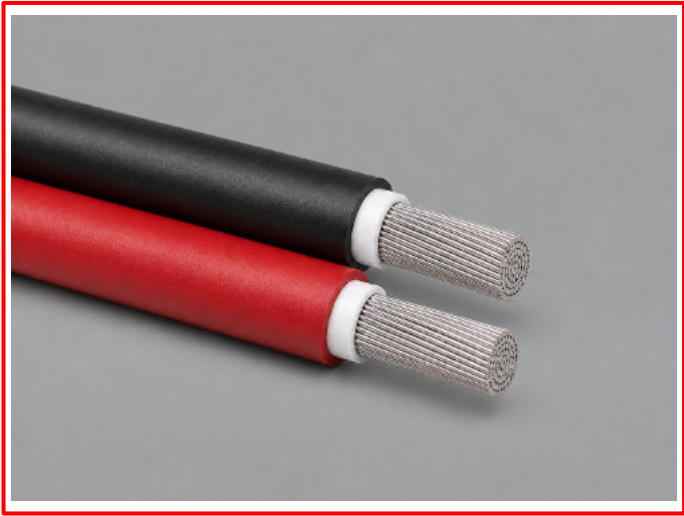
LSOH Rubber
Compound Insulation



LSOH Rubber
Compound Outer
Sheath Available in
Red & Black

PROPERTIES

Nominal Voltage	1kV
Test Voltage	3.5 kV
Operating Temp	-40°C to 90°C (On Conductor)
Max Conductor Temp. at short circuit	150°C
Min. Bending Radius	4 x OD



Standards	
IEC Standard	EN 50618

Cable Size	Max Diam. of Wiring	Outer Diameter	Approx. Cable Weight
(mm²)	(mm)	(mm)	(kg/km)
4.0	0.31	5.5	62
6.0	0.31	6.3	85
10.0	0.41	7.5	135

PACKAGING



Full Drums



Cut to Spec.

CABLE TERMINALS



APPLICATION

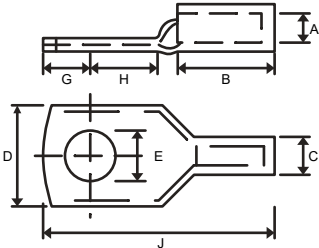
Heavy duty copper lugs are typically used in electrical sub-stations, transformers, distribution boards, control panels, and systems that requires conductors to be joined.

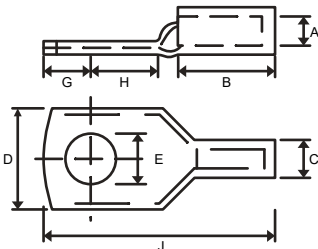
PROPERTIES

The lugs are made out of a high grade copper to allow crimping of copper or XLPE cables without any need for soldering.



	Cable Size	Stud Hole	Dimensions						
	(mm²)	E	A	C	D	G	H	B	J
Material: ETP Copper Finish: Tin Platted	1.5	4.2	1.8	3.7	8.0	4.0	5.0	6.0	17.0
		5.2	1.8	3.7	8.0	4.0	5.0	6.0	17.0
		6.5	1.8	3.7	10.0	4.0	6.0	6.0	19.0
	2.5	4.2	2.4	4.0	8.0	4.0	5.0	8.0	19.0
		5.2	2.4	4.0	8.0	4.0	5.0	8.0	19.0
		6.5	2.4	4.0	10.0	5.0	6.0	8.0	21.0
		8.4	2.4	4.0	12.0	6.0	9.0	8.0	26.0
	4	4.2	3.1	4.8	10.0	5.0	6.0	8.0	21.0
		5.2	3.1	4.8	10.0	5.0	6.0	8.0	21.0
		6.5	3.1	4.8	10.0	5.0	6.0	8.0	21.0
		8.4	3.1	4.8	12.0	6.0	9.0	8.0	26.0
	6	5.2	3.8	5.5	10.0	5.0	6.0	10.0	24.0
		6.5	3.8	5.5	10.0	5.0	6.0	10.0	24.0
		8.4	3.8	5.5	12.0	6.0	9.0	10.0	27.0
		10.5	3.8	5.5	15.0	8.0	11.0	10.0	32.0
	10	6.5	4.5	6.2	11.0	6.0	7.0	10.0	26.5
		8.4	4.5	6.2	12.0	6.0	9.0	10.0	28.0
		10.5	4.5	6.8	15.0	8.0	11.0	11.0	32.0
	16	5.2	5.4	7.1	12.0	7.0	7.0	12.0	30.0
		6.5	5.4	7.1	12.0	7.0	7.0	12.0	30.0
		8.4	5.4	7.1	12.0	7.0	7.0	12.0	30.0
		10.5	5.4	7.6	15.0	8.0	12.0	12.0	35.0
		13.0	5.4	7.6	17.0	11.0	13.0	12.0	39.0

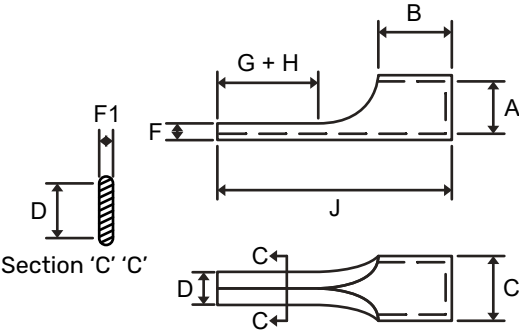
	Cable Size	Stud Hole	Dimensions						
	(mm ²)	E	A	C	D	G	H	B	J
 Material: ETP Copper Finish: Tin Platted	25	6.5	6.8	8.8	13.0	7.0	7.0	12.0	30.0
		8.4	6.8	8.8	13.0	7.0	7.0	12.0	30.0
		10.5	6.8	8.8	15.0	10.0	11.0	13.0	36.5
		13.0	6.8	8.8	17.0	10.0	12.0	15.0	40.0
	35	6.5	8.2	10.6	16.0	9.0	9.0	13.5	36.0
		8.4	8.2	10.6	16.0	9.0	9.0	13.5	36.0
		10.5	8.2	10.6	16.0	9.0	9.0	13.5	37.0
		13.0	8.2	10.6	18.0	10.0	12.0	13.5	41.0
		17.0	8.2	10.6	22.0	14.0	18.0	13.5	50.0
	50	8.4	9.5	12.4	18.0	9.0	10.0	17.0	42.0
		10.5	9.5	12.4	18.0	9.0	10.0	17.0	42.0
		13.0	9.5	12.4	20.0	10.0	12.0	17.0	45.0
		17.0	9.5	12.4	22.0	15.0	15.0	18.0	54.0
	70	8.4	11.3	14.6	21.0	11.0	11.0	18.5	47.0
		10.5	11.3	14.6	21.0	11.0	11.0	18.5	47.0
		13.0	11.3	14.6	21.0	11.0	11.0	18.5	47.0
		14.5	11.3	14.6	22.0	14.0	15.0	18.5	55.0
		17.0	11.3	14.6	26.0	14.0	16.0	18.5	5
	95	8.4	13.5	17.4	25.0	12.0	13.0	21.0	53.0
		10.5	13.5	17.4	25.0	12.0	13.0	21.0	53.0
		13.0	13.5	17.4	25.0	12.0	13.0	21.0	53.0
		14.5	13.5	17.4	25.0	14.0	15.0	22.0	55.0
		17.0	13.5	17.4	25.0	14.0	16.0	22.0	56.0
	120	10.5	15.0	19.4	28.0	13.0	14.0	23.0	60.0
		13.0	15.0	19.4	28.0	13.0	14.0	23.0	60.0
		14.5	15.0	19.4	28.0	13.0	14.0	23.0	60.0
		17.0	15.0	19.4	28.0	16.0	16.0	23.0	64.0

	Cable Size	Stud Hole	Dimensions (mm)						
	(mm²)	E	A	C	D	G	H	B	J
 Material: ETP Copper Finish: Tin Platted	150	10.5	16.5	21.2	30.0	16.0	16.0	27.0	70.0
		13.0	16.5	21.2	30.0	16.0	16.0	27.0	70.0
		14.5	16.5	21.2	30.0	16.0	16.0	27.0	70.0
		17.0	16.5	21.2	30.0	16.0	16.0	27.0	70.0
		21.0	16.5	21.2	30.0	19.0	16.0	27.0	73.0
	185	10.5	18.5	23.5	34.0	17.0	19.0	32.0	80.0
		13.0	18.5	23.5	34.0	17.0	19.0	32.0	80.0
		14.5	18.5	23.5	34.0	17.0	19.0	32.0	80.0
		17.0	18.5	23.5	34.0	17.0	19.0	32.0	80.0
		21.0	18.5	23.5	34.0	17.0	19.0	32.0	80.0
	240	10.5	21.0	26.5	38.0	20.0	20.0	37.0	94.0
		13.0	21.0	26.5	38.0	20.2	20.0	37.0	94.0
		14.5	21.0	26.5	38.0	20.2	20.0	37.0	94.0
		17.0	21.0	26.5	38.0	20.0	20.0	37.0	94.0
		21.0	21.0	26.5	38.0	20.0	20.0	37.0	94.0
			21.0	26.5	38.0			37.0	94.0
	300	10.5	23.5	30.0	43.0	22.0	22.0	42.0	101.0
		13.0	23.5	30.0	43.0	22.0	22.0	42.0	101.0
		14.5	23.5	30.0	43.0	22.0	22.0	42.0	101.0
		17.0	23.5	30.0	43.0	22.0	22.0	42.0	101.0
		21.0	23.5	30.0	43.0	22.0	22.0	42.0	101.0
			23.5	30.0	43.0			42.0	101.0

LUGS

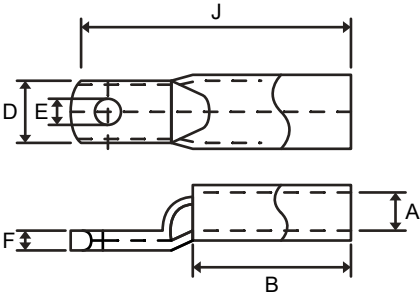
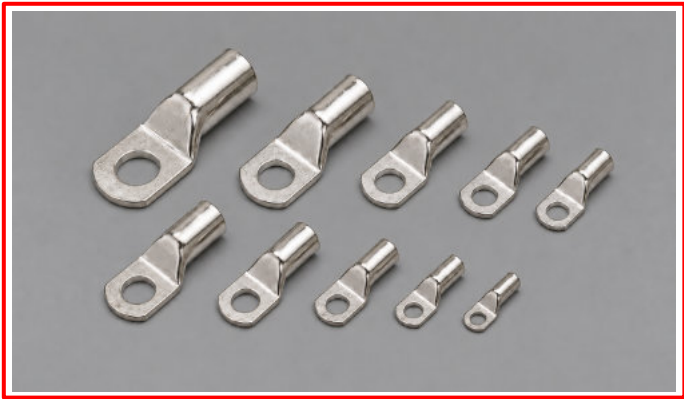
Heavy Duty Copper Crimping Lugs

PIN LUGS



Cable Size	Dimensions							
	(mm²)	A	C	D	F1	F	B	G + H
10	4.5	6.7	4.3	2.4	0.95	8.0	14	14
16	5.8	8.2	5.5	2.6	1.15	10	17	17
25	7.5	11.1	7.2	1.75	3.8	11	22	22
35	9.0	12.6	8.2	1.75	3.8	12	21	21
50	10.5	14.1	9.0	1.75	3.8	16	25	25
70	12	16	10.0	1.95	4.1	16	30	30

NARROW PALM LUGS



Material: ETP Copper
Finish: Tin Platted

Cable Size	Stud Size E	Dimensions					
		A	E	D	F	B	J
35	M 6	8.2	6	15.0	3.0	21	41
50	M 6	9.5	6	15.0	3.2	22	43
	M 10	9.5	10	19.0	3.2	22	49
70	M 6	11.2	6	17.0	3.3	24	45
	M 10	11.2	10	19.0	3.3	24	51
95	M 8	13.4	8	19.0	3.9	27	55
	M 10	13.4	10	19.0	3.9	27	55
120	M 8	15.0	8	19.0	5.0	30	61
	M 10	15.0	10	19.0	5.0	30	61
150	M 8	16.7	8	19.0	5.5	30	66
	M 10	16.7	10	19.0	5.5	30	66
185	M 10	18.4	10	31.0	5.7	38	82
240	M 10	21.2	10	31.0	7.1	38	82
300	M 10	23.5	10	31.0	7.8	42	87

FERRULES

Heavy Duty Copper Tubular Connectors

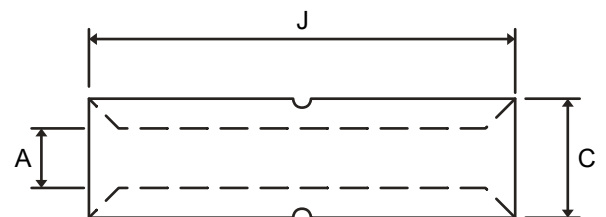
APPLICATION

High connectivity ferrules are commonly used in electrical substations, transformers, distribution boards, control panels and any system the requires conductor joining.

PROPERTIES

The ferrules are manufactured out of a high grade copper to allow for crimping of copper or XLPE cables without the requirement of soldering.

Cable Size	Dimensions (mm)			Cutting Length
	A	C	J	
1.5	1.8	3.7	12.0	16.0
2.5	2.4	4.0	15.0	19.0
4	3.1	4.8	15.0	19.0
6	3.8	5.5	15.0	19.0
10	4.5	6.2	20.0	24.0
16	5.4	7.1	20.0	24.0
25	6.8	8.8	32.0	36.0
35	8.2	10.6	36.0	40.0
50	9.5	12.4	40.0	44.0
70	11.2	14.7	50.0	54.0
95	13.5	17.4	60.0	64.0
120	15.0	19.4	65.0	69.0
150	16.5	21.2	70.0	74.0
185	18.5	23.5	75.0	79.0
240	21.0	26.5	90.0	95.0
300	23.5	30.0	100.0	10.0



Material: Copper BS-1977
Finish: Tin Plated

TORQUE SHEAR LUG & FERRULES

Mechanical Lugs & Ferrules

DESIGN

Heavy Duty torque shear lugs connectors consist of a tin plated aluminium lug body with shear bolts. With only four available sizes in the range, a single torque shear can accommodate several conductor sizes. They are designed for the perfect fit in low to medium voltage cable up to 42kV.

Each torque has factory applied grease for protection against moisture, and oxidation. Once torque bolts are tightened the head are sheared of, making the torque irremovable.



CONSTRUCTION

Lug/Connector Body	Lug bodies are made of a high-tensile, tin-plated aluminium alloy
	The Internal surfaces of the conductor hole are grooved
	Connectors are chamfered at the edges and available with or without oil barrier (as blocked and unblocked types) depending on the application requirements
	Lugs are suitable for both indoor and outdoor applications and are available with different palm hole sizes
Shear Head Bolts	Made out of an aluminium alloy with a single double shear-head-point and are hexagonal in shape
	The bolts are treated with a highly lubrication agent and equipped with a contact ring
	Contact bolts are irremovable once tightened and sheared off

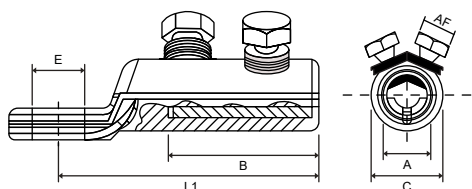
FEATURES

- With only four sizes available in the range the torque shears cover a wide range of conductor cross-sections from 25mm to 630mm.
- Installation requires no expensive crimping tools and a standard socket wrench will be sufficient.
- The aluminium alloy provides excellent connectivity for both copper and aluminium conductors

TORQUE SHEAR LUG & FERRULES

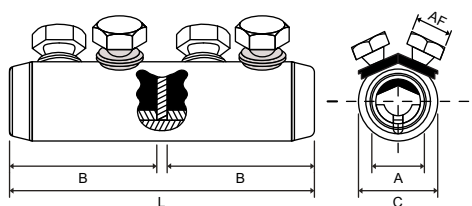
Mechanical Lugs & Ferrules

TORQUE SHEAR LUGS



Cable Size	Palm Hole Size	Dimensions (mm)				No. of Bolts	Head size of AF
(mm²)		C	A	L1	B		(mm)
25-95	13	24	12.8	62.5	32	1	13
35-150	13	28	15.8	86	36	1	13
	17	28	15.8	86	36	1	17
95-240	13	33	20	111.5	65	2	19
	17	33	20	111.5	65	2	19
120-300	13	37	24	115.5	70	2	22
	17	37	24	115.5	70	2	22
185-400	13	42	25.5	137	85	3	22
	17	42	25.5	137	85	3	22
	21	42	25.5	137	85	3	22
500-630	13	50	33	153	110	3	27
	17	50	33	153	110	3	27
	21	56	36	185	130	4	27
800	21	54	7.1	12.0	7.0	4	27

TORQUE SHEAR CONNECTORS



Cable Size	Dimensions (mm)				No. of Bolts	Head size of AF
(mm²)	L	B	C	A		(mm)
25 - 95	65	30	24	12.8	2	13
35 - 150	80	38	28	15.8	2	17
95 - 240	125	60	33	20	4	19
120 - 300	140	68	37	24	4	22
185 - 400	170	83	42	29.5	6	22
500	160	75	46	29.6	6	13
630	160	75	50	33	6	13
800	220	105	56	36	6	27

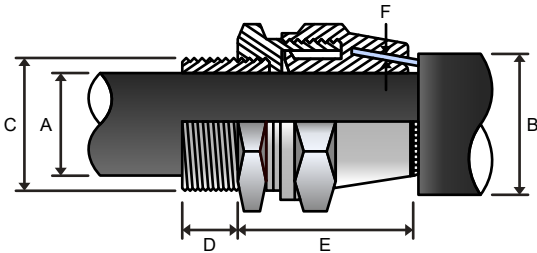
DESIGN

BW Cone Glands are used for steel wire armoured and aluminium armoured cable. The glands are designed for indoor use with a two-part handling system that has no loose parts. The glands freely rotating captive cone provides armoured clamp and earth bond without twisting the armouring of the cable. Each gland is manufactured precisely from high quality nickel plated brass.



PROPERTIES

Gland Material	Nickel Plated Brass BS 2874, EN 12164 Aluminium ASTM
Cable Type	Steel Wire Armour or Aluminium Armoured Wire
Armour Clamping	-10°C to 70°C
Continuous Operating Temperature	-65°C to 120°C



Standards	
Design Standards	BS 6121:Part 1 IEC/BS EN 62444 SANS 62444 SANS 1213
EMC Compatible	EN 55011 + A1 EN 55022
Installation Standards	AS/NZS 3000 BS 1621-5 BS 7671 BS 7430 IEC 60364-5-54 SANS 0142

Gland Size Ref.	Metric Entry Thread		NPT Entry Thread		Cable Detail		
	C	Min D	C	Min D	Max A	Min B	Max B
0 - 20s	M20 x 1.5	10	½/¾	15	12.0	11.5	16.0
1 - 20	M20 x 1.5	10	½/¾	15	15.0	14.5	20.5
2 - 25	M25 x 1.5	10	¾/1	15/19	20.0	20.5	26.5
3 - 32	M32 x 1.5	10	1/1¼	19	26.5	26.5	33.5
4 - 40	M40 x 1.5	15	1¼/1½	19/21	34.0	33.5	42.5
5 - 50	M50 x 1.5	15	1½/2	21	44.5	42.5	52.5
6 - 63	M63 x 1.5	15	2/2½	21/30	56.5	52.5	
7 - 75	M75 x 1.5	15	2½/3	30/32	67.5	65.5	
8 - 80	M80 x 2.0	20	3	32	74.0	78.0	
9 - 90	M90 x 2.0	20	3/3½	32/33	81.5	82.0	
10 - 100	M100 x 2.0	20	3½/4	33/34	91.0	90.0	
11 - 110	M110 x 2.0	20	4	34	98.0	100.0	
12 - 120	M120 x 2.0	20			103.0	103.0	118.0
13 - 130	M130 x 2.0	20			115.0	113.0	124.0

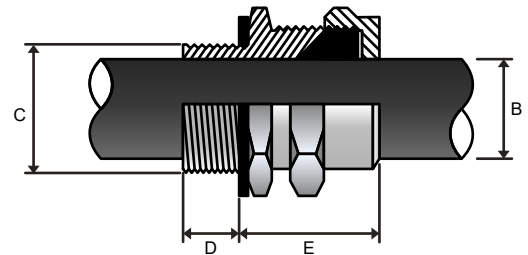
A2 COMPRESSION GLAND

Unarmoured Cable

DESIGN

A2 Compression Glands are suitable for indoor and outdoor use. The gland seals the cable sheath according to IP66/68. The gland possesses a specially formulated elastomeric seal. The gland is manufactured precisely from high quality nickel plated brass but it is also available in aluminium or stainless steel 316/316L upon request.

Standards	
Design Standards	BS 6121:Part 1 EN 50262 IEC/BS 62444 SANS 62444 SANS 1213
EMC ip66/68 100M - Parallel	IEC 60529
I65 Tapered	IEC 60529
Marine ABS	IEC 60529 IEC 62444
DNV-GL	IEC 60529 BS 6121



Gland Size Ref.	Metric Entry Thread		NPT Entry Thread		Cable Detail		Max Leng. E
	C	Min D	C	Min D	Min B	Max B	
00-16S	M16x1.5	10			1.0	6.0	20.0
00-16ss	M16x1.5	10			3.0	8.5	20.0
00-20ss	M20x1.5	10	½/¾	15	3.0	8.5	20.0
0-20s	M20x1.5	10	½/¾	15	7.0	11.5	20.0
1-20	M20x1.5	10	½/¾	15	11.0	15.0	24.0
2s-25s	M25x1.5	10	¾/1	15/19	11.5	17.5	25.0
2-25	M25x1.5	10	¾/1	15/19	15.0	20.0	25.0
3s-32s	M32x1.5	10	1/1¼	19	16.0	22.0	30.0
3-32	M32x1.5	10	1/1¼	19	20.0	26.5	30.0
4s-40s	M40x1.5	15	1¼/1½	19/21	22.0	31.5	30.0
4-40	M40x1.5	15	1¼/1½	19/21	26.0	34.0	30.0
5s-50s	M50x1.5	15	1½	21	29.0	38.0	42.0
5-50	M50x1.5	15	2	21	34.0	44.5	42.0
6s-63s	M63x1.5	15	2	21	38.0	50.0	48.0
6-63	M63x1.5	15	2½	30	44.5	56.5	48.0
7s-75	M75x1.5	15	2½	30	50.0	62.0	50.0
7-75	M75x1.5	15	3	32	56.0	67.5	50.0
8s-80s	M80x2.0	20	3	32	54.0	69.0	55.0
8-80	M80x2.0	20	3	32	65.0	74.0	55.0

PROPERTIES

Gland Material	Nickel Plated Brass BS 2874 EN 12164 Aluminium ASTM Bs221 Stainless Steel 316/316L
Cable Type	Unarmoured
Seal Material	Thermoset Elastomer or Silicone on request
Continuous Operating Temperature	-65°C to 120°C

Gland Size Ref.	Metric Entry Thread		NPT Entry Thread		Cable Detail		Max Leng. E
	C	Min D	C	Min D	Min B	Max B	
9s-90s	M90x2.0	20	3	32	60.0	75.0	60.0
9-90	M90x2.0	20	3½	33	73.0	81.5	60.0
10-100	M100x2.0	20	3½/4	33/34	81.0	91.0	74.0
11-110	M110x2.0	20	4	34	91.0	101.0	92.5
12-120	M120x2.0	20			101.0	109.0	92.5
13-130	M130x2.0	20			109.0	119.0	92.5

CABLE ACCESSORIES



CABLE TIES

APPLICATION

Open lock head for easy insertion. The tail end of the cable tie is pulled through to tighten. Inside serration to ensure a strong hold

PROPERTIES

Material	Nylon 66, 94V-2 certified by UL
Temperature Range	Fixed: -40°C to 85°C

Product Code	Size	Tensile Strength
	(mm)	(kg)
PHD18R	2.5 x 100	11
PHD30R	3.6 x 150	20
PHD50R	4.6 x 200	28
PHD50I	4.6 x 300	36
PHD50L	4.6 x 400	36
PHD120R	7.6 x 350	65



NITTO PVC TAPE

APPLICATION

Nitto PVC 21 is a heavy duty general purpose tape which is ideal for wire and cable harnessing. Colour Coded; Duct Sealing; Preventative of Corrosion; Holding and Protection.

PROPERTIES

Nitto tape is a PVC tape that is coated with a rubber-based pressure sensitive adhesive.



FANS & ACCESSORIES



AC TUBE AXIAL FANS

Power Efficient & Quiet in Operation

PROPERTIES

The AC Axial (propeller) Fan provides a large constant flow and is used in application where ventilation and cooling is essential. The fan is power efficient, quiet in operation and causes less electromagnetic and radio Interference



Stock Code	Size	Blade Material	Bearing Type	Voltage Grade	Max. Related Current	Max Input Power	Speed	Max. Air Flow	Noise
	(mm)			(VAC 50Hz)	(mA)	(W)	(RPM)	(CFM)	(dB-A)
8P-230HB	80x80x25	Glass Plastic	Dual Ball	230	95	18	2500	21	30
3C-DVB	80x80x38	Glass Plastic	Dual Ball	230/115	200/170	15	2600	29	30
9P-115HB	92x92x25	Glass Plastic	Dual Ball	115	160	16	2400	28.56	35
9P-230HB	92x92x25	Glass Plastic	Dual Ball	230	80	16	2400	28.56	35
4C-230LB	120x120x38	Glass Plastic	Dual Ball	230	65	10	1500	57	30
4C-230HB	120x120x38	Glass Plastic	Dual Ball	230	135	22	2650	89	46
4E-115B	120x120x38	Metal	Dual Ball	115	250	24	2650	82.4	41
4E-230B	120x120x38	Metal	Dual Ball	230	140	22	2650	82.4	41
4E-DVB	120x120x38	Metal	Dual Ball	230/115	30/250	22	2650	85	41
5E-115B	170x150x55	Metal	Dual Ball	115	640	48	2750	200	50
5E-230B	170x150x55	Metal	Dual Ball	230	300	46	2750	200	50
5E-DVB	170x150x55	Metal	Dual Ball	230/115	10/640	45	2750	200	50
6C-230HBSE	172x150x51	Glass Plastic	Dual Ball	230	300	46	2750	198	55
6C-230HBSR	172x172x51	Glass Plastic	Dual Ball	230	300	46	2750	198	55

DC TUBE AXIAL FANS

Power Efficient & Quiet in Operation

PROPERTIES

The DC Axial (propeller) Fan can run at variable speeds and operates using lower voltage. The DC fan is most commonly used in computers, servers, and any equipment where the need for thermal control is necessary for the longevity of the product



Stock Code	Size	Blade Material	Bearing Type	Voltage Grade	Max. Rated Current	Max. Input Power	Speed	Max. Air Flow	Noise
	(mm)			(VDC)	(A)	(W)	(RPM)	(CFM)	(dB-a)
BP402012M	40x40x20	Glass Plastic	Dual Ball	10.2 ` 13.8	0.10	1.2	6000	7.09	26.4
BP501012M	50x50x10	Glass Plastic	Dual Ball	10.2 ` 13.8	0.10	1.2	4000	8.79	29
BP601012M	60x60x10	Glass Plastic	Dual Ball	10.2 ` 13.8	0.16	1.92	4200	20.7	35
BP602512H-03	60x60x25	Glass Plastic	Dual Ball	10.2 ` 13.8	0.13	1.56	3800	19.5	29.6
BP602524HM-03	60x60x25	Glass Plastic	Dual Ball	20.4 ` 27.6	0.18	4.32	6000	33.2	42.4
BP802512H-03	80x80x25	Glass Plastic	Dual Ball	10.2`13.8	0.30	3.6	3300	44	35.6
BP802524H-03	80x80x25	Glass Plastic	Dual Ball	20.4`27.6	0.21	5.04	3300	44	35.6
BP803012H	80x30(snail)	Glass Plastic	Ball	10.2`13.8	0.20	2.4	2600	8.94	35
BP922512H-02	92x92x25	Glass Plastic	Dual Ball	10.2`13.8	0.32	3.84	3000	63.5	40.3
BP922524H-02	92x92x25	Glass Plastic	Dual Ball	20.4`27.6	0.22	4.32	3000	58.7	38
BP1202512H	120x120x25	Glass Plastic	Dual Ball	10.2`13.8	0.38	4.56	3000	88.3	48.32
BP1203812H-03	120x120x38	Glass Plastic	Dual Ball	10.2`13.8	1.10	13.2	2900	145	48
BP1202524H	120x120x25	Glass Plastic	Dual Ball	20.4`27.6	0.24	5.76	3000	88.3	48.32
BP1203824H-03	120x120x38	Glass Plastic	Dual Ball	20.4`27.6	0.80	19.2	2900	145	48
BP1203848M-03	120x120x38	Glass Plastic	Dual Ball	40.8`55.2	0.18	8.64	2400	121	46
BP1203848H-03	120x120x38	Glass Plastic	Dual Ball	40.8`55.2	0.40	19.2	2900	145	48
BP172514HE	172x150x51	Glass Plastic	Dual Ball	12`27.6	0.80	19.2	3400	235.1	59.6
BP1725124HR	172x172x51	Glass Plastic	Dual Ball	12`27.6	0.80	19.2	3400	235.1	59.6
BP1725148HE	172x150x51	Glass Plastic	Dual Ball	25`60	0.40	19.2	3400	235.1	59.6
BP1725148HR	172x172x51	Glass Plastic	Dual Ball	25`60	0.40	19.2	3400	235.1	59.6

PROPERTIES

Fan grills and filter kits provide optimal protection against dust and foreign bodies. They are conveniently designed for easy installation. The fan grills and filter kits fit most fans and vents.

Stock Code	Size	Description
	(mm)	
6G-60	60x60	Silver Chrome Finger Guard/Grill
6G-80	80x80	Black Plastic Finger Guard/Grill
6G-80P	80x80	Three Piece Black Plastic Dust Filter Kit
6G-3E	80x80	Silver Chrome Finger Guard/Grill
6G-92E	92x92	Silver Chrome Finger Guard/Grill
6G-92P	92x92	Three Piece Black Plastic Dust Filter Kit
6G-120G	120x120	Black Plastic Finger Guard/Grill
6G-120P	120x120	Three Piece Black Plastic Dust Filter Kit
6G-4E	120x120	Silver Chrome Finger Guard/Grill
4SG	120x120	Baffle/Fan Spacer
5G-150P	172x150	Three Piece Black Plastic Dust Filter Kit
6G-5E	172x150	Silver Chrome Finger Guard/Grill

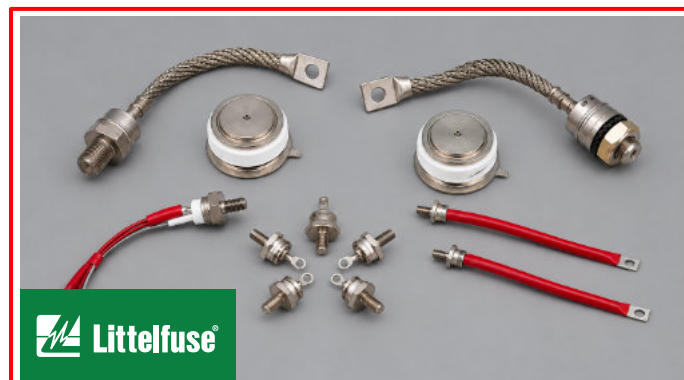


POWER ELECTRONICS



PROPERTIES

Littelfuse rectifier diodes provide high performance and reliability, with 400 V to 6 kV blocking voltages for applications up to 2 kV. They feature low conduction losses, high overload capacity, and low thermal impedance, making them ideal for demanding applications such as variable speed drives, traction converters, welding equipment, and DC power supplies.



Stock Code	IT _{AVE} @ 55°C	Vrrm	Case Style	Case Size	Tail
W06285SA080SAB	628	800	Stud	3/4"unf	Yes
W0628SA160SAB	628	1600	Stud	3/4"unf	Yes
W0735SA040SAB	735	400	Stud	3/4"unf	Yes
W0944WC150	944	1500	Capsule	42x41	
W1748LC180	1748	1800	Capsule	58x26	
W1263YC250	1263	2500	Capsule	42x41	
W2052NC400	2050	4000	Capsule	74x26	

Stock Code	IT _{AVE} @ 55°C	Vrrm	Case Style	Case Size	Tail
W2058LC020	2058	200	Capsule	58x26	
W2416NC250	2500	2500	Capsule	74x26	
W2899MC480	2899	4800	Capsule	74x26	
W3270NC080	3270	800	Capsule	74x26	
W4534N020	4534	200	Capsule	74x26	
W4693QK080	4693	800	Capsule	58x14	
W5696VC020	5696	200	Capsule	102X33	

PHD EQUIVALENT



Image	Part Number	IT _{AVE} @ 55°C	Vrrm	Case Size	Case Style	Tail
1	D16A(K) 1K6VC	16	1600	Stud	10-32" unf	No
1	DA25A(K) 1K6VC	25	1600	Stud	10-32" unf	No
2	D85A(K) 1K2VC	85	1200	Stud	1/4" unf	No
2	D85A(K) 1K8VC	85	1800	Stud	1/4" unf	No
2	D85A(K) 1K6VM	85	1600	Stud	Metric M8x1.5mm	No
3	D100A(K) 1K6VB	100	1600	Stud	1/2" unf	Yes
3	D150A(K) 1K8VB	150	1800	Stud	1/2" unf	Yes
3	D150A(K) 1K8VM	150	1800	Stud	M12x1.5mm	Yes
3	DA160A 1K8VM	160	1800	Stud	M12x1.5mm	Yes
3	D180A(K) 1K8VB	180	1800	Stud	1/2" unf	Yes
3	D240A(K) 1K8VB	240	1800	Stud	3/4" unf	Yes
3	D240A(K) 1K8VM	240	1800	Stud	M16x1.5mm	Yes
3	D301A(K) 2K6V	300	2600	Stud	3/4" unf	Yes
3	D400A(K) 1K8V	400	1800	Stud	3/4" unf	Yes
3	D401A(K) 1K8VM	400	1800	Stud	M20x1.5mm	Yes
4	D700A 2KV	700	2000	Capsule	42x41mm	No

PROPERTIES

Little Fuse Soft Recovery Diodes are available with a range of reverse recovery characteristics tailored to meet the requirements of both freewheeling and snubber applications. These devices are available with blocking voltages up to 6kV and average currents up to 2412A. 24mm TO 75mm diameter silicone slices. These parts are particularly suitable where soft recovery is required such as RCD snubbers, voltage clamping and snubberless applications. The devices utilise compression bonding along with both alloyed and floating silicone technologies to deliver robust devices you can rely on in demanding applications.



Stock Code	Previous Stock Code	IT _{AVE} @ 55°C	Vrrm	Case Style	Case Size	Tail
M0437WC140	SM14CXC170	437	1400	Capsule	42x14mm	3.0
M0859LC120	SM12CXC220	859	1200	Capsule	58x26mm	3.0
M1022LC180	SM18CXC724	1022	1800	Capsule	58x26mm	3.0

PROPERTIES

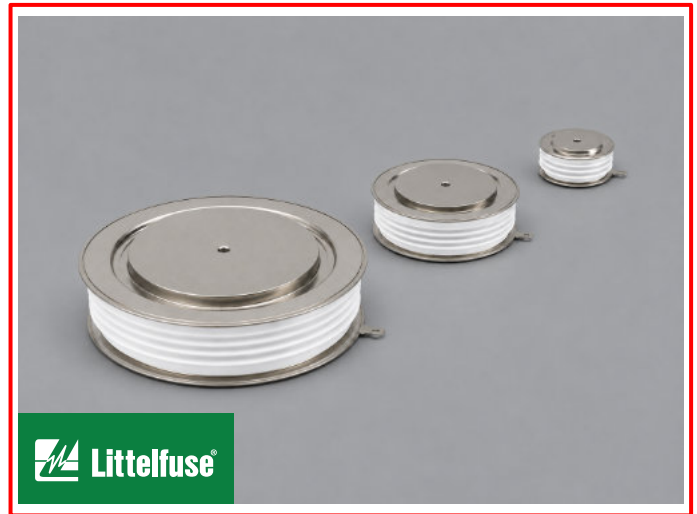
Phase control thyristors are available with 600 V to 4500V voltage ratings, making them suitable for applications from 230 V to over 1000 V. They offer low conduction losses and are designed for line frequencies up to 400 Hz, making them ideal for applications such as industrial DC drives, induction heating, marine and rail propulsion, and wind power systems. The Wespac design provides high power density, high current capacity, low thermal resistance, and excellent reliability.

PROPERTIES

ICurrent $I_{T_{AVE}}$	63A @ 85C
V_{RMS}	100V
V_{GT}	1.5V
I_{G_T}	100mA
Package	T0-65(T0208AC)

APPLICATIONS

- Motor Control
- Power Converter
- AC Power Controller



FEATURES

- Thyristors for line frequencies
- International standard package
- JDED 50-208 AC
- Planar Glassivated Chip
- Long-term stability of blocking currents and voltages

Stock Code	Previous Stock Code	$I_{T_{AVE}} @ 55^{\circ}C$	V_{rrm}	Case Style	Case Size	Tail
N0795YN180	N0734YS180	734	1600	Capsule	42x14mm	
N0910LS180	N330SH18	910	1800	Capsule	58x26mm	
N1010NC380	N360CH38	1010	3800	Capsule	74x26mm	
N1075LN180	N1114LS180	1114	1800	Capsule	58x26mm	
N1263JK180	N1263JK180	1263	1800	Capsule	50x14mm	
N1467NS240	N490SH24	1467	2400	Capsule	74x26mm	
N1661VC320	N630CH32	1661	3200	Capsule	102x33mm	
N1718NS180	N540SH18	1718	1800	Capsule	74x26mm	
N2046NS160	N740SH16	2046	1600	Capsule	74x26mm	
N2500VC160	N990CH16	2500	1600	Capsule	102x33mm	
N3022MK140		3022	1400	Capsule	74x14mm	
N4085ZC120	N1600CH12	4085	1200	Capsule	110x36mm	
N4400TC220	N1863CH22	4400	2200	Capsule	112x26mm	

THYRISTORS

Stud Type & Capsule

PHD EQUIVALENT



Image	Stock Codes	IT _{AVE} @ 55°C	V _{rrm}	Case Style	Case Size	Tail
1	T25AS 1K6VC	25	1600	Stud	1/4"unf	No
1	T50AS 1K6VC	50	1600	Stud	1/4"unf	No
1	T80AS 1K6VC	80	1600	Stud	1/2"unf	No
2	T80AS 1K8VB	80	1800	Stud	1/2"unf	Yes
2	T110AS 1K8VB	110	1800	Stud	1/2"unf	Yes
2	T160AS 1K8VM	160	1800	Stud	1/2"unf	Yes
2	T230AS 1K8VB	230	1600	Stud	3/4"unf	Yes
2	T330 AS 2KVB	330	2000	Stud	3/4"unf	Yes
3	T400A 1K8V	400	1800	Capsule	42x14mm	
3	T800A 1K8V	800	1800	Capsule	42x14mm	
3	T990A 1K8V	990	1800	Capsule	57x26mm	
3	T1500A 2KV	1500	2000	Capsule	75x26mm	
3	T2500 3KV	2500	3000	Capsule	110x36mm	

FAST DISTRIBUTED GATE THYRISTORS

PROPERTIES & APPLICATION

These devices are available with blocking voltages up to 4.5 kV and currents up to 4 kA, offering fast turn-off, high di/dt capability, and low on-state voltage drop. They are ideal for induction heating, power supplies, high-frequency inverters/converters, UPS systems, and pulse power applications

Stock Codes	IT _{AVE} @ 55°C	Vrrm	Case Style	Case Size	Tail
R0830LS14E	830	1400	Capsule	58x26mm	25
R0878LS21K	878	2100	Capsule	58x26mm	60
R0929LS12C	929	1200	Capsule	58x26mm	15
R0964LS12E	964	1200	Capsule	58x26mm	25
R0990LS08A	990	1800	Capsule	58x26mm	10
R1275NS18L	1275	1800	Capsule	74x26mm	65
R1446NS12E	1446	1200	Capsule	74x26mm	25



PHD EQUIVALENT

Part Number	IT _{AVE} @ 55°C	Vrrm	Case Style	Case Size	Tail
TF083A 1KVL	83	1000	Stud	1/2"unf	No
TF180A 1K2V	180	800	Capsule	42x14mm	No
TF33A 1K2V	333	1200	Capsule	42x14mm	No
R1300A 2KV	1300	2000	Capsule	75x26mm	No
R1500A 2KV	1500	2000	Capsule	75x26mm	No
R2500A 2KV(26)	2500	2000	Capsule	110x26mm	No
R2500A 2KV(36)	2500	2000	Capsule	110x36mm	No



FEATURES

A silicon controlled rectifier (SCR) is a solid state switching device which can provide fast, infinitely variable proportional control of electric power. Not only does this give maximum control of your heat process, but it can extend heater life many times over other control methods. Since the SCR is a solid state it can cycle on and off over a billion time, if properly used.

- Line rectifying 50.60Hz
- Planar passivated chips
- Long term stability
- Direct copper bonded Al2O3-ceramic



ADVANTAGES

- Space and weight saving
- Simple mounting with 2 screws
- Improved temperature and power cycling
- Power converter
- Reduced protection circuits

APPLICATIONS

- Thysistor for line frequency
- soft start AC motor control
- DC motor control
- Power converter
- Lighting and temperature control

Image	Part Number	IT _{AVE} @ 85°C	V _{rrm}	Circuit	Config	Width(mm)
1	MCC26-16IO1B	27	1600	SCR-SCR	Series A-K	20
1	MCC44-16IO1B	49	1600	SCR-SCR	Series A-K	20
1	MCC56-16IO1B	60	1600	SCR-SCR	Series A-K	20
1	MCC72-16IO1B	85	1600	SCR-SCR	Series A-K	20
1	MCC95-16IO1B	116	1600	SCR-SCR	Series A-K	20
1	MCC95-18IO1B	116	1800	SCR-SCR	Series A-K	20
2	MCC162-18IO1	181	1800	SCR-SCR	Series A-K	34
2	MCD160-18IO1	181	1800	SCR-Diode	Series A-K	34
1	MCD56-16IO1B	60	1600	SCR-Diode	Series A-K	20
1	MCD72-16IO1B	85	1600	SCR-Diode	Series A-K	20
1	MCD95-16IO1B	116	1600	SCR-Diode	Series A-K	20
3	MCC255-18IO1	250	1800	SCR-SCR	Series A-K	34
3	MCC312-18IO1	320	1800	SCR-SCR	Series A-K	50
3	MCD225-18IO1	250	1600	SCR-Diode	Series A-K	50

SCR / DIODES MODULES

Power Converters

Image	Part Number	IT _{AVE} @ 85°C	Vrrm	Circuit	Config	Width (mm)
1	TT25A 1K8V	25	1800	SCR-SCR	Series A-K	20
1	TT63A 1K8V	63	1800	SCR-SCR	Series A-K	20
1	TT72A 1K8V	72	1800	SCR-SCR	Series A-K	20
1	TT95A 1K8V	95	1800	SCR-SCR	Series A-K	20
1	TT110A 1K8V	110	1800	SCR-SCR	Series A-K	20
1	TD110A 1K8V	110	1800	SCR-DIODE	Series A-K	20
1	TD250A 1K8V	250	1800	SCR-DIODE	Series A-K	50
1	DD100A 1K8V	100	1800	DIODE-DIODE	Series A-K	20
1	DD100 1K8V-K	100	1800	DIODE-DIODE	Common Cathode	20
1	TT110A 1K8VW	100	1800	SCR-SCR	Series A-K	25
2	TT130A 1K8V	130	1800	SCR-SCR	Series A-K	34
2	TT160A 1K8V	160	1800	SCR-SCR	Series A-K	34
2	TD63A 1K8V	63	1800	SCR-DIODE	Series A-K	20
2	DD160A 1K8V	160	1800	DIODE-DIODE	Series A-K	34
3	TT250A 1K8V	250	1800	SCR-SCR	Series A-K	50
3	TT350A 1K8V	350	1800	SCR-DIODE	Series A-K	50
4	TT500A 1K8V	500	1800	SCR-DIODE	Series A-K	
4	TT600A 1K8V	600	1800	SCR-DIODE	Series A-K	

Image	Part Number	Description
5	MDG80A 1K8V	3 x Diode 80A 1800V Common Live Anode Base
5	MDY80A 1K8V	3 x Diode 80A 1800V Common Live Cathode Base
5	MTG80A 1K8V	3 x SCR 80A Common Live Anode Base
5	MTY80A 1K8V	3 x SCR 80A Common Live Cathode Base
6	MDG160A 1K8V	3 x Diode 160A 1800V Common Live Anode Base
6	MDY160A 1K8V	3 x Diode 160A 1800V Common Live Cathode Base
6	MTG160A 1K8V	3 x SCR 160A Common Live Anode Base
6	MTY160A 1K8V	3 x SCR 160A Common Live Cathode Base

Image	Part Number	Description	Size (mm)
7	MUR20020	FRED 2X 100A 200V Common Live Cathode Base 50ns	92x20
7	MUR40020	FRED 2X 100A 100V Common Live Cathode Base 75ns	92x20



BRIDGE RECTIFIERS

Uncontrolled

FEATURES

Bridge rectifiers consist of four diodes or thyristors that are arranged to convert AC supply voltage to DC. These rectifiers are available in both single and three phase and may be classified as full controlled, half controlled and uncontrolled.

- Packaged with DCB ceramic
- Improve temperature and power cycling
- Planar passivated chips
- Low forward voltage drop
- Low leakage current

APPLICATION

- Diode for main rectification
- For one phase bridge configurations
- Supplies for DC power equipment
- Input rectifier for PWM inverter
- Battery DC power suppliers
- Field supply for DC motors

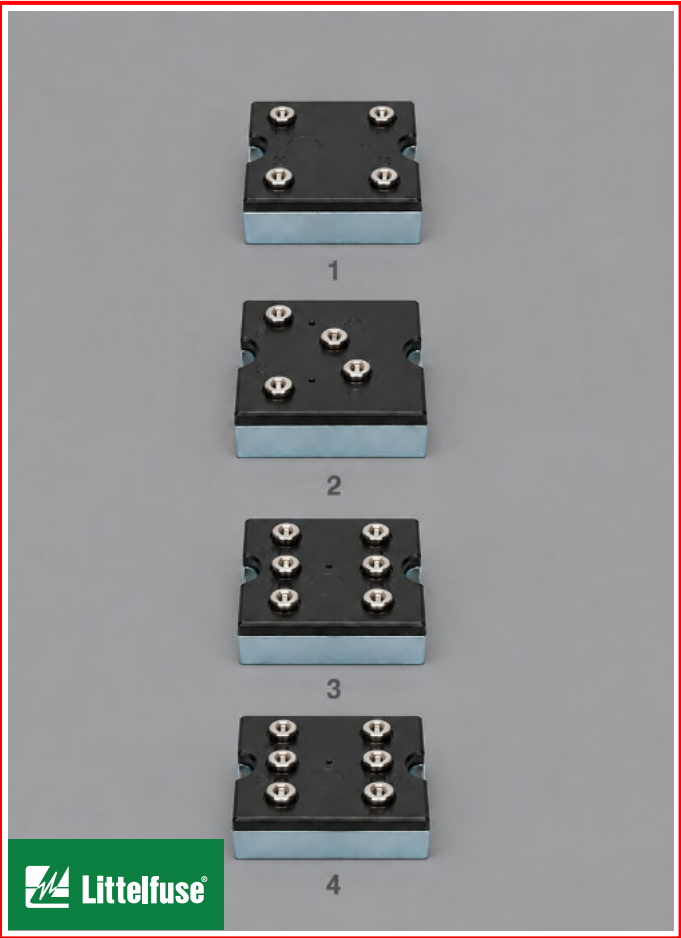


Image	Part Number	I _o @T _c		V _{rrm}	V _{FM} @I _{FM}		I _{RRM}	I _{FSM}	R _{JC}	T _{JM}	V _{ISO}
		A@	°C	V	V	A	mA	a	°C/W	°C	VAC
SINGLE PHASE											
1	VB030-16N07	35	85	1600	2.2	150	5	400	0.7	150	3000
2	VB050-16N07	50	64	1600	1.6	150	10	750	0.65	150	3000
THREE PHASE											
3	VU030-16N07	38	85	1600	2.2	150	5	400	0.7	150	3000
4	VU055-16N07	58	85	1600	1.6	150	10	750	0.45	150	3000

BRIDGE RECTIFIERS

Uncontrolled

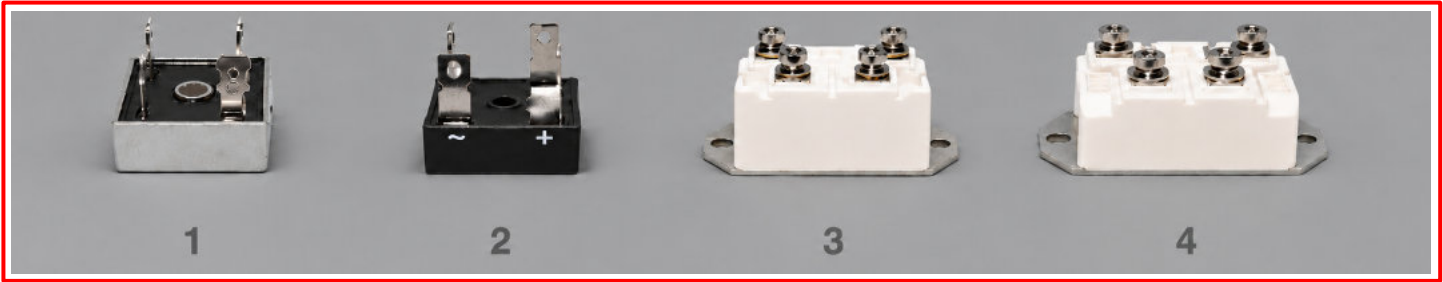


Image	Part Number	I _o @T _c		V _{rrm}	V _{FM} @ I _{FM}		I _{RRM}	I _{FSM}	R _{JC}	T _{JM}	V _{ISO}
		A @	°C	V	V	A	mA	a	°C/W	°C	VAC
SINGLE PHASE											
1	BPC25A 1K2V	25	85	1200						150	2500
1	BPC35A 1K6V	35	85	1600						150	2500
2	BPC50A 1K6V	50	85	1600						150	2500
2	BPC50A 1K8V	50	85	1600						150	2500
3	BPC100A 1K6V	100	100	1600	1.53	150	10	1.500	0.24	150	2500
4	BPC150A 1K6V	150	100	1600	1.47	150	10	2.500	0.15	150	2500



Image	Part Number	$I_o @ T_c$		V_{rrm}	$V_{FM} @ I_{FM}$		I_{RRM}	I_{FSM}	R_{JC}	T_{JM}	V_{ISO}
		A @	°C		V	A					
1	DPC30A 1K6V	30	85							150	2500
2	DPC35A 1K6V	35	60	1600				0.475		150	2500
3	DPC70A 1K6V	75	100	1600	1.47	75	8	1.000	0.32	150	2500
4	DPC70A 1K6VF	75	100	1600	1.47	75	8	1.000	0.32	150	2500
3	DPC100A 1K6V	100	100	1600	1.53	100	10	1.500	0.24	150	2500
4	DPC100A K6VF	100	100	1600	1.53	100	10	1.500	0.24	150	2500
5	DPC150A 1K6V	150	100	1600	1.5	150	10	2.500	0.15	150	2500
6	DPC250A 1K6V	250	100	1600						150	2500
7	DPC300A 1K6V	300	100	1600						150	2500

BRIDGE RECTIFIERS

½ Controlled

FEATURES

- Package with DCB Ceramic Base Plate
- Isolation Voltage 3600V ~ Planar Passivated Chip
- 1/4" Fast-on Terminals
- UL Registered E 72873

APPLICATION

- Supply for DC Power Equipment
- DC Motor Control

PROPERTIES

Part Number	VHF36 - 16I05
IT _{AVE} (Module)	36A @ 85°C
IT _{AVE} (LEG)	28A
V _{RPM}	1600A
V _{GT} - I _{GT} @ 25°C	1.0V/65mA

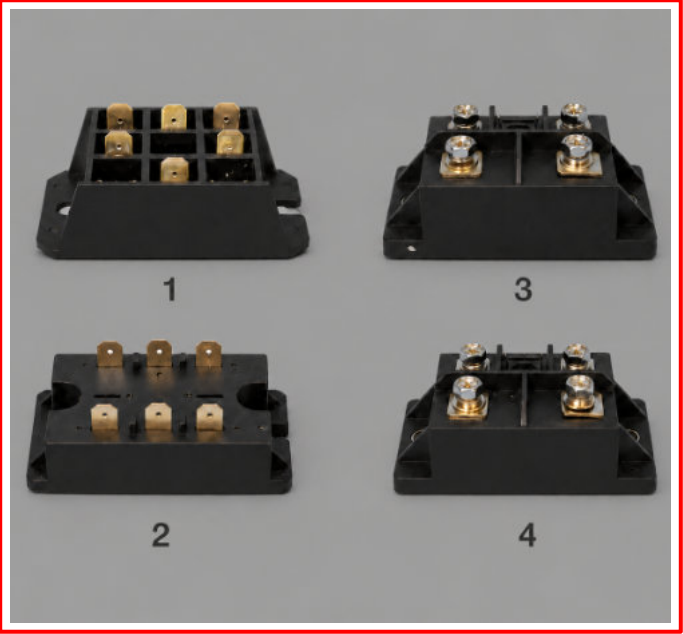


Image	Part Number	I _o	V _{rrm}
		A	V
1	CHB13614W	36	1400
2	CHB14012W	40	1200
3	CHB16012W	60	1200
4	CHB110012W	100	1200

THREE PHASE WITH FREE WHEEL DIODE

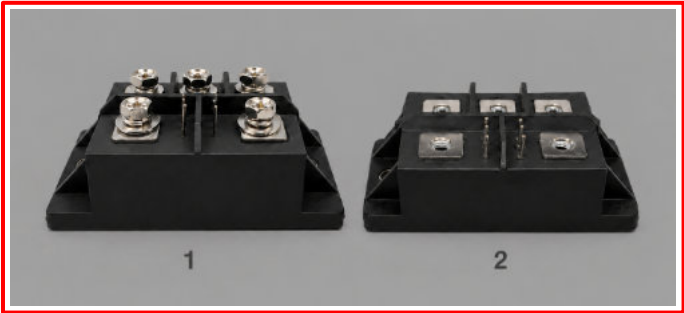
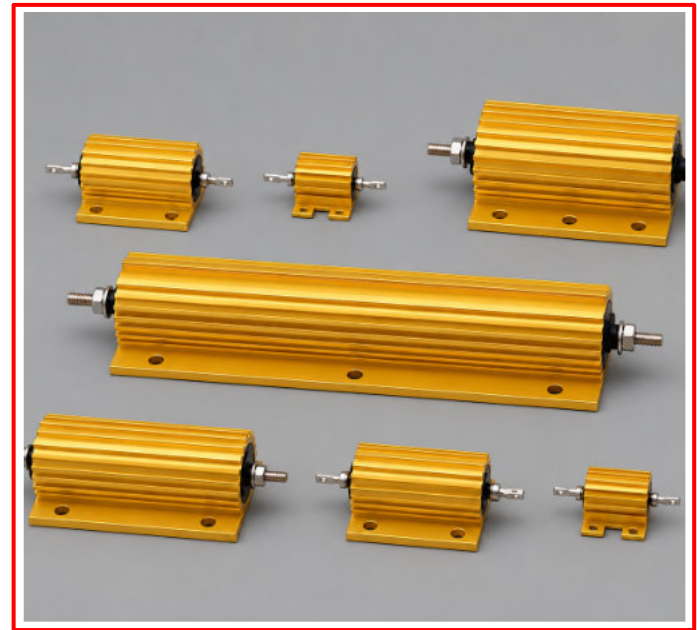


Image	Part Number	I _o	V _{rrm}
		A	V
1	CHD16016W	60	1600
2	CHD110016W	100	1600

PROPERTIES

Having been originally designed for use in thyristor protection circuits, the HSW600 is most suitable where water cooling is available and space is limited. The withdrawal of heat, internally and externally, ensures a low temperature gradient across the unit reducing internal stress. Heat is extracted internally through the cooling pipe and externally by direct mounting onto the chassis, or additional water cooled heat sink, thereby reducing temperature across internal insulation.

- Aluminium Housing
- Balanced Cooling
- Low Induction Winding's
- Mounted-in Insulated Cable Terminations
- High power for small size

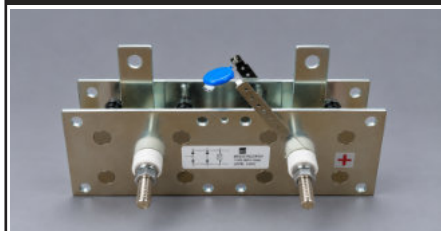


Power Rating	Sizes (mm)			
Watts	Length	Width	Height	Inside Diameter
5	15	9.5	8	6
10	20	11	10.5	7.5
15	20	11	10.5	7.5
25	28	14	14	10
35	33	16.5	15.5	11
50	50	16.5	15.5	11
75 small	60	29	15.5	11
100 small	70	29	15.5	11
75 big	75	48	26	17
100 big	98	48	26	17
150	136	48	26	17
200	155	48	26	17
300	128	72	41	33
500	200	72	41	33
800	250	72	41	33
1000	300	72	41	33

PLATE RECTIFIERS

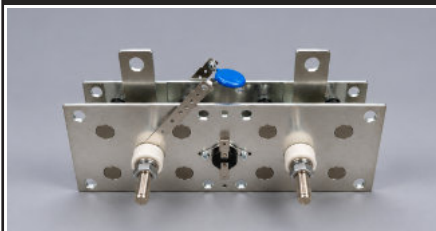
Single & Three Phase

PHDQ150A



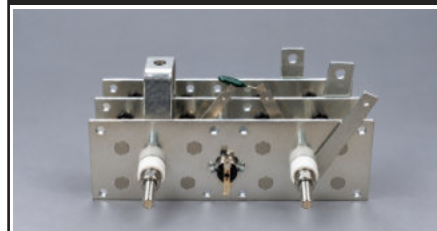
Circuit	1 Phase
Mounting Bolts	2
Plates	2
Diodes/Plate	8
IFAVE (A)	150
Vrrm (V)	1200
Air Flow (m/s)	3.0

PHDQ250A



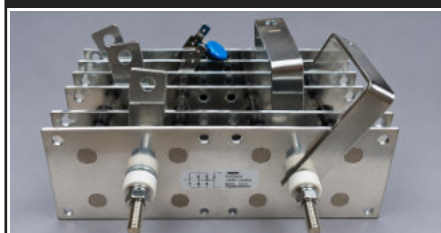
Circuit	1 Phase
Mounting Bolts	2
Plates	2
Diodes/Plate	12
IFAVE (A)	250
Vrrm (V)	1200
Air Flow (m/s)	3.0

PHDS250A



Circuit	3 Phase
Mounting Bolts	2
Plates	3
Diodes/Plate	8
IFAVE (A)	250
Vrrm (V)	1200
Air Flow (m/s)	3.0

PHDS300A



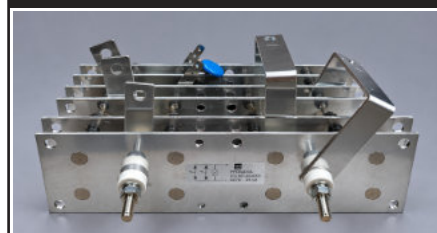
Circuit	3 Phase
Mounting Bolts	2
Plates	6
Diodes/Plate	6
IFAVE (A)	250
Vrrm (V)	1200
Air Flow (m/s)	3.0

PHDS300AL



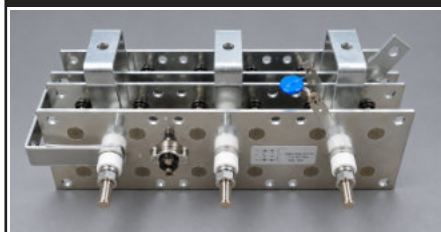
Circuit	3 Phase
Mounting Bolts	2
Plates	4
Diodes/Plate	9
IFAVE (A)	300
Vrrm (V)	1200
Air Flow (m/s)	3.0

PHDS400A



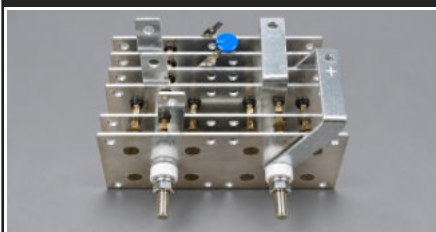
Circuit	3 Phase
Mounting Bolts	2
Plates	6
Diodes/Plate	8
IFAVE (A)	400
Vrrm (V)	1200
Air Flow (m/s)	3.0

PHDS400AL



Circuit	3 Phase
Mounting Bolts	3
Plates	4
Diodes/Plate	9
IFAVE (A)	400
Vrrm (V)	1200
Air Flow (m/s)	3.0

PHDS500A



Circuit	3 Phase
Mounting Bolts	2
Plates	6
Diodes/Plate	12
IFAVE (A)	500
Vrrm (V)	1200
Air Flow (m/s)	3.0

PHDS500AL



Circuit	3 Phase
Mounting Bolts	3
Plates	6
Diodes/Plate	9
IFAVE (A)	500
Vrrm (V)	1200
Air Flow (m/s)	3.0

TEMPERATURE SWITCHES

Normally Open & Normally Closed

APPLICATION

Temperature switches are used in a variety of industrial and technical processes. If a preset temperature is reached, then the temperature switch opens or closes a corresponding switch contact. Depending on the requirements, mechanical or electrical switches can be used.



Part Number	Temperature °C	Contact	Base	Fixing
T23A050NCFL	50	Normally Closed	Flush	Loose Base
T23A050NOFL	50	Normally Open	Flush	Loose Base
T23A060NOFL	60	Normally Open	Flush	Loose Base
T23A080NCFL	80	Normally Closed	Flush	Loose Base
T23A090NOFL	90	Normally Open	Flush	Loose Base
T23A100NCFL	100	Normally Closed	Flush	Loose Base
T23A080NCFR	80	Normally Closed	Recessed	Fixed Base
T23A090NCFR	90	Normally Closed	Recessed	Fixed Base
T23A100NCFR	100	Normally Closed	Recessed	Fixed Base
T23A100NOFL	100	Normally Open	Flush	Loose Base
T3A090NCFF	90	Normally Closed	Flush	Fixed Base

CAPACITORS

High Power & Water Cooled

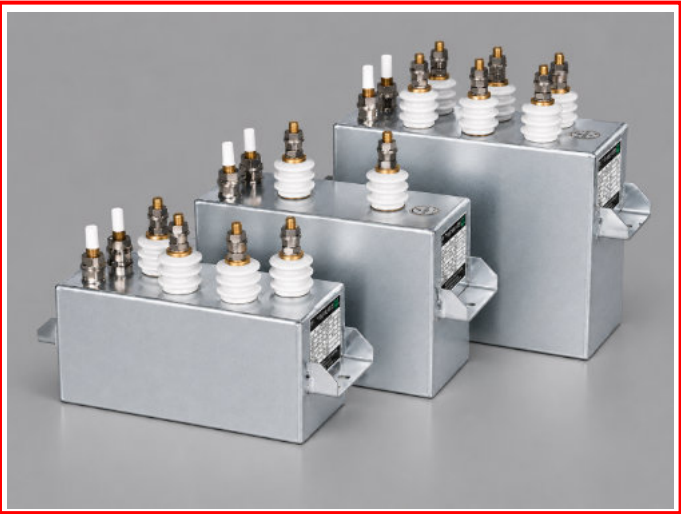
APPLICATION

Water-cooled capacitors provide high current handling, efficient cooling, and long service life, making them ideal for high-power applications. Their compact design, improved energy efficiency, and reduced maintenance help lower operating costs and environmental impact.

PROPERTIES

High power capacitors are used in medium frequency induction heating electrical systems for factor correction, or to improve loop characteristics. The electric heating capacitor is mainly composed of a core and a box shell, it is also filled with a high-quality impregnating agent, and the core is welded with a cooling water pipe for cooling the water supply container

- No pulse induction/transformer
- No gated driver required
- Triggers any size thyristor
- Triggers under any load conditions
- Compact
- Trigger two Thyristors
- Up to 5300V isolation



INSTALLATION

- The altitude and operation area should not exceed 1000 meters.
- The installation site is free of severe mechanical vibration, gases and vapours, and conductive or explosive dust
- The inlet water temperature of the cooling should not exceed 30°C. for Capacitors below 1000kvar, water flow should not be lower than 6L/min
- It should be able to run 4 hours ever 24 hours at a rated frequency of 1.1UN. The continuous current should not exceed 1.35IN

Part Number	Rated Voltage (V)	Rated Capacity (Kvar)	Frequency (Hz)	Rated Cap (µF)
RFM0.75-1000-1S	750	1000	1000	6*47.2
RFM1.2-2000-1S	1200	2000	1000	6*36.9
RFM1.6-2000-0.5S	1600	2000	500	6*41.5
RFM0.75-2000-1S	750	2000	1000	10*56.6
RFM1.2-2000-0.5S	1200	2000	500	8*55.3

PROPERTIES

Solid State Relays (SSR) are semiconductor equivalents of the electromechanical relay and can be used to control electrical loads without the use of moving parts. By having no moving parts, the SSR tends to have a longer operational lifetime as they are not subjected to wear and tear.

HDH are power line relays allowing 10 to 15 Amps, switching power with voltage rating from 208 to 480 VAC. Hybrid technology provides highly efficient thermal management for greatly increased cyclic life.

- Logic compatible current regulated input. 4000Vrms optical isolation.
- Both "Zero Voltage & phase controllable "Random Switching" versions
- High voltage (1200 Vpk) version for 480 Vrms service.



Part Number	Control Voltage	Line Voltage	Current	Switching Type
	VDC	VAC	A	
HDH2528ZD3	3-32	280	25	Zero Cross
HDH4028RD3	3-32	280	40	Random
HDH4028ZD3	3-32	280	40	Zero Cross
HDH4048RD3	3-32	480	40	Random
HDH4048ZA4	3-32	480	40	Zero Cross
HDH7528RD3	3-32	280	75	Random
HDH10028ZD3	3-32	280	100	Zero Cross
HTH6048ZD3	3-32	480	60	Zero Cross

APPENDIX

KVA / KWA CHART

80% Power Factor

kVA	kW	208V	220V	240V	380V	400V	440V	450V	480V	600V	2400V	3300V	4160V
6.3	5.0	17.5	16.5	15.2	9.6	9.1	8.3	8.1	7.6	6.1			
9.4	7.5	26.1	24.7	22.6	14.3	13.6	12.3	12.0	11.3	9.1			
12.5	10.0	34.7	33.0	30.1	19.2	18.2	16.6	16.2	15.1	12.0			
18.7	15.0	52.0	49.5	45.0	28.8	27.3	24.9	24.4	22.5	18.0			
25.0	20.0	69.5	66.0	60.2	38.4	36.4	33.2	32.4	30.1	24.0	6.0	4.4	3.5
31.3	25.0	87.0	82.5	75.5	48.0	45.5	41.5	40.5	37.8	30.0	7.5	5.5	4.4
37.5	30.0	104.0	99.0	90.3	57.6	54.6	49.8	48.7	45.2	36.0	9.1	6.6	5.2
50.0	40.0	139.0	132.0	120.0	77.0	73.0	66.5	65.0	60.0	48.0	12.1	8.8	7.0
62.5	50.0	173.0	165.0	152.0	96.0	91.0	83.0	81.0	76.0	61.0	15.1	10.9	8.7
75.0	60.0	208.0	198.0	181.0	115.0	109.0	99.6	97.5	91.0	72.0	18.1	13.1	10.5
93.8	75.0	261.0	247.0	226.0	143.0	136.0	123.0	120.0	113.0	90.0	22.6	16.4	13.0
100.0	80.0	278.0	264.0	240.0	154.0	146.0	133.0	130.0	120.0	96.0	24.1	17.6	13.9
125.0	100.0	347.0	330.0	301.0	192.0	182.0	166.0	162.0	150.0	120.0	30.0	21.8	17.5
156.0	125.0	433.0	413.0	375.0	240.0	228.0	208.0	204.0	188.0	150.0	38.0	27.3	22.0
187.0	150.0	520.0	495.0	450.0	288.0	273.0	249.0	244.0	225.0	180.0	45.0	33.0	26.0
219.0	175.0	608.0	577.0	527.0	335.0	318.0	289.0	283.0	264.0	211.0	53.0	38.0	31.0
250.0	200.0	694.0	660.0	601.0	384.0	364.0	332.0	324.0	301.0	241.0	60.0	44.0	35.0
312.0	250.0	866.0	825.0	751.0	480.0	455.0	415.0	405.0	376.0	300.0	75.0	55.0	43.0
375.0	300.0	1040.0	990.0	903.0	576.0	546.0	498.0	487.0	451.0	361.0	90.0	66.0	52.0
438.0	350.0	1220.0	1155.0	1053.0	672.0	637.0	581.0	568.0	527.0	422.0	105.0	77.0	61.0
500.0	400.0	1390.0	1320.0	1203.0	770.0	730.0	665.0	650.0	602.0	481.0	120.0	88.0	69.0
625.0	500.0	1735.0	1650.0	1504.0	960.0	910.0	830.0	810.0	752.0	602.0	150.0	109.0	87.0
750.0	600.0	2080.0	1980.0	1803.0	1150.0	1090.0	996.0	975.0	902.0	721.0	180.0	131.0	104.0
875.0	700.0	2430.0	2310.0	2104.0	1344.0	1274.0	1162.0	1136.0	1052.0	842.0	210.0	153.0	121.0
1000.0	800.0	2780.0	2640.0	2405.0	1540.0	1460.0	1330.0	1300.0	1203.0	962.0	241.0	176.0	139.0
1125.0	900.0	3120.0	2970.0	2709.0	1730.0	1640.0	1495.0	1460.0	1354.0	1082.0	271.0	197.0	156.0
1250.0	1000.0	3470.0	3300.0	3009.0	1920.0	1820.0	1660.0	1620.0	1504.0	1202.0	301.0	218.0	174.0
1563.0	1250.0	4350.0	4130.0	3765.0	2400.0	2280.0	2080.0	2040.0	1885.0	1503.0	376.0	273.0	218.0
1875.0	1500.0	5205.0	4950.0	4520.0	2880.0	2730.0	2490.0	2440.0	2260.0	1805.0	452.0	327.0	261.0
2188.0	1750.0			5280.0	3350.0	3180.0	2890.0	2830.0	2640.0	2106.0	528.0	380.0	304.0
2500.0	2000.0			6020.0	3840.0	3640.0	3320.0	3240.0	3015.0	2405.0	602.0	436.0	348.0
2812.0	2250.0			6780.0	4320.0	4095.0	3735.0	3645.0	3400.0	2710.0	678.0	491.0	392.0
3130.0	2500.0			7520.0	4800.0	4560.0	4160.0	4080.0	3765.0	3005.0	752.0	546.0	435.0
3750.0	3000.0			9040.0	5760.0	5460.0	4980.0	4880.0	4525.0	3610.0	904.0	654.0	522.0
4375.0	3500.0			10550.0	6700.0	6360.0	5780.0	4660.0	5285.0	4220.0	1055.0	760.0	610.0
5000.0	4000.0			12040.0	7680.0	7280.0	6640.0	6480.0	6035.0	4810.0	1204.0	872.0	695.0

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