gentec
GLOBAL SOLUTION IN ENERGY MANAGEMENT

LOW VOLTAGE CAPACITORS

STYLE: DSHI & DSHM

DSHM

DSHI

NEW L1 & L2 SERIES WITH HEAT TRANSFER PACKAGE (HTP)

Metallized polypropylene capacitor elements are self-healing and dry, without any flammable dielectric liquid. Each individual capacitor element features patented internal protection.

Delta or Star connection 3-phase units can be used for power factor correction in all types of capacitor banks, including tuned and detuned filters. Wire losses are kept to a minimum through the use of solid copper, low-current bus bars for internal connections. Capacitor elements are installed on special supports within the steel housing, ensuring that the elements remain separated.

The split design of the housing enables more efficient cooling due to a 40% increase in cooling surface area.

L2 Series design features:

- Smaller dimensions
- Lower losses
- Cable termination for one or two outputs
- Special patented Heat Transfer Package

L1 & N3D Series design features:

- Smaller dimensions
- Lower losses
- Easy cable termination

TECHNICAL SPECIFICATIONS

TYPE	DRY SELF-HEALING, INTERNALLY PROTECTED ELEMENT
Dielectric	Metallized polypropylene film, no liquid dielectric
Voltage range	208 to 1000 Volts
Frequency	50 and 60 Hz
Internal connection	3 Phase delta (208, 240, 480, 600 Volts) 3 Phase Y 600 Volts (750 Volts construction) Cell connected by solid copper bus bars
Tolerance	0% / +15%
Discharge resistor / time	< 50 V in 1 minute
Losses	=< 0.4 W/kvar with discharge resistor
Interrupting rating / Unfused	10 ka I.C. Symmetrical
Interrupting rating / Fused	200 ka I.C. Symmetrical
Continuous overvoltage	110% x Vn
Continuous overcurrent	135% x In
Maximum recommended harmonic current	105% x In
Maximum recommended harmonic voltage	103% x In
Maximum ambient temperature Operating ambient temperature	-40°C to +50°C (-40°F to +122°F) -40°C to +40°C (-40°F to +104°F)
Others conditions	Contact Gentec inc
Design service life	200,000 hours
Maximum altitude	1800 meters (6000 feet) without derating
Certification	UL, CSA, IEC
Enclosure type	1, 12, 3R Heavy gauge welded steel with Heat Transfer Package construction
Paint finish	Light Beige
Mounting	Heavy gauge brackets, floor mounting holes 2" x 3/8" slots
Terminals	12M (1/2-13 brass studs c/w lugs)

480 Volts *L Series*

Emax = 110% En

kVAR	Model # ** DSHI cat #	Style Suffix	Type* Suffix	Dimension Fig. #	" A " inch (mm)	Option 3 Fus. Suffix	Option 3 Lights Suffix	Dimension Fig. #	" A " inch (mm)
2	22650	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
3	22202	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
4	22651	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
5	21686	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
6	22203	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
7.5	21368	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
10	21369	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
12.5	31237	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
15	21370	FL1D	1	3	12.8 (326)	F	BFI	4	12.8 (326)
17.5	31238	FL1D	1	3	12.8 (326)	F	BFI	4	12.8 (326)
20	21371	FL1D	1	3	12.8 (326)	F	BFI	4	12.8 (326)
25	21372	FL1D	1	3	12.8 (326)	F	BFI	4	12.8 (326)
30	21373	SL1D	1	3	16.7 (425)	F	BFI	4	16.7 (425)
35	31239	FL2D	1	5	13.4 (340)	F	BFI	6	18.1 (460)
40	21374	FL2D	1	5	13.4 (340)	F	BFI	6	18.1 (460)
45	31240	FL2D	1	5	13.4 (340)	F	BFI	6	18.1 (460)
50	21375	FL2D	1	5	13.4 (340)	F	BFI	6	18.1 (460)
60	21376	SL2D	1	5	17.4 (440)	F	BFI	6	22.0 (560)
70	22652	SL2D	1	5	17.4 (440)	F	BFI	6	22.0 (560)
75	21377	SL2D	1	5	17.4 (440)	F	BFI	6	22.0 (560)
80	22653	SL2D	1	5	17.4 (440)	F	BFI	6	22.0 (560)
90	22654	AL2D	1	5	21.0 (535)	F	BFI	6	25.8 (655)
100	21378	AL2D	1	5	21.0 (535)	F	BFI	6	25.8 (655)

600 Volts *L Series*

Emax = 110% En

kVAR	Model # ** DSHI cat #	Style Suffix	Type* Suffix	Dimension Fig. #	" A " inch (mm)	Option 3 Fus. Suffix	Option 3 Lights Suffix	Dimension Fig. #	" A " inch (mm)
3	21555	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
6	21556	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
7.5	21363	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
10	9932	N3D	1	1	7.5 (190)	F	BFI	2	10.3 (260)
12.5	21364	M1LD	1	3	9.1 (230)	F	BFI	4	9.1 (230)
15	9935	FL1D	1	3	12.8 (326)	F	BFI	4	12.8 (326)
20	9938	FL1D	1	3	12.8 (326)	F	BFI	4	12.8 (326)
25	9941	SL1D	1	3	16.7 (425)	F	BFI	4	16.7 (425)
30	9944	SL1D	1	3	16.7 (425)	F	BFI	4	16.7 (425)
40	9950	FL2D	1	5	13.4 (340)	F	BFI	6	18.1 (461)
50	9956	SL2D	1	5	17.4 (440)	F	BFI	6	22.0 (560)
60	9959	SL2D	1	5	17.4 (440)	F	BFI	6	22.0 (560)
75	21365	AL2D	1	5	21.0 (535)	F	BFI	6	25.8 (655)
100	21366	TL2D	1	5	25.0 (635)	F	BFI	6	29.7 (755)

600 Volts *L Series*

Emax = 140% En (750 Volts Construction)

kVAR	Model # ** DSHI cat #	Style Suffix	Type* Suffix	Dimension Fig. #	" A " inch (mm)	Option 3 Fus. Suffix	Option 3 Lights Suffix	Dimension Fig. #	" A " inch (mm)
3	31248	ML1Y	1	3	9.1 (230)	F	BFI	4	9.1 (230)
6	31249	ML1Y	1	3	9.1 (230)	F	BFI	4	9.1 (230)
7.5	31250	ML1Y	1	3	9.1 (230)	F	BFI	4	9.1 (230)
10	31251	ML1Y	1	3	9.1 (230)	F	BFI	4	9.1 (230)
12.5	31252	FL1Y	1	3	13.0 (330)	F	BFI	4	13.0 (330)
15	31253	FL1Y	1	3	13.0 (330)	F	BFI	4	13.0 (330)
20	31254	SL1Y	1	3	16.7 (423)	F	BFI	4	16.7 (423)
25	31256	SL1Y	1	3	16.7 (423)	F	BFI	4	16.7 (423)
30	31257	FL2Y	1	5	13.4 (340)	F	BFI	6	18,0 (461)
40	31258	SL2Y	1	5	17.4 (440)	F	BFI	6	22.0 (558)
50	31259	SL2Y	1	5	17.4 (440)	F	BFI	6	22.0 (558)
60	31260	AL2Y	1	5	21.0 (535)	F	BFI	6	25.8 (655)
75	31261	TL2Y	1	5	25.0 (635)	F	BFI	6	29.7 (755)
100	31255	RL2Y	1	5	28.7 (730)	F	BFI	6	33.5 (851)

240 Volts *L Series*

Emax = 110% En

kVAR	Model # ** DSHI cat #	Style Suffix	Type* Suffix	Dimension Fig. #	" A " inch (mm)	Option 3 Fus. Suffix	Option 3 Lights Suffix	Dimension Fig. #	" A " inch (mm)
5	21357	ML1D	1	3	9 (228)	F	BFI	4	9.0 (228)
7.5	21358	ML1D	1	3	9 (228)	F	BFI	4	9.0 (228)
10	21359	FL1D	1	3	12.8 (326)	F	BFI	4	12.8 (326)
15	21360	FL1D	1	3	12.8 (326)	F	BFI	4	12.8 (326)
20	21361	FL2D	1	5	13.4 (340)	F	BFI	6	18.1 (460)
25	21362	FL2D	1	5	13.4 (340)	F	BFI	6	18.1 (460)
30	9947	FL2D	1	5	13.4 (340)	F	BFI	6	18.1 (460)
40	9953	SL2D	1	5	17.4 (440)	F	BFI	6	22.0 (560)
50	21687	AL2D	1	5	21.0 (535)	F	BFI	6	25.8 (655)

** Type = 1, 12 or 3R*

*** Typical Model # = DSHI-21687-AL2D - 12 - F - BFI*

Fig. 1

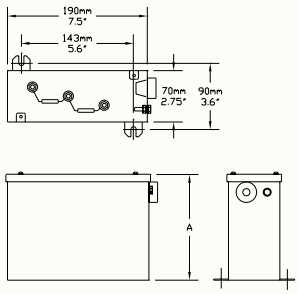


Fig. 2

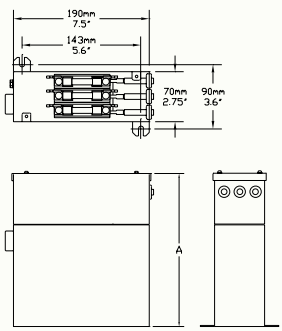


Fig. 3

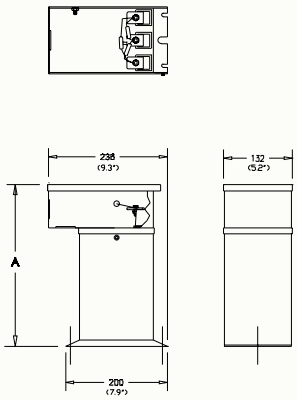


Fig. 4

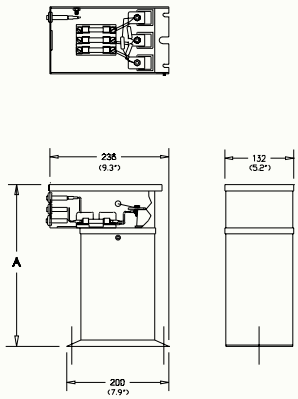


Fig. 5

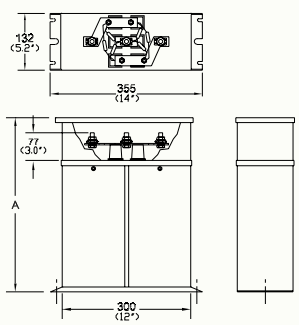


Fig. 6

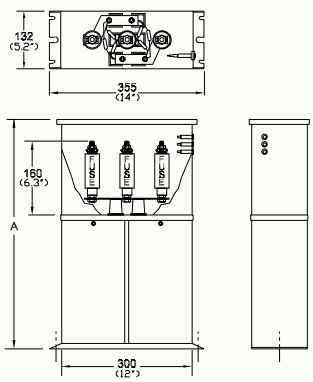


Fig. 7

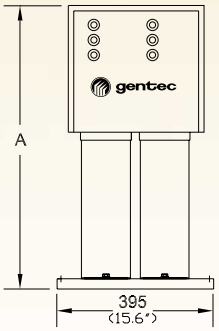


Fig. 8

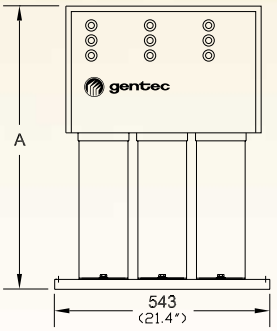


Fig. 9

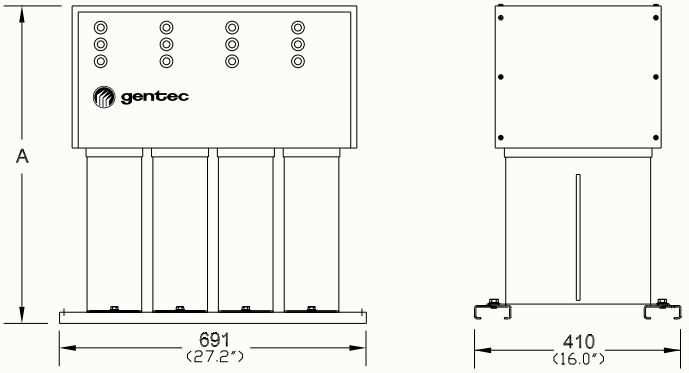
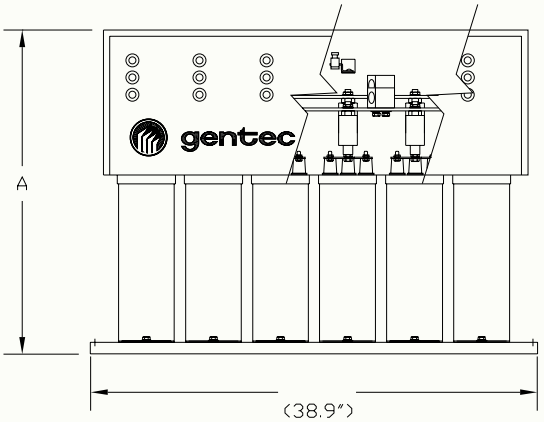


Fig. 10



240 Volts *L Series*

kVAR	Model # ** DSHM cat #	Style Suffix	Option Type 1, 12, 3R Suffix*	Option 3 Fus. Suffix	Option 3 Lights Suffix	Dimension Fig. #	Dimension " A " inch (mm)
60	2-9947	FL2D	1	F	BFI	7	23.0 (583)
80	2-9953	SL2D	1	F	BFI	7	26.9 (683)
100	2-21687	AL2D	1	F	BFI	7	30.9 (784)
120	3-9953	SL2D	1	F	BFI	8	26.9 (683)
150	3-21687	AL2D	1	F	BFI	8	30.9 (784)
200	4-21687	AL2D	1	F	BFI	9	30.9 (784)
225	4-21687-2	AL2D	1	F	BFI	10	30.9 (784)
250	5-21687	AL2D	1	F	BFI	10	30.9 (784)
300	6-21687	AL2D	1	F	BFI	10	30.9 (784)

480 Volts *L Series*

kVAR	Model # ** DSHM cat #	Style Suffix	Option Type 1, 12, 3R Suffix*	Option 3 Fus. Suffix	Option 3 Lights Suffixe	Dimension Fig. #	Dimension " A " inch (mm)
120	2-21376	SL2D	1	F	BFI	7	26.9 (683)
125	2-21377-5	SL2D	1	F	BFI	7	26.9 (683)
130	2-22652-6	SL2D	1	F	BFI	7	26.9 (683)
140	2-22652	SL2D	1	F	BFI	7	26.9 (683)
150	2-21377	SL2D	1	F	BFI	7	26.9 (683)
160	2-22653	SL2D	1	F	BFI	7	26.9 (683)
175	2-21378-7	AL2D	1	F	BFI	7	30.9 (784)
180	2-22654	AL2D	1	F	BFI	7	30.9 (784)
200	2-21378	AL2D	1	F	BFI	7	30.9 (784)
210	3-22652	SL2D	1	F	BFI	8	26.9 (683)
225	3-21377	SL2D	1	F	BFI	8	26.9 (683)
240	3-22653	SL2D	1	F	BFI	8	26.9 (683)
250	3-22654-2	AL2D	1	F	BFI	8	30.9 (784)
270	3-22654	AL2D	1	F	BFI	8	30.9 (784)
275	3-21378-7	AL2D	1	F	BFI	8	30.9 (784)
290	3-21378-4	AL2D	1	F	BFI	8	30.9 (784)
300	3-21378	AL2D	1	F	BFI	8	30.9 (784)
320	4-22653	SL2D	1	F	BFI	9	26.9 (683)
360	4-22654	AL2D	1	F	BFI	9	30.9 (784)
400	4-21378	AL2D	1	F	BFI	9	30.9 (784)
430	4-21378-3	AL2D	1	F	BFI	9	30.9 (784)
450	5-22654	AL2D	1	F	BFI	10	30.9 (784)
475	5-21378-7	AL2D	1	F	BFI	10	30.9 (784)
500	5-21378	AL2D	1	F	BFI	10	30.9 (784)
540	6-22654	AL2D	1	F	BFI	10	30.9 (784)
600	6-21378	AL2D	1	F	BFI	10	30.9 (784)

600 Volts *L Series*

kVAR	Model # ** DSHM cat #	Style Suffix	Option Type 1, 12, 3R Suffix*	Option 3 Fus. Suffix	Option 3 Lights Suffix	Dimension Fig. #	Dimension " A " inch (mm)
120	2-9959	SL2D	1	F	BFI	7	26.9 (683)
150	2-21365	AL2D	1	F	BFI	7	30.9 (784)
175	2-21366-5	TL2D	1	F	BFI	7	34.6 (878)
200	2-21366	TL2D	1	F	BFI	7	34.6 (878)
225	3-21365	AL2D	1	F	BFI	8	30.9 (784)
250	3-21366-6	TL2D	1	F	BFI	8	34.6 (878)
275	3-21366-5	TL2D	1	F	BFI	8	34.6 (878)
300	3-21366	TL2D	1	F	BFI	8	34.6 (878)
350	4-21366-6	TL2D	1	F	BFI	9	34.6 (878)
375	4-21366-5	TL2D	1	F	BFI	9	34.6 (878)
400	4-21366	TL2D	1	F	BFI	9	34.6 (878)
450	5-21366-6	TL2D	1	F	BFI	10	34.6 (878)
500	5-21366	TL2D	1	F	BFI	10	34.6 (878)
550	6-21366-6	TL2D	1	F	BFI	10	34.6 (878)
600	6-21366	TL2D	1	F	BFI	10	34.6 (878)

Other power options are avalaible on request. Contact Gentec headquarters.

** Type = 1, 12 or 3R*

*** Typical Model # = DSHM - 6-21366-TL2D - 1 - F - BFI*

kVAR	240 Volts				480 Volts				600 Volts			
	Nominal Current per Phase **Amp.**	Minimum Copper Cable Size **# awg**	Recom. Fuse Size **Amp.**	Recom. Fuse Discon. **Amp.**	Nominal Current per Phase **Amp.**	Minimum Copper Cable Size **# awg**	Recom. Fuse Size **Amp.**	Recom. Fuse Discon. **Amp.**	Nominal Current per Phase **Amp.**	Minimum Copper Cable Size **# awg**	Recom. Fuse Size **Amp.**	Recom. Fuse Discon. **Amp.**
2	6	14	15	30	2.4	14	20	30	2.0	14	20	30
3	8	14	15	30	3.6	14	20	30	3.0	14	20	30
4	10	14	15	30	4.8	14	20	30	3.8	14	20	30
5	12	12	20	30	6.0	14	20	30	4.8	14	20	30
6	14	12	30	60	7.2	14	20	30	5.8	14	20	30
7.5	18	10	30	60	9.0	14	30	30	7.2	14	20	30
10	24	8	40	60	12	12	30	30	9.6	12	20	30
15	36	8	60	60	18	10	40	60	14	12	30	30
20	48	8	80	100	24	8	50	60	19	10	40	60
25	60	4	100	100	30	8	60	60	24	10	50	60
30	72	3	125	200	36	6	75	100	29	10	60	60
40	96	1	175	200	48	6	100	100	38	8	80	100
50	120	2/0	200	200	60	4	125	200	48	8	100	100
60	144	3/0	225	400	72	3	150	200	58	6	125	200
70	168	3/0	250	400	84	2	175	200	68	4	125	200
75	180	250	300	400	90	2	175	200	72	3	150	200
80	192	250	300	400	96	1	200	200	78	2	150	200
90	217	300	400	400	108	1/0	200	200	94	2	175	200
100	241	350	400	400	120	2/0	200	200	96	2	200	200
120	289	500	500	600	144	3/0	225	400	115	2/0	225	400
140	329	500	600	600	168	4/0	250	400	135	2/0	250	400
150	361	2x 4/0	600	600	180	4/0	300	400	144	3/0	300	400
160	385	2x 250	600	600	192	250	300	400	154	3/0	300	400
180	433	2x 300	600	600	217	300	400	400	173	4/0	300	400
200	481	2x 350	800	800	241	350	400	400	192	250	400	400
210	510	2x 350	800	800	253	350	400	400	202	250	400	400
225	541	2x 350	800	800	270	500	500	600	217	300	400	400
240	577	2x 500	1000	1200	289	500	500	600	231	300	400	400
250	601	2x 500	1000	1200	301	500	500	600	241	350	400	400
270	650	3x 350	1000	1200	325	2x 3/0	600	600	260	350	400	400
280	674	3x 350	1000	1200	337	2x 3/0	600	600	270	350	500	600
300	722	3x 500	1200	1200	361	2x 4/0	600	600	289	500	500	600
320	-	-	-	-	385	2x 250	800	800	308	500	600	600
360	-	-	-	-	433	2x 300	800	800	346	2x 4/0	600	600
375	-	-	-	-	450	2x 300	800	800	361	2x 4/0	800	800
400	-	-	-	-	481	2x 350	800	800	385	2x 250	800	800
420	-	-	-	-	505	2x 350	1000	1200	404	2x 250	800	800
450	-	-	-	-	541	2x 400	1000	1200	433	2x 300	800	800
480	-	-	-	-	577	2x 500	1000	1200	462	2x 300	800	800
500	-	-	-	-	601	2x 500	1000	1200	481	2x 350	800	800
540	-	-	-	-	660	2x 600	1200	1200	520	2x 350	1000	1200
600	-	-	-	-	722	3x 350	1200	1200	577	2x 500	1000	1200

The above table gives recommended cable ratings, disconnect switches, fuses for use with capacitor loads. For requirements not covered in the tables, the following guidelines may be used:
Power cable = 135% In • Disconnect switch = 165% In • Molded case circuit breaker = 135% In

COMPLETE SOLUTION IN POWER QUALITY CORRECTION


Power Quality Manager


C100 Auto Bank


FT100, FT200, FT300 Passive Filter


DS100, DS200 DriveSaver


FT400 Active Filter


HVCE 3 Ph. Cap (2400 @ 6900 V)


C1000 & FT1000 HV Metal Enclosed 5, 15, 25 kV

gentec
GLOBAL SOLUTION IN ENERGY MANAGEMENT

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