

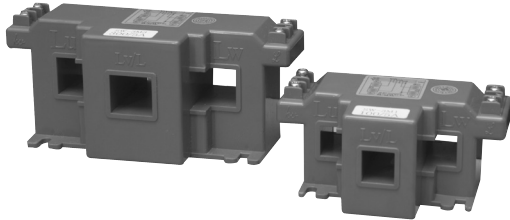
Current and Voltage Transformer

3 PHASE CURRENT TRANSFORMER
PROTECTION CURRENT TRANSFORMER
SQUARE TYPE CURRENT TRANSFORMER (1.15KV)
ROUND TYPE CURRENT TRANSFORMER [1.15KV]
WINDING TYPE CURRENT TRANSFORMER [1.15KV]
3 PHASE VOLTAGE TRANSFORMER
VOLTAGE TRANSFORMER AND GROUNDING VOLTAGE
TRANSFORMER [0.72KV]
EPOXY RESIN INSULATOR [0.6KV]
EPOXY RESIN INSULATOR [7.2, 12KV]
EPOXY RESIN INSULATOR [24, 36KV]
SHUNT [VOLTAGE DROP 50MV]
CURRENT LIMIT RESISTER [CLR]

CT, VT
(0.6kV, 7.2kV, 12kV, 24kV, 36kV)



3 PHASE CURRENT TRANSFORMER



Feature

- 3 phase in one current transformer with combined each of ct easy to install, save the cost
- Case : Polycarbonate (PC)

Rating

Items	Applied range
Max. Voltage	1150V
Frequency	60Hz
Class	1.0% ~3.0%
Phase	3 ϕ , 2 ϕ 40In/1Sec
Over Current Factor	40In/1Sec

1150V Window Type C.T (3P4W 3C.T)

Specification

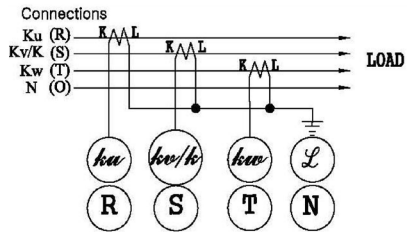
Model	Pri. Cur.(A)	Sec.Cur.(A)	Class(%)	Burden(VA)	MCCB&ELCB
DW-40	50-75	5	3.0	2.5	50AF
DW-41	100-150		1.0 / 3.0	5 / 15	100AF
DW-42	120-250		1.0 / 3.0	5 / 15	225AF
DW-43	300-400		1.0	15 / 40	400AF
DW-44	500-1200		1.0	15 / 40	600/800AF

1150V Window Type C.T (3P3W 2C.T)

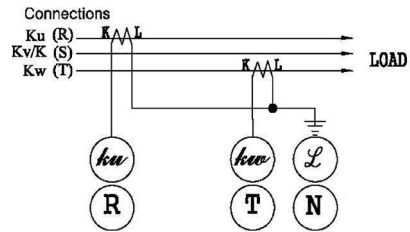
Specification

Model	Pri. Cur.(A)	Sec.Cur.(A)	Class(%)	Burden(VA)	MCCB&ELCB
DW-30	50-75	5	3.0	2.5	50AF
DW-31	100-150		1.0 / 3.0	5 / 15	100AF
DW-32	120-250		1.0 / 3.0	5 / 15	225AF
DW-33	300-400		1.0	15 / 40	400AF
DW-34	500-1200		1.0	15 / 40	600/800AF

External wiring diagram

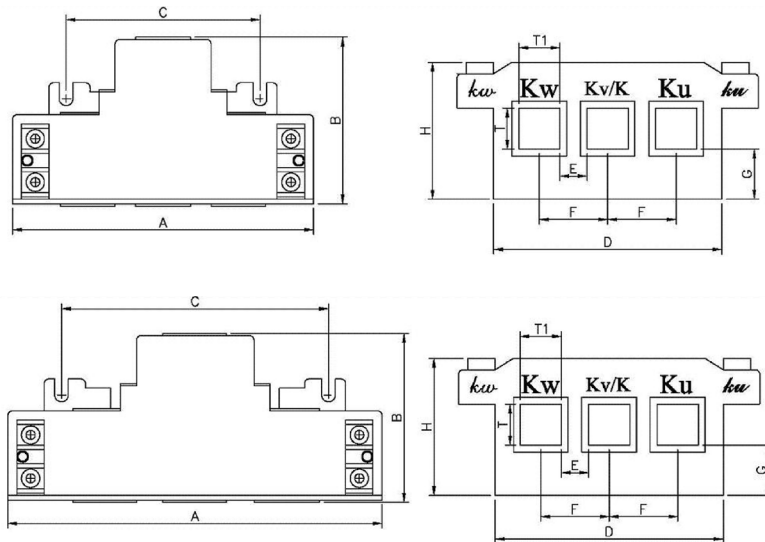


※ 2nd connection method
Notice : pay attention of polar



※ 2nd connection method
Notice : pay attention of polar

Dimension



Type

Unite : mm

3P3W 3C,T	3P3W 2C,T	A	B	C	D	E	F	T	T1	H	G
DW-40	DW-30	117	94	66	82	9	25	17	16	60	25
DW-41	DW-31	132	73	85	100	12	30	18	18	60	21,5
DW-42	DW-32	151	73	100	119	14	35	21	21	60	21,5
DW-43	DW-33	182	66	127	150	18	44	24	26	80	31,5
DW-44	DW-34	262	66	210	230	24	70	28	46	85	29,5

PROTECTION CURRENT TRANSFORMER

DS - 2R, DS - 3R, DS - 4R,
DS - 5R [DS - 51R], DS - 6R

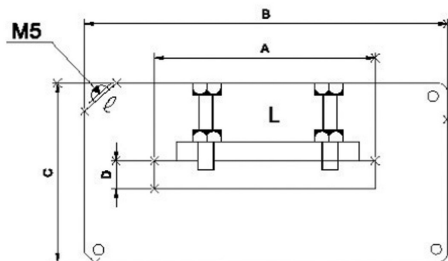


Model	DS - 2R	DS - 3R	DS - 4R	DS - 5R [DS - 5-2R]	DS - 6R
1st Rating	250~400A	150~600A	600~1,500A	1,000~4,000A	1,500~5,000A
2nd Rating	AC 5A / 1A				
Class	5P				
n	n > 10	n > 10	n > 10	n > 20	n > 20
In	40 in				
Frequency	50 / 60 Hz				
Burden	5Va	5~10Va	5~10Va	5Va	5~40Va

Feature

Tolerance class	Limit value of 2nd current when connect rating burden to c.t and input rating current 1P / 3P [JEC1201], 5P / 10P [IEC60044-1]
Overcurrent numeric(n)	In put over current on c.t and display has numeric of 1st rating current with the value which is overcurrent satisfied to tolerance class of 2nd current is divided by 1st rating current. [n > 5 / n > 10 / n > 20]
Safety Index	In put over current on c.t and display has numeric of 1st rating current with the value which is overcurrent get out of tolerance class is divided by 1st rating current. [FS 5 / FS 10 / FS 15 / FS 20 / FS 30]
Overcurrent intensity	In put over current on 1st c.t and display as numeric of 1st rating current for max overcurrent value with no change in thermal and mechanical [40In / 75In / 150In / 300In] In = rated current
Rating burden	Total load value to connect 2nd . Within allowance range of tolerance class in c.t 5VA / 10VA / 15V / 25VA / 40VA [JEC1201] 2.5VA / 5VA / 10VA / 15VA / 30VA [IEC60044-1]

Dimension



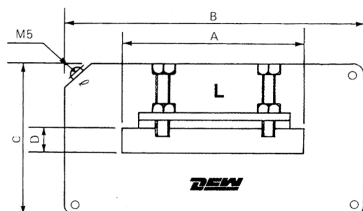
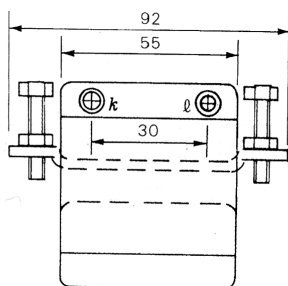
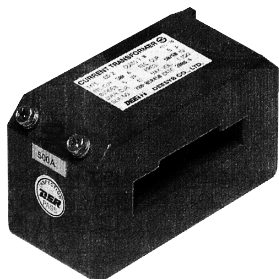
Uite : m/m

MODEL	A	B	C	D
DS-2R	65	115	65	11
DS-3R	85	135	70	13
DS-4R	105	155	85	22
DS-5R	130	212	126	41
DS-5-2R	130	212	138	53
DS-6R	160	260	180	75

SQUARE TYPE CURRENT TRANSFORMER (1.15KV) PANEL

DS-1, DS-2, DS-3, DS-4, DS-5, DS-6

- BUSbar through type
- Color : Brown
- For metering
- Resin : ABS Non-flamable(case)
- For indoor
- Mold : Polyester



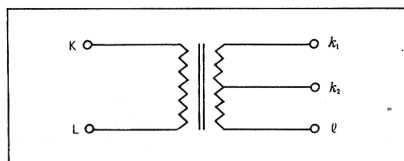
Single ratio C.T

Type	Primary (A)	Secondary (A)	Burden (VA)	Class (%)	over curr. strenght (times)	Frequ-ency (Hz)	Weight (kg)
DS-1	100	5 or 1	5 or 15	1.0	5 or 1	50/60	1.3
	150~200		5 or 15				
	250~300		5 or 15				
	300		5 or 15				
DS-2	400	5 or 1	15	1.0	5 or 1	50/60	1.5
	500~600		15~40				
DS-3	600~1000		15~40	0.5			1.5
DS-4	750~2000			1.0			1.6
DS-5	1000~4000		40	0.5			1.9
DS-6	2500~6000			0.3			4.8

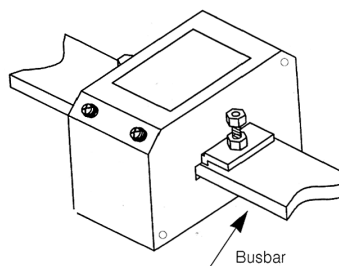
Unit : mm

Type	Dimension			
	A	B	C	D
DS-1	44	110	80	10
DS-2	65	115	65	11
DS-3	85	135	70	13
DS-4	105	155	85	27
DS-5	130	212	126	41
DS-5-2	130	212	138	53
DS-6	160	260	180	75

Double C.T Connection diagram



DS CT is designed how to install the busbar is very easy by being used the installing metal.

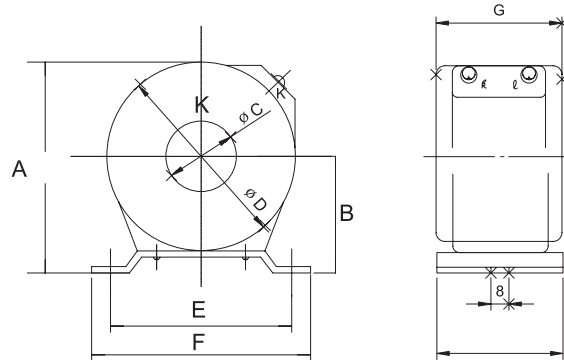
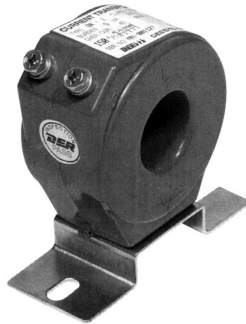


ROUND TYPE CURRENT TRANSFORMER (1.15KV)

DR-1, DR-2, DR-3, DR-18

- Cable through type
- Mounting parts to be changeable at 90° direction
- For metering application
- For indoor
- Color : Brown

- Resin : ABS Non-flamable(case)
- Mold : Polyester



What is rating ampere turn?

The rating A.T is the value of rating 1ry current(A) a multiplies the turn of 1ry conductor.

According to the method how the turn of 1ry conductor is changed, It is able to change rating 1ry current.

ex) In case of rating AT : 200 AT

The turn of cable 1T :rating 1ry current 200A

The turn of cable 2T :rating 1ry current 100A

The turn of cable 4T :rating 1ry current 50A

Refer to page 183 for the turn and cross area of 1' ry conductor according to rating 1' ry current.

Dimension

Type	A	B	ØC	ØD	E	F	G
DR-18	84	48	18	64	65	80	50
DR-1	95	55	27	70	75	94	40
DR-2	108	65	40	87	75	94	40
DR-3	134	77	60	114	75	94	40

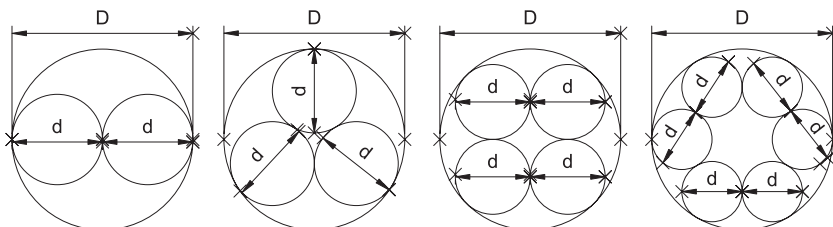
Specification

Type	Rated (AT)	Burden (VA)	Class (%)	Over Current Strength (times)	Frequen -cy(Hz)	Weight (kg)
DR-18	75	5	1.0	40In	50/60	0.55
	100					
	120					
	150					
	200					
DR-1	180	5 or 15	1.0	40In	50/60	0.75
	200					
	240					
	250					
	300					
	300					
DR-2	240	15 or 40	1.0	40In	50/60	1.10
	250					
	300					
	400					
	500					
	600					
DR-3	500	40	1.0	40In	50/60	1.10
	600					
	750					
	800					
	1000					
	1500					

• Current ratio and across area of 1ry conductor

According to turn of DR, CT 1ry conductor Following table is discribed the trun rating 1ry current, 1ry conductor and the cross area of 600V vinyl wire(6000,I Wire) The allownace current of wire is the value at amboent temperaure 40°C discribed.

5VA				15VA				40VA					
DR-1 / DR-18				DR-2				DR-3					
Rated AT	1ry current (A)	turns (T)	1ry cable (mm ²)	Rated AT	1ry current (A)	turns (T)	1ry cable (mm ²)	Rated AT	1ry current (A)	turns (T)	1ry cable (mm ²)		
75	5	15	()	240	15	16	5,5	500	50	10	38		
	15	5	8		20	12	14		100	5	125		
	25	3	14		30	8	22		125	4	125		
	75	1	50		60	4	80		250	2	250		
100	5	20	()	250	120	2	125	600	75	8	60		
	10	10	8		240	1	500		100	6	60		
	20	5	14		25	10	4		150	4	125		
	25	4	14		50	5	60		200	3	150		
150	50	2	22	300	125	2	125	800	300	2	250		
	100	1	200		250	1	500		600	1	500		
	15	10	8		30	10	22		75	10	38		
	25	6	14		50	6	38		150	5	125		
160	30	5	14	400	75	4	80	1000	250	3	250		
	50	3	38		100	3	80		750	1	500		
	75	2	50		150	2	125		80	10	38		
	100	1	200		300	1	500		100	8	50		
180	10	16	8	500	40	10	14	1200	200	4	125		
	20	8	14		50	8	22		400	2	250		
	40	4	38		100	4	80		800	1	500		
	80	2	50		200	2	200		100	10	38		
200	160	1	200	600	400	1	500	1500	200	5	125		
	10	18	8		50	10	14		500	1	500		
	20	9	14		100	5	60		100	12	38		
	30	6	22		125	4	80		200	6	125		
250	60	3	50	600	250	2	125	1500	300	4	125		
	90	2	60		500	1	500		400	3	()		
	180	1	200		70	8	22		600	2	80X3()		
	20	10	14		100	6	60		1200	1	250X3()		
300	25	8	22	600	150	4	80	1500	150	10	38		
	40	5	22		200	3	100		300	5	125		
	50	4	38		300	2	125		500	3	250		
	100	2	200		600	1	500		750	2	80X3()		
300	200	1	200	600	600	1	500	1500	1500	1	250X3()		
	25	10	8		600	25	10		8	1500	25	10	8
	50	5	14			50	5		14		50	5	14
	125	2	50			75	4		22		75	4	22
250	1	200	100	3		38	100	3	38				
300	50	6	14	600	150	4	80	1500	150	10	38		
	60	5	14		200	3	100		300	5	125		
	75	4	22		300	2	125		500	3	250		
	100	3	38		600	1	500		750	2	80X3()		
300	150	2	50	600	600	1	500	1500	1500	1	250X3()		
	300	1	200		600	25	10		8	1500	25	10	8



(ex)In case of DR-1type CT and 3 trun of 38mm² outer cross length of 38mm² will 11,5mm² The error 120 & 100AT is 0,3 class and then inner cross length of DP-50F CT is 27mm and the CTcan be used

WINDING TYPE CURRENT TRANSFORMER (1.15KV)

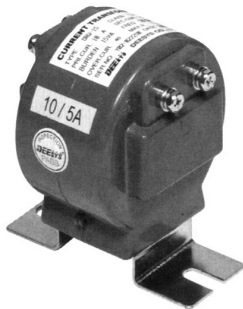
DRW-15, DRW-40, DRB-1, DRB-2

- Winding type
- For metering
- For watt hour meter
- Changeable 90° at mounting direction
- Color : Brown
- Resin : ABS Non-flamable(case)
- Mold : Polyester

Single ratio C.T

Type	Primary (A)	Secondary(A)	Burden (VA)	Class (%)	over curr. strenght (times)	dimension	Weight (kg)	Remark
DRW-15	5~30					Fig 1	0.70	Terminal Type
DRB-1	40~150 200~300 400~500	5 or 1	15	1.0	40in	Fig 2	0.85	Busbar Type
DRW-15	5~30					Fig 3	1.0	Terminal Type
DRB-2	40v150 200~300 400~500	5 or 1	40	1.0	40in	Fig 4	1.2	Busbar Type

DRW C.T

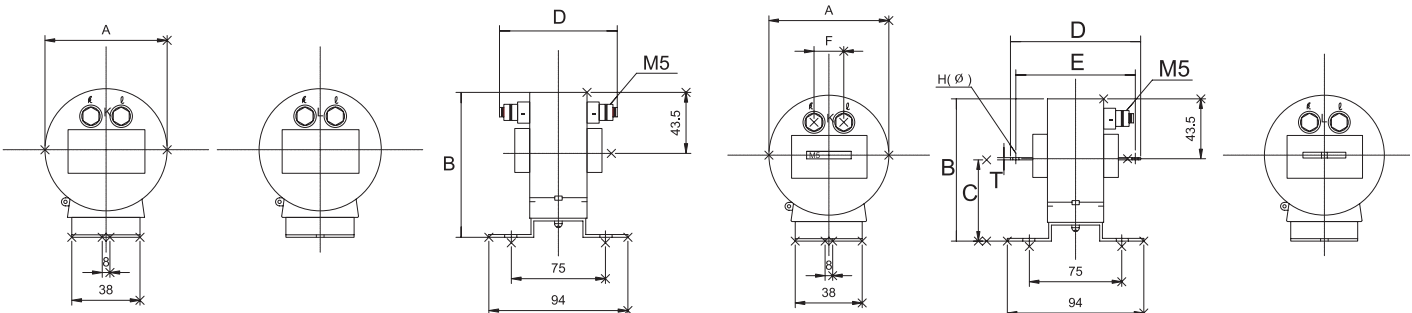


DRB C.T



Fig1.5~30A(DRW C.T)

Fig2. 40~500A(DRB C.T)

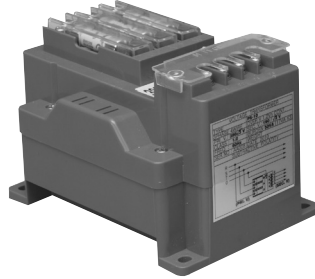


Unit : mm

Type	Primary current	A	B	C
DRW-15	5~30	80	100	90
DRW-40		100	118	102

Type	Primary current(A)	Dimension							
C		A	B	C	D	E	F	G	H(ø)
DRB-1	40~150	80	100	60	125	100	25	3.2	6
	200~300	80	100	60	135	105	30	6	10
	400~500	80	100	60	155	115	30	6	12
DRB-2	40~150	100	118	70	135	110	25	3.2	6
	200~300	100	118	70	145	115	30	6	10
	400~500	100	118	70	165	130	40	6	12

3 PHASE VOLTAGE TRANSFORMER



Feature

- 3 phase measuring pt is very good shape through landmark design and easy to install
- price is less expensive and economical to apply to SWGR
- Simple for wiring and reduce the time for connection

Rating

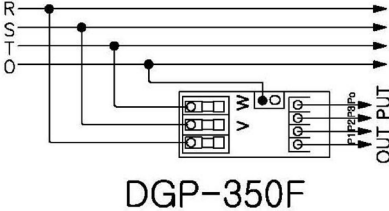
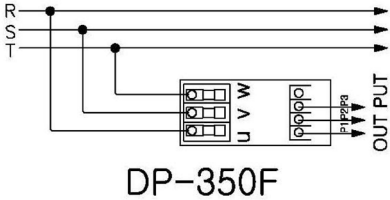
Items	Applied range
Max. Voltage	1150V
Frequency	60Hz
Class	1.0%
Phase	3 ϕ
Over Voltage Factor	1,2Vn Continuous

Specification

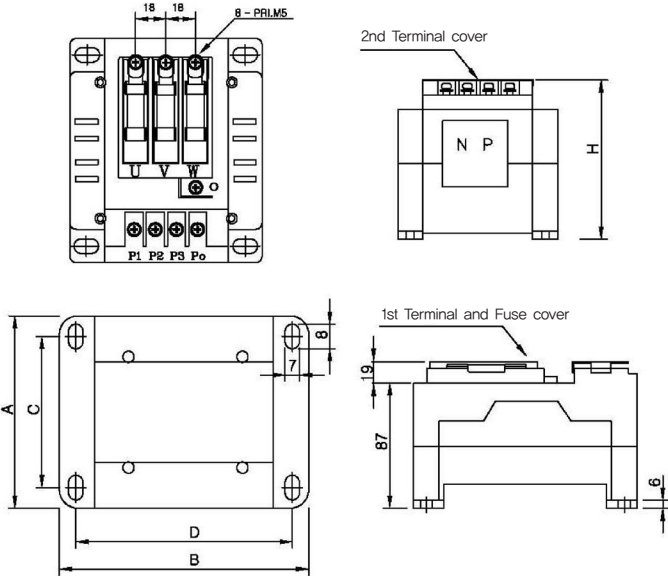
Model	Pri. Volt	Sec. Volt	Class(%)	Burden
DP-350F (3P3W)	220-600V	110-220V	1.0	50VA
DGP-350F (3P4W)	208/R3-440/R3	190/R3V	1.0	50VA

3 PHASE VOLTAGE TRANSFORMER

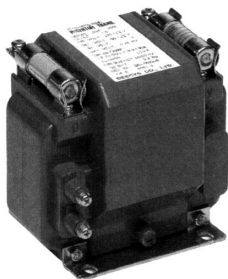
External wiring diagram



Dimension



VOLTAGE TRANSFORMER AND GROUNDING VOLTAGE TRANSFORMER (0.72KV)



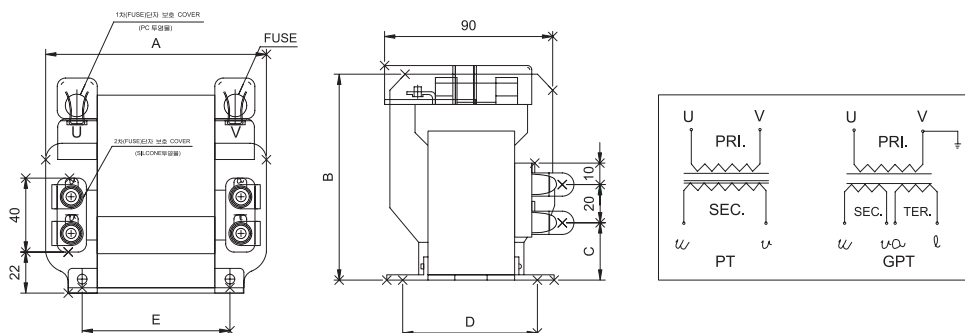
- Single phase
- Color : Brown
- metering & relaying
- Resin : ABS Non-flamable(case)
- For indoor
- Mold : Epoxy

• Note: If the burden of 3ry winding open terminal is less than rating burden, it may be the reason of relay malfunction due to remaining voltage. Please select the pit that applicable burden of PT will be 70% of rating burden.

Specification

Name	Type	Rated voltage(V)			Accuracy Class		Burden(VA)		Frequency (Hz)	Voltage Factor (IEC-186)	Weight (kg)
		1ry	2ry	3ry	2ry	3ry	2ry	3ry			
V.T	DP-50 DP-50F						50				2,5
	DP-100 DP-100F	220	110 or 190 or 220				100			1,2Vh cont	3,2
	DP-200 DP-200F	440					200				5,8
	DGP-100 DGP-100F				1,0		50		50/60		3,2
GPT	DGP-200 DGP-200F	220/√3	190/√3				100			1,2Vh cont	5,8
	DGP-100T DGP-100TF	380/√3	or 440/√3	110/√3			50	100		1,9Vh 30S	3,2
	DGP-200T DGP-200TF			110/√3		3p	100	200			5,8

Dimension



Model	A	B	C	D	E
DP-50	100	102	30	75	77
DP-100/DGP-100	118	112	33	75	73
DP-200/DGP-200	166	126	37	82	142