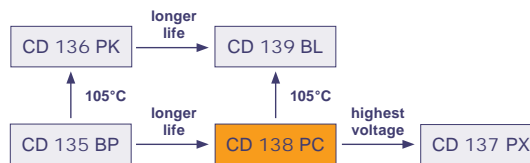


10000h at 85°C

- Long Life
- High Reliability
- High Currents for High Professional Applications and High Power Inverter



Item	Characteristics
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	350 ~ 450
Capacitance Range (µF)	1000 ~ 18000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0,01CV or 5mA, whichever is smaller C: Nominal Capacitance (µF) V: Rated Voltage (V)
Dissipation Factor (20°C, 120Hz)	Less than 0,15

Lifetime	Useful Life		Load Life	Endurance Test	Shelf Life
		10000h	>100000h	5000h	5000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacity Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value
Condition:					
Applied Voltage	$U_R$	$U_R$	$U_R$	$U_R$	$U_R = 0$
Applied Current	$I_R$	$1,4 \times I_R$	$I_R$	$I_R = 0$	$I_R = 0$
Applied Temperature	85°C	40°C	85°C	85°C	85°C
Failure Rate Level	≤ 1% Failure Rate	≤ 1% Failure Rate	guaranteed		After test: $U_R$ to be applied for 30min >24h before measurement

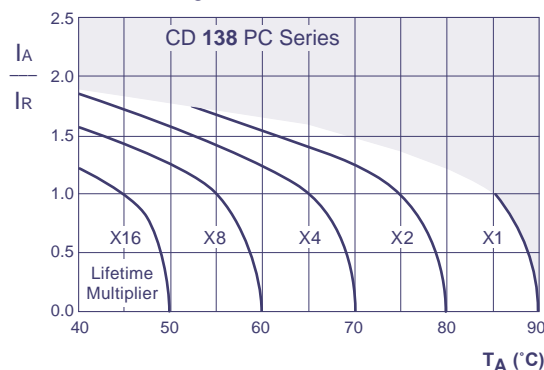
Screw

## Multiplier for Ripple Current

Frequency Coefficient

Frequency	50Hz	120Hz	300Hz	1kHz	≥10kHz
Coefficient	0,70	1,00	1,10	1,30	1,40

Lifetime Diagram



$I_A$  = actual ripple current at 120Hz,  $I_R$  = rated ripple current at 120Hz, 85°C  
Multiplier of Useful Life as a function of ambient temperature and ripple current load



## Ratings for CD 138 PC Series

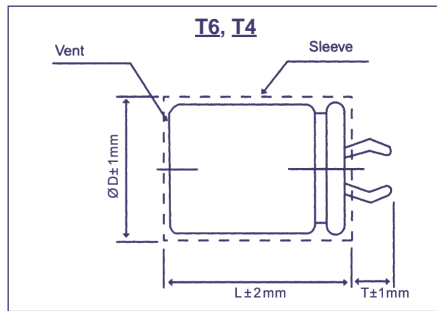
V <sub>DC</sub> (Surge Voltage) Code	Rated Capa- cittance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Max Ripple Current 85°C, 120Hz	Size Ø D x L
(V)	(µF)	(mΩ)	(mΩ)	(Arms)	(mm)
<b>350 (400) 2V</b>	1200	215	67	5,5	51 x 83
	1500	172	55	6,1	51 x 83
	1800	143	43	7,4	51 x 96
	2200	117	30	8,2	51 x 96
	2700	96	27	10,2	51 x 130
	3300	78	23	11,3	51 x 130
	3900	66	19	12,8	64 x 115
	4700	55	16	14,8	64 x 130
	5600	46	14	16,3	77 x 115
	6800	38	13	18,8	77 x 130
	8200	31	11	22,1	77 x 155
	10000	26	10	25,9	90 x 157
	12000	22	8	28,4	90 x 157
	15000	17	6	34,6	90 x 196
18000	14	4	41,4	90 x 236	
<b>400 (450) 2G</b>	1000	215	82	5,0	51 x 83
	1200	179	70	5,5	51 x 83
	1500	143	50	6,7	51 x 96
	1800	119	40	7,4	51 x 96
	2200	98	28	9,2	51 x 130
	2700	80	23	9,9	64 x 96
	3300	65	21	11,8	64 x 115
	3900	55	19	13,5	64 x 130
	4700	46	15	14,9	77 x 115
	5600	39	14	17,0	77 x 130
	6800	32	13	20,2	77 x 155
	8200	26	12	23,5	90 x 157
	10000	22	10	25,9	90 x 157
	12000	18	8	31,0	90 x 196
15000	14	6	37,5	90 x 236	
<b>450 (500) 2W</b>	1000	215	93	5,0	51 x 83
	1200	179	69	6,0	51 x 96
	1500	143	56	7,2	51 x 115
	1800	119	45	8,3	51 x 130
	2200	98	35	9,0	64 x 96
	2700	80	30	10,7	64 x 115
	3300	65	24	12,4	64 x 130
	3900	55	20	13,6	77 x 115
	4700	46	16	15,6	77 x 130
	5600	38	13	18,3	77 x 155
	6800	32	11	21,4	90 x 157
	8200	26	10	23,5	90 x 157
	10000	22	9	28,3	90 x 196
	12000	18	8	33,6	90 x 236

Screw

Custom products are available on request.

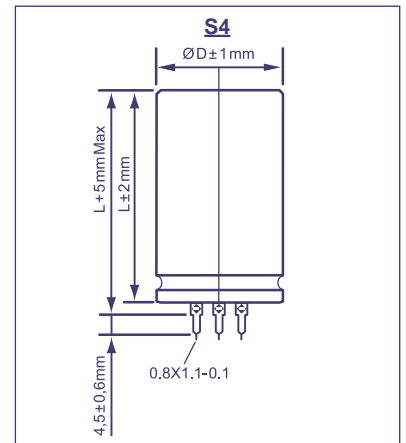
## Technical Specification Snap-In Type

**Pin Type: Snap-In**  
Order Code: T6, T4

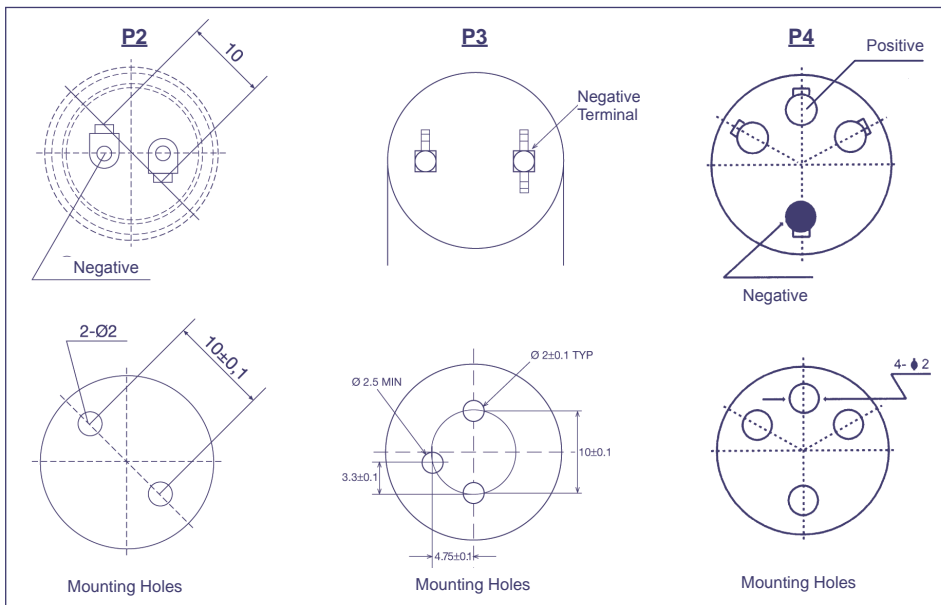


Terminal	T6	T4
Pin Length T	6,3	4,0

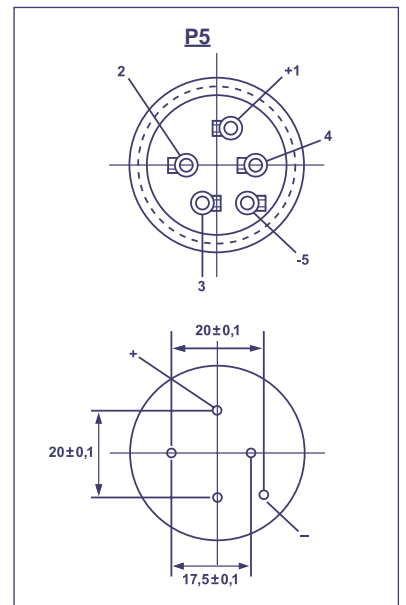
**Pin Type: Soldering**  
Order Code: S4



**Snap-In Terminal**  
Order Code: P2, P3, P4



**Soldering Terminal**  
Order Code: P5



P3 only T4 Terminal

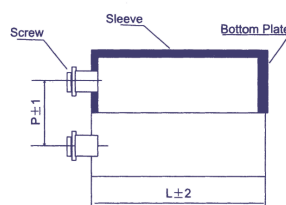
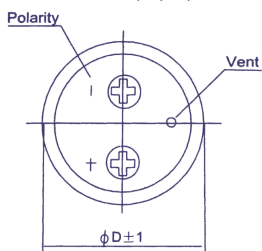
## Order Code Screw Type

EC	G	1C	BP	101	M	B	E	160	A361	JExxxxx
Technology	Terminal Type	Rated Voltage Code	Series Code	Capacitance Code	Capacitance Tolerance	Mounting	Diameter	Length	For Terminal Code see tables below	for Specials only
EC = Electrolytic Capacitor	Screw = G	For coding please refer to the pages of ratings	CD 135 = BP	100 = 101	±20% = M	Bolt = B	36 = A	53 = 053		
			CD 136 = PK	1000 = 102	±10% = K	No double sleeve = N	40 = B	65 = 065		
			CD 137 = PX	10000 = 103	+30 / -10% = Q	2 stoppers bracket+double sleeve* = I	51 = C	96 = 096		
			CD 138 = PC		+20 / -0% = R	3 stoppers bracket+double sleeve* = Y	64 = D	100 = 100		
			CD 139 = BL		+50 / -10% = T	No bracket, but double sleeve* = D	77 = E	115 = 115		
				<b>preferred</b>	* Double sleeve for diameter ≥ 51 only		90 = F	236 = 236		
							101 = G			

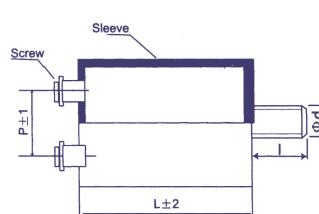
## Technical Specification Screw Type

### Dimensions

**Standard Housing**  
Order Code: I, Y, D, N



**Bolt Housing**  
Order Code: B



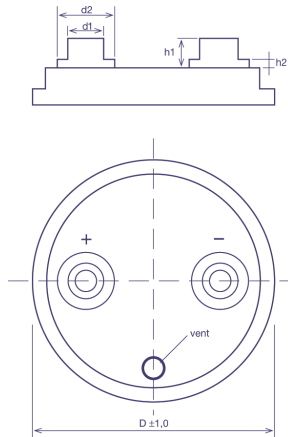
Ø D	Ø d	l
Ø 36	M8	12
≥ Ø 51	M12	16

in mm

## Terminal Form

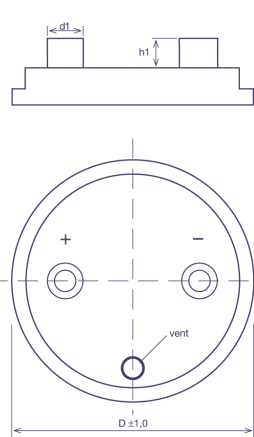
### Terminal A

Order Code: AXXX



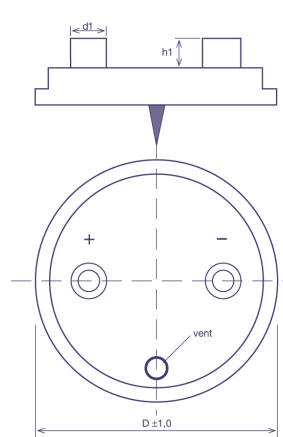
### Terminal B

Order Code: BXXX



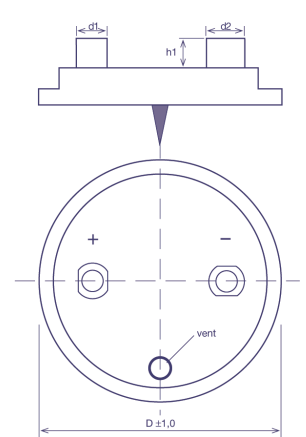
### Terminal C

Order Code: CXXX



### Terminal D

Order Code: DXXX



Tolerances of d1, d2, h1, h2 : +/- 0,3 mm

Code	ØD	Screw	Pitch P	d1	d2	h1	h2
A361	36	M5	12,7	8	11	6,8	1,8
A362	36	10 - 32	12,7	8	11	6,8	1,8
A511	51	M5	21,8	10	13	6,8	1,8
D551	55	M5	21,8	10	13	5,5	0
A641	64	M5	28,2	10	15,5	6,8	1,8
A642	64	M5	28,2	15	20	7,3	3,5
A643	64	1/4 - 28	28,2	15	20	7,3	3,5
B641	64	1/4 - 28	28,2	17,2	0	6,4	0
D641	64	M5	28,2	13,0	15,0	7,14	0
A771	77	M5	31,4	10	15,5	6,3	1,3
A772	77	M6	31,4	10	15,5	6,3	1,3
B771	77	M6	31,4	17,2	0	3,17	0

Code	ØD	Screw	Pitch P	d1	d2	h1	h2
B772	77	M6	31,4	17,2	0	6,4	0
B773	77	M8	31,4	17,2	0	3,17	0
B774	77	M5	31,4	17,2	0	6,4	0
C771	77	M5	31,4	17,2	0	3,5	0
C772	77	M6	31,4	17,2	0	3,5	0
C773	77	M5	31,4	17,2	0	5,5	0
C774	77	M5	31,4	17,2	0	6,4	0
A901	90	M5	31,4	10	15,5	6,3	1,3
A902	90	M6	31,4	10	15,5	6,3	1,3
B901	90	M6	31,4	17,2	0	6,4	0
B902	90	M5	31,4	17,2	0	6,4	0
A101	101	M8	41,5	<b>21,5</b>	<b>17,2</b>	<b>11,0</b>	<b>6,0</b>

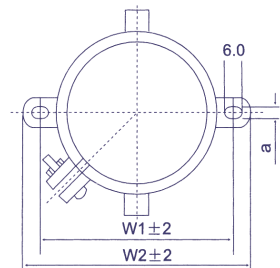
preferred, other forms on request

in mm

## Bracket Mounting

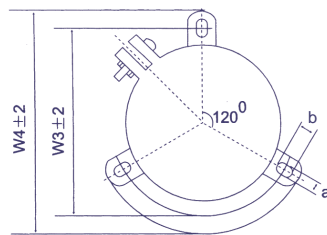
### I-Type

Ø D 36-90



### Y-Type

Ø D 51-101



Ø D	W1	W2	W3	W4	a	b
36	48,0	58,0	-	-	3,5	-
51	68,0	80,0	63,5	73,0	4,5	7,0
64	81,0	93,0	76,2	85,1	4,5	7,0
77	93,5	106,0	88,9	98,4	4,5	7,0
90	108,0	120,5	101,6	111,1	4,5	7,0
101	-	-	115,0	127,0	5,0	8,0

preferred

in mm

Height of brackets: ~30mm

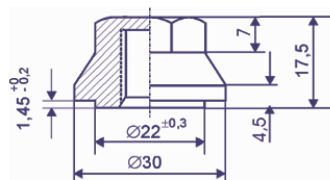
## Terminal Detail



### Screw Definition

Hexagon-Head	M5x10
Hexagon-Head	M6x12
Hexagon-Head	M8x16

## Accessories for Bolt Mounting



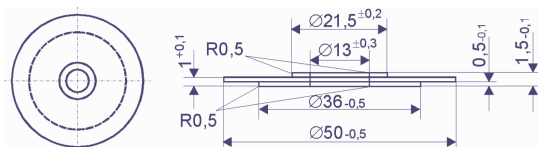
### Cap Nut

Order Code: CNN30M12

### Insulation Washer

Order Code: K100-ISO-50

Ø D 51, 64



### Insulation Washer

Order Code: K100-ISO-77

Ø D 77, 90

