K16 TYPE -40°C +85°C 5000H

RoHS Compliant

- **Surge-proof capacitor in aluminium can with insulation sleeve.**
- **Safety vent at bottom case or aside case.**
- **Snap in terminals for PCB mounting.**
- **2-4 pins available (d=45mm: 4 pins only).**
- **Large size snap in.**

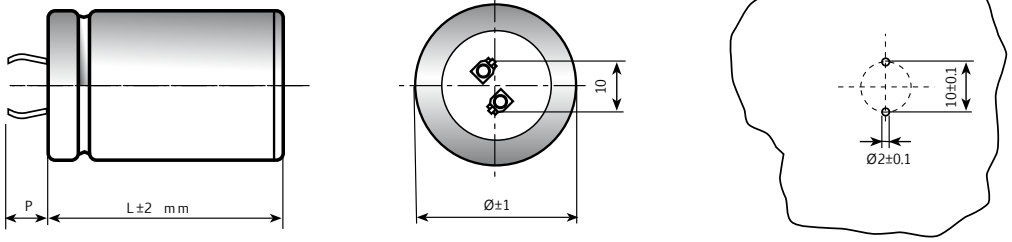
APPLICATIONS

Professional switch mode power supplies. Professional power electronics.

Dimensions in mm.

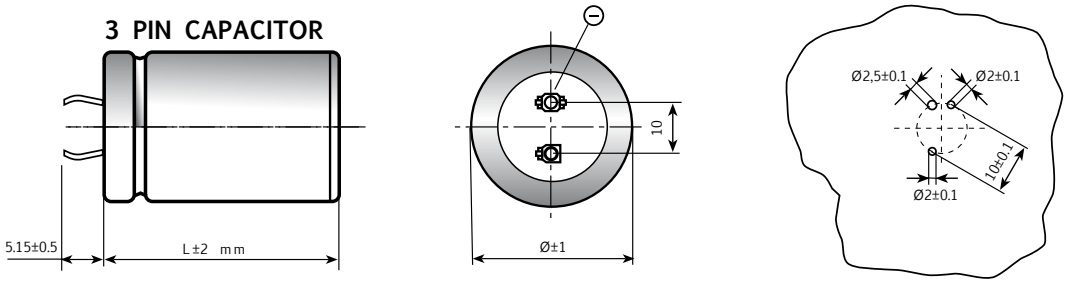
Circuit board hole dimensions

2 PIN CAPACITOR

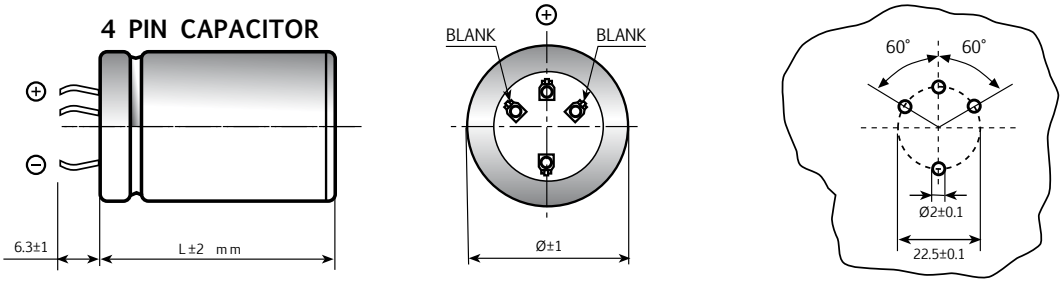


PIN LENGTH
P 4.5 short pin - P 6.3 long pin (standard)

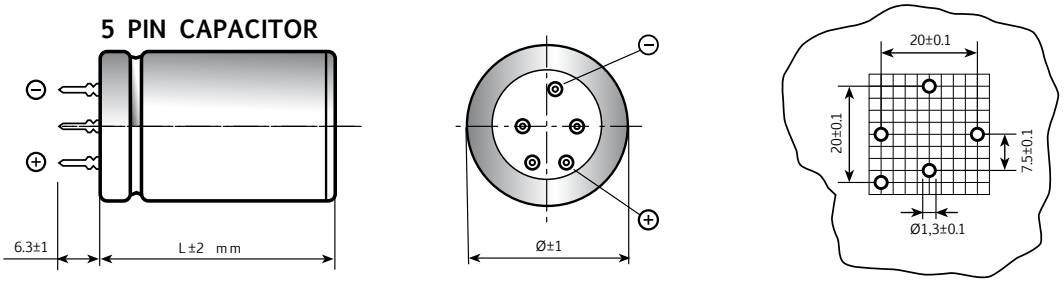
3 PIN CAPACITOR



4 PIN CAPACITOR



5 PIN CAPACITOR



Ø	22	25	30	35	40	45	50
2 PIN	●	●	●	●	●		
3 PIN		●	●	●			
4 PIN				●	●	●	●
5 PIN					●		

On demand, only for capacitors with diam ≥ 35mm: octagonal can shape for long stress vibration applications.

SPECIFICATIONS

Temperature Range	Operating: -40°C +85°C Storage : Preferably below +25°C, not exceeding +40°C
Rated Voltage Range (V_r)	from 400V to 450V DC
Surge Voltage (V_p)	V_p = 1.10 V_r
Rated Capacitance Range	from 820 µF to 2700 µF
Capacitance Tolerance	±20% at 100 Hz, 20°C [M class IEC-62]
Leakage Current (I_L) **(mA, 5 min, 20°C)**	max I_L= 0.006 C_r V_r + 4 µA Kendeil product limit: I_L= 0.003 C_r V_r At 85°C max I_L = 0.04 C_r V_r µA
Ripple current (I_r)	Refer to table at 85°C and 100Hz :

FREQUENCY	50Hz	100Hz	500 Hz	1000Hz	>10kHz		
MULTIPLIER	0.88	1.0	1.45	1.5	1.55		
AMBIENT TEMP.	35°C	45°C	55°C	65°C	75°C	85°C	95°C
MULTIPLIER	2.2	2.1	1.8	1.6	1.4	1.0	0.5
Maximum internal temperature	98°C						

Insulation Resistance	At 100V DC for 1 min is >100 MΩ across insulating sleeve and terminals.		
Vibration Resistance	Frequency range: 10 Hz to 55 Hz, amplitude 0.75 mm max acceleration 10 G for 3x2 h		
Withstand voltage **(between terminals bundled and plate)**	2500 VAC for 1 min		
Life test	After 2,000 hours application of rated voltage at 85°C capacitors meet characteristics aside	Cap change tan δ Leakage current (I_L) Impedance (Z)	≤ 10% ≤ 130% < initial limit ≤ 130%
Shelf life	After leaving capacitors under no load for 500 hours at 85°C, when restored at 20°C meet specifications aside	Cap change tan δ Leakage current (I_L)	≤ ±15% ≤ 150% < initial limit
Useful life **(Vn, Temp rated I ripple applied)**	> 5,000 h at 85°C > 200000 h at 40°C		
Failure percentage **Failure rate**	≤ 1% (during useful life) ≤ 33 fit (33 10^{-9}/h)		
Self inductance	Approx. 20 nH		
Damp heat test **(Vn applied, 2000 hours, 85% RH)**	Stable electrical parameters in humidity ambient condition 85°C		
Electrolyte	All the capacitors of this series have self-extinguishing electrolyte in accordance with IEC EN 60695-11-10		
Marking information	minus pole band aside within an angle of 41° ± 25°		
Reference standards	CECC 30.301 - IEC 60384-4 LONG LIFE GRADE		

K16 TYPE STANDARD RATINGS

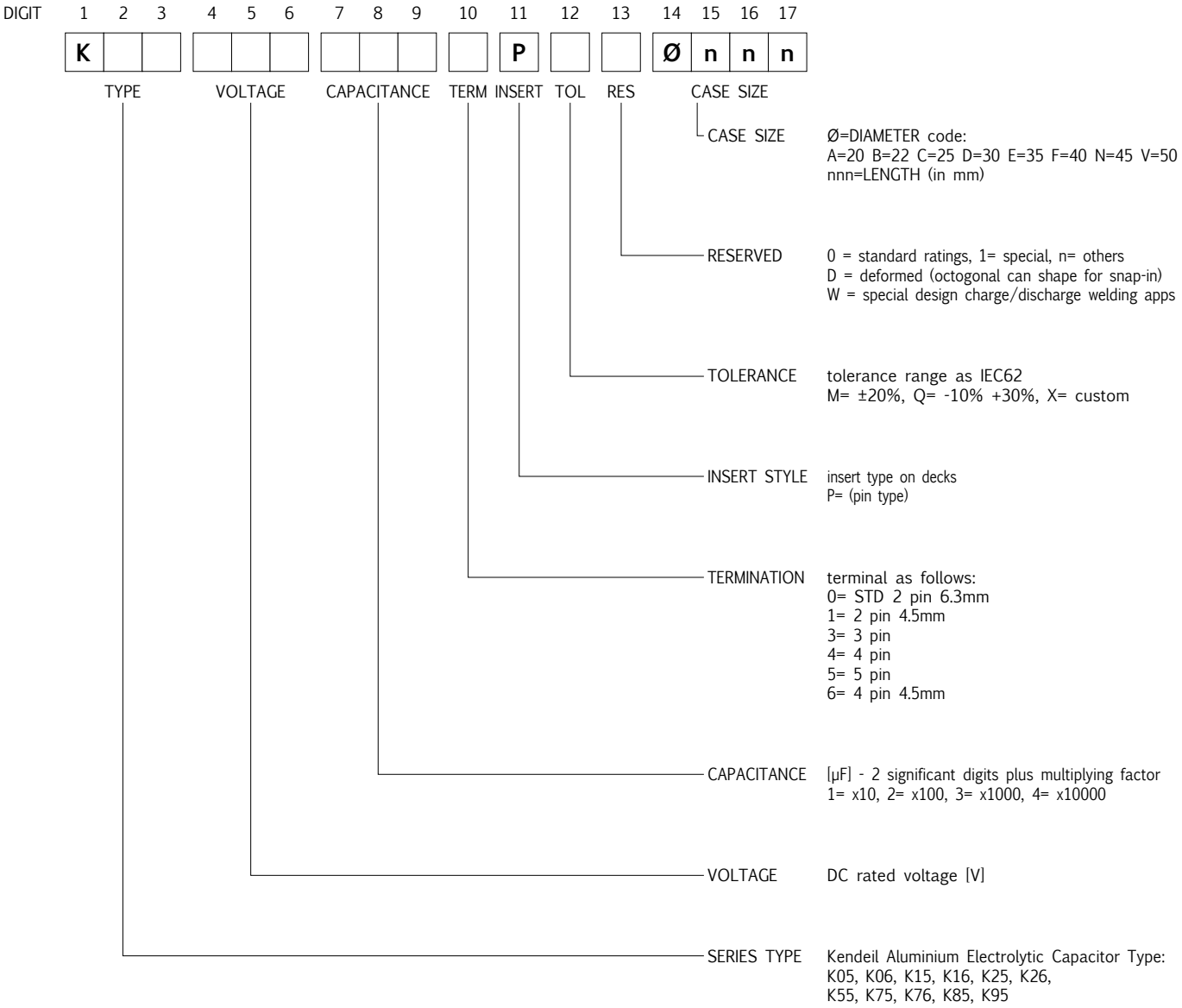
Cap µF	Ø x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10 kHz 20°C	Ir a.c. A max 100 Hz 85°C	PART NUMBER termination digit excluded	RATED VOLTAGE VDC
1000	35x77	0.10	90	80	4.50	K16400102_PM0E077	400V
1200	40x60	0.10	89	79	4.50	K16400122_PM0F060	
1500	40x77	0.10	75	64	5.80	K16400152_PM0F077	
1500	45x60	0.10	80	70	4.90	K16400152_PM0N060	
1800	40x97	0.10	60	50	6.60	K16400182_PM0F097	
1800	45x77	0.10	70	60	6.00	K16400182_PM0N077	
1800	50x60	0.10	70	60	6.30	K16400182_PM0V060	
2000	40x105	0.10	45	35	7.60	K16400202_PM0F105	
2200	45x97	0.10	55	45	7.30	K16400222_PM0N097	
2200	50x77	0.10	55	45	7.40	K16400222_PM0V077	
2700	45x105	0.10	39	27	9.00	K16400272_PM0N105	
3300	50x105	0.10	37	25	10.00	K16400332_PM0V105	

Cap µF	Ø x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10 kHz 20°C	Ir a.c. A max 100 Hz 85°C	PART NUMBER termination digit excluded	RATED VOLTAGE VDC
820	35x77	0.15	220	200	3.65	K16420821_PM0E077	420V
1000	40x60	0.15	200	170	4.90	K16420102_PM0F060	
1200	40x77	0.15	190	150	4.90	K16420122_PM0F077	
1200	45x60	0.15	180	140	4.90	K16420122_PM0N060	
1500	40x97	0.15	140	110	5.56	K16420152_PM0F097	
1500	45x77	0.15	150	120	5.36	K16420152_PM0N077	
1500	50x60	0.10	150	110	4.70	K16420152_PM0V060	
1800	40x105	0.15	120	100	6.40	K16420182_PM0F105	
1800	50x77	0.10	120	106	5.60	K16420182_PM0V077	
2200	45x97	0.15	112	102	6.70	K16420222_PM0N097	
2200	50x105	0.10	112	100	7.00	K16420222_PM0V105	
2700	50x105	0.10	101	102	7.40	K16420272_PM0V105	

Cap µF	Ø x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10 kHz 20°C	Ir a.c. A max 100 Hz 85°C	PART NUMBER termination digit excluded	RATED VOLTAGE VDC
820	35x77	0.15	215	195	3.65	K16450821_PM0E077	450V
1000	40x60	0.15	195	165	4.90	K16450102_PM0F060	
1200	40x77	0.15	183	142	4.90	K16450122_PM0F077	
1200	45x60	0.15	180	140	4.90	K16450122_PM0N060	
1500	40x97	0.15	140	110	5.56	K16450152_PM0F097	
1500	45x77	0.15	150	120	5.36	K16450152_PM0N077	
1500	50x60	0.10	140	110	4.7	K16450152_PM0V060	
1800	45x97	0.15	128	110	6.50	K16450182_PM0N097	
1800	50x77	0.10	128	108	5.6	K16450182_PM0V077	
2200	45x105	0.15	112	102	6.80	K16450222_PM0N105	
2700	50x105	0.10	112	102	7.4	K16450272_PM0V105	

PART NUMBER SYSTEM
FOR SNAP-IN TYPE CAPACITORS

New PART-NUMBER CODE in use since Sep 2010. Total length is 17 digits.
Please see examples below and have a reference code from the standard ratings capacitors pages.



EXAMPLES

K	0	5	4	5	0	4	7	1	0	P	M	0	E	0	5	0

K05 450V 470µF, standard pin, ±20%, 35x50

Specifications subject to change without notice