

# K18 TYPE -55°C +85°C 10000H

RoHS Compliant

- Design optimized for low equivalent series resistance and high ripple current.
- Surge-proof capacitor in aluminium can with insulation sleeve.
- To be mounted with ring clips or with threaded stud.

## APPLICATIONS

Designed for professional application. Switch mode power suppliers, high ripple current converters, motor drives.

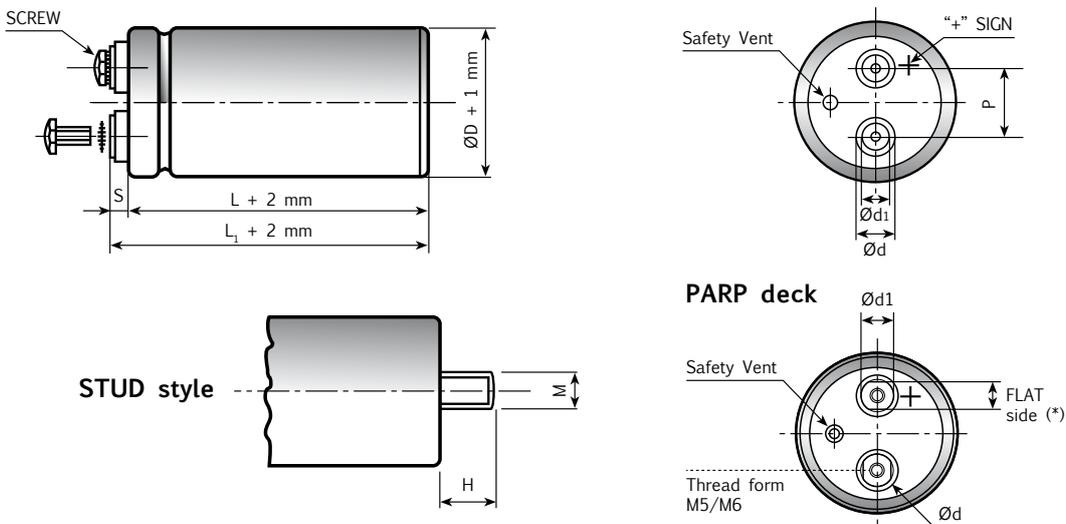


Diagram of dimensions (unit=mm)  
Insert and screw threads: Metric (mm), UNF (inches)

ØD	d	d1	P	STUD		INSERT	SCREW	L1	-L[-1+3]	S[-1+1]	INSERT STYLE CODE
				M	H						
35	11	7.9	12.7	M8	12	M5	5MA x 9.5	2.5		5	0
51	18.5	13	22.7	M12	16	M5	5MA x 9.5	2.5		5	H
63	18.5	13	28.6	M12	16	M5	5MA x 9.5	2.5		5	H
63	17.3	17.3	28.6	M12	16	UNF 1/4-28 Low Post	1/4-28 x 3/8"	3		4	W
63	17.3	17.3	28.6	M12	16	UNF 1/4-28 High Post	1/4-28 x 1/2"	6		7	R
63	7.9	7.9	28.6	M12	16	UNF 10-32 Low Post	10-32 x 1/4"	2		2.5	Z
63	12	7.9	28.6	M12	16	UNF 10-32 High Post	10-32 x 3/8"	6		7	U
76	18.5	13	31.8	M12	16	M5	5MA x 9.5	2.5		5	H
76	18.5	13	31.8	M12	16	M5	5MA x 9.5	2.5		7	L
76	23.2	17.7	31.8	M12	16	M6	6MA x 10	4.5		7	6
76	17.3	17.3	31.8	M12	16	UNF 1/4-28 Low Post	1/4-28 x 3/8"	3		4	W
76	17.3	17.3	31.8	M12	16	UNF 1/4-28 High Post	1/4-28 x 1/2"	6		7	R
76	7.9	7.9	31.8	M12	16	UNF 10-32 Low Post	10-32 x 1/4"	2		2.5	Z
76	12	7.9	31.8	M12	16	UNF 10-32 High Post	10-32 x 3/8"	6		7	U
90	23.2	17.7	31.8	M12	16	M6	6MA x 10	4.5		7	H
51	13	13 (10)*	22.7	M12	16	PARP M5	5MA x 9.5	6		7	K
63	15	15 (13)*	28.6	M12	16	PARP M5	5MA x 9.5	6		7	K
76	19	15 (13)*	31.8	M12	16	PARP M5	5MA x 9.5	6		7	K
76	19	15 (13)*	31.8	M12	16	PARP M6	6MA x 10	6		7	Q
90	19	15 (13)*	31.8	M12	16	PARP M6	6MA x 10	6		7	Q

Note: (\*) quote on the PARP deck of the flat side (PARP = Protection Against Reverse Polarity).

## K18 TYPE SPECIFICATIONS

<b>Temperature Range</b>	Operating: -55°C +85°C Storage : Preferably below +25°C, not exceeding +40°C	[Environmental classification 55/85/56 IEC-68]
<b>Rated Voltage Range (V<sub>r</sub>)</b>	from 400V to 450V DC	
<b>Surge Voltage (V<sub>p</sub>)</b>	V <sub>p</sub> = 1.10 V <sub>r</sub>	
<b>Rated Capacitance Range</b>	from 330 µF to 15000 µF	
<b>Capacitance Tolerance</b>	±20% at 100 Hz, 20°C [M class IEC-62] on request: -10% +30% at 100 Hz, 20°C [Q class IEC-62]	
<b>Leakage Current (I<sub>L</sub>)</b> (mA, 5 min, 20°C)	max I <sub>L</sub> = 0.006 C <sub>r</sub> V <sub>r</sub> + 4 µA	
<b>Ripple current (I<sub>r</sub>)</b>	Refer to table at 85°C and 100Hz :	
	FREQUENCY	50Hz 100Hz 500 Hz 1000Hz >10kHz
	MULTIPLIER	0.8 1.0 1.2 1.3 1.5
	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
	Due to the current load capability of the contact elements, the following limits must not be exceeded:	
	CAPACITOR DIAMETER	51mm 63mm 76mm 90mm
	Maximum current	30A 40A 50A 70A
<b>Insulation Resistance</b>	At 100V DC for 1 min is >100 MΩ across insulating sleeve and terminals.	
<b>Vibration Resistance</b>	Frequency range: 10 Hz to 55 Hz, amplitude 0.75 mm Capacitor length ≤ 143 : max acceleration 10g for 3x2 h Capacitor length > 143 : max acceleration 5g for 3x0.5 h	
<b>Life test</b>	After 2,000 hours application of rated voltage at 85°C capacitors meet characteristics aside	Cap change ≤ 10% tan δ ≤ 130% Leakage current (I <sub>L</sub> ) < initial limit Impedance (Z) ≤ 130%
<b>Shelf life</b>	After leaving capacitors under no load for 2000 hours at 85°C, when restored at 20°C meet specifications aside	Cap change ≤ ±15% tan δ ≤ 150% Leakage current (I <sub>L</sub> ) < initial limit
<b>Useful life (85°C, V<sub>n</sub>, I<sub>r</sub> applied) Operation up to 105° C with voltage derating 0,88 x V<sub>r</sub></b>	> 10000 h at 85°C	
<b>Failure percentage Failure rate</b>	≤ 1% (during useful life) ≤ 33 fit (33 10 <sup>-9</sup> /h)	
<b>Self inductance</b>	Approx. 20 nH	
<b>Reference standards</b>	CECC 30.300 IEC 60384-4 LONG LIFE GRADE	

## K18 TYPE STANDARD RATINGS

Cap $\mu\text{F}$	$\varnothing \times L$ Mm	Tan $\delta$ MAX 100 Hz 20°C	ESR TYP $m\Omega$ 100 Hz 20°C	Z TYP $m\Omega$ 10KHz 20°C	Ir a.c. A max 100 Hz 85°C	PART NUMBER Stud and insert style excluded
330	35x60	0.10	290	273	2.8	K18400331__M0E060
470	35x60	0.10	160	150	3.0	K18400471__M0E060
560	35x79	0.10	145	125	3.3	K18400561__M0E079
680	35x79	0.10	120	115	3.8	K18400681__M0E079
1000	51x79	0.10	105	95	5.8	K18400102__M0G079
1500	51x79	0.10	65	55	6.3	K18400152__M0G105
2200	51x105	0.10	50	47	8.3	K18400222__M0G105
3300	63x105	0.12	35	30	11.0	K18400332__M0H105
4700	76x105	0.15	30	29	14.9	K18400472__M0J105
4700	76x143	0.15	30	29	16.8	K18400472__M0J143
5600	76x143	0.15	26	25	19.0	K18400562__M0J143
6800	76x143	0.15	22	18	19.5	K18400682__M0J143
8200	76x143	0.15	22	18	19.5	K18400822__M0J143
10000	76x143	0.15	21	17	19.6	K18400103__M0J143
15000	76x214	0.20	15	12	26.0	K18400153__M0J214
15000	90x220	0.20	15	12	33.5	K18400153__M0L220

**RATED  
VOLTAGE  
VDC**

**400V**

Cap $\mu\text{F}$	$\varnothing \times L$ Mm	Tan $\delta$ MAX 100 Hz 20°C	ESR TYP $m\Omega$ 100 Hz 20°C	Z TYP $m\Omega$ 10KHz 20°C	Ir a.c. A max 100 Hz 85°C	PART NUMBER Stud and insert style excluded
330	35x60	0.10	240	210	2.8	K18450331__M0E060
470	35x79	0.10	200	179	3.1	K18450471__M0E079
680	35x79	0.10	140	128	3.2	K18450681__M0E079
820	51x79	0.10	120	102	4.8	K18450821__M0G079
1000	51x79	0.10	100	88	4.9	K18450102__M0G079
1500	51x79	0.10	67	55	5.4	K18450152__M0G079
2200	51x105	0.10	60	55	7.2	K18450222__M0G105
3300	63x105	0.12	35	30	9.3	K18450332__M0H105
4700	76x105	0.15	32	30	14.0	K18450472__M0J105
4700	76x143	0.15	32	30	15.0	K18450472__M0J143
5600	76x143	0.15	26	25	18.0	K18450562__M0J143
6800	76x143	0.15	23	22	19.2	K18450682__M0J143
8200	76x143	0.15	22	20	19.5	K18450822__M0J143
10000	76x214	0.15	20	19	23.1	K18450103__M0J214
12000	76x214	0.15	15	12	23.8	K18450123__M0J214
15000	90x220	0.20	14	12	32.6	K18450153__M0L220

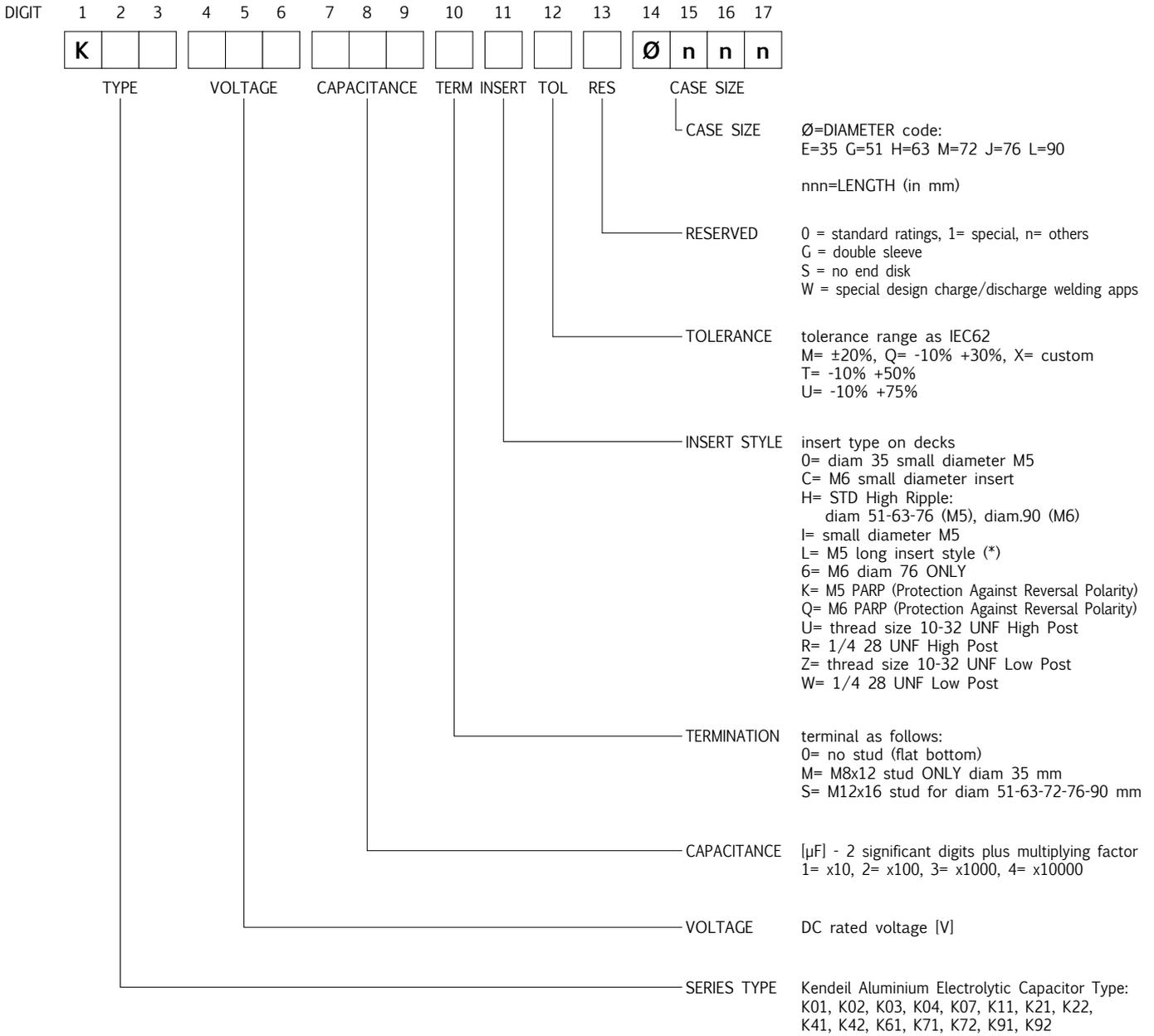
**RATED  
VOLTAGE  
VDC**

**450V**

PLEASE TO CONTACT OUR TECHNICAL SERVICE FOR MORE INFORMATION OR SPEC-IN ANALYSIS.

# PART NUMBER SYSTEM FOR SCREW 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	1	1	0	0	2	2	3	0	H	M	0	H	1	0	5	K01 100V 22000µF, Hi ripple, -20%+20%, 63x105
K	0	1	0	6	3	2	2	3	S	H	Q	0	G	1	0	5	K01 63V 22000µF, stud M12x16, Hi rip. -10%+30%, 51x105
K	0	2	0	4	0	1	0	4	0	H	M	0	J	1	4	3	K02 40V 100000µF, Hi ripple, -20%+20%, 76x143

Specifications subject to change without notice

(\*) Note for INSERT STYLE digit\_11

M5 long insert style dedicated to not insulated bus bar (+2 mm height versus STD High Ripple code)