

K1M TYPE -40°C +85°C 15000H

Preliminary version

- High voltage and high ripple current design
- Strong miniaturization
- Surge-proof capacitor in full insulated box (UL approved)
- Mechanical design optimized for low profile modular machines
- Low capacitance value versus ground
- Low inductance design
- Central point of voltage available for circuital connections

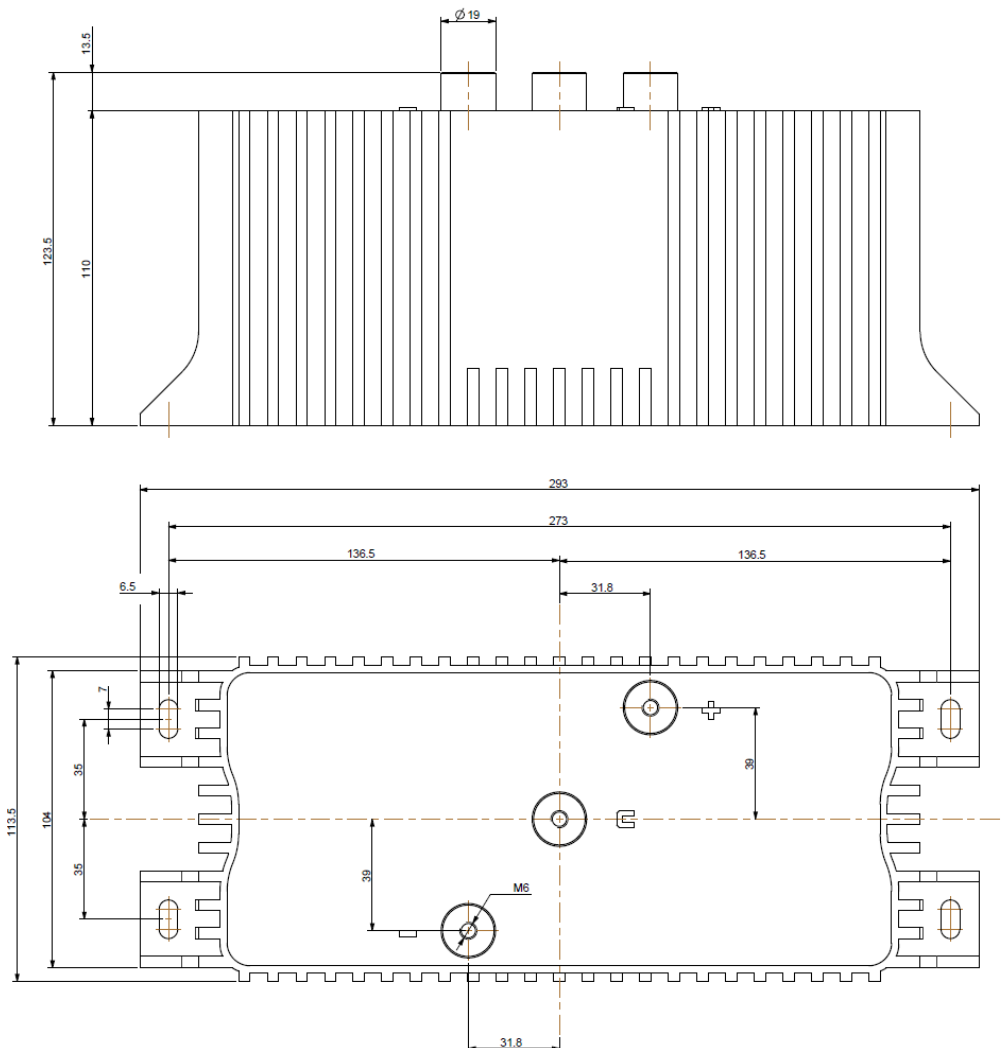


PATENT PENDING ©

APPLICATIONS

Designed for professional application.

Switch mode power suppliers, high ripple current converters, motor drives.



SPECIFICATIONS

Preliminary version

Temperature Range	Operating: -40°C +85°C Storage : Preferably below +25°C, not exceeding +40°C	[Environmental classification 40/85/56 IEC-68]																												
Rated Voltage Range (V_r)	from 500V to 1200V DC																													
Surge Voltage (V_p)	V _p = 1.10 V _r																													
Rated Capacitance Range	from 2500 μF to 15000 μF																													
Capacitance Tolerance	±20% at 100 Hz, 20°C [M class IEC-62] on request: -10% +30% at 100 Hz, 20°C [Q class IEC-62]																													
Leakage Current (I_L) (5 min, 20°C)	max I _L = 0.006 C _r V _r + 4 μA																													
Ripple current (I_r)	Refer to table at 85°C and 100 Hz : <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">FREQUENCY</th> <th>50Hz</th> <th>100Hz</th> <th>500 Hz</th> <th>1000Hz</th> <th>>10kHz</th> </tr> </thead> <tbody> <tr> <td>MULTIPLIER</td> <td>0.8</td> <td>1.0</td> <td>1.45</td> <td>1.5</td> <td>1.55</td> </tr> </tbody> </table> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">AMBIENT TEMP</th> <th>35°C</th> <th>45°C</th> <th>55°C</th> <th>65°C</th> <th>75°C</th> <th>85°C</th> <th>95°C</th> </tr> </thead> <tbody> <tr> <td>MULTIPLIER</td> <td>1.6</td> <td>1.5</td> <td>1.3</td> <td>1.2</td> <td>1.1</td> <td>1.0</td> <td>0.5</td> </tr> </tbody> </table> Maximum internal temperature 98°C Maximum current 250A RSM		FREQUENCY	50Hz	100Hz	500 Hz	1000Hz	>10kHz	MULTIPLIER	0.8	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	1.6	1.5	1.3	1.2	1.1	1.0	0.5
FREQUENCY	50Hz	100Hz	500 Hz	1000Hz	>10kHz																									
MULTIPLIER	0.8	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	1.6	1.5	1.3	1.2	1.1	1.0	0.5																							
Insulation Resistance	At 100V DC for 1 min is >100 MΩ across insulating frame and terminals.																													
Vibration Resistance	Frequency range: 10 Hz to 55 Hz, amplitude 0.75 mm max acceleration 5G for 3x0.5 h																													
Life test	After 2,000 hours application of rated voltage at 85°C capacitors meet characteristics aside	Cap change ≤ ±10% Tan δ ≤ 130% Leakage current (I _L) < initial limit Impedance (Z) ≤ 130%																												
Shelf life	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 _L) < initial limit																												
Useful life	> 15.000 h at 85°C																													
Failure rate	≤ 150 fit (200 10 ⁻⁹ /h)																													
Self inductance	Approx. 10 nH																													
Reference standards	CECC 30.300 IEC 60384-4 LONG LIFE GRADE																													

K1M TYPE STANDARD RATINGS

Preliminary version

Cap μF	NOMINA L VOLTAGE VDC	RATED VOLTAGE E VDC	Tan δ MAX 100Hz 20°C	ESR TYP mΩ 100Hz 20°C	Z TYP mΩ 10KHz 20°C	Ir a.c. A max 100Hz 85°C *	Ir a.c. A max 100Hz 85°C **	Ir a.c. A max 10KHz 35°C **	PART NUMBER
2500	1200	1050	PLEASE TO CONTACT OUR TECHNICAL SERVICE FOR MORE INFORMATION						K1M12125206M00ABC
3300	1100	960				K1M11133206M00ABC			
4700	1000	880				K1M10147206M00ABC			
6800	900	800				K1M90068206M00ABC			
7800	840	740				K1M84078206M00ABC			
8200	800	700				K1M80082206M00ABC			
10000	700	610				K1M70010306M00ABC			
13000	600	530				K1M60013306M00ABC			
15000	500	450				K1M50015306M00ABC			

* Natural air flow, rated voltage

** Forced air flow, rated voltage

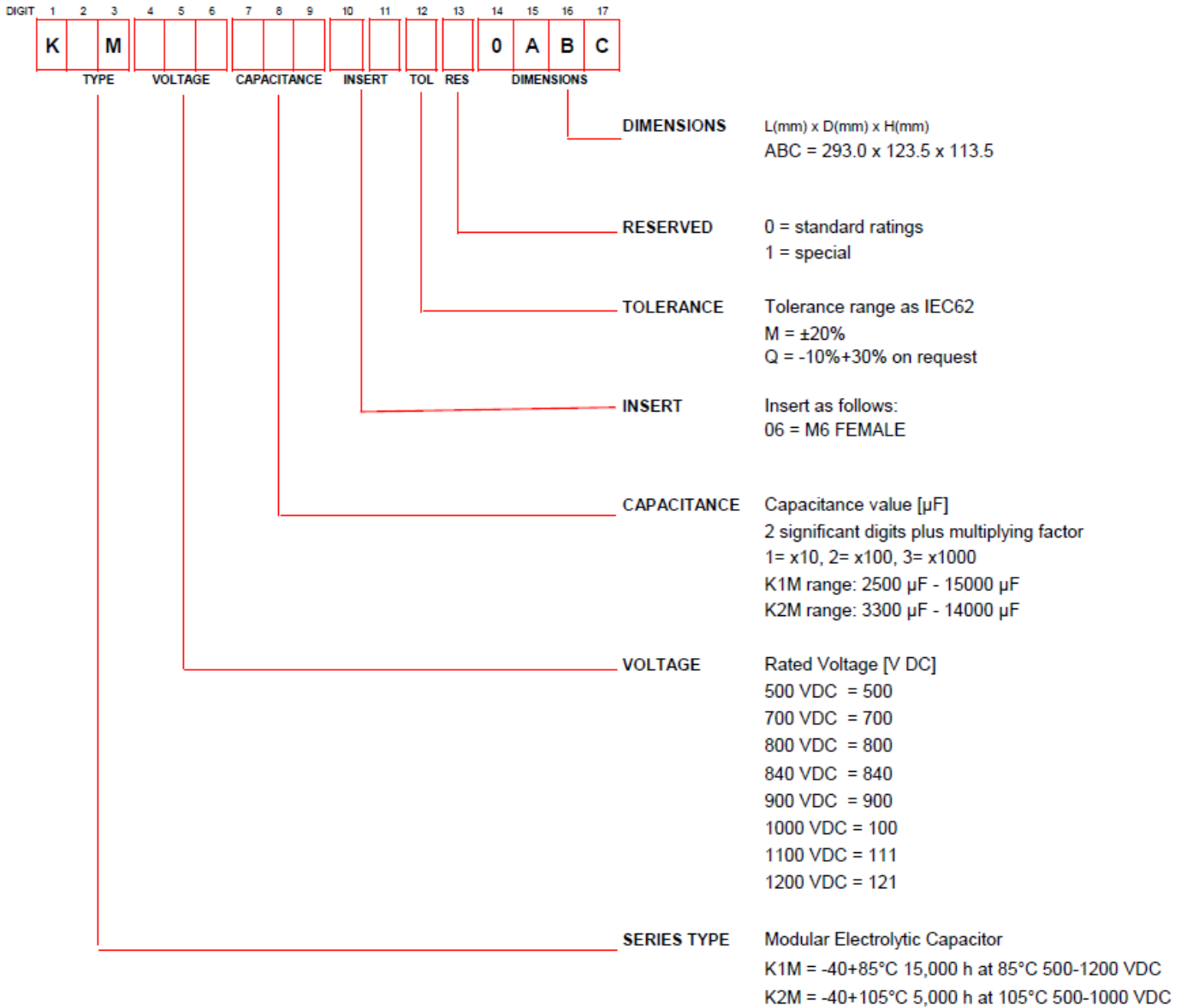
Remarks: ABC = 293.0 x 123.5 x 113.5 - L(mm) x D(mm) x H(mm)

PART NUMBER SYSTEM

Preliminary version

Total length is 17 digits

MODULAR ELECTROLYTIC CAPACITOR



Examples

K 1 M 7 0 0 1 0 3 0 6 M 0 0 A B C	K1M 700V 10000µF, insert M6, -20%+20%, size 293 x 123.5 x 113.5
K 2 M 8 0 0 6 8 2 0 6 Q 0 0 A B C	K2M 800V 6800µF, insert M6, -10%+30%, size 293 x 123.5 x 113.5