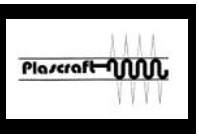
# Plascraft Product Datasheets
# Catalogue 1 www.plascraft.co.za



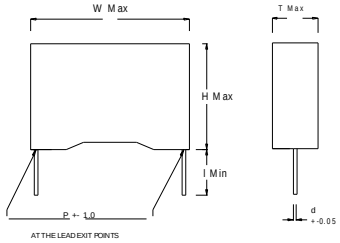
# METALLIZED POLYESTER GENERAL PURPOSE BOXED CAPACITOR TYPE MEC

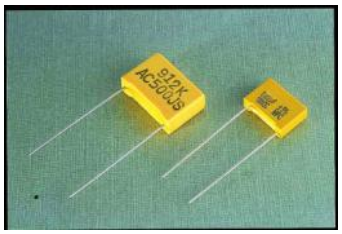
**FEATURES:**

★ Wide capacitance range, small size and light weight
★ Non-inductive construction
★ Long life due to self-healing effect
★ High reliability and superior performance in high frequency applications

**APPLICATIONS:**

★ Widely used in filter and noise suppression circuits
★ Pulse, logic and timing circuits
★ Suitable for blocking, by-passing and coupling of D.C and signals to VHF range

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**SPECIFICATIONS:**

※DIELECTRIC: Polyester film ※MARKING: MEC
※ELECTRODES: Vacuum evaporated metal
※COATING: Epoxy resin coating
※LEADS: Radial leads of tinned wire
※REFERENCE STANDARD : IEC384-2 grade 1;SJ/T10787-1996
※CLIMATIC CATEGORY: 40/85/21(From 85`C up to 105`C with derating voltage 1.25%/`C)
※CAPACITANCE VERSUS RATED VOLTAGE (UR): 0.001uF-10.0uF/100VDC;0.001uF-10.0uF/250VDC; 0.001uF-4.7uF/400VDC;0.001uF-4.7uF/630VDC;
※CAPACITANCE TOLERANCE: M=±20% K=±10% J=±5%
※DISSIPATION FACTOR (TANGENT OF LOSS): C≤1.0uF DF≤0.8% C>1.0uF DF≤1.0%(at 20`C,1KHz)
※VOLTAGE PROOF:1.6*Ur(5S at 20`C)
※INSULATION RESISTANCE: C≤0.33uF IR≥15000MΩ; C>0.33uF IR*C≥3000S (1 minute at 20`C and RH≤65%)
※ENDURANCE: 1000hours with 125% of rated voltage at 85`C. After the test: ΔC/C≤8%;ΔDF≤0.30%(C>1uF); ΔDF≤0.50%(C≤1uF) IR≥50% of the specified value(20`C 1KHz
ORDERING CODE . The order Code is Next to the Capacitor details under the column MEC . Example 0.47 400VDC would be MEC064
Items with Order Codes are stock Items . The other values are available to order.

| CAPACITANCE | 50/100VDC | | | | | |
|---|---|---|---|---|---|---|
| uF | Stock Code | W | H | T | P | d |
| 1.0 | MEC 068 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 |
| 2.2 | MEC 059 | 26.5 | 17.0 | 8.5 | 22.5 | 0.8 |
| 6.8 | MEFC051 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 |
| 10.0 | MEFC048 | 32 | 22 | 13.0 | 27.5 | 0.8 |

| CAPACITANCE | 250VDC | | | | | |
|---|---|---|---|---|---|---|
| uF | Stock Code | W | H | T | P | d |
| 0.10 | MEC 070 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 0.22 | MEC 053 | 18.0 | 13.0 | 7.0 | 15.0 | 0.8 |
| 0.47 | MEC 058 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 |
| 1.5 | MEC 004<br>MEC 061 | 26.5<br>32.0 | 18.5<br>20.0 | 10.0<br>11.0 | 22.5<br>27.5 | 0.8<br>0.8 |
| 1.8 | MEC 005 | 32.0 | 20.0 | 10.5 | 27.5 | 0.8 |
| 2.2 | MEC 006 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 |

| CAPACITANCE | 400VDC | | | | | |
|---|---|---|---|---|---|---|
| uF | Stock Code | W | H | T | P | d |
| 0.022 | MEC 057 | 13.0 | 9.0 | 4.0 | 10.0 | 0.6 |
| 0.47 | MEC 064 | 26.0 | 17.0 | 8.5 | 22.5 | 0.8 |
| 1.0 | MEC 050 | 31.0 | 20.0 | 11.0 | 27.5 | 0.8 |

| CAPACITANCE | 630VDC | | | | | |
|---|---|---|---|---|---|---|
| uF | Stock Code | W | H | T | P | d |
| 0.22 | MEC 056 | 26.5 | 18.5 | 10.0 | 22.5 | 0.8 |

# METALLIZED POLYESTER GENERAL PURPOSE DIPPED CAPACITOR TYPE MEF

## FEATURES:

★ Wide capacitance range, small size and light weight
★ Non-inductive construction
★ Long life due to self-healing effect
★ High reliability and superior performance in high frequency applications

## APPLICATIONS:

★ Widely used in filter and noise suppression circuit
★ Pulse, logic and timing circuit
★ Suitable for blocking, by-passing and coupling of D.C and signals to VHF range

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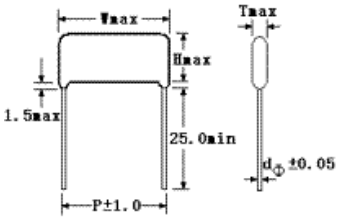



## SPECIFICATIONS:

※DIELECTRIC: Polyester film ※MARKING: MEF
※ELECTRODES: Vacuum evaporated metal
※COATING: Epoxy resin coating
※LEADS: Radial leads of tinned wire
※REFERENCE STANDARD : IEC384-2 grade 1;SJ/T10787-1996
※CLIMATIC CATEGORY: 40/85/21(From 85`C up to 105`C with derating voltage 1.25%/`C)
※CAPACITANCE VERSUS RATED VOLTAGE (UR): 0.001uF-10.0uF/100VDC;0.001uF-10.0uF/250VDC;
0.001uF-4.7uF/400VDC;0.001uF-4.7uF/630VDC;
※CAPACITANCE TOLERANCE: M=±20% K=±10% J=±5%
※DISSIPATION FACTOR (TANGENT OF LOSS): C≤1.0uF DF≤0.8% C>1.0uF DF≤1.0%(at 20`C,1KHz)
※VOLTAGE PROOF:1.6*Ur(5S at 20`C)
※INSULATION RESISTANCE: C≤0.33uF IR≥15000MΩ; C>0.33uF IR*C≥3000S (1 minute at 20`C and RH≤65%)
※ENDURANCE: 1000hours with 125% of rated voltage at 85`C.
After the test: ΔC/C≤8%;ΔDF≤0.30%(C>1uF); ΔDF≤0.50%(C≤1uF); IR≥50% of the specified value(20`C 1KHz)

| CAPACI-TANCE | 100VDC | | | | | |
|---|---|---|---|---|---|---|
| uF | W | H | T | P | d | Stock Code |
| 2.2 | 17.0 | 14.0 | 7.0 | 15.0 | 0.8 | MEF 003 |

| CAPACI-TANCE | 250VDC | | | | | |
|---|---|---|---|---|---|---|
| uF | W | H | T | P | d | Stock Code |
| 0.047 | 12.0 | 9.0 | 5.0 | 10.0 | 0.6 | MEF 046 |
| 0.068 | 12.0 | 9.0 | 5.0 | 10.0 | 0.6 | MEF 069 |
| 0.10 | 12.0 | 10.0 | 5.5 | 10.0 | 0.6 | MEF 047 |
| 0.22 | 12.0 | 9.0 | 6.0 | 10.0 | 0.6 | MEF 067 |
| 0.47 | 17.0 | 11.0 | 6.0 | 15.0 | 0.8 | MEF 002 |
| 1.5 | 24.0<br>23.0 | 16.0<br>15.0 | 9.0<br>8.0 | 22.5<br>20.0 | 0.8<br>0.8 | MEF 074<br>MEF 042 |
| 1.8 | 24.0 | 17.0 | 9.5 | 22.5 | 0.8 | MEF 043 |
| 2.2 | 24.0 | 16.0 | 10.0 | 22.5 | 0.8 | MEF 044 |

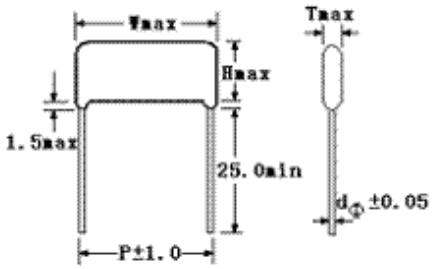
| CAPACI-TANCE | 400VDC | | | | | |
|---|---|---|---|---|---|---|
| uF | W | H | T | P | d | Stock Code |
| 1.0 | 30.0 | 16.0 | 10.0 | 27.5 | 0.8 | MEF 001 |

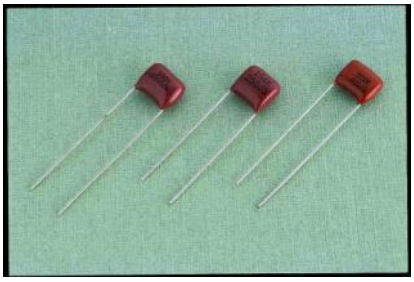
| CAPACI-TANCE | 630VDC | | | | | |
|---|---|---|---|---|---|---|
| uF | W | H | T | P | d | Stock Code |
| 0.010 | 12.0 | 10.0 | 6.0 | 10.0 | 0.6 | MEF 073 |

# METTALISED POLYESTER GENERAL PURPOSE CAPACITOR (MINIATURE) TYPE MEM

FEATURES:
★ Small size can be compared favourably with stacked film capacitors
★ Excellent self-healing and high reliability
★ Non-inductive construction
★ Space saving, miniature size

APPLICATIONS:
★ Blocking coupling of DC and signals to VHF range
★ Pulse, logic and timing circuit
★ Light duty pulse forming network



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SPECIFICATIONS:

※DIELECTRIC: Polyester film
※ELECTRODES: Vacuum evaporated metal
※COATING: Epoxy resin coating
※LEADS: Radial leads of tinned wire
※REFERENCE STANDARD : IEC384-2 grade 1;SJ/T10874-1996
※CLIMATIC CATEGORY: 40/85/21(From 85`C up to 105`C with derating voltage 1.25%/`C)
※CAPACITANCE VERSUS RATED VOLTAGE (UR): 0.001uF-0.47uF/50V/100V 0.00uF-0.15uF/250VDC 0.001uF-0.033uF/400VDC;0.001uF-0.015uF/630VDC
※CAPACITANCE TOLERANCE: M=±20% K=±10% J=±5%
※DISSIPATION FACTOR (TANGENT OF LOSS): DF≤1.0%(at 20`C,1KHz)
※VOLTAGE PROOF:1.6*Ur(5S at 20`C)
※INSULATION RESISTANCE: C≤0.33uF IR≥15000MΩ； C>0.33uF IR*C≥3000S (1 minute at 20`C and RH≤65%)
※ENDURANCE: 500hours with 125% of rated voltage at 85`C. After the test: ΔC/C≤8%;ΔDF≤0.30%(C>1uF); ΔDF≤0.50%(C≤1uF)
※MARKING: L76 : Symbol/Tolerance/Value

| CAPACI-TANCE | | 50/100VDC | | | | | |
|---|---|---|---|---|---|---|---|
| SYMBOL | uF | W | H | T | P | d | Stock Code |
| 104 | 0.10 | 7.5 | 6.5 | 4.0 | 5.0 | 0.6 | MEM 001 |
| 224 | 0.22 | 7.5 | 5.0 | 4.0 | 5.0 | 0.6 | MEM 003 |

# X2 CAPACITOR 275 Vac TYPE MX2

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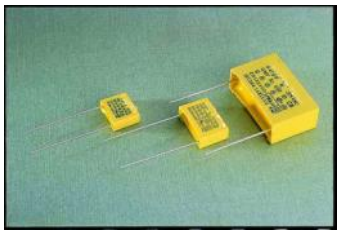
FEATURES:

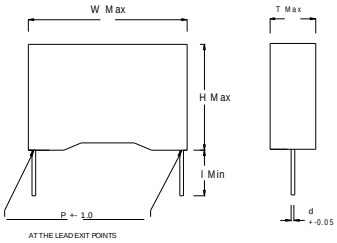
★ High stability of capacitance and DF versus wide temperature and frequency range
★ High electricity endurance and high insulation
★ Real long-term stability
★ Withstanding over-voltage strength (420 V.A.C For 60 Hrs at 55 C

Sub class X2 Capacitors are for use in an environment where the peak voltage of the impulses superimposed on the mains is <=2.5 Kv.

APPLICATION:

★ line-By-Pass and Antenna coupling
★ Across-the-line ,spark killer
★ EMI filter
★ Switching power supply






APPROVALS

| | | | |
|---|---|---|---|
| Sweden | 614203 | VDE565 | 40000463 |
| Norway | P06207206 | USA UL1414 | EI52288 |
| Denmark | 314078-01 | Germany | 40000463 |
| Finland | 23012 | Canada | LR108534-1 |
| IEC 384-14 | DE1-35344 | China | CQC 03001002847 |
| Switzerland | 060744 | USA UL1283 | E221606 |

SPECIFICATIONS:

※DIELECTRIC: Polypropylene film ※MARKING:MKP
※ELECTRODES: Vacuum evaporated metal
※COATING: Encapsulated in reinforced flame retardant plastic case sealed with epoxy resin meeting the requirement of UL94V-0
※LEADS: Radial leads of tinned wire/insulation flexible wire
※REFERENCE STANDARD : IEC 60384-14(3nd Edition,2005)UL1414,UL1283,GB/T14472- 1998,EN60384-14
※CLIMATIC CATEGORY: 40/100/21(GMF)
※CAPACITANCE VERSUS RATED VOLTAGE (UR): 0.001UF-2.2UF/275VAC(50/60HZ)
※CAPACITANCE TOLERANCE: M=±20% K=±10% J=±5%
※DISSIPATION FACTOR (TANGENT OF LOSS): ≤0.1%(PP))（at 20℃,1KHz）
※VOLTAGE PROOF:4.3×Ur Unit：VDC (1 minute at 20℃)
※INSULATION RESISTANCE:C≤0.33uF IR≥15,000MΩ； C>0.33uF IR*C≥5,000S (1 minute at 20℃ and RH≤65%)
※ENDURANCE: The test voltage 125% shall be applied for 1000 hours in the 85℃ chamber .Each of these voltage shall be applied to each capacitor individually through a resistor of 47Ω±5%,during this period,1000VAC 60Hz for 0.1sec be applied once each hour.

| uF | W | H | T | P | d | Stock-Code |
|---|---|---|---|---|---|---|
| 0.01 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 | MX2017 |
| 0.015 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 | MX2018 |
| 0.022 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 | MX2019 |
| 0.033 | 13.0 | 12.0 | 6.0 | 10.0 | 0.6 | MX2020 |
| 0.047 | 13.0 | 12.0 | 6.0 | 10.0 | 0.6 | MX2021 |
| 0.068 | 18.0 | 12.0 | 6.0 | 15.0 | 0.6 | MX2022 |
| 0.10 | 13.0 | 12.0 | 6.0 | 10.0 | 0.6 | MX2023 |
| 0.10 | 18.0 | 12.0 | 6.0 | 15.0 | 0.6 | MX2024 |
| 0.15 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 | MX2025 |
| 0.22 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MX2026 |
| 0.22 | 18.0 | 14.5 | 8.5 | 15.0 | 0.8 | MX2027 |
| 0.22 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 | MX2055 |
| 0.33 | 18.0 | 16.0 | 10.0 | 15.0 | 0.8 | MX2028 |
| 0.33 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 | MX2063 |
| 0.47 | 18.0 | 18.0 | 10.0 | 15.0 | 0.8 | MX2029 |
| 0.47 | 26.5 | 18.5 | 10.0 | 22.5 | 0.8 | MX2030 |
| 0.47 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 | MX2031 |
| 0.56 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 | MX2072 |
| 0.68 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 | MX2032 |
| 1.0 | 26.0 | 21.5 | 12.0 | 22.5 | 0.8 | MX2033 |
| 1.0 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 | MX2052 |
| | | | | | | |

# Y2 CAPACITOR 250/500 Vac TYPE MY2

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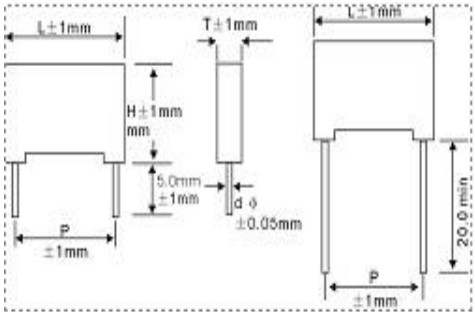
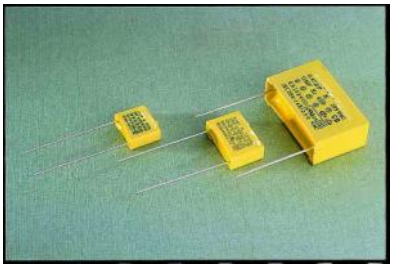
## Application

These capacitors are suitable for High Voltage A.C. applications, such as mains across the line suppressors, safety capacitors of class Y from Live and Neutral to Earth,for requirements with higher pulse ratings, high voltage DC. circuits as well as D.C. timing circuit applications . They are available in the preferred values and m.m. case sizes shown below:-
When not used as class Y they may be used at 500 Volts Ac due to the Special Construction



| Standard Sizes Stocked Other Sizes on Request | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | C( µF) | L+-1.0 | T+-1.0 | H+-1.0 | P+-1.0 | D+-0.05 | Stock Code | Tolerance |
| | 0.001 | 13.0 | 4.0 | 9.0 | 10.0 | 0.6 | MY2007 | 10% |
| | 0.0022 | 13.0 | 4.5 | 9.0 | 10.0 | 0.6 | MY2008 | 10% |
| | 0.0047 | 13.0 | 6.0 | 12.0 | 10.0 | 0.6 | MY2009 | 10% |
| | 0.0068 | 13.0 | 6.0 | 12.0 | 10.0 | 0.6 | MY2010 | 10% |
| | 0.0068 | 13.0 | 6.0 | 12.0 | 10.0 | 0.6 | MY2066 | 5% |
| | 0.01 | 18.0 | 5.0 | 10.0 | 15.0 | 0.8 | MY2011 | 10% |
| | 0.022 | 18.0 | 7.5 | 13.5 | 15.0 | 0.8 | MY2012 | 10% |
| | 0.047 | 18.0 | 10.0 | 16.0 | 15.0 | 0.8 | MY2013 | 10% |
| | 0.1 | 26.5 | 7.0 | 16.0 | 22.5 | 0.8 | MY2014 | 10% |
| | 0.15 | 30.56 | 12.5 | 22.0 | 27.5 | 0.8 | MY2015 | 10% |
| | 0.22 | 26.5 | 13.0 | 23.0 | 22.5 | 0.8 | MY2016 | 10% |

**GENERAL SPECIFICATION**
Manufacturing Standard.
Manufactured to IEC 384-14
1. VOLTAGE RANGE:
250V.A.C, as CLASS Y2,
500.A.C,1000V.D.C.
.
**2. CAPACITANCE RANGE:**
.001MFD TO .22 MFD
**3. CAPACITANCE TOLERANCES:**
+-20% (CODE M )
**4. OPERATING TEMPERATURE:**
-40 to +85 ₀C.
**5. ENDURANCE:**
1000 HRS AT 425V.A.C
**6. TEST VOLTAGE**
1500V.D.C. 2 Sec.
**7. TANGENT OF THE LOSS ANGLE**
C<=1uF <=.002
**8. ENVIRONMENTAL CLASSIFICATION:**
40/85/21
9. **INSULATION RESISTANCE.**
C< = 0,33 µF 100000 MΩ
C> 0,33 µF 30000 seconds.
**FEATURES:**
**Uniform shape and high density packaging.**
**Non-inductive construction.**
**Special Mettalised Construction for high ac ionisation inception voltage**
**Self-healing properties.**
**Good solderabilty.**
**Other lead spacing available on request.**
**Very High insulation resistance.**

# X2 CAPACITOR 275Vac FLEXIBLE LEAD TYPE MXF

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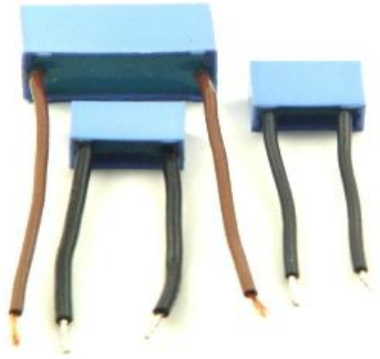
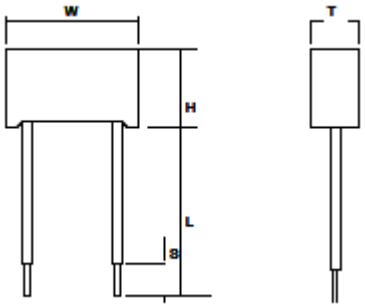
## Application

These capacitors are suitable for A.C. applications, such as mains across the line suppressors,and are ideally suited for portable tools, hairdriers, lawnmowers, washing machines, stoves and other applications where vibration is present. They are available in the preferred values and m.m. case sizes shown below:-






## GENERAL SPECIFICATION

**Manufacturing Standard.**
Manufactured to IEC 384-14

**1. VOLTAGE RANGE:**
275V.A.C, Class X2
.

**2. CAPACITANCE RANGE:**
.1MFD TO 1.0 MFD

**3. CAPACITANCE TOLERANCES:**
+-10%

**4. OPERATING TEMPERATURE:**
-40 to +85 $_{o}$C.

**5. ENDURANCE:**
1000 HRS AT 312V.A.C

**6. TEST VOLTAGE**
750V.D.C. 2 Sec.

**7. TANGENT OF THE LOSS ANGLE**
C<=1uF <=.002

**8. ENVIRONMENTAL CLASSIFICATION:**
40/85/21

**9. INSULATION RESISTANCE.**
C< = 0,33 µF 100000 MΩ
C> 0,33 µF 30000 seconds.

**FEATURES:**
**Uniform shape and high density packaging.**
**Non-inductive construction.**
**Self-healing properties.**
**Good solderabilty.**
**Other lead spacing available on request.**
**Very High insulation resistance.**

CAPACITANCE AND DIMENSION TABLE

| C( F) | W+-1.0 | T+-1.0 | H+-1.0 | Wire Type | Size | Colour | L Wire Length | S Strip | Stock Code |
|---|---|---|---|---|---|---|---|---|---|
| 0.1 | 17.75 | 8.2 | 15.2 | P.V.C Stranded | 0.2mm sq | Black | 60+- 6 | 9+-1 | 35/302 |
| 0.1 | 17.75 | 8.2 | 15.2 | P.V.C Stranded | 0.2mm sq | White | 60+-6 | 6+-1 | 35/302A |
| 0.22 | 26.0 | 9.0 | 19.0 | P.V.C Stranded | 0.5mm sq | Brown | 71+-6 | 6+-1 | 35/193 |
| 0.47 | 18.5 | 11.0 | 22.5 | P.V.C Stranded | 0.5mm sq | Black | 50+-10 | 6+-1 | 35/125 |
| 1.0 | 26.5 | 12.0 | 27.0 | P.V.C Stranded | 0.5mm sq | Brown | 100+-10 | 9+-1 | 35/504 |

# X1 CAPACITOR 330 Vac TYPE MX1

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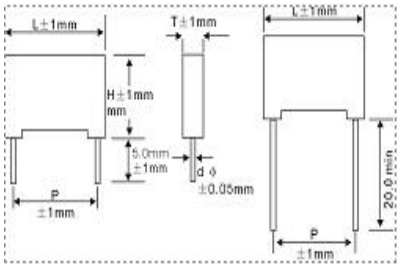
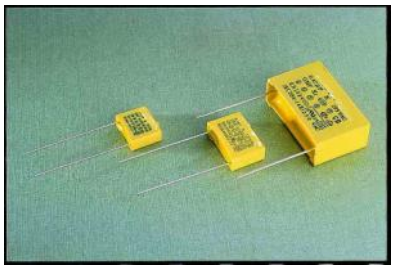
## Application

Interference suppression capacitors for use within or associated with, electronic or electrical apparatus and machines where the capacitors will be connected to a supply mains with a voltage not exceeding 330 V.a.c (R.m.s)
Sub class X1 Capacitors are for use in an environment where the peak voltage of the impulses superimposed on the mains is <=4.0 Kv.
They are available in the preferred values and m.m. case sizes shown below:-



## SPECIFICATIONS:

※DIELECTRIC: Polypropylene film ※MARKING:MX1
※ELECTRODES: Vacuum evaporated metal
※COATING: Epoxy resin coating
※LEADS: Radial leads of tinned wire
※REFERENCE STANDARD : IEC60384-14 grade Class X1
※CLIMATIC CATEGORY: 40/105/56
※CAPACITANCE VERSUS RATED VOLTAGE (UR): 0.00047uF-6.8uF 330VAC (50/60 Hz)
※CAPACITANCE TOLERANCE: M=±20% K=±10% J=±5%
※DISSIPATION FACTOR (TANGENT OF LOSS): ≤ 0.2 % at 1KHz; ≤ 0.4 % at 10KHz;
※VOLTAGE PROOF: 4.3*Ur UnitVDC (1 Minute at 20`C)
※INSULATION RESISTANCE: C≤0.33uF IR≥15000MΩ； C>0.33uF IR*C≥3000S (1 minute at 20`C and RH≤65%)
※ENDURANCE: The test voltage 125% shall be applied for 1000 hours in the 85℃ chamber .Each of these voltage shall be applied to each capacitor individually through a resistor of 47Ω±5%,during this period,1000VAC 60Hz for 0.1sec be applied once each hour.
After the test: ΔC/C≤10%;IR≥50% of the specified value ΔDF≤0.8%(C≤1UF); ΔDF≤0.5%(C>1UF);(at 20℃ 1KHz)

| uF | W | H | T | P | d | Stock-Code |
|---|---|---|---|---|---|---|
| 0.01 | 18.0 | 12.0 | 6.0 | 15.0 | 0.6 | MX1034 |
| 0.022 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 | MX1035 |
| 0.068 | 18.0 | 16.0 | 10.0 | 15.0 | 0.8 | MX1036 |
| 0.10 | 18.0 | 14.5 | 8.5 | 15.0 | 0.8 | MX1037 |
| 0.22 | 26.5 | 16.0 | 7.0 | 22.5 | 0.8 | MX1038 |
| 0.47 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 | MX1039 |
| 0.68 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 | MX1062 |
| 1.0 | 32.0 | 25.0 | 14.0 | 27.5 | 0.8 | MX1040 |

# INTERFERENCE SUPPRESSION 3 PHASE CAPACITOR NETWORKS TYPE M3P

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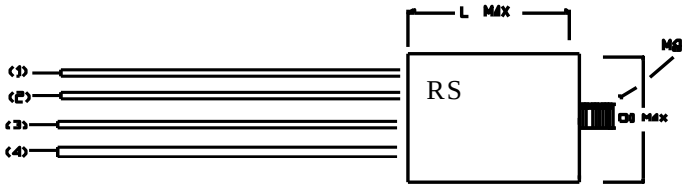
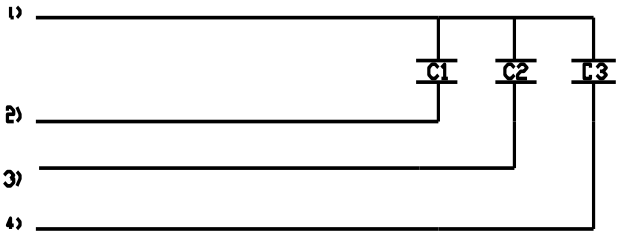
**Application**

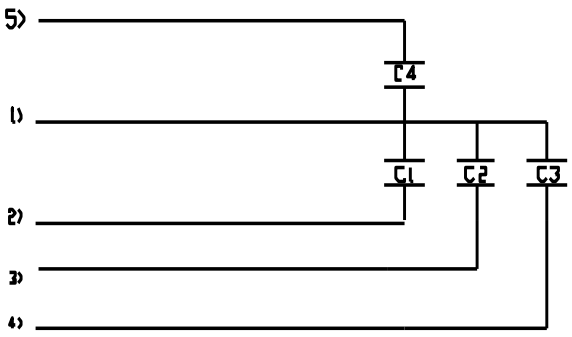
**These Capacitor Networks are used To reduce the Radio Frequency Interference of Equipment that uses High Current and where it is not practical to use Inductors in series. Used for high current Heating and Industrial Ovens and Welders .**



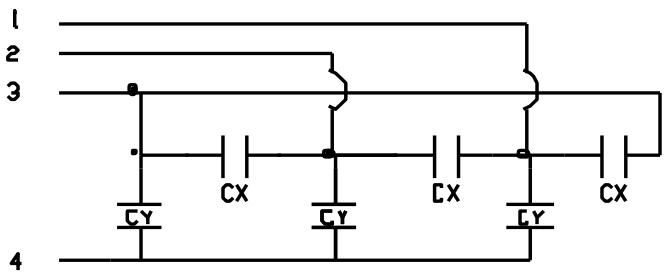

Stock Code 37/401 3 Phase Network Housing RS3 OD=42,L=75




Stock Code 37/341 3 Phase Network Housing RS4 OD=46,L=89




Stock Code 37/289 3 Phase Network Housing RS4 OD=46, L=89




# SNUBBER CAPACITOR (RC SERIES, RC PARALLEL) TYPE MRC

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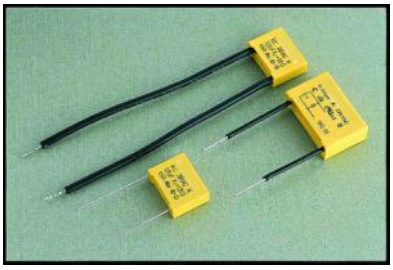
FEATURES:

★ Small size with superior performance
★ Suitable for PCB mounting
★ Ideal for AC or DC application
★ Large product selection range with 1/4,1/2 and 1 watt resistors,0.001uF to 1.0uF capacitance



APPLICATIONS:

★ Protection for contacts from noise during switching operation of equipment
★ Protection of electronic instruments during operation of relays,solenoids,motors and so on
★ Electrical noise protection of semiconductor equipment during the control of triacs, transistor, motors, welders, etc.

SPECIFICATIONS:

※DIELECTRIC: Metallized Polypropylene/Polyester film
※RESISTOR: Non-inductive,high pulse resistor
※COATING: Encapsulated in reinforced flame retardant plastic case sealed with epoxy resin meeting the requirement of UL94V-0
※LEADS: Tinned wire or polyvinyl chloride(PVC)insulation standed copper wire
※CATEGORY: X2 class
※REFRENCE STANDARD : IEC 384-14 GB/T14472-98;EN132400;UL1283
※CLIMATIC CATALOGUE: 40/100/21
※CAPACITANCE VERSUS RATED VOLTAGE (UR):
SERIES 0.01UF-1.0UF 300VAC
PARALLEL 0.01UF-0.68UF 300VAC
※RESISTANCE AND POWER: SERIES 10-470Ω,1/4,1/2,1.0or2.0 Watt
PARALLEL 1.0-2.2MΩ,1/4,1/2,1 Watt
※CAPACITANCE
TOLERANCE: M=±20% K=±10% J=±5%
※DISSIPATION FACTOR
(TANGENT OF LOSS): ≤0.1%(PP)) ≤1.0%(PE) （at 20`C,1KHz）
※VOLTAGE PROOF:4.3×Ur (1 minute at 20`C)
※INSULATION RESISTANCE:C≤0.33uF IR≥15,000MΩ;
C>0.33uF IR*C≥5,000S(series only) (1 minute at 20`C and RH≤65%)
※ENDURANCE: The test voltage 125% shall be applied for 1000 hours in the 85`C chamber. Each of these voltage shall be applied to each capacitor individually through a resistor of 47Ω±5%,during this period,1000VAC 60Hz for 0.1sec be applied once each hour.After the test:
ΔC/C≤10%;IR≥50% of the specified value
ΔDF≤0.8%(C≤1UF);
ΔDF≤0.5%(C>1UF);(at 20`C 1KHz

# SNUBBER CAPACITOR (RC SERIES, RC PARALLEL) TYPE MRC

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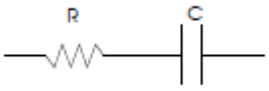
Circuit Diagram

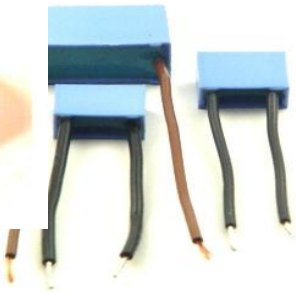



## TECHNICAL DATA

Manufacturing Standard
Manufactured to BS613
1) Rated Voltage 250 V.A.C
2) Capacitance Tolerance: +-10%
3) Resistance Tolerance +-5%

Housing I1, I2, I3, I4

Housing E1 Flexible Leads



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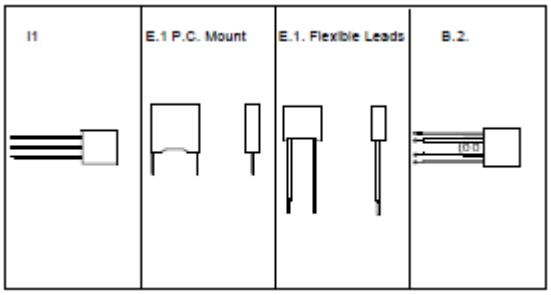
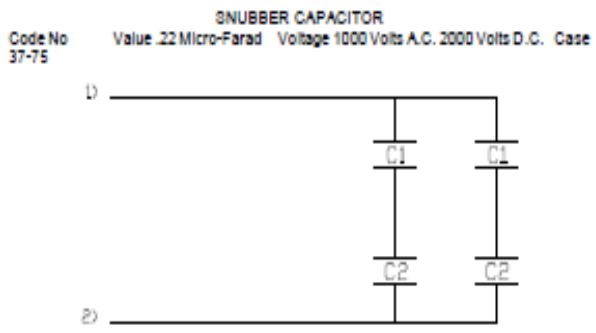



Housing E1
Pcb Mount

| Rated Voltage | Capacitance µF | Resistance Ohms | Housing Type | Stock Code | Remarks |
|---|---|---|---|---|---|
| 250 V.A.C | 0.1 | 47 | I1 | 44/175 | |
| 250 V.A.C | 0.1 | 100 | I1 | 44/314 | |
| 250 V.A.C | 0.1 | 100 | I1 | 44/314LL | Long Leads |
| 250 V.A.C | 0.1 | 100 | E1 PC Mount | 44/424 | 22.5mm Lead Space |
| 250 V.A.C | 0.47 | 220 | I2 | 44/791 | 35 x 23 Voltage Stabiliser |
| Dual 400 V.A.C | 0.047 | 100 | B2 | 44/244 | |
| 500 V.A.C | 0.047 | 100 | E1 Flexible Leads | 44/229 | |




# INTERFERENCE SUPPRESSION XY NETWORKS TYPE MXY

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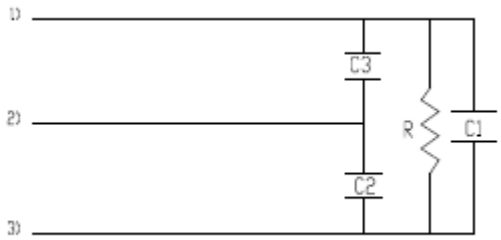
FEATURES:

★ Capacitor network has one X2 and two Y2 capacitors in a compact package.
★ Excellent common and normal mode capability in a wide capacitance selection
★ Y2 Capacitors grounded to external mounting tab or common lead.
★ Installed cost saving with single packing design.




APPLICATIONS:

★ Radio Interference currents are by-passed.
★ Antenna coupling. Across the line spark killer.
★ Emi Filters

★ Switching Power Supply

Plascraft offers these combinations as under.
NOTE: In some types , due to earth leakage requirements only one Y2 capacitor is incorporated
All units shown are fitted with 3 Flexible leads and are designed for 250 V.A.C mains useage. (other voltages may be available)

| Specifications | |
|---|---|
| Reference Standard | UL1414, IEC 30384-14 |
| Climatic Category | 40/85/21 |
| Capacitance Class | 0.047 –0.47uF (X2)<br>0.001—0.0047 (Y2) |
| Rated Voltage | 275VAC (50/60 Hz) |
| Capacitance Tolerance | M=+-20%, K=+-10%, J=+-5% |
| Dissipation Factor | <=0.10%PP;<=1.0%PE (at 20C, 1Khz) |
| Voltage Proof | 4.3*Ur Unit:VDC (1 minute at 20c) |
| Insulation Resistance | 15000Mohms >0.33 5000Secs |
| Endurance | 1000Hrs with 344VAC. During this Period 880VAc 60hz for 0.1 Secs to be applied for once each hour |

**Locally Manufactured Types**

| Rated X capacitance µF | Rated Y2 Capacitance µF | Housing Type | Housing Size (mm) | Remarks | Stock Code |
|---|---|---|---|---|---|
| 0.1 | 1 x 0.0047 | I1 | L=30,Od=19 | | 46/263 |
| 0.22 | 1 x 0.01 | I1 | L=30,Od=19 | | 46/375 |
| 0.22 | 1 x 0.022 | B2 | Od=30,L=43 | 5 mm Brass Ring Terminal | 46/510 |
| 0.47 | 2 x 0.022 | I3 | L=41,Od=28 | | 46/381 |
| 0.47 | 2 x 0.022 | RS1 | Od=30,L= 47 | 6.3 mm Brass Receptacle | 46/505 |

# TOROIDAL IRON POWDER CORES TYPE MTP

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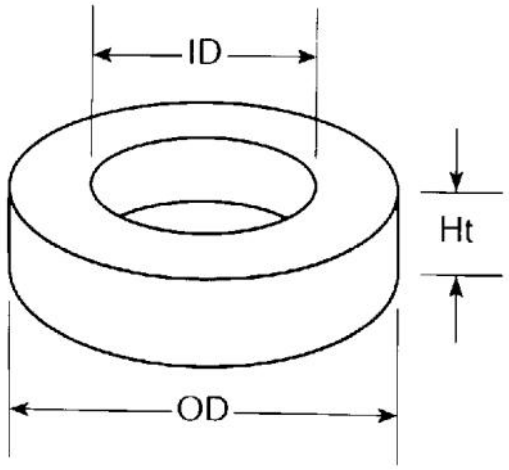
## Application

### INTRODUCTION

Iron powder as a material has been widely used in RF applications for years. The distributed air gap properties inherent in iron powder cores also make them extremely well- suited for a variety of energy storage inductor applications. Iron powder is a **cost-effective** design alternative to molypermalloy powder (MPP) , high flux, or sendust cores. It can also be used in place of ferrites and iron-alloy laminations requiring a gap.

The iron powder cores described in this catalogue are typically used for DC output chokes, differential-mode input chokes, power factor correction inductors, continuous flyback inductors, light dimmer chokes




| IRON POWDER TOROIDAL CORES | | | | | |
|---|---|---|---|---|---|
| Size | OD mm | ID mm | Ht mm | AL nH/N2 | Stock Code |
| P13 | 12.7 | 7.7 | 4.83 | 33 | 09/948 |
| P20 | 20.2 | 12.6 | 6.35 | 46 | 09/843 |
| P23 | 22.9 | 14 | 9.53 | 70 | 09/949 |
| P39 | 38.4 | 21.5 | 11.1 | 96 | 09/868 |
| P40 | 39.9 | 24.1 | 14.5 | 100 | 09/862 |
| P47 | 46.7 | 24.4 | 18 | 169 | 09/840 |
| P58 | 57.2 | 35.7 | 25.4 | 160 | 09/907 |

# TOROIDAL FERRITE CORES TYPE MTF

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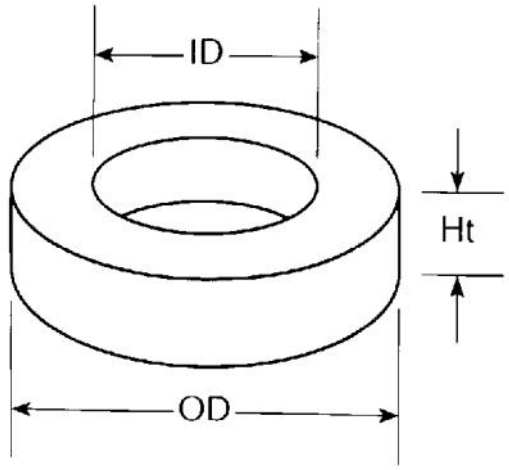
## Application

Ferrites are dense homogenous ceramic structures made by mixing iron oxide ($Fe_2O_3$) with oxides or carbonates of one or more metals such as manganese, zinc, nickel or magnesium.
They are pressed , then fired in a kiln at 2000oF, and machined as needed to meet various operational requirements.
The ferrites described below are of the manganese-zinc type used for communications (frequencies from 1Khz to 1000 Khz) and for power applications such as switching power supplies.

**ADVANTAGES OF FERRITES**

Ferrites have a paramount advantage over other types of magnetic materials: high electrical resistivity and resultant low eddy current losses over a wide frequency range.
Additional characteristics such as high permeability and time/temperature stability have expanded ferrite uses into quality filter circuits, high frequency transformers, wide band transformers, adjustable inductors, delay lines , and other high frequency electronic circuitry.
As the high frequency performance of other circuit components continues to be improved, ferrites are routinely designed into magnetic circuits for both low level and power applications.
Another factor in choosing ferrites is the higher cost of magnetic metals.
For the most favorable combination of low cost high Q, high stability, and lowest volume , ferrites are the best core material choice for frequencies from 10 Khz to 50 Mhz. Ferrites offer an unmatched flexibility in magnetic and mechanical parameters.
Ferrite toroids offer high magnetic efficiency as there is no air gap, and the cross sectional area is uniform. They are available in many sizes.




| FERRITE TOROIDAL CORES | | | | | |
|---|---|---|---|---|---|
| Size | OD mm | ID mm | Ht mm | Perme-ability | Code |
| F14 | 13.6 | 6.5 | 5.95 | 10K | 09/670 |
| F23 | 23.3 | 12.6 | 7.4 | 4K | 09/669 |
| F23 | 23.3 | 12.6 | 7.4 | 10K | 09/111 |
| F25 | 26.8 | 13.5 | 11 | 7K | 09/110 |
| F25 | 26.8 | 13.5 | 11 | 10K | 09/968 |
| F31 | 32.1 | 18.4 | 13.1 | 10K | 09/969 |
| F40 | 38.1 | 25.4 | 19 | 4K | 09/107 |
| F40 | 38.1 | 25.4 | 19 | 10K | 09/112 |
| F65 | 63 | 38 | 25 | 4K | 09/108 |
| F65 | 63 | 38 | 25 | 10K | 09/113 |

# INTERFERENCE SUPPRESSION INDUCTORS SINGLE WOUND TYPE MSW

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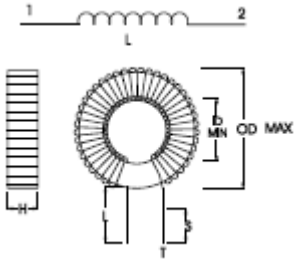
Mounted on a 6 Pin IC Socket

APPLICATION:
Radio Interference Suppression.
Current Transformers
Earth Line Chokes




**SPECIFICATION**
**Manufacturing Standard.** Manufactured to BS 613
**1. INDUCTANCE TOLERANCE:** +- 30%
**2. RATED CURRENT:** Referred to 50 Hz.
**3. RATED INDUCTANCE:** Measured at 1Khz at 25 $^{o}$C.

| Current Rating in Amps | Inductance in Millihenries | OD | ID | H | T | L | No Turns | Temp Rise°C | Stock Code | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| SIZE 1 F14 | | | | | | | | | | |
| 0.75 | 56 | 15.5 | 3 | 8 | 0.28 | 10 | 100 | 30 | 40/519 | |
| 1.5 | 3.5 | 15.5 | 3 | 8 | 0.355 | 12 | 25 | 30 | 40/726 | |
| 2 | 9.0 | 15.5 | 3 | 8 | 0.4 | 10 | 40 | 30 | 40/789 | |
| 3 | 1.25 | 15.5 | 3 | 8 | 0.5 | 16 | 15 | 22 | 40/544 | |
| 3 | 5.0 | 15.5 | 5 | 8 | 0.5 | 16 | 30 | 24 | 40/340 | |
| SIZE 2 F23 | | | | | | | | | | |
| 3 | 9.576 | 24 | 11 | 8 | 0.5 | 16 | 60 | 27 | 40/207 | |
| 4 | 3.447 | 28 | 10 | 10 | 0.63 | 7 | 36 | 28 | 40/452 | Upright |
| 5 | 5.62 | 25 | 10 | 9 | 0.71 | 16 | 45 | 29 | 40/123 | |
| 6 | 3.25 | 25 | 10 | 9 | 0.9 | 16 | 35 | 30 | 40/208 | |
| 6 | 3.25 | 25 | 10 | 9 | 0.9 | 16 | 35 | 30 | 40/422 | |
| 11* | 1.407 | 26.5 | 9 | 10 | 1.41 | 16 | 23 | 30 | 40/128 | |
| 30 | 0.81 | 26.5 | 9 | 10 | 8x0.5 | 16 | 23 | 30 | 40/590 | High Current |
| SIZE 3 F25 | | | | | | | | | | |
| 3 | 180 | 31 | 8 | 16 | 0.5 | 21 | 133 | 30 | 40/415 | |

# INTERFERENCE SUPPRESSION INDUCTORS COMMON MODE TYPE MCM

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APPLICATION
These inductors operate as current compensated chokes.
Electronic devices primarily generate common mode interference.
In order to meet the limit values of the safety requirements (limiting the leakage current and consequently the capacitance of Y capacitors), chokes with high unsymmetrically operating inductance must be used.
Current compensated ring core chokes are particularly suitable for this purpose. Their core is not saturated by the operating current due to a special winding configuration.
Therefore it is possible to use high permeability cores.
Due to their construction there is relatively little suppression of differential mode interference by current compensated chokes. It is therefore necessary to combine them with symmetrically connected capacitors or powder core chokes

Lead Configuration Diagrams

Fig 1

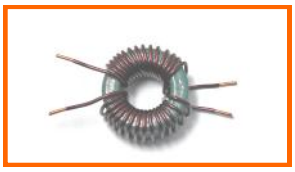


Fig 2

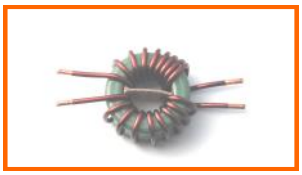


Fig 3

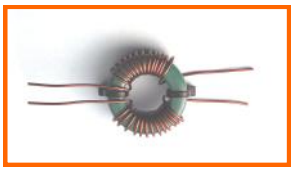


Fig 4

Fig 5

Fig 6

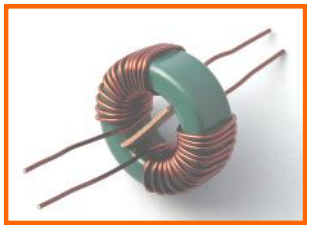


Fig 7

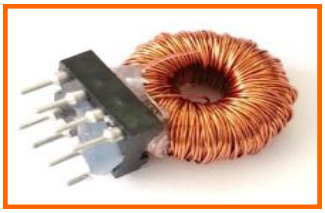


Fig 8

Fig 9

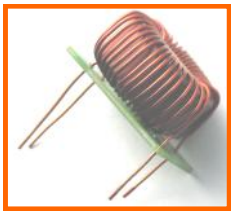
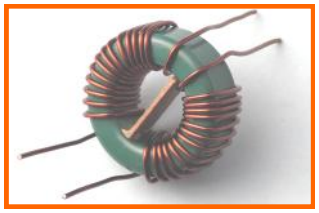


Fig 10



**TECHNICAL DATA**
**Manufacturing Standard.**
Manufactured to BS 613
**1. INDUCTANCE TOLERANCE:**
+- 30%
**2. RATED CURRENT:**
Referred to 50 Hz.
**3. RATED INDUCTANCE:**
Measured at 1Khz at 25 $^{o}$C
.
**4. TEST VOLTAGE:**
1500 V.a.c. 2 Secs. (Winding to winding.)

# INTERFERENCE SUPPRESSION INDUCTORS COMMON MODE TYPE MCM

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| Current Amps | Induc-tance Mh | OD | H | T | L | No Turns Winding | Temp Rise ° C | Lead Config. Fig | Stock Code |
|---|---|---|---|---|---|---|---|---|---|
| SIZE 1 F14 | | | | | | | | | |
| 2 | 2.95 | 15.5 | 8 | .355 | 16 | 23 | 26 | 2 | 40/313 |
| 3 | .1.25 | 15.5 | 8 | .5 | 16 | 15 | 29 | 2 | 40/216 |
| 3 | 1.25 | 15.5 | 8 | .5 | 50 | 15 | 29 | 2 | 40/216E |
| SIZE 2 F23 | | | | | | | | | |
| 0.5 | 53 | 25 | 10 | .355 | 16 | 140 | 25 | 2 | 40/969 |
| 1 | 13 | 25 | 10 | .355 | 16 | 70 | 26 | 2 | 40/270 |
| 1 | 13 | 25 | 10 | .355 | 16 | 70 | 26 | 4 | 40/270S |
| 3 | 2.39 | 25 | 8 | .5 | 16 | 30 | 25 | 2 | 40/209 |
| 4 | 1.5 | 25 | 10 | .63 | 7 | 24 | 30 | 5 | 40/453 |
| 5 | 0.68 | 25 | 8 | .71 | 16 | 16 | 29 | 2 | 40/210 |
| 6 | 0.68 | 25 | 9 | .9 | 16 | 16 | 22 | 2 | 40/215 |
| 6 | 1.5 | 27 | 12 | .9 | 16 | 22 | 29 | 2 | 40/466 |
| 7.5 | 0.45 | 25 | 9 | .9 | 16 | 13 | 28 | 2 | 40/211 |
| 10 | 0.266 | 26 | 10 | 1.18 | 16 | 10 | 29 | 2 | 40/213 |
| 10 | 0.266 | 26 | 10 | 1.18 | 16 | 10 | 29 | 3 | 40/213A |
| 10 | 0.476 | 26 | 10 | 1.0 | 20 | 13 | 29 | 4 | 40/001 |
| SIZE 3 F25 | | | | | | | | | |
| 3 | 30.85 | 30 | 14.5 | .63 | 16 | 55 | 29 | 3 | 40/403 |
| 5 | 2.61 | 30 | 12.5 | 1.0 | 27 | 16 | 20 | 2 | 40/658 |
| 7 | 2.97 | 30 | 17 | 1.18 | 16 | 17 | 29 | 5 | 40/410 |
| 10 | 0.65 | 29 | 12.5 | 1+1 | 30 | 8 Bifilar | 20 | 5 | 40/659 |
| 16 | 0.82 | | | 1.6 | | 9 | | 4 | 40/002 |

## INTERFERENCE SUPPRESSION INDUCTORS COMMON MODE TYPE MCM

BACK TO INDEX

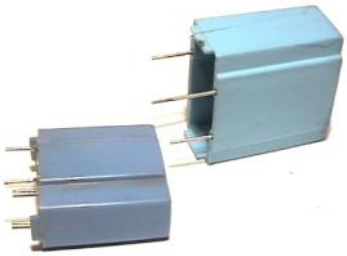
| Current Amps | Induc-tance Mh | OD | H | T | L | No Turns Winding | Temp Rise ° C | Lead Config. Fig | Stock Code |
|---|---|---|---|---|---|---|---|---|---|
| SIZE 4 F31 | | | | | | | | | |
| 4 | 2.2 | 38 | 19 | .71 | 16 | 42 | 27 | 2 | 40/129 |
| 6.5 | 4.62 | 38 | 18 | 1.0 | 16 | 19 | 28 | 2 | 40/275 |
| 10 | 2.88 | 38 | 18 | 1.32 | 16 | 15 | 28 | 2 | 40/217 |
| 13.5 | 2.51 | 38 | 18 | 1.4 | 16 | 14 | 20 | 2 | 40/296 |
| 15 | .1.84 | 39 | 20 | 1.6 | 16 | 12 | 15 | 4 | 40/652 |
| 16 | .1.84 | 38 | 19 | 1.6 | 16 | 12 | 29 | 2 | 40/376 |
| 25-30 | 1.038 | 38 | 20 | 2.0 | 16 | 9 | 45 | 2 | 40/373 |
| 30 | 0.461 | 39 | 20 | 6x1 | 16 | 6 | 35 | 2 | 40/989 |
| 40 | 0.628 | 43 | 21 | 2.5 | 20 | 7 | 50 | 2 | 40/100 |
| SIZE 4A 2x Size 4 | | | | | | | | | |
| 20 | 4.0 | 44 | 40 | 8x0.5 | 16 | 8 | 36 | 2 | 40/990 |
| 25 | 1.0 | 40 | 35 | 20 | 41/25 | 9 | 45 | 6 | 40/993 |
| Size 5 F40 | | | | | | | | | |
| 20 | 0.623 | 50 | 26 | 4x1.18 | 50 | 9 | 16 | 2 | 40/030 |
| 30 | 0.4 | 51.5 | 27.5 | 5x1.18 | 50 | 8 | 19 | 2 | 40/031 |
| 40 | 0.3 | 52 | 28 | 6x1.18 | 50 | 7 | 25 | 2 | 40/032 |
| 50 | 0.25 | 50 | 27 | 10x1.0 | 50 | 6 | 23 | 2 | 40/021 |
| Size 6 F65 | | | | | | | | | |
| 40 | 0.89 | 77 | 37 | 10x1.0 | 70 | 9 | 28 | 2 | 40/028 |
| 50 | 0.704 | 78 | 38 | 10x 1.18 | 70 | 8 | 26 | 2 | 40/024 |
| 60 | 0.539 | 79 | 40 | 10x 1.32 | 70 | 7 | 30 | 2 | 40/026 |
| 80 | 0.396 | 80 | 42 | 10x1.6 | 70 | 6 | 30 | 2 | 40/027 |
| 100 | 0.275 | 86 | 46 | 10x1.8 | 70 | 5 | 30 | 2 | 40/025 |
| 130 | 0.176 | 90 | 50 | 13x1.8 | 70 | 4 | 30 | 2 | 40/022 |

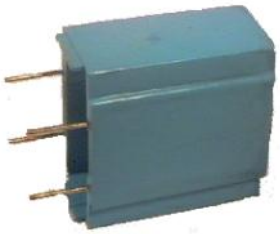
# INTERFERENCE SUPPRESSION INDUCTORS COMMON MODE TYPE MPC

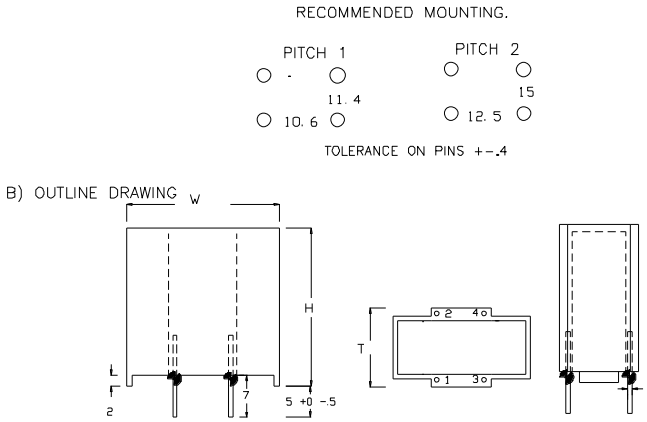
BACK TO INDEX

## FOR PRINTED CIRCUIT BOARD MOUNTING

These inductors operate as current compensated chokes with ring cores semi-encapsulated in plastic cases with terminal pins.
They are ideal for applications where they will be used where vibration may be a problem as well as on printed circuit boards. Due to the high inductances of these units they are suitable for T.V. Sets , Switch mode power supplies, Video games and Computers







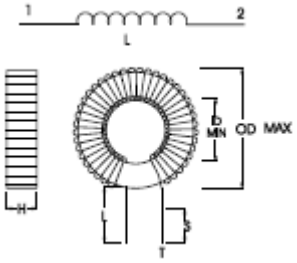

**TECHNICAL DATA**
**Manufacturing Standard.**
Manufactured to BS 613
**1. INDUCTANCE TOLERANCE:**
+- 30%
**2. RATED CURRENT:**
Referred to 50 Hz.
**3. RATED INDUCTANCE:**
Measured at 1Khz at 25 $_{o}$C
.
**4. TEST VOLTAGE:**
1500 V.a.c. 2 Secs. (Winding to winding.)

| AMPS | INDUC-TANCE | W MAX | T MAX | H MAX | PITCH | Hous-ing | TEMP RISE ° | Stock Code |
|---|---|---|---|---|---|---|---|---|
| 0.75 | 56 | 31.5 | 18 | 33.5 | 2 | PC2 | 25 | 40/631 |
| 1 | 13 | 31.5 | 18 | 33.5 | 2 | PC2 | 26 | 40/417 |
| 1 | 27 | 31.5 | 18 | 33.5 | 2 | PC2 | 17 | 40/438 |
| 3 | 2.39 | 31.5 | 18 | 33.5 | 2 | PC2 | 25 | 40/745 |

# INTERFERENCE SUPPRESSION INDUCTORS FOR LIGHT DIMMERS AND TRIAC CIRCUITS TYPE MDC

BACK TO INDEX

For suppression of power controls using thyristors, triacs and quadracs, used in light dimmers etc.Used in conjunction with suitable capacitors, interference can be reduced to limits specified by the S.A.B.S. (Plascraft can provide testing facilities and assist with the selection of the correct capacitors and resistors.) These inductors are available in single wound toroids with encapsulated versions shown below




**TECHNICAL DATA**
**Manufacturing Standard.**
Manufactured to BS 613
**1. INDUCTANCE TOLERANCE:**
+- 20%
**2. RATED CURRENT:**
Referred to 50 Hz.
**3. RATED INDUCTANCE:**
Measured at 1Khz at 25 $^{o}$C

**APPLICATION**
See next Page For a Dimmer Circuit and application Notes

**INDUCTORS FOR USE WITH LIGHT DIMMERS AND TRIAC CIRCUITS**

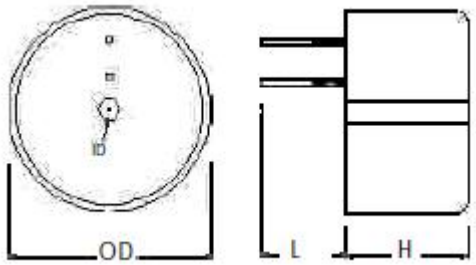
| Watts | Inductance mh | OD. | ID. | H. | T. | L | Turns | Temp rise° C * | Stock Code | Resistance milliΩ | Capacitor Cx1 µF | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 2.0 | 15.5 | 4.2 | 8 | .25 | 16 | 250 | 15 | 40/379 | 1600 | .068 | |
| 200 | 2.0 | 15.5 | 4.2 | 8 | .25 | 16 | 250 | 59 | 40/379 | 1600 | .068 | |
| 200 | 3.28 | 24 | 8 | 10 | .355 | 16 | 270 | 33 | 40/354 | 1170 | .068 | Very Low Flicker |
| 300 | 1.8 | 23 | 8.5 | 9.5 | .355 | 21 | 200 | 55 | 40/364 | 909 | .1 | |
| 400 | 1.378 | 24 | 4 | 12.5 | .5 | 21 | 175 | 45 | 40/361 | 404 | .1 | |
| 500 | 1.378 | 24 | 4 | 12.5 | .5 | 21 | 175 | 80 | 40/361 | 404 | .1 | |
| 600 | 1.02 | 28 | 8 | 14 | .63 | 25 | 121 | 48 | 40/622 | 224 | .15 | |
| 600 | 1.2 | 36 | 15 | 11.5 | .63 | 25 | 170 | 34 | 40/765 | 260 | .1 | Low Temperature |
| 800 | .770 | 29 | 7 | 14 | .71 | 25 | 105 | 63 | 40/623 | 185 | .22 | |
| 800 | 1.08 | 31.5 | 7 | 16 | .71 | 25 | 108 | 54 | 40/766 | 180 | .15 | |
| 1000 | .729 | 25 | 4 | 22 | .71 | 21 | 90 | 95 | 40/327 | 190 | .22 | Very High Temp |
| 1000 | 1.4 | 43 | 12 | 15 | .9 | 35 | 122 | 38 | 40/365 | 140 | .22 | |
| 1500 | .821 | 45 | 13 | 22 | 1.18 | 35 | 92 | 55 | 40/362 | 72 | .33 | |
| 2000 | .545 | 45 | 13 | 22 | 1.32 | 35 | 75 | 55 | 40/363 | 55 | .47 | |
| 3000 | .610 | 54 | 12 | 27 | 1.8 | 35 | 61 | 60 | 40/368 | 40 | .68 | |
| 4000 | .59 | 54 | 12 | 27 | 2.0 | 35 | 60 | 65 | 40/369 | 25 | .68 | |
| 6000 | .353 | 70 | 15 | 42 | 3x1.6 | 35 | 47 | 46 | 40/469 | 10 | 1.0 | |

* Temperature Rise Measurements done in oil. Max Temperature rise allowed 95° C

# INTERFERENCE SUPPRESSION INDUCTORS FOR LIGHT DIMMERS AND TRIAC CIRCUITS TYPE MDE

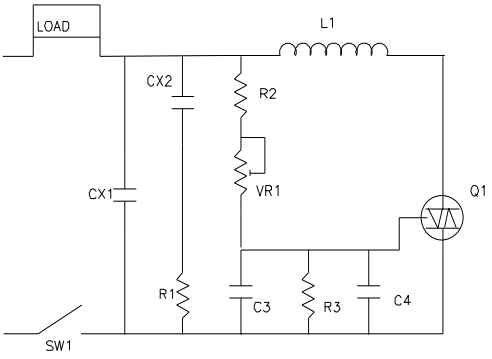
BACK TO INDEX

For suppression of power controls using thyristors, triacs and quadracs, used in light dimmers etc.Used in conjunction with suitable capacitors, interference can be reduced to limits specified by the S.A.B.S. (Plascraft can provide testing facilities and assist with the selection of the correct capacitors and resistors.) These inductors are available in single wound toroids with encapsulated versions shown below




| ENCAPSULATED INDUCTORS FOR USE WITH LIGHT DIMMERS AND TRIAC CIRCUITS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Watts** | **Inductance micro henries** | **OD.** | **ID.** | **H.** | **T.** | **Temp rise° C** | **Housing** | **Stock Code** |
| **3000** | **610** | **60** | **6.4** | **36** | **35** | **65** | **I5** | **40/336** |
| **4000** | **590** | **60** | **6.4** | **36** | **35** | **60** | **I5** | **40/337** |

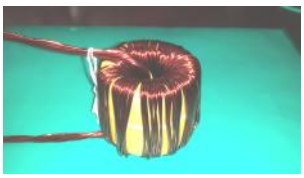
The Typical circuit is intended to show the suppression component positions as follows.
L1 : Inductor to be chosen from the table below based on Wattage required and temperature rise. If used at higher wattages the temperature rise will increase.
CX1: Value of Suppression Capacitor to be used in conjunction with L1 to achieve a level of 64DBuv suppression level.
CX2 and R1 may be added to prevent flicker with low wattage loads.
Typical value .1uf and 470 Ohm
NOTE: Both Capacitors CX1 andCX2 should be “X” type capacitors due to pulses on the line



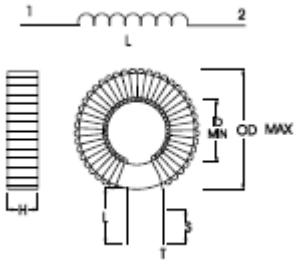
## SWITCH MODE POWER SUPPLY OUTPUT CHOKES TYPE MSM

BACK TO INDEX

Standard Versions



TYPICAL APPLICATIONS:
50 HZ Differential-mode EMI Line Chokes
DC Chokes: <50KHz or low Et/N
DC Chokes: >50KHz or higher Et/N
Power Factor Correction Chokes: < 50KHz
Power Factor Correction Chokes: >= 50KHz




**RATINGS**
**1. INDUCTANCE TOLERANCE:** +- 20%
**2. RATED CURRENT:** Referred to 50 Hz.
**3. RATED INDUCTANCE:** Measured at 1Khz at 25 o C.

| Current Rating in Amps | Induc-tance in Micro-henries | OD | H | T | L | No Turns | Temp Rise°C | Stock Code | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| Core Size 1 DC Energy Storage :10 to 40 Degrees Temperature Rise: 60 to 180 Microjoules | | | | | | | | | |
| 1 | 150 | 14 | 7 | .4 | 10 | 64 | 30 | 40/578 | |
| 3 | 34 | 15 | 6.5 | .56 | 10 | 34 | 30 | 40/223 | |
| Core Size 2 DC Energy Storage :10 to 40 Degrees Temperature Rise: 330 to 960 Microjoules | | | | | | | | | |
| 2 | 154 | 23.5 | 10 | .56 | 16 | 58 | 28 | 40/029 | |
| 4 | 450 | 24 | 12.5 | .71 | 21 | 100 | 30 | 40/387 | |
| 4 | 99 | 22.5 | 9 | .71 | 16 | 47 | 23 | 40/172 | |
| 5 | 61 | 2316 | 9 | .8 | | 37 | 30 | 40/380 | |
| 12 | 15 | 24 | 10.5 | 1.32 | 16 | 14 | 35 | 40/010 | |
| Core Size 2A DC Energy Storage :10 to 40 Degrees Temperature Rise: 660 to 1920 Microjoules | | | | | | | | | |
| 4 | 729 | 24 | 18 | .8 | 35 | 90 | 70 | 40/181 | |
| 4 | 729 | 24 | 18 | .71 | 10 | 90 | 90 | 40/386 | For p.c.b mounting |
| | | | | | | | | | |

## SWITCH MODE POWER SUPPLY OUTPUT CHOKES TYPE MSM

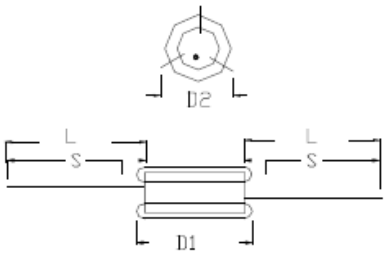
BACK TO INDEX

| Current Rating in Amps | Induc-tance in Micro-henries | OD | H | T | L | No Turns | Temp Rise°C | Stock Code | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| Core Size 3 DC Energy Storage :10 to 40 Degrees Temperature Rise: 610 to 1730 Microjoules | | | | | | | | | |
| 2 | 650 | 26 | 12 | .355 | 10 | 96 | 30 | 40/225 | |
| Core Size 4 DC Energy Storage :10 to 40 Degrees Temperature Rise: 1100 to 3200 Microjoules | | | | | | | | | |
| 10 | 67 | 31 | 14 | 1.2 | 12 | 27 | 30 | 40/009 | |
| Core Size 4 | | | | | | | | | |
| | | | | | | | | | |
| Core Size 5 | | | | | | | | | |
| | | | | | | | | | |
| Core Size 6 DC Energy Storage :10 to 40 Degrees Temperature Rise: 3100 to 8500 Microjoules | | | | | | | | | |
| 8 | 645 | 46 | 18 | 1.32 | 36 | 82 | 25 | 40/654 | |
| 7 | 150 | 42 | 15 | 1.0 | 35 | 40 | 26 | 40/173 | |
| 30 | 63 | 44 | 16 | 2.0 | 35 | 26 | 50 | 40/162 | |
| Core Size 7 DC Energy Storage :10 to 40 Degrees Temperature Rise: 4050 to 11500 Microjoules | | | | | | | | | |
| 8 | 203 | 44 | 16 | 1.18 | 40 | 46 | 42 | 40/023 | |
| 13 | 242 | 48 | 24 | 1.8 | 35 | 50 | 55 | 40/163 | |
| Core Size 8 DC Energy Storage :10 to 40 Degrees Temperature Rise: 8000 to 22000 Microjoules | | | | | | | | | |
| | | | | | | | | | |
| Core Size 9 DC Energy Storage :10 to 40 Degrees Temperature Rise: 19000 to 40000 Microjoules | | | | | | | | | |
| 80 | 35 | 74 | 37 | 10x1.18 | | 15 | | 40/017 | |
| Core Size 9A DC Energy Storage :10 to 40 Degrees Temperature Rise: 38000 to 80000 Microjoules | | | | | | | | | |
| 60 | 150 | 71 | 63 | 10x1.0 | | 22 | | 40/016 | |

## HIGH FREQUENCY BEAD/TUBE INDUCTORS TYPE MBT

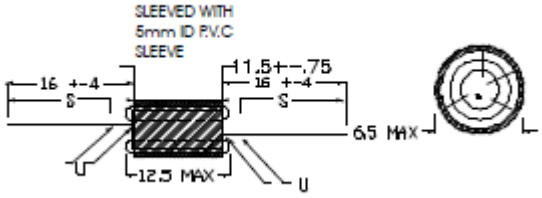
BACK TO INDEX

VHF chokes of a ferrite core with a centre hole, available with and without sleeving. Suitable for use in the frequency range from 50 to 200 Mhz.
These chokes are suitable for broadband interference suppression in electrical apparatus and appliances in the HF and VHF range, and to reduce the radiated interference from radio and TV receivers.



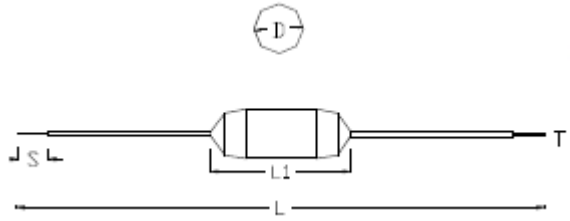

| Current Rating in Amps | Inductance in Microhenries | D1 | D2 | T | L | No Turns | Temp Rise°C | Stock Code | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 60 | 12.5 | 6.5 | .5 | 16 | 3 | 60 | 40/205 | |
| 5 | 60 | 12.5 | 6.5 | .5 | 16 | 3 | 60 | 40/421 | Tinned Leads |

### Bead with Sleeving and solid lead wire




| Current Rating in Amps | Inductance in Microhenries | D1 | D2 | T | L | No Turns | Temp Rise°C | Stock Code | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 80 | 12.5 | 6.5 | .5 | 16 | 4 | 60 | 40/206 | |

### Bead with Sleeving and Flexible wires

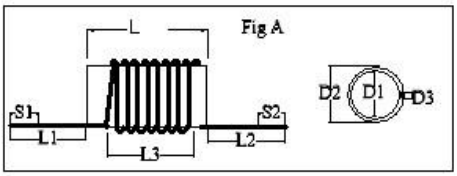


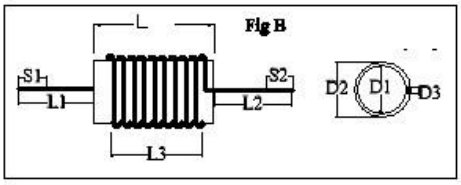

| Current Rating in Amps | Inductance in Microhenries | D1 | D2 | T | L | No Turns | Temp Rise° C | Stock Code | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 60 | 42 | 60 | * | 180 | 3 | 60 | 40/254 | * 5 mm sq Flexible Wire |

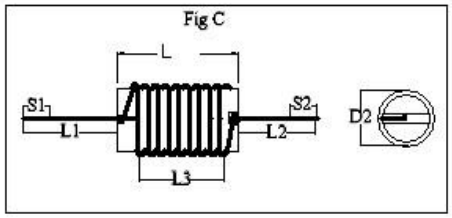
## HIGH FREQUENCY ROD CHOKES TYPE MHR

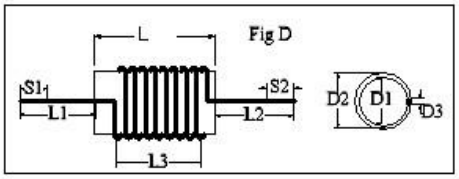
BACK TO INDEX

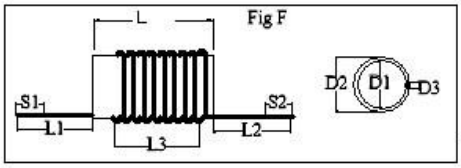
VHF chokes of a ferrite rod, available as standard or P.C. board mount. Suitable for use in the frequency range from 30 to 200 Mhz.
These chokes are suitable for broadband interference suppression in electrical apparatus and appliances in the HF and VHF range, and to reduce the radiated interference from radio and TV receivers, Switch mode power supplies and appliances using brush motors.



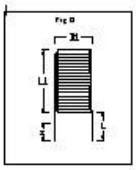
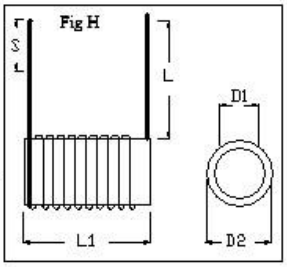
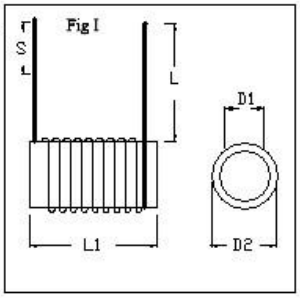



Fig G



## HIGH FREQUENCY ROD CHOKES TYPE MHR

BACK TO INDEX

VHF chokes of a ferrite rod, available as standard or P.C. board mount. Suitable for use in the frequency range from 30 to 200 Mhz.
These chokes are suitable for broadband interference suppression in electrical apparatus and appliances in the HF and VHF range, and to reduce the radiated interference from radio and TV receivers, Switch mode power supplies and appliances using brush motors.

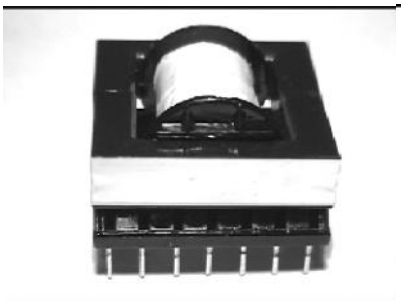
| Inductance (uh) | Rod | Test Freq | I dc (A) | Lead Wire Size (mm) | Figure | Diameter Max. | Stock Code | Remarks |
|---|---|---|---|---|---|---|---|---|
| 18.2 | 6.35/19 | 1khz/S | 2.5 | 0.5 | G | 9 | 40/367 | |
| 34 | 5/20 | 1khz/S | 5 | .63 | I | 7.5 | 40/981A | |
| 34 | 5/20 | 1khz/S | 5 | .63 | G | 7.5 | 40/981 | |
| 7.0 | 6.35/19 | 1khz/S | 7.5 | .71 | H | 8 | 40/513 | |
| 8.0 | 6.35/19 | 1khz/S | 7.5 | .71 | I | 8 | 40/809 | |
| 5.4 | 6.35/19 | 1khz/S | 10 | 1.0 | G | 11.5 | 40/390 | |
| 2.5 | 6.35/19 | 1khz/S | 10 | 1.0 | G | 10 | 40/391 | |
| 5.1 | 6.35/19 | 1khz/S | 15 | 1.18 | G | 9 | 40/003 | |
| 4.4 | 6.35/19 | 1khz/S | 18 | 1.41 | I | 9 | 40/551 | |
| 3.0 | 5/20 | 1khz/S | 22 | 1.6 | A | 8.5 | 40/012 | |
| 2.0 | 5/20 | 1khz/S | 22 | 1.6 | F | 8.5 | 40/013 | |
| 2.4 | 5/20 | 1khz/S | 22 | 1.6 | D | 8.5 | 40/006 | |
| 2.2 | 5/20 | 1khz/S | 26 | 2.0 | F | 9.5 | 40/007 | |
| 1.9 | 6.35/19 | 1khz/S | 30 | 2.6 | A | 11 | 40/008 | |
| 1.7 | 6.35/19 | 1khz/S | 35 | 3.0 | H | 13 | 40/015 | |

# FERRITE TRANSFORMERS AND INDUCTORS E,EF,RM,P, TYPE MTR

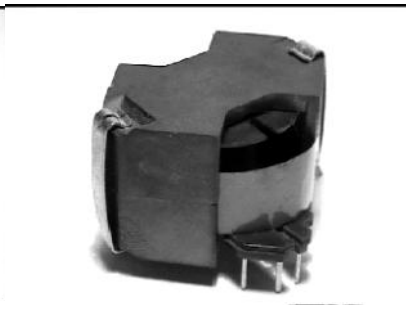
BACK TO INDEX

Using Precision German Linear winding machines Plascraft is able to wind on bobbins, or other items supplied by the customer either to assist in times of overload or else as an economical solution to replace in-house winding. A wide range of sizes may be accomodated in addition to having the ability to wind thin wires with accurate tension control.

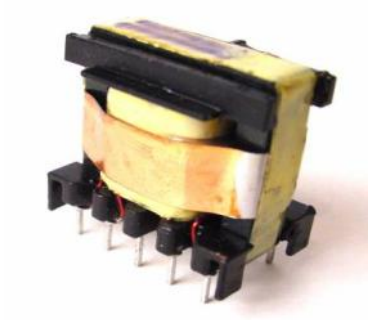
E-Core Transformer



R.M. Core Transformer



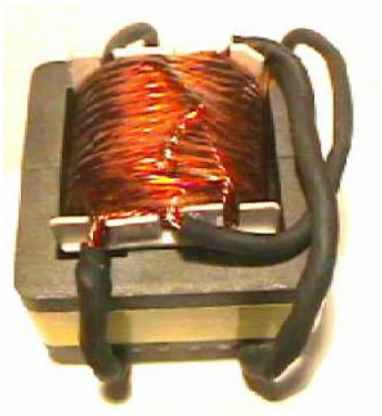
E-Core Screened Transformer



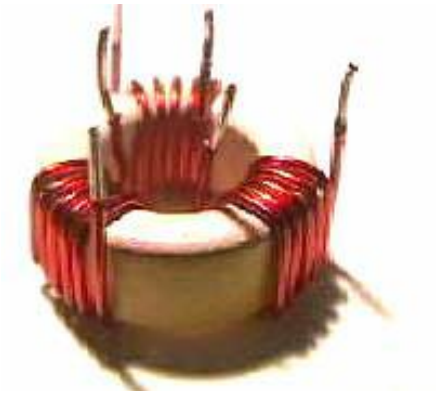
Transformers for use in Switched mode power supplies may need to be screened if excessive R.F.I is produced. Plascraft has a screened room equipped with Quasi-Peak R.F.I testing equipment and is able to test power supplies to C.I.S.P.R. requirements, which assists in establishing the correct design of transformer. Suitable Suppression circuits can be designed to complement the transformer

Pot Core Transformer

E-Core Transformer



Toroidal Pulse Transformer



E-Core High power Tape wound Transformer

Toroidal Pulse Transformer

Toroidal Bifilar Transformer

## CURRENT TRANSFORMERS TYPE MCT

BACK TO INDEX

Plascraft manufactures a range of transformers and coils for use in telecommunications systems and switchedmodepower supplies. Transformers are available for DC isolation, base drive, power switching and current sensing.
Several packaging configurations are available. Transformers can be wound on bobbins or overwound on toroids.
Plascraft will custom design and manufacture a transformer to your specification as required

Using modern Toroidal coil winding machinery ,Plascraft is able to wind multiple turn windings on a variety of cores with thin wire to achieve highly efficient current transformers. These units are well suited for use in equipment monitoring A.C. mains usage such as energy management meters, pumps, gate controllers and Industrial Controllers

Current Transformer Coil Wound on Silicon Iron Core

Current Transformer : Custom 2000 Turn Winding on Silicon Iron core and potted in Plastic Case with centre hole for current carrying conductor

Fig B Open with Flexible Leads Construction

Type C View from Base

Fig A Open Construction

Custom

## CURRENT TRANSFORMERS TYPE MCT

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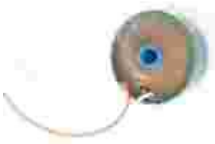
Type A Open Type. This is the Basic wound Current Transformer , Care must be Taken when using this Construction as damage to the leads and wire may be caused

Type B Taped Open-Type.
This is a Type A for use when the unit will be protected from damage to the leads and wire

Type C Rectangular Type
For Printed Circuit Board
Mounting with Pins



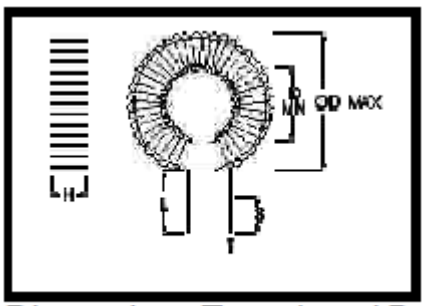
D Round Type
Encapsulated with Flexible PVC Leads

APPLICATION
-Electronic over Current Relay
-Electric Motor Protection relay
-Motor, heater control

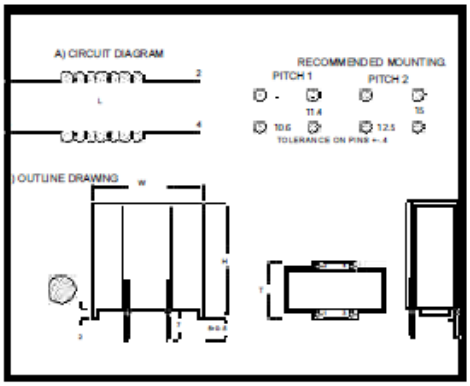
FEATURES
-Low Cost approach
-Current monitoring and sensing
-High Saturation induction ,Dielectric withstanding of 2.0KV -4.0

Note: The maximum input current of a CT can be increased by varying the ohms of the burden resistor. Lowering the ohms of the burden resistor will increase the maximum input of the CT, but it lowers the resolution. Also, the accuracy of the output voltage depends on the accuracy of the burden resistor. The burden resistor should never be used for more than 55%of its wattage capacity, and thermal concerns of the surrounding materials should be considered to prevent over heating damage. For circuits requiring very accurate outputs, the CT should only be used up to 50 % of saturation line of the core

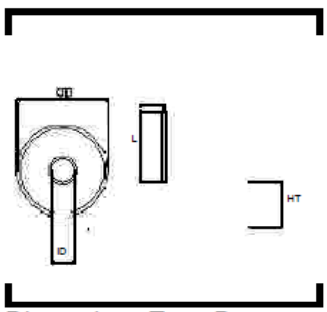
Definition Of Terms
DCR: DC Resistance of Secondary Winding
Im: Max Rated current
Rb: Burden Resistance
Dimensions: OD is the Outside Diameter of the CT, ID is the Diameter of the centre Hole where the Conductor Passes Through, HT is the Height of the CT, L is the length of the Leads




Dimensions Type A and B




DimensionsType C




Dimensions Type D

## CURRENT TRANSFORMERS TYPE MCT

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| SIZE CT F14 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Description** | Current Ratio | DCR(+-6%) Ω | Im Rb=1Ω | Im Rb=20Ω | Im Rb=100Ω | Code | Fig | Housing | Dimensions OD-W/ID/HT |
| **CTF14/100A** | 100:1 | 1.0 | 5A | 0.1A | N/A | 42/001 | A | Open | 15.0/6.0/6.0 |

| SIZE CT F23 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Description** | Current Ratio | DCR(+-6%) Ω | Im Rb=1Ω | Im Rb=20 Ω | Im Rb=100Ω | Code | Fig | Housing | Dimensions OD-W/ID/ HT |
| **CTF23/500A** | 500:1 | 6.8 | 80A | 20A | 3A | 42/003 | A | Open | 26.0/10.0/9.0 |
| **CTF23/500B** | 500:1 | 6.8 | 80A | 20A | 3A | 42/015 | B | Taped | 26.0/10.0/9.0 |
| **CTF23/500C** | 500:1 | 6.8 | 80A | 20A | 3A | 42/016 | C | PC2 | 33/31/18/11 |
| **CTF23/500D** | 500:1 | 6.8 | 80A | 20A | 3A | 42/017 | D | CTR | 33/8/15 |
| **CTF23/1000A** | 1000:1 | 13.3 | 150A | 60A | 15A | 42/004 | A | Open | 26.0/10.0/9.0 |
| **CTF23/1000B** | 1000:1 | 13.3 | 150A | 60A | 15A | 42/018 | B | Taped | 26.0/10.0/9.0 |
| **CTF23/1000C** | 1000:1 | 13.3 | 150A | 60A | 15A | 42/019 | C | PC2 | 33/31/18/11 |
| **CTF23/1000D** | 1000:1 | 13.3 | 150A | 60A | 15A | 42/020 | D | CTR | 33/8.0/15.0 |

## CURRENT TRANSFORMERS TYPE MCT

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**SIZE CT F25**

| Description | Current Ratio | DCR(+-6%) Ω | Im Rb=1Ω | Im Rb=20Ω | Im Rb=100Ω | Code | Fig | Housing | Dimensions OD-W/ID/HT |
|---|---|---|---|---|---|---|---|---|---|
| **CTF25/500A** | 500:1 | 9.2 | 125A | 40A | 5A | 42/005 | A | Open | 27.5/11.0/12.0 |
| **CTF25/500B** | 500:1 | 9.2 | 125A | 40A | 5A | 42/022 | B | Taped | 27.5/11.0/12.0 |
| **CTF25/500C** | 500:1 | 9.2 | 125A | 40A | 5A | 42/023 | C | PC2 | 33/31/18/11 |
| **CTF25/500D** | 500:1 | 9.2 | 125A | 40A | 5A | 42/024 | D | CTR | 33.0/7.0/18.0 |
| **CTF25/1000A** | 1000:1 | 24.0 | 175A | 100A | 30A | 42/006 | A | Open | 27.5/11.0/12.0 |
| **CTF25/1000B** | 1000:1 | 24.0 | 175A | 100A | 30A | 42/025 | B | Taped | 27.5/11.0/12.0 |
| **CTF25/1000C** | 1000:1 | 24.0 | 175A | 100A | 30A | 42/026 | C | PC2 | 33/31/18/11 |
| **CTF25/1000D** | 1000:1 | 24.0 | 175A | 100A | 30A | 42/027 | D | CTR | 33.0/7.0/18.0 |

**SIZE CT F31 (Ferrite Core)**

| Description | Current Ratio | DCR(+-6%) Ω | Im Rb=1Ω | Im Rb=20Ω | Im Rb=100Ω | Code | Fig | Housing | Dimensions OD-W/ID/HT |
|---|---|---|---|---|---|---|---|---|---|
| **CTF31/500A** | 500:1 | 10.8 | 150A | 50A | 10A | 42/007 | A | Open | 34.0/16.0/15.0 |
| **CTF31/500B** | 500:1 | 10.8 | 150A | 50A | 10A | 42/028 | B | Taped | 34.0/16.0/15.0 |
| **CTF31/500D** | 500:1 | 10.8 | 150A | 50A | 10A | 42/029 | D | CTR | 38.0/9.0/20.0 |
| **CTF31/1000A** | 1000:1 | 31 | 300A | 150A | 40A | 42/008 | A | Open | 34.0/15.5/15.5 |
| **CTF31/1000B** | 1000:1 | 31 | 300A | 150A | 40A | 42/030 | B | Taped | 34.0/15.5/15.5 |
| **CTF31/1000D** | 1000:1 | 31 | 300A | 150A | 40A | 42/031 | D | CTR | 38.0/9/20.0 |
| **CTF31/2000A** | 2000:1 | 45 | 400A | 250A | 100A | 42/009 | A | Open | 35.0/12.5/16.5 |
| **CTF31/2000B** | 2000:1 | 45 | 400A | 250A | 100A | 42/032 | B | Taped | 35.0/12.5/16.5 |
| **CTF31/2000D** | 2000:1 | 45 | 400A | 250A | 100A | 42/033 | D | CTR | 38.0/9.0/20.0 |

## CURRENT TRANSFORMERS TYPE MCS

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**TYPE CT S24 (Silicon Core)**

| Description | Current Ratio | DCR(+-6%) Ω | Im Rb=1Ω | Im Rb=20Ω | Im Rb=100Ω | Code | Construction |
|---|---|---|---|---|---|---|---|
| **CTS24/500A** | 500:1 | 7.0 | 200A | 150A | 40A | 42/010 | Types A |
| **CTS24/500B** | 500:1 | 7.0 | 200A | 150A | 40A | 42/036 | Type B |

**DIMENSIONS TYPE CT S24**

| Type | OD | ID | HT | Lead Length mm |
|---|---|---|---|---|
| **A,B** | 26.5 | 7.5 | 15.0 | 30-65 |
| **D** | 32.5 | 7.0 | 18.0 | 100 |

**TYPE CT S33 (Silicon Core)**

| Description | Current Ratio | DCR(+-6%) Ω | Im Rb=1Ω | Im Rb=20Ω | Im Rb=100Ω | Code | Construction |
|---|---|---|---|---|---|---|---|
| **CTS33/500A** | 500:1 | 11.6 | 400A | 150A | 40A | 42/011 | Types A |
| **CTS33/1000A** | 1000:1 | 25 | 400A | 300A | 70A | 42/012 | Types A |
| **CTS33/2000A** | 2000:1 | 47 | 400A | 300A | 100A | 42/013 | Types A |

**DIMENSIONS TYPE CT S33**

| Type | OD | ID | HT | Lead Length mm |
|---|---|---|---|---|
| **A,B** | 37.5 | 14.5 | 16.5 | 30-65 |
| **D** | 44.0 | | 20 | 100 |

## AIR CORE COILS TYPE MAI

BACK TO INDEX

Using Precision German Linear winding machines Plascraft is able to wind on bobbins, or other items supplied by the customer either to assist in times of overload or else as an economical solution to replace in-house winding.
A wide range of sizes may be accommodated in addition to having the ability to wind thin wires with accurate tension control.

Fig A Air Core Coil for Proximity Sensor

Air Core Coil mounted in Proximity Sensor

Fig B Air Core Coils

Fig C Air Core Coils

**Ordering**
For any of the above items it is necessary when ordering to provide a drawing with Dimensions ,no of turns , Wire size, Type of wire and Electrical requirements

## RF COILS TYPE MRF

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Using Precision German Linear winding machines Plascraft is able to wind on bobbins, or other items supplied by the customer either to assist in times of overload or else as an economical solution to replace in-house winding.
A wide range of sizes may be accommodated in addition to having the ability to wind thin wires with accurate tension control.

Rf Coil

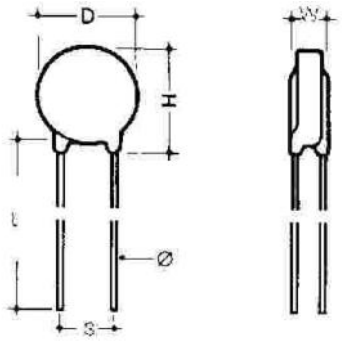
Rf coil with Adjuster

**Ordering**
For any of the above items it is necessary when ordering to provide a drawing with Dimensions ,no of turns , Wire size, Type of wire and Electrical requirements

# METAL OXIDE VARISTORS (ZnO) 7MM TYPE SMV

BACK TO INDEX

These varistors are voltage dependant symmetrical resistors which ,when exposed to high energy voltage transients cause the impedance to change from a high standby value to a very low conducting value thus clamping the transient voltage to a safe level and are ideal for use in power distribution equipment ,telecommunication equipment, data processing equipment, industrial instrumentation and automatic control systems . They are available in the preferred values and sizes shown below:-




## RATINGS 7mm STANDARD ENERGY 1.2 KA TYPE SMV

| Type | Stock Code | Varistor Voltage | Max Allowable Voltage | | Max Clamping Voltage (8/20us) | | Rated Wattage | Energy | | Max Peak Current | | Capacitance 1Khz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | V1ma(V) | AC r.m.s(V) | DC(V) | Vc(V) | Lp(A) | (W) | 10/1000us | 2ms | 1 Time | 2 Times | |
| SMVS7K275 | 03/009 | 431(387- | 275 | 350 | 710 | 10 | 0.25 | 26.2 | 18.7 | 1.2 | 0.6 | 150 |

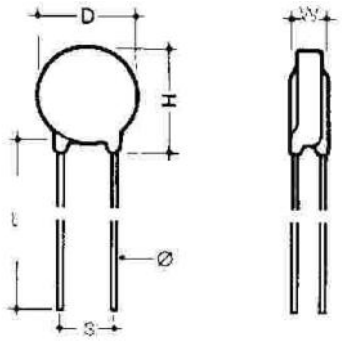
## DIMENSIONS

| Description | Stock Code | D Max | H | S | W Max |
|---|---|---|---|---|---|
| SMVS7K275 | 03/009 | 7.5 | 11.5 | 5+- | 3.0 |

# METAL OXIDE VARISTORS (ZnO) 10MM TYPE SMX

BACK TO INDEX

These varistors are voltage dependant symmetrical resistors which ,when exposed to high energy voltage transients cause the impedance to change from a high standby value to a very low conducting value thus clamping the transient voltage to a safe level and are ideal for use in power distribution equipment ,telecommunication equipment, data processing equipment, industrial instrumentation and automatic control systems . They are available in the preferred values and sizes shown below:-




## RATINGS 10mm HIGH ENERGY 3.5KA TYPE SMX

| Type | Stock Code | Varistor Voltage | Max Allowable Voltage | | Max Clamping Voltage (8/20us) | | Rated Wattage | Energy | | Max Peak Current | | Capacitance 1Khz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | V1ma(V) | AC r.m.s(V) | DC(V) | Vc(V) | Lp(A) | (W) | 10/1000us | 2ms | 1 Time | 2 Times | |
| SMXH10K27 | 03/007 | 431(387-473) | 275 | 350 | 710 | 25 | 0.4 | 80 | 55 | 3500 | 2500 | 185 |

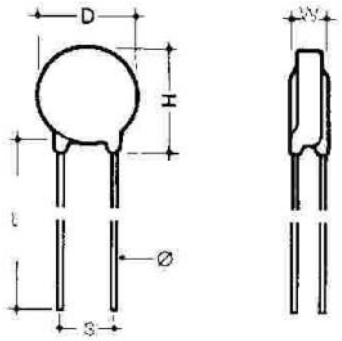
## DIMENSIONS

| Description | Stock Code | D Max | H | S | W Max |
|---|---|---|---|---|---|
| SMVH10K275 | 03/007 | 14.0 | 18.0 | 7.5+- | 6.5 |

# METAL OXIDE VARISTORS (ZnO) 14MM TYPE SMY

BACK TO INDEX

These varistors are voltage dependant symmetrical resistors which ,when exposed to high energy voltage transients cause the impedance to change from a high standby value to a very low conducting value thus clamping the transient voltage to a safe level and are ideal for use in power distribution equipment ,telecommunication equipment, data processing equipment, industrial instrumentation and automatic control systems . They are available in the preferred values and sizes shown below:-




## RATINGS 14mm HIGH ENERGY 6KA TYPE SMY

| Type | Stock Code | Varistor Voltage | Max Allowable Voltage | | Max Clamping Voltage (8/20us) | | Rated Wattage | Energy | | Max Peak Current | | Capacitance 1Khz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | V1ma(V) | AC r.m.s(V) | DC(V) | Vc(V) | Lp(A) | (W) | 10/1000us | 2ms | 1 Time | 2 Times | |
| SMYH14K275 | 03/010 | 430(387-473) | 275 | 350 | 710 | 50 | 0.6 | 155 | 110 | 6000 | 4500 | 340 |

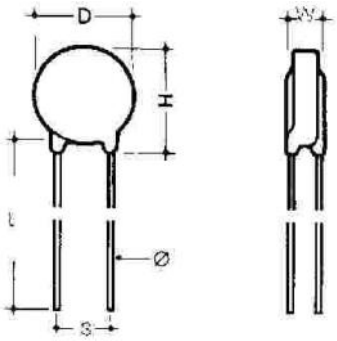
## DIMENSIONS

| Description | Stock Code | D Max | H | S | W Max |
|---|---|---|---|---|---|
| SMVH14K275 | 03/010 | 17.5 | 22.0 | 7.5+-1 | 6.5 |

# METAL OXIDE VARISTORS (ZnO) 20MM TYPE SMZ

BACK TO INDEX

These varistors are voltage dependant symmetrical resistors which ,when exposed to high energy voltage transients cause the impedance to change from a high standby value to a very low conducting value thus clamping the transient voltage to a safe level and are ideal for use in power distribution equipment ,telecommunication equipment, data processing equipment, industrial instrumentation and automatic control systems . They are available in the preferred values and sizes shown below:-




## RATINGS 20mm HIGH ENERGY 10KA Type SMZ

| Description | Stock Code | Varistor Voltage | Max Allowable Voltage | | Max Clamping Voltage (8/20us) | | Rated Wattage | Energy | | Max Peak Current | | Capacitance 1Khz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | V1ma(V) | AC r.m.s(V) | DC(V) | Vc(V) | Lp(A) | (W) | 10/1000us | 2ms | 1 Time | 2 Times | |
| SMZH20K275 | 03/011 | 430(387-473) | 275 | 350 | 710 | 100 | 1.0 | 303 | 215 | 10000 | 6500 | 660 |
| SMZH20K420 | 03/012 | 680(612-748) | 420 | 560 | 1120 | 100 | 1.0 | 382 | 273 | 10000 | 6500 | 435 |

## DIMENSIONS

| Description | Stock Code | D Max | H | S | W Max |
|---|---|---|---|---|---|
| SMVH20K275 | 03/011 | 23.0 | 26.0 | 10.01 | 7.0 |
| SMVH20K420 | 03/012 | 25.0 | 29.0 | 10.01 | 9.5 |

# METAL OXIDE VARISTORS (ZnO) 32MM TYPE SMB

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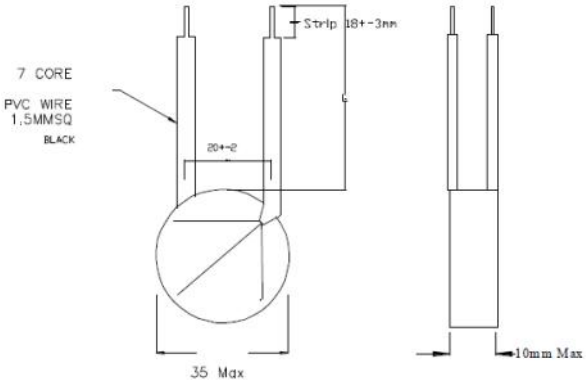
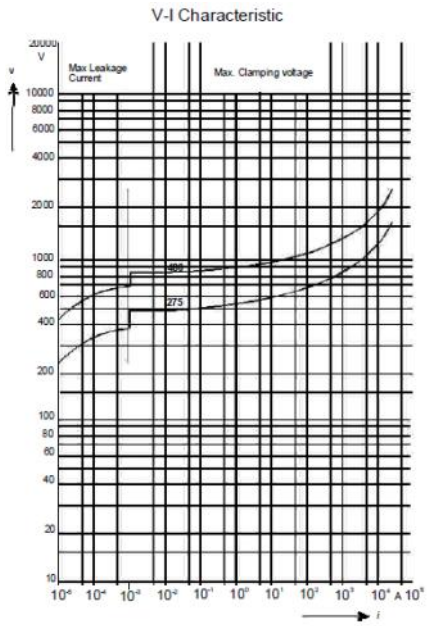
These varistors were developed in 1997 in conjunction with the major manufacturers in the South African energy metering industry in conjunction with Eskom in order to protect energy meters from the effects of the harsh Electrical Environment specific to South Africa.

*** Complies with Eskom Specification TRMSCAAP 2 Rev 2 (1994)**

**LEADED VARISTOR 45/604**
**Disk Type Type SMB**
**Applications**
Overvoltage protection
**Features**
**.** High surge current rating of 25 KA
Complies with Requirement of **TRMSCAAP2 REV 2 (Test Report Available)**
**Dimensional drawings in mm**




**Electrical data**
Maximum ratings (85 C)
Max. Operating AC voltage **V**rms = 460 V
Max. Operating DC voltage **V**dc = 615 V
Surge current (8/20 uS) 1 time **I**max = 25000 A
Energy absorption (2 ms) **E**max = 660 J
Average power dissipation Pmax = 1.2 W
Characteristics (25 C)
Varistor voltage at 1 mA Vv = 750 V +_10%
Clamping voltage at 200 A (8/20 uS) V cmax = 1240 V
Typical. Capacitance at 1 kHz C = 1200 pF

# METAL OXIDE VARISTORS (ZnO) 32MM TYPE SMB

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**Special electrical data for use in accordance with TRMSCAAP2 REV 2**

| | |
|---|---|
| Maximum continuous operating voltage (Uc) | 440 V rms |
| Rated voltage (Ur) | 480 V rms |
| Norminal lightning discharge current In (8/20 us) | 5 kA |
| Peak residual for 8/20 us current impulse | |
| Of the following impulse : | |
| 1 kA | |
| 5 kA | 2500 V peak MAX. |
| 10 kA | |
| Steep current impulse residual voltage | 2500 V peak MAX. |
| Virtual front time T1: 2 us +_10 % | |
| Virtual time to half value | |
| Of the tail: | <20 us |
| Peak value of current : | 5 kA +_5 % |
| Long duration current impulse withstand test | |
| Peak current 75 A | |
| Virtual duration of peak | 1000 us |
| Rectangular pulse shape in Accordance with IEC 60 -1 | |
| Number of groups of applications | 4 |
| Number of impulses per group | 5 |
| Interval between groups | 25 – 30 minutes |
| Interval between impulses | 50 -60 seconds |

Operating duty test
- Initial measurement :residual voltage at In = 5 kA (8/20 us )
- Conditioning : 20 impulses at In = 5 kA (8/20 us ) in 4 groups of 5 impulses;
  - Interval between impulses : 50 -60 seconds
  - Interval between groups :25 – 30 minutes
  - Superimposed on continuous operating voltage +20%
  - ( 1.2 * Uc = 528 V rms)

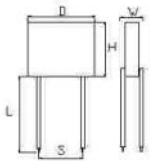
High current impulse 4/10 us :
- 1 impulse at Imax =30 kA
- Preheat to 60 C +_3 C
- 1 impulse at Imax = 30 kA
- Rated voltage at Ur = 480 V for 10 seconds
- Continuous operating voltage U c=440 V for 30minutes
- Cool to ambient , 20 C +_15 C

Requirement : power dissipation decreases at least during the last 15 minutes of U c application
measurement : residual voltage at In = 5 kA (8/20 us)
requirement : change of residual voltage less 10 %
no visible damage.

# METAL OXIDE VARISTORS (ZnO) 40MM TYPE SMC

BACK TO INDEX

These varistors are voltage dependant symmetrical resistors which ,when exposed to high energy voltage transients cause the impedance to change from a high standby value to a very low conducting value thus clamping the transient voltage to a safe level and are ideal for use in power distribution equipment ,telecommunication equipment, data processing equipment, industrial instrumentation and automatic control systems . They are available in the preferred values and sizes shown below:-




**For Use in SPDs**

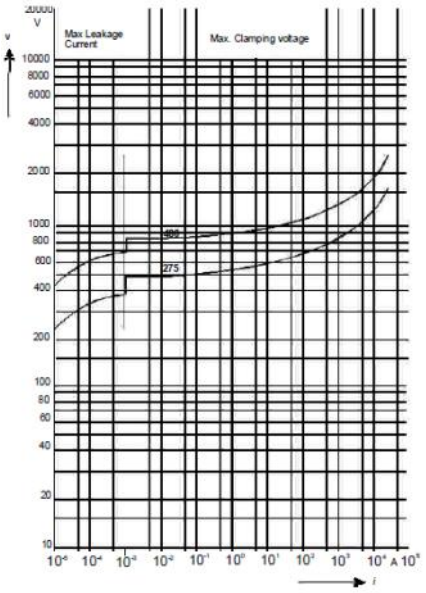
## RATINGS 40mm 40KA

| Description | Stock Code | Varistor Voltage | Max Allowable Voltage | | Max Clamping Voltage (8/20us) | | Rated Wattage | Energy | | Max Peak Current | | Capacitance 1Khz (pf) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | V1ma(V) | AC r.m.s(V) | DC(V) | Vc(V) | Lp(A) | (W) | 10/1000us | 2ms | 1 Time | 2 Times | |
| SMC40K275 | 45/015 | 430(387- | 275 | 350 | 710 | | | | | 40000 | | 2700 |

## DIMENSIONS

| Description | Stock Code | D Max | H | S | W Max |
|---|---|---|---|---|---|
| SMV40K275 | **45/015** | 35.0 | 36.0 | 20.0 | |

V-I Characteristic



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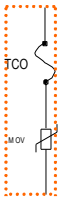
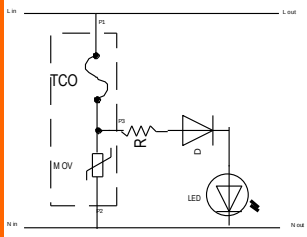
# MOV'S WITH THERMAL DISCONNECTS TYPE SMT

These modules consist of Mov's in different combinations with built in thermal disconnects to disconnect the Mov from the circuit to prevent the risk of fire and bursting due to degradation . Degradation can cause an increasing leakage current resulting in Thermal runaway . Applications in Power supplies, Surge Protectors, Surge Filters, Led Lighting , Surge protected multiplugs and Industrial equipment. Suitable for PCB Mounting

TP Thermally protected MOV
Operation: When Mov fails it will be disconnected preventing it from Thermal runaway and the risk of fire or bursting




Type SMT-A
PM L/N

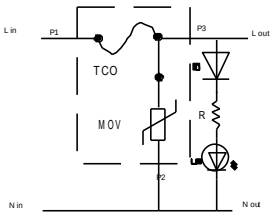


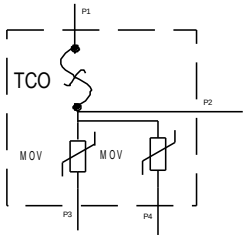

Type SMT-B
PM L/N

Thermally protected MOV with indicator output lead . Type SMT-B
Application: When MOV fails the light will go out and the Mov will be disconnected.

Thermally protected Mov with disconnect to the load circuit ..
Application: When MOV fails power to the load circuit will stop and the Mov will be disconnected

Type SMT-B
PM L/N/E



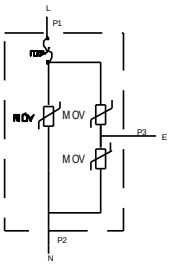



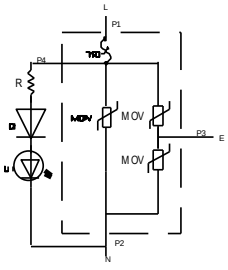

Type SMT-C
PM L/N

Two Thermally protected Movs with Output for Signal Remote Warning or Load Disconnection .
Application: When Mov fails the switch for the remote output will open and the Both Movs will be disconnected.

Three Thermally protected Movs For Live , Neutral and Earth Connection
Application : When Movs fail they will be disconnected preventing them from Thermal runaway and the risk of fire or bursting

Type SMT-D
PM L/N/E




Type SMT-E
PM L/N/E

Three Thermally protected Movs For Live , Neutral and Earth Connection, includes lead for Remote Indication and Load Circuit disconnection
Application : When Movs fail they will be disconnected preventing them from Thermal runaway and the risk of fire or bursting. At the same time the Load will be disconnected to avoid the risk of being damaged due to failure of the protection.

# MOV'S WITH THERMAL DISCONNECTS TYPE SMT

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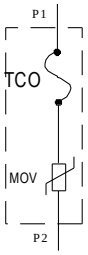
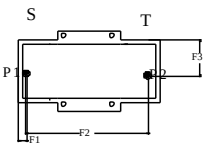
## TYPE SMT-A PM L/N

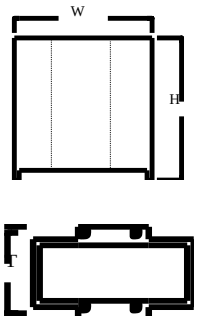


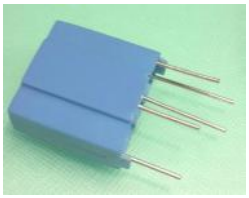

Thermally protected MOV
Operation: When Mov fails it will be disconnected preventing it from Thermal runaway and the risk of fire or bursting

Connection




Dimensions PC2
W=33.0
H=31.0
T=13.5
F1=
F2=
F3=
D=

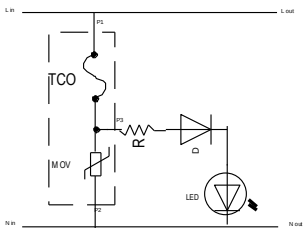


**Specifications**

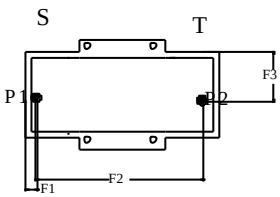
| Stock Code | Max Continous operating Voltage Ac Rms | Dc | Varistor Voltage at 1mA dc Min | Max | Clamping Voltage (Max) Vc | Lp | Maximum Peak Current (8/20us) Ln | Imax | Voltage Clamping Ratio Rd | Ln | Max Energy (Joule) 10/1000 us | Typical Capacitance Ref. @1Khz | Thermal disconnect TCO Amps |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (V) | | (V) | | (V) | (A) | (kA) | | | (kA) | (J) | (pf) | |
| **45/022** | 275 | 350 | 387 | 473 | 710 | 75 | 5 | 10 | 2.3 | 5 | 248 | 750 | 16 |

## TYPE SMT-B PM L/N

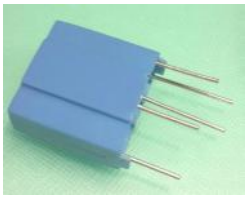


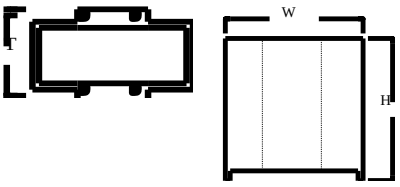

Connection

Thermally protected MOV with indicator output lead or load Disconnect Lead
Application: When MOV fails the light will go out and the Mov will be disconnected. Does not include Indication components




Dimensions PC2
W=33.0
H=31.0
T=13.5
F1=
F2=
F3+






**Specifications**

| Stock Code | Max Continous operating Voltage Ac Rms | Dc | Varistor Voltage at 1mA dc Min | Max | Clamping Voltage (Max) Vc | Lp | Maximum Peak Current (8/20us) Ln | Imax | Voltage Clamping Ratio Rd | Ln | Max Energy (Joule) 10/1000 us | Typical Capacitance Ref. @1Khz | Thermal disconnect TCO Amps |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (V) | | (V) | | (V) | (A) | (kA) | | | (kA) | (J) | (pf) | |
| **45/018** | 275 | 350 | 387 | 473 | 710 | 75 | 5 | 10 | 2.3 | 5 | 248 | 750 | 16 |

# MOV'S WITH THERMAL DISCONNECTS TYPE SMT

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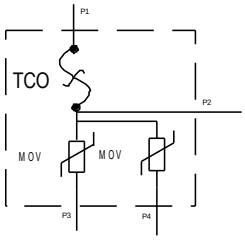
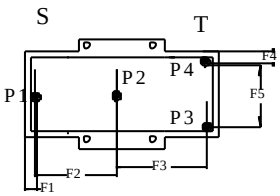
## TYPE SMT-C PM L/N

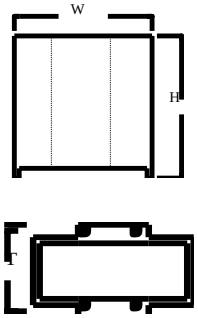


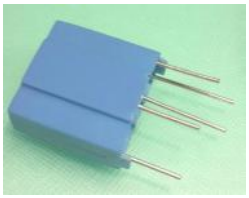

Connection

Two Thermally protected Movs with Output for Signal Remote Warning .
Application: When Mov fails the switch for the remote output will open and then Both Movs will be disconnected.



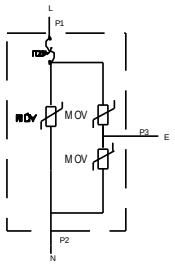

Dimensions PC2
W=33.0
H=31.0
T=13.5
F1=
F2=
F3=



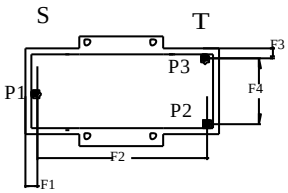
| Specifications | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Max Continous operating Voltage | | Varistor Voltage at 1mA dc | | Clamping Voltage (Max) | | Maximum Peak Current (8/20us) | | Voltage Clamping Ratio | | Max Energy (Joule) | Typical Capacitance Ref. | Thermal disconnect |
| Stock Code | Ac Rms | Dc | Min | Max | Vc | Lp | Ln | Imax | Rd | Ln | 10/1000 us | @1Khz | TCO Amps |
| | (V) | | (V) | | (V) | (A) | (kA) | | | (kA) | (J) | (pf) | |
| 45/019 | 275 | 350 | 387 | 473 | 710 | 75 | 5 | 10 | 2.3 | 5 | 248 | 750 | 16 |

## TYPE SMT-D PM L/N/E

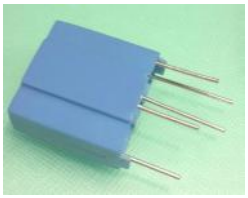


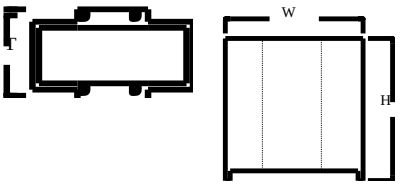

Connection

Three Thermally protected Movs For Live , Neutral and Earth Connection
Application : When Movs fail they will be disconnected preventing them from Thermal runaway and the risk of fire or bursting




Dimensions PC2
W=33.0
H=31.0
T=13.5
F1=
F2=
F3=
F4=






| Specifications | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Max Continous operating Voltage | | Varistor Voltage at 1mA dc | | Clamping Voltage (Max) | | Maximum Peak Current (8/20us) | | Voltage Clamping Ratio | | Max Energy (Joule) | Typical Capacitance Ref. | Thermal disconnect |
| Stock Code | Ac Rms | Dc | Min | Max | Vc | Lp | Ln | Imax | Rd | Ln | 10/1000 us | @1Khz | TCO Amps |
| | (V) | | (V) | | (V) | (A) | (kA) | | | (kA) | (J) | (pf) | |
| 45/020 | 275 | 350 | 387 | 473 | 710 | 75 | 5 | 10 | 2.3 | 5 | 248 | 750 | 16 |

# MOV'S WITH THERMAL DISCONNECTS TYPE SMT

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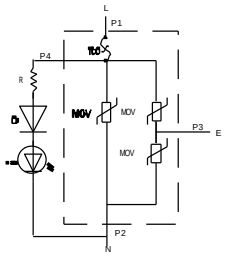
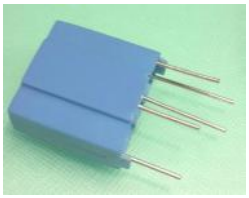
## TYPE SMT-E PM L/N/E

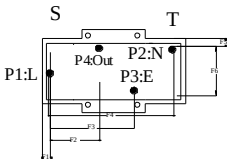



Three Thermally protected Movs For Live , Neutral and Earth Connection, includes lead for Remote Indication and Load Circuit disconnection

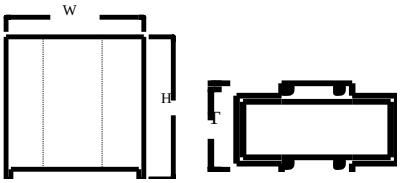
Application : When Movs fail they will be disconnected preventing them from Thermal runaway and the risk of fire or bursting. At the same time the Load will be disconnected to avoid the risk of being damaged due to failure of the protection.



Connection




Dimensions PC2
W=33.0
H=31.0
T=13.5
F1=
F2=
F3+




**Specifications**

| Stock Code | Max Continous operating Voltage Ac Rms (V) | Dc | Varistor Voltage at 1mA dc Min (V) | Max | Clamping Voltage (Max) Vc (V) | Lp (A) | Maximum Peak Current (8/20us) Ln (kA) | Imax | Voltage Clamping Ratio Rd | Ln (kA) | Max Energy (Joule) 10/1000 us (J) | Typical Capacitance Ref. @1Khz (pf) | Thermal disconnect TCO Amps |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **45/021** | 275 | 350 | 387 | 473 | 710 | 75 | 5 | 10 | 2.3 | 5 | 248 | 750 | 16 |

# Surge Arresters PM LN Class II TYPE SAA

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These Two wire Surge Protection modules are for connection to Live and Neutral , encapsulated for convenient attachment to LED Lighting Systems, Gate Motors, Pool Pumps, Distribution Boards, They are available in I max KA Ratings from 10 to 50KA and clamping Voltages 710 and 1200VDC

**Specifications Type SAA**

| Maximum Peak Current (8/20us) | Max Continuous operating Voltage Uc | Clamping Voltage (Max) | | | | |
|---|---|---|---|---|---|---|
| **Imax** (kA) | **Ac Rms** (V) | **Vc** (V) | **Stock Code** | **Image** | **Housing** | **Dimensions mm** |
| 10 | 275 | 710 | **45/041** | Fig 1 | Epoxy Dip | OD23/T8.5 |
| 20 | 275 | 710 | **45/023** | Fig 2 | PC2 | 33/31/18.0 |
| 25 | 275 | 710 | **45/014** | Fig 1 | Epoxy Dip | OD34/T11.5 |
| 25 | 480 | 1200 | **45/042** | Fig 1 | Epoxy Dip | OD34/T11.5 |
| 25 | 480 | 1200 | **45/043** | Fig 4 | RS | OD37/H12.5/Stud 8 |
| 30 | 275 | 710 | **45/024** | Fig 3 | B2 | OD35/H43/Bracket 30 |
| 50 | 480 | 1200 | 45/044 | Fig 4 | RS | OD37/H25/Stud 8 |

Fig 1 Epoxy Dipped

Fig 2 Rectangular Plastic Housing

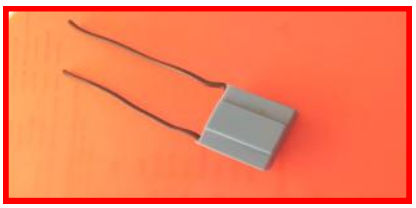
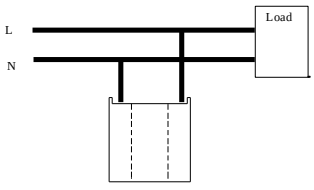


Fig 3 Cylindrical Housing with Bracket

Fig 4 Round Plastic Housing with 8mm Stud

Connecting Diagram




Connect One wire to Live and one wire to Neutral. These units are not polarised

# Surge Arresters PM L/N Class II TD TYPE SAF

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These Surge Arresters are used in Mains Installations where the protection Mode is required between the Live and Neutral Supply Lines. They include Thermal Disconnects as a safety measure to disconnect the Varistors in the event of degradation due to excessive discharges over time. They may include a status light or Output lead to disconnect the load or for remote monitoring. They are encapsulated for convenient attachment to LED Lighting Systems, Gate Motors, Pool Pumps, Distribution Boards, Available in Imax KA Ratings from 10 to 50KA and Clamping Voltages 710 and 1200 Vc(V)

**Specifications Type SAF**

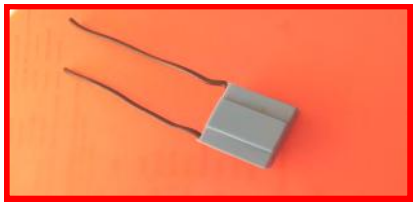
| Maximum Peak Current (8/20us) | Max Continuous operating Voltage Uc | Clamping Voltage | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Imax** (kA) | **Ac Rms** (V) | **Vc** (V) Max | **Status Light** | **Output Lead** | **Image** | **Connection** | **Housing** | **Dimension mm** | **Part No** |
| 10 | 275 | 710 | | | Fig 4 | 1 | PC2 | 32/31/18 | 45/046 |
| 10 | 275 | 710 | X | | Fig 4 | 1 | PC2 | 32/31/18 | 45/047 |
| 10 | 275 | 710 | | X | Fig 4 | 2 | PC2 | 32/31/18 | 45/048 |
| 20 | 275 | 710 | | | Fig 4 | 1 | PC2 | 32/31/18 | 45/049 |
| 20 | 275 | 710 | X | | Fig 4 | 1 | PC2 | 32/31/18 | 45/050 |
| 20 | 275 | 710 | | X | Fig 4 | 2 | PC2 | 32/31/18 | 45/051 |
| 25 | 275 | 710 | | | Fig 3 | 1 | RS | OD37/15/Stud 8 | 45/052 |
| 25 | 275 | 710 | X | | Fig 2 | 1 | RS | OD37/25/Stud 8 | 45/053 |
| 25 | 275 | 710 | | X | Fig 2 | 2 | RS | OD37/25/Stud 8 | 45/054 |
| 25 | 480 | 1200 | | | Fig 2 | 1 | RS | OD37/25/Stud 8 | 45/055 |
| 25 | 480 | 1200 | X | | Fig 2 | 1 | RS | OD37/25/Stud 8 | 45/056 |
| 25 | 480 | 1200 | | X | Fig 3 | 2 | RS | OD37/15/Stud 8 | 45/057 |
| 25 | 480 | 1200 | | | Fig 1 | 1 | HS | OD33/T12 | 45/029 |
| 25 | 480 | 1200 | | X | Fig 1 | 2 | HS | OD33/T12 | 45/030 |

Fig 1 Encapsulated with Resin in Heat Shrink Sleeving

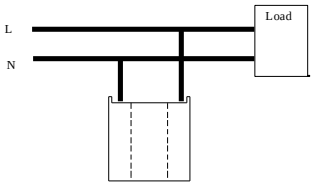
Fig 2 Round Plastic Housing with 8mm Stud

Fig 3 Round Plastic Housing with 8mm Stud

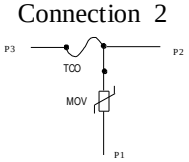
Fig 4 Rectangular Plastic Housing



Connection 1




Connection 2



# Surge Arresters PM L/N/E Class II TP 25KA TYPE SAB

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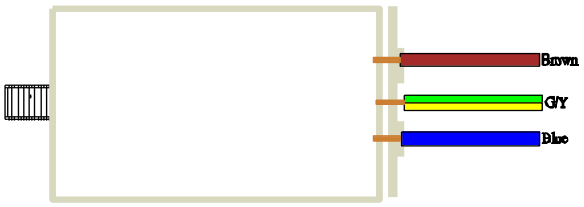
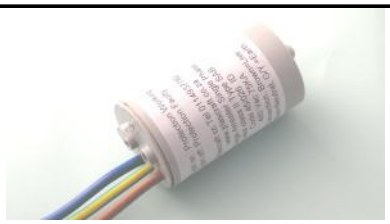
These Surge Arresters are for use in high exposure areas and use multiple 25KA varistors configured for connection to single phase mains supply with earth.
Typical applications are for use in Traffic Light Controllers and L.E.D Lighting systems as well as Industrial equipment operating in harsh environments
These units include thermal cutouts to prevent damage caused by overheating of varistors due to excessive surges and degradation over time as found in harsh environments
A status indicator may be included that monitors when the protection is no longer operating and indicates when the unit needs to be replaced.
Depending on the model it may include disconnection of the load to isolate the circuit when the protection fails

**Specifications Type SAB**

| Maximum Peak Current (8/20us) | Status Light | Output Lead | Max Load Current | Max Continuous operating Voltage | | Clamping Voltage (Max) | Housing | Stock Code |
|---|---|---|---|---|---|---|---|---|
| Imax (kA) | | | | Ac Rms (V) | Dc (V) | Vc (V) | | |
| 25 x 3 | | | | 480 | 560 | 1200 | Rs3 | 45/060 |
| 25 x 3 | X | | | 480 | 560 | 1200 | RS3 | 45/026 |
| 25 x 3 | X | X | 20A | 480 | 560 | 1200 | RS3 | 45/061 |

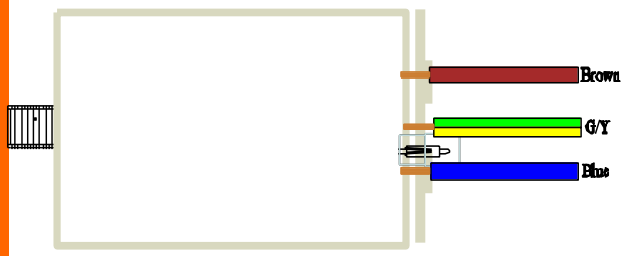
**Tyoe SAB 25KA 480 VAC Single Phase 3 Wire with Thermal Cutouts Code 45/060. For Parallel Connection**



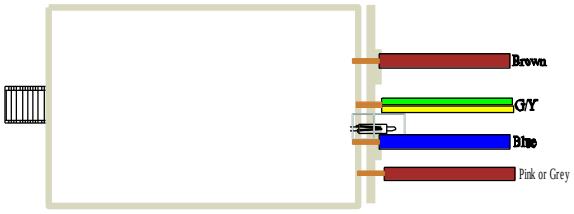
CONNECTION:
Brown=Live
Blue=Neutral
G/Y=Earth
DIMENSIONS
OD=44mm
Length excluding Stud=80mm.

**Tyoe SAB 25KA 480 VAC Single Phase 3 Wire with Thermal Cutouts and Mov Failure Indication Code 45/026.**




CONNECTION:
Brown=Live
Blue=Neutral
G/Y=Earth
DIMENSIONS
OD=44mm
Length excluding Stud=80mm.
Stud=M8

**Type SAB 25KA 480 VAC 3Wire with Thermal Cutouts and Mov Failure Indication Includes disconnection of the load circuit Code 45/061 For Series Connection**




CONNECTION:
Brown=Live in
Blue=Neutral
G/Y=Earth
Grey=Live out
DIMENSIONS
OD=44mm
Length excluding Stud=80mm.

## Surge Arresters Three Phase 10 and 25Ka 420V /480 TYPE SAC

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These Surge Arresters are for use in high exposure areas and use multiple 25KA varistors configured for connection to Three Phase Mains Supplies.
They are for use on 4 wire and 5 wire Three phase supplies
Typical applications are for use in Traffic Light Controllers and L.E.D Lighting systems as well as Industrial equipment operating in harsh environments

**Specifications Type SAC**

| Maximum Peak Current (8/20us) | | Max Continuous operating Voltage | | Clamping Voltage (Max) | Housing |
|---|---|---|---|---|---|
| **Imax** (kA) | **Part Nos** | **Ac Rms** (V) | **Dc** (V) | **Vc** (V) | |
| 10 4 wire | **45/458** | 420 | 500 | 1100 | B2 |
| 10 5 Wire | **45/459** | 420 | 500 | 1100 | RS3 |
| 25 4 Wire | **45/010** | 480 | 560 | 1200 | B2 |
| 25 5 Wire | **45/062** | 480 | 560 | 1200 | RS3 |

### Tyoe SAC 10KA 420 VAC 3 Phase 4 Wire Code 45/458. For Parallel Connection

CONNECTION:
Red= Phase
White=Phase
Blue=Phase
Black=Neutral

Dimensions
OD35 mm
Length 43 mm
Bracket 30mm

### Tyoe SAC 25KA 480 VAC 3 Phase 4 Wire Code 45/010. For Parallel Connection

CONNECTION:
Red= Phase
White=Phase
Blue=Phase
Black=Neutral

Dimensions
Length 75 mm
Diameter 44 mm
Stud M8

### Tyoe SAC 10KA 420 VAC 3 Phase 5 Wire Code 45/459 For Parallel Connection

CONNECTION:
Red= Phase
White=Phase
Blue=Phase
Black=Neutral
G/Y= Earth

Dimensions
OD35 mm
Length 43 mm
Bracket 30mm

### Tyoe SAC 25KA 480 VAC 3 Phase 5Wire Code 45/062 For Parallel Connection

CONNECTION:
Red= Phase
White=Phase
Blue=Phase
Black=Neutral
G/Y= Earth

Dimensions
Length 75 mm
Diameter 44 mm
Stud M8

# Surge Arresters Three Phase 4 and 5 wire with Thermal disconnect and Protection Fail Indicator TYPE SAE

BACK TO INDEX

These Surge Arresters are for use in high exposure areas and use multiple 25KA varistors configured for connection to three phase 5 Wire mains supply with earth.
Typical applications are for use in Traffic Light Controllers and L.E.D Lighting systems as well as Industrial equipment operating in harsh environments
These units include thermal cutouts to prevent damage caused by overheating of varistors due to excessive surges and degradation over time as found in harsh environments
Status indicators are included that monitors when the protection is no longer operating and indicates when the unit needs to be replaced.

**Specifications Type SAE**

| Stock Code | Connection | Max Continuous operating Voltage Ac Rms (V) | Dc (V) | Housing | Clamping Voltage (Max) Vc (V) | Maximum Peak Current (8/20us) Imax (kA) |
|---|---|---|---|---|---|---|
| 45/002 | Parrallel 4 Wire | 480 | 560 | RS3 | 1200 | 25 x 3 |
| 45/025 | Parrallel 5 Wire | 480 | 560 | RS3 | 1200 | 25 x 4 |

## Tyoe SAE 25KA 480 VAC 3 Phase 4 Wire Code 45/002 For Parallel Connection

CONNECTION:
Red= Phase
White=Phase
Blue=Phase
Black=Neutral

Dimensions
Length 75 mm
Diameter 44 mm
Stud M8

## Tyoe SAE 25KA 480 VAC 3 Phase 5 Wire Code 45/025. For Parallel Connection

CONNECTION:
Red= Phase
White=Phase
Blue=Phase
Black=Neutral
G/Y=Earth

Dimensions
Length 75 mm
Diameter 44 mm
Stud M8

## SURGE ARRESTORS PM L/N/E CLASS II TYPE SLA

BACK TO INDEX

These Led Driver surge protectors are typically used in Indoor, Outdoor and commercial LED Lighting, including traffic lighting, Service entrance lighting, flood lighting , tunnel lighting , parking garage lighting, street lighting , roadway lighting, and digital signage.
This range is available for Series as well as Parallel connection, for Low and High Exposure situations
Low exposure situations could include inside the home and small offices.
High exposure situations would include outdoors and inside larger buildings .
Where LED Lighting Dimmers are included in LED Lighting system the SLB range should be considered. See AN1.pdf for detailed instructions of application, selection and installation for these types.

**SLA PM L/N/E**

| Surge Current | Voltage | Series | Parrallel | Rated Current Amps | Stock Code | Photo/ Housing |
|---|---|---|---|---|---|---|
| 6KA | 275 | X | | **10** | 45/033 | Fig 1 I2 |
| 6KA | 275 | | X | | 45/032 | Fig 3 I2 |
| 10KA | 275 | X | | **10** | 45/009 | Fig 2 B2 |
| 10KA | 275 | | X | | 45/008 | Fig 4 B2 |
| 25KA | 480 | | X | | 45/536 | Fig 5 RS3 |

Fig 1

Fig 2 45/009

Fig 3

Dimensions B2

Dimensions I2

Fig 4

Dimensions I2

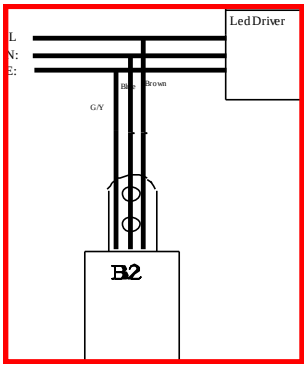
Dimensions RS

Fig 5

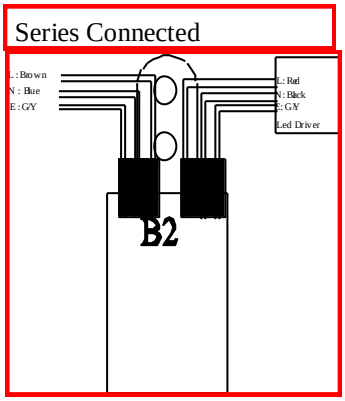
## CONNECTIONS TYPE SLA

BACK TO INDEX

**Parrallel Connection.**
The brown, blue and Green and Yellow wires are to be connected to the mains Live , Neutral and Earth respectively as close as possible to the Led lights or LED light drivers




**Series Connection .**
The brown, blue and Green and Yellow wires are to be connected to the mains Live , Neutral and Earth respectively and the Red , Black and Green and yellow are to be connected to the Led Lights or LED driver Live , Neutral and Earth respectively



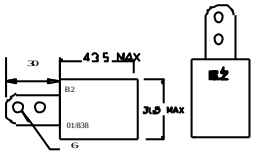
## L.E.D DRIVER SURGE PROTECTION MODULES CLASS II TYPE SLC

BACK TO INDEX

These Led Driver surge protectors are typically used in Outdoor and commercial LED Lighting, including traffic lighting, Service entrance lighting, flood lighting , tunnel lighting , parking garage lighting, street lighting , roadway lighting, and digital signage.
This range is available for Series as well as Parallel connection. and include Thermal disconnect with built in indicators to monitor protection status. See AN1.pdf for detailed instructions of application, selection and installation for these types.

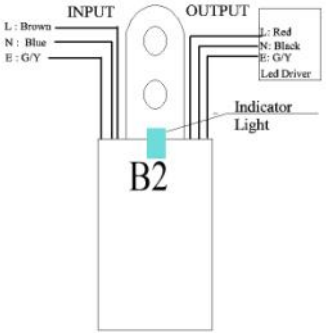
### LED DRIVER SURGE PROTECTOR SLC Series Connected with built in Indicator SLC-A

In this arrangement in the event of failure of the surge protection, the monitoring led will go out and the and the Luminaire will be disconnected




**Connection.**
The brown, blue and Green and Yellow wires are to be connected to the mains Live , Neutral and Earth respectively and the Red , Black and Green and yellow are to be connected to the Led Lights or LED driver Live , Neutral and Earth respectively

Series Connected Connection




45/034 For Low Exposure Level

45/016 For High Exposure Level

**Specifications Series Connected with built in Indicator**

| Rated Current Amps | Surge Current | Housing | OD mm | Length mm | Stock Code | Exposure Level |
|---|---|---|---|---|---|---|
| **10** | 10KA | B2 | 31.5 | 43.5 | 45/016 | High |
| **10** | 6Ka | I3 | 27.5 | 40.5 | 45/034 | Low |

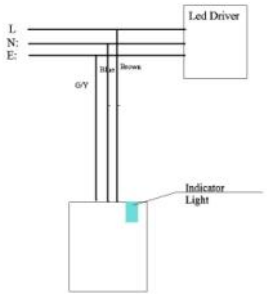
## L.E.D DRIVER SURGE PROTECTION MODULES CLASS II TYPE SLC

BACK TO INDEX

These Led Driver surge protectors are typically used in Outdoor and commercial LED Lighting, including traffic lighting, Service entrance lighting, flood lighting , tunnel lighting , parking garage lighting, street lighting , roadway lighting, and digital signage.
This range is available for Series as well as Parallel connection. and include Thermal disconnect with provision for monitoring protection status.
See AN1.pdf for detailed instructions of application, selection and installation for these types.

### LED DRIVER SURGE PROTECTOR SLC Parallel Connected with built in Indicator SLC-B

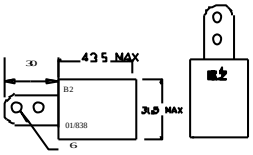
In this arrangement in the event of failure of the surge protection, the monitoring led will go out and the surge protection will be disconnected . The Luminaire will continue to operate without protection




**Connection.**
The brown, blue and Green and Yellow wires are to be connected to the mains Live , Neutral and Earth respectively They should be situated where the LED is visible so as to allow replacement as soon as possible

45/035 For Low exposure Level

45/017 For High exposure Level




**Specifications Parallel Connection with built in Indicator**

| Surge Current | Housing | OD mm | Length mm | Stock Code | Exposure Level |
|---|---|---|---|---|---|
| 10KA | B2 | 315 | 43.5 | 45/017 | High |
| 6Ka | I3 | 27.5 | 40.5 | 45/035 | Low |

## L.E.D DRIVER SURGE PROTECTION MODULES CLASS II TYPE SLC

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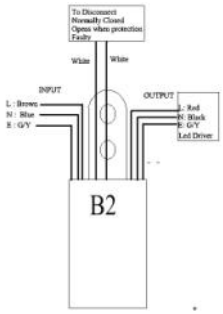
**LED DRIVER SURGE PROTECTOR SLC Series Connected with built in switch for Remote Monitoring SLC-C**

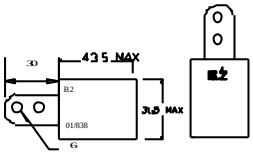
In this arrangement in the event of failure of the surge protection, the monitoring switch will be opened and the status can be monitored remotely by connecting the switch to a panel or other control device. See AN1.pdf for detailed instructions of application, selection and installation for these types.

**Connection.**

The brown, blue and Green and Yellow wires are to be connected to the mains Live , Neutral and Earth respectively and the Red , Black and Green and yellow are to be connected to the Led Lights or LED driver Live , Neutral and Earth respectively.
The 2 Grey or White wires in the centre are isolated from the mains and can be connected as a normally closed switch to control 6 amps for switching or illumination of a fault condition

Series Connected




**Specifications Series Connected with built in switch for remote Monitoring**

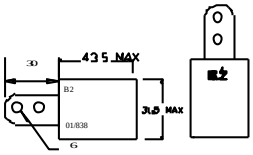
| Rated Current Amps | Surge Current | Housing | OD mm | Length mm | Height | Leads | Stock Code | Exposure Level |
|---|---|---|---|---|---|---|---|---|
| **10** | 10KA | B2 | 31.5 | 43.5 | | | 45/038 | High |
| **10** | 6ka | I3 | 27.5 | 40.5 | | | 45/036 | Low |

45/038 For High exposure Levels

45/036 For low exposure levels

**LED DRIVER SURGE PROTECTOR SLC Parallel Connected with built in switch for Remote Monitoring SLC-D**

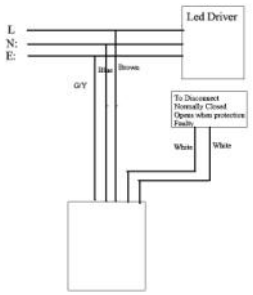
In this arrangement in the event of failure of the surge protection, the monitoring switch will be opened and the status can be monitored remotely by connecting the switch to a panel or other control device.See AN1.pdf for detailed instructions of application, selection and installation for these types.




**Connection.**

The brown, blue and Green and Yellow wires are to be connected to the mains Live , Neutral and Earth respectively

The 2 Grey or White wires in the centre are isolated from the mains and can be connected as a normally closed switch to control 6 amps for switching or illumination of a fault condition




45/039 For High exposure Level

45/037 For low exposure Level

**Specifications Parallel Connection with built in switch for Remote Monitoring**

| Surge Current | Housing | OD mm | Length mm | Stock Code | Exposure Level |
|---|---|---|---|---|---|
| 10KA | B2 | 315 | 43.5 | 45/039 | High |
| 6KA | I3 | 27.5 | 40.5 | 45/037 | Low |

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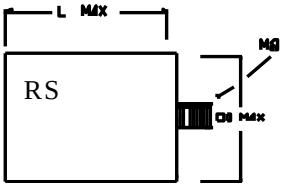
# L.E.D LIGHTING LINE SUPPRESSION SURGE FILTERS TYPE SLB

Due to the fact that most LED Drivers do not have surge suppression between earth ground and any of the input wires due to the effect these have during the hi-pot testing, it has been established that it is more practical to install these devices in the fixture or external to the LED Driver.
The Maximum surge rating required is 10Ka for the high exposure level. These devices are fitted with 4 10KA Varistors and connected so as to improve the differential mode surge capability. See AN2.pdf

## LED DRIVER SURGE PROTECTOR WITH FILTER

These LED Driver Surge Protectors are additionally fitted with Emi filters containing X and Y capacitors and Specially wound Inductors to eliminate the flickering effect sometimes found when using LED Light dimmers caused by ripple relays as well as when using emergency generators during blackout periods. They provide additional Surge Protection for Long Term reliability to minimise failure of L.E.D Lighting Systems. In addition they suppress the noise generated causing interference to Electronic equipment and Entertainment systems.

10 Amp 45/003





**DIMENSIONS**

| Rated Current Amps | Housing | Od mm | L mm | Stud mm | Wire Length | Stock Code |
|---|---|---|---|---|---|---|
| 10 | RS3 | 44 | 76 | M8 | 185mm | 45/003 |

| Specifications Type SLB | | | | |
|---|---|---|---|---|
| | Current Rating in Series (A) | Max Continuous operating Voltage | Clamping Voltage (Max) | Maximum Peak Current (8/20us) |
| Part No | | Ac Rms (V) | Vc (V) | Imax (kA) |
| 45/003 | 10 | 275 | 710 | 30 (3x10) |

**INSTALLATION INSTRUCTIONS**

Connect the Brown and Blue wires of the Units to the Mains Supply Live and neutral and the Green and Yellow Wire to the Mains Earth.
Connect the Red (Live) and Black (Neutral) wire to the Led Light Circuit Red to Brown and Black to Blue.

# L.E.D LIGHTING BYPASS MODULE FOR CONTROL OF L.E.D. FLICKER TYPE SFL

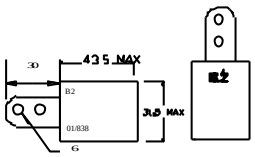
BACK TO INDEX

LED bulbs are very different to the conventional bulbs they're replacing. Conventional bulbs are based on a simple 'filament' wire that glows white hot as the electrical current passes through it. If you vary the voltage and current applied to the bulb you can directly change its brightness.LED bulbs are more complex, they include electronic circuitry to control them and enable them to work in domestic mains (230V) electrical systems. It's this complexity that allows them to achieve such great power saving efficiency but also what makes them more difficult to use with dimmers of any type.
Many dimmers cannot be used to control LEDs (even if the LEDs are dimmable), so you need to choose a Dimmer suitable for dimming L.E.D Lamps and even then sometimes there is a flicker due to the interaction of the dimmer and the LED Driver. This is when one needs to use a flicker control module .

**LED Flicker Bypass Module Type SFL**

These LED modules are fully encapsulated in a cylindrical housing and have two wires coming out which are connected in Parallel with the LED Drivers . See Application note AN02 for a full explanation of how to choose and fit these items

44/050




**DIMENSIONS**

| Bypass Watts | Housing | Od mm | L mm | Wire Length | Stock Code |
|---|---|---|---|---|---|
| 10 | I2 | 23 | 35 | 100 | 44/791 |

| Specifications Type SFL | | |
|---|---|---|
| | Max Continuous operating Voltage | Rating |
| Stock Code | Ac Rms (V) | Watts |
| 44/791 | 275 | 10 |

**INSTALLATION INSTRUCTIONS**

See Application Note AN02 for correct connection and Installation

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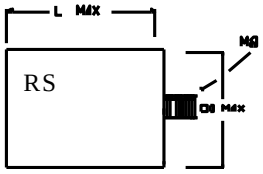
# L.E.D LIGHTING INTERFERENCE SUPPRESSION FILTERS TYPE SEM

These LED Lighting Emi filters have been designed to eliminate the noise generated by LED Drivers causing interference to Electronic equipment and Entertainment systems.
They are connected in Series with the LED Systems. See Application Note AN03 for a detailed description of the causes , Remedies , Selection and Installation instructions

## LED LIGHTING EMI FILTER PLASTIC HOUSING TYPES

These units consist of Inductors , Capacitors and Resistors fully encapsulated in Plastic housings and are suitable for low to medium levels of interference

10, Amp versions


### DIMENSIONS

| Rated Current Amps | Housing | Od mm | L mm | Stud mm | Wire Length | Stock Code |
|---|---|---|---|---|---|---|
| 10 | RS | 44 | 76 | M8 | 185mm | 41/201 |

**INSTALLATION INSTRUCTIONS**
Connect the Brown and Blue wires of the Units to the Mains Supply Live and neutral and the Green and Yellow Wire to the Mains Earth.
Connect the Red (Live) and Black (Neutral) wire to the Led Light Circuit Red to Brown and Black to Blue.
See Application Note AN2 for detailed Installation Instructions.

# SURGE FILTERS METAL BOX TYPE TYPE SFA

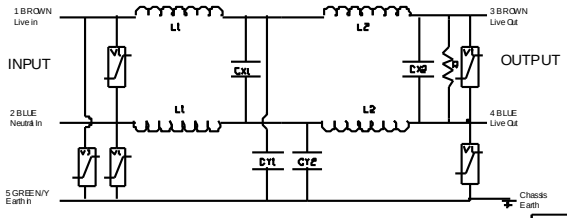
BACK TO INDEX

Plascraft Surge -suppression Filters are designed to protect sophisticated electronic and electrical equipment from the spikes and surges of current and voltage overloads and from noise, from the A.C. Mains.

They are used for computers, data processors, word processors, electronic cash registers, process control systems ,laboratory and medical equipment etc.

These filters are supplied as discrete units and are designed to be incorporated into a variety of built-up configurations such as protected mains socket outlets, or protected feed-thru units for permanent connection to the A.C. mains.

The circuit diagram of a typical Plascraft Surge-suppression Filter together with a drawing of the Filter module is given below:-




**TECHNICAL DATA**

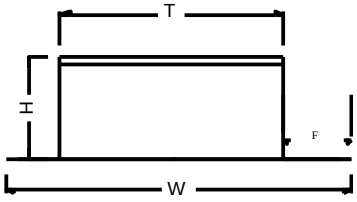
**Manufacturing Standard. Manufactured TO BS 613 1977, ieee, std 587 Category B**

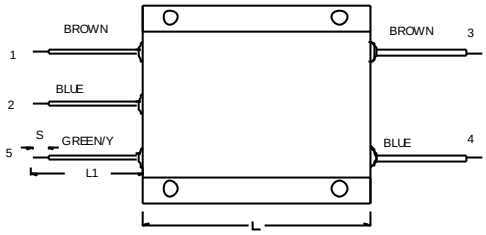
**1. RATED VOLTAGE**
**250 V.A.C**

**2 TEMPERATURE RATING :-10 c TO +85 c**

**3 EARTH LEAKAGE < 3.5ma**

**4 MAXIMUM IMPULSE CURRENT (8/20) see Dimensions Table**




## DIMENSIONS

| Rated Current Amps | Surge Current K/a | L | W | H | T | F | Housing | Stock Code |
|---|---|---|---|---|---|---|---|---|
| **5** | 20 | 82 | 73 | 29 | 53 | 9 | MB1 | 45/CL5 |
| **5** | 50 | 82 | 73 | 29 | 53 | 9 | MB1 | 45/MH5A |
| **10** | 20 | 101 | 77 | 31 | 58 | 9 | MB2 | 45/CL10 |
| **15** | 20 | 101 | 77 | 31 | 58 | 9 | MB2 | 45/CL15 |
| **20** | 20 | 101 | 77 | 31 | 58 | 9 | MB2 | 45/CL20 |
| **25** | 20 | 101 | 77 | 31 | 58 | 9 | MB2 | 45/CL25 |
| **30** | 20 | 110 | 77 | 35 | 58 | 9 | MB3 | 45/CL30 |
| **40** | 30 | 110 | 77 | 35 | 58 | 9 | MB3 | 45/CL40 |

**Mounting and Connection** :

**Internal mounting** :The surge filter should be mounted within the product to be protected preferably with the base on the chassis as the unit's earth is connected internally to the base.

**External mounting** : If it is mounted externally the leads should be connected in such a way that the joins are safe and not exposed. If the surge filter is exposed the Earth wire must be connected to avoid earth leakage currents on the metal housing to comply with safety requirements.

**Connection to mains** : The brown and blue wires on the side with the green and yellow wire should be connected to the incoming live and neutral respectively and the Green and Yellow wire must be connected to the earth.

**Connection to equipment:** The brown and blue wire on the other side should be connected to the equipment to be protected. Brown to live and blue to Neutral. The metal housing is earthed and should be connected to the product's earth lead.

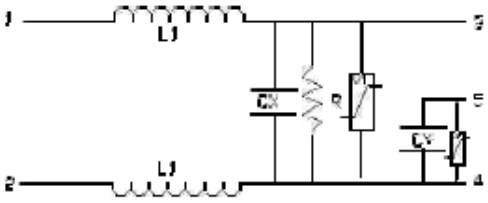
The integral EMI/RFI filter provides high attenuation to interference signals in both common and differential modes.
The design of special Spike-suppression Filters with improved parameters may also be considered

# SURGE FILTERS SINGLE SECTION PLASTIC CAN VERSION TYPE SFB

BACK TO INDEX

These Surge-suppression Filters are enclosed in plastic cylindrical containers and are suitable for applications where less stringent requirements are called for than the metal box type

SINGLE PI NETWORK (Typical Circuit)



**TECHNICAL DATA**

**Manufacturing Standard. Manufactured TO BS 613 1977, ieee, std 587 Category B**

**1. RATED VOLTAGE**

**250 V.A.C**

**2 TEMPERATURE RATING :-10 c TO +85 c**

**3 EARTH LEAKAGE < 3.5ma**

**4 MAXIMUM IMPULSE CURRENT 20KA (8/20)**

**5R.F. INTERFERENCE ATTENUATION: See Figure 1**

**DIMENSIONS**

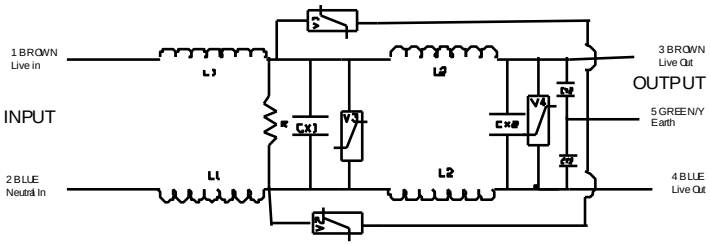
| Rated Current Amps | Rated Voltage | Rated Inductance Milli Henries | Earth Leakage Milli Amps | Surge Rating KA | Housing | Stock Code |
|---|---|---|---|---|---|---|
| 3 | 250 | .587 | .75 | 20 | B2 | 45/250 |
| 3 | 250 | .587 | .75 | 20 | RS2 39-51 | 45/287 |

# SURGE FILTERS DOUBLE SECTION PLASTIC CAN VERSION TYPE SFD

BACK TO INDEX

These Surge-suppression Filters are enclosed in plastic cylindrical containers and are suitable for applications where less stringent requirements are called for than the metal box type

DOUBLE SECTION NETWORK (Typical Circuit)




**TECHNICAL DATA**

**Manufacturing Standard. Manufactured TO BS 613 1977, ieee, std 587 Category B**

**1. RATED VOLTAGE**

**250 V.A.C**

**2 TEMPERATURE RATING :-10 c TO +85 c**

**3 EARTH LEAKAGE < 3.5ma**

**4 MAXIMUM IMPULSE CURRENT 20KA (8/20)**

**5R.F. INTERFERENCE ATTENUATION: See Figure 1**

**DIMENSIONS**

| Rated Current Amps | Rated AC Voltage | Earth Leakage Milli Amps | Surge Rating KA Tot | Dimensions mm | Housing | Stock Code |
|---|---|---|---|---|---|---|
| 10 | 250 | .1.7 | 40 | OD=48,L=86, Stud M8 | RS3 | 45/064 |
| 15 | 250 | 1.7 | 40 | OD=48,L=86, Stud M8 | RS3 | 45/065 |
| 20 | 250 | 1.7 | 40 | OD=48,L=86, Stud M8 | RS3 | 45/066 |
| 30 | 250 | 1.7 | 40 | OD=48,L=86, Stud M8 | RS3 | 45/067 |

The integral EMI/RFI filter provides high attenuation to interference signals in both common and differential modes.
The design of special Spike-suppression Filters with improved parameters may also be considered

# SURGE FILTERS PLASTIC BOX PLUG-IN TYPE SFC

BACK TO INDEX

Plascraft Surge-suppression Filters are designed to protect sophisticated electronic and electrical equipment from the spikes and surges of current and voltage overloads and from noise, from the A.C. Mains.
They are used for computers, data processors, word processors, electronic cash registers, process control systems,laboratory and medical equipment etc.
This version is ideal as an add on Filter for existing equipment where the convenience of being able to plug in is required.

Large Housing

Small Housing

**TECHNICAL DATA**
**Manufacturing Standard. Manufactured TO BS 613 1977, ieee, std 587 Category B**
**1. RATED VOLTAGE**
**250 V.A.C**
**2 TEMPERATURE RATING :-10 c TO +85 c**
**3 EARTH LEAKAGE < 3.5ma**
**4 MAXIMUM IMPULSE CURRENT 20KA (8/20)**
**5R.F. INTERFERENCE ATTENUATION: See Figure 1**
**6 LED Indication**

## DIMENSIONS

| Rated Current Amps | Housing | Length mm | Width mm | Height | Output Cable Type | Stock Code |
|---|---|---|---|---|---|---|
| **5** | Small | 75 | 50 | 30 | 2.5 Metres IEC Plug | 45/582 |
| **5** | Large | 114 | 75 | 50 | 2.5 Metres IEC Plug | 45/580 |
| **10** | Large | 114 | 75 | 50 | 3 Meters 3 x IEC plugs | 45/581 |

FIGURE 1. INSERTION LOSS CHARACTERISTICS.

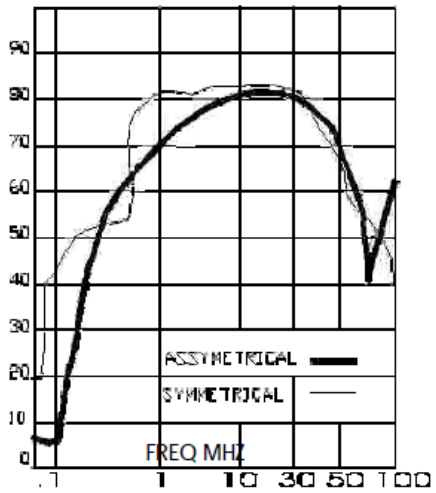
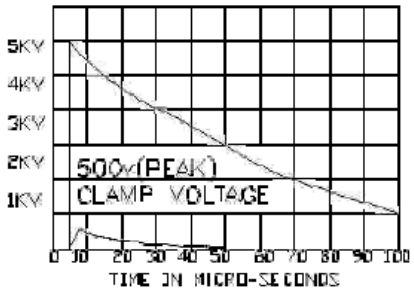



FIGURE 2. IMPULSE TEST.



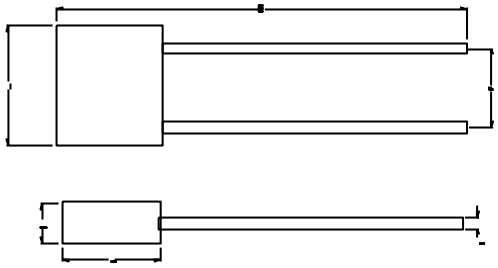

An impulse of 5 Kilo Volts in 1 Micro-second is slowed down and clamped to a nominal level of 500 Volts, with no overshoot: adequate protection is thus provided.

The integral EMI/RFI filter provides high attenuation to interference signals in both common and differential modes.
The design of special Spike-suppression Filters with improved parameters may also be considered

# THERMAL DISCONNECTS TYPE STD

BACK TO INDEX

Thermal Disconnects are non-resettable devices used for the thermal protection of Equipment or Components in which, under fault conditions , one or more parts may reach hazardous temperature.



## DIMENSIONS

| | A +-.5 | B+-0.5 | C +-0.2 | D+-0.05 | E+-3 | F+-0.5 |
|---|---|---|---|---|---|---|
| **03/005** | 8.3 | 7.5 | 3.4 | 1.05 | 35 | 5.2 |
| **03/002** | 10.8 | 11.5 | 4.8 | 1.6 | 50 | 6.6 |
| | | | | | | |

## SPECIFICATIONS

| | Tf Rated Func-tioning Temp. | Fusing Temp | Th | Tm | Ir Rated Current Amps | Ur (Vac) Rated Voltage | In 8/20us 15 times (Ka) | Imax 8/20us (1 Time) (Ka) | |
|---|---|---|---|---|---|---|---|---|---|
| **03/005** | 115 | 111+-2 | 85 | 200 | 15/16 | 250 | 6 | 12 | T115 |
| **03/002** | 115 | 111+-2 | 82 | 200 | 20 | 250 | 15 | 25 | P115 |

# AUTOMOTIVE SUPPRESSORS : CAPACITORS TYPE EAC

BACK TO INDEX

These consist of various combinations of capacitors in a variety of special designs and housings, providing suppression for all automotive electrical or electronic equipment as shown below.
A free booklet on vehicle noise suppression is available, which should assist in the investigation and rectification of vehicle noise from automotive and marine applications

## SINGLE CAPACITOR TYPE EAC

Capacitors for use on Alternators , Ignition Coils, Clock and wiper motors. They may also be used with A-Line chokes to form noise filters

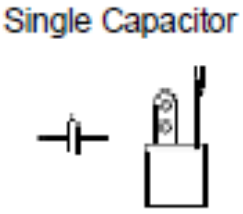



Fig 1


| Application | Description | Code | Housing |
|---|---|---|---|
| **Voltage Regulator** | 2.2 uf Without Terminal | 39/262 | Fig 1 |
| **Ignition Coil, Clock , Fuel Pump, Alternator, Wiper, Ventilator , Fan** | 2.2 With Quick Connect flag Terminal | 39/490 | Fig 1 |
| **Alternator** | 2.2 With 8mm Ring Terminal | 39/524 | Fig 1 |

## DUAL CAPACITOR TYPE EAC

Special Applications whereby two capacitors are required in one housing

Circuit diagram

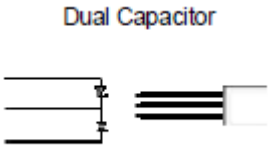


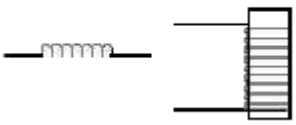

Fig 2

| Application | Description | Code | Housing | Dimensions |
|---|---|---|---|---|
| **Special Applications whereby two capacitors are required I n one Housing** | 2.2 uf + 2.2 uf | 39/285 | I3 Fig 2 | OD=27, L=40 |

## AUTOMOTIVE SUPPRESSORS : WIPER CHOKES TYPE EAD See Also Type MHR for More

BACK TO INDEX

High Frequency Chokes



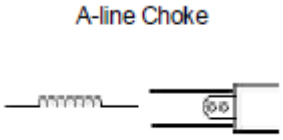
| Application | Description | Code |
|---|---|---|
| For use on Windscreen Wiper Motors and Vehicle equipment causing Intereference on FM Bands | 20 Amp High Frequency Choke | 40/551 |
| | | |
| | | |

## AUTOMOTIVE SUPPRESSORS : NOISE FILTERS AND A-LINE CHOKES

BACK TO INDEX

These consist of various combinations of capacitors and/or inductors in a variety of special designs and housings, providing suppression for all automotive electrical or electronic equipment as shown below.
A free booklet on vehicle noise suppression is available, which should assist in the investigation and

## AUTOMOTIVE SUPPRESSORS : A-LINE CHOKES TYPE EAF




A-Line chokes for Radios, C.Bs, Cellphones and other vehicle audio equipment

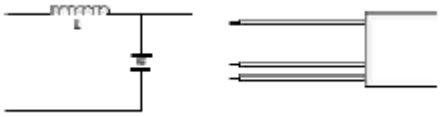
**A-Line ChokesPrimarily For use in line with the radio or Amplifier but can be used with the Single Capacitor**

| Rating amps | Code | Inductance MH | Housing |
|---|---|---|---|
| 5 | 39/203 | 6 | B2 |
| 10 | 39/202 | 3.25 | B2 |
| 15 | 39/201 | 1.4 | B2 |
| 20 | 39/923 | 1.4 | I3 |
| 30 | 39/924 | 0.8 | I3 |

## AUTOMOTIVE SUPPRESSORS : NOISE FILTERS TYPE EAH


**Noise Filters For High Power Amplifiers**

| Current | Housing | Code |
|---|---|---|
| **10 Amps** | I4 | 39/614 |
| **20 Amps** | I4 | 39/532 |
| **30 Amps** | I4 | 39/615 |



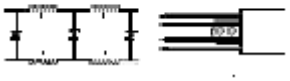
## AUTOMOTIVE SUPPRESSORS: FOR PROTECTION OF ON-BOARD ELECTRONIC EQUIPMENT TYPES EAG/EAJ

BACK TO INDEX

These consist of various combinations of capacitors and/or inductors in a variety of special designs and housings, providing suppression for all automotive electrical or electronic equipment as shown below. A free booklet on vehicle noise suppression is available, which should assist in the investigation and rectification of vehicle noise from automotive and marine applications

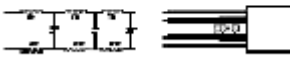
## AUTOMOTIVE SUPPRESSORS : ON BOARD COMPUTER FILTERS TYPE EAG

On board Computers



| Application | Description | Housing | Stock Code |
|---|---|---|---|
| For use on on-board motor vehicle computers, equipment containing sensitive Electronic circuits. NOTE: The equipment should not be earthed for these filters | 3 Amp Double Pi Network | B2 | 39/335 |
| | 6 Amp Double Pi Network | B2 | 39/356 |
| | | | |

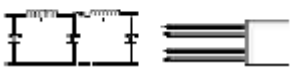
On board Computers



| Application | Description | Housing | Stock Code |
|---|---|---|---|
| For use on on-board motor vehicle computers, equipment containing sensitive Electronic circuits. NOTE: The equipment should not be earthed for these filters to be effective | 3 Amp High Frequency Triple Pi Network | B2 | 39/122 |
| | | B2 | 39/122A |
| | | | |

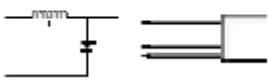
## AUTOMOTIVE SUPPRESSORS : SENSOR FILTERS TYPE EAJ

Sensor Filters



| Application | Description | Housing | Stock Code |
|---|---|---|---|
| For Sensors such as speed, temperature, pressure etc connected to on board motor vehicle computers | Double Pi Network | I3 | 39/227 |
| | | | |

Sensor Filters



| Application | Description | Housing | Stock Code |
|---|---|---|---|
| For Sensors such as speed, temperature, pressure etc connected to on board motor vehicle computers | Single L/C Network | I1 | 39/339 |
| | | | |

# MAINS FILTERS FOR EMI

BACK TO INDEX

Plascraft Mains Filters are used to suppress radio frequency interference, to S.A.B.S. Standards, stemming from single phase electrical machines and apparatus, up to around 25 Amperes.

**SELECTION**: This is normally based on the following parameters

a)Voltage, operating current and mains frequency.

b) Leakage current limits.

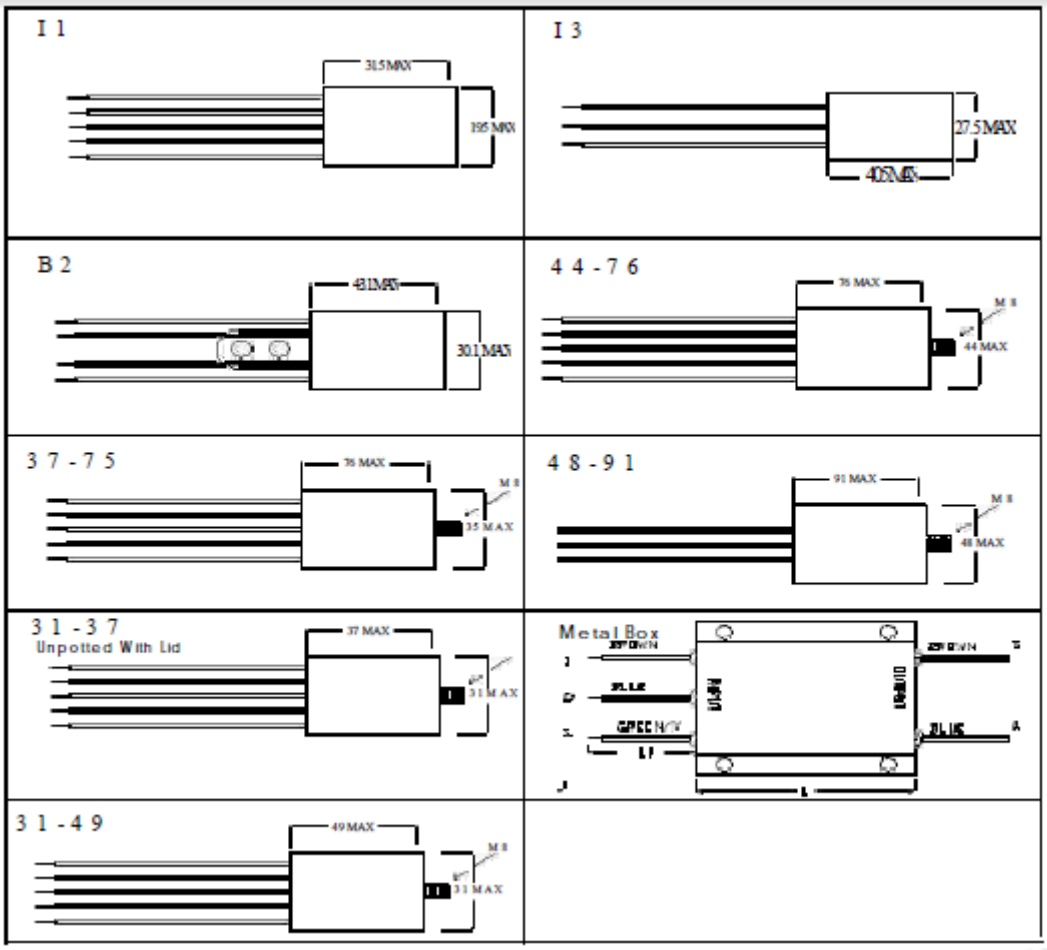
c) R.F.Characteristics of interference source and R.F.Interference Level required.

d) Mechanical details of the mains filter.

**CONSTRUCTION:**

These units are designed around selected inductors together with appropriate X and Y capacitors and other components as necessary. They are housed in cylindrical plastic containers as per Identification Table as shown below.

## HOUSINGS




CONNECTIONS

Are made via 4,5, or 6 flexible leads using the colours shown below as applicable.

Connections from the mains power supply:

Brown = Live

Blue = Neutral

Green and Yellow = Earth

Connections to the equipment.

Red = Live

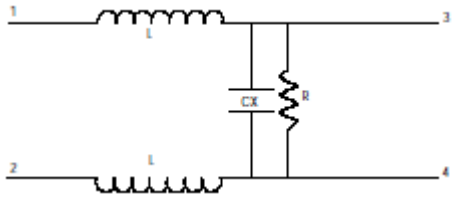
Black = NeutraL

Green = Earth

# MAINS FILTERS 4 WIRE SINGLE SECTION TYPE EMG

BACK TO INDEX

For use in equipment that is not earthed




**TECHNICAL DATA**
Manufacturing Standard
Manufactured to BS613
**1: RATED VOLTAGE**
250 V.A.C 50/60 Hz
**2.:RATED CURRENT**
Referred to 50Hz
**3: RATED INDUCTANCE**
Measured at 1Khz at 25° C

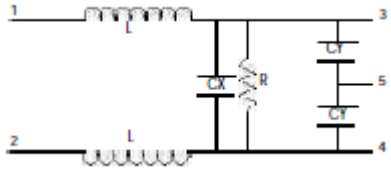
| Rated Current Amps | Inductance mh | Housing | X Capacitor | Code | Remarks |
|---|---|---|---|---|---|
| **3** | 2x 2.39 | B2 | 0.22 | 41/370 | With Q.C Terminals |
| **5** | 2x .68 | B2 | 0.47 | 41/418 | |
| **5** | 2x.27 | Sleeved | 0.1 | 41/400 | High Frequency Inductors |

# MAINS FILTERS : 5 WIRE SINGLE SECTION TYPE EMF

BACK TO INDEX

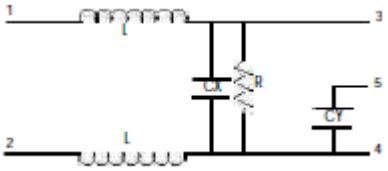
These are used for normal suppression of equipment incorporating contacts, brush motors, power controls, electronic switches etc. NB. As with all filters incorporating an earth wire, the maximum earth leakage current permitted must be taken into account.

5 Wire with Two "Y" Capacitors




**TECHNICAL DATA**
Manufacturing Standard
Manufactured to BS613
**1: RATED VOLTAGE**
250 V.A.C 50/60 Hz
**2.:RATED CURRENT**
Referred to 50Hz

5 Wire with One "Y" Capacitors

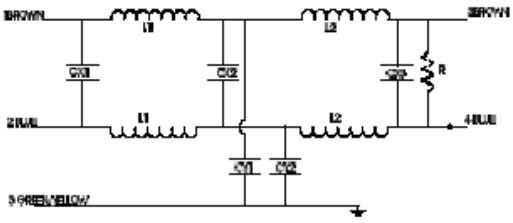



| Rated Current Amps | Inductance m.h | Housing | X Cap | Y Cap | Earth Leakage m.a | Code | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | 13 | B2 | 0.47 | 2x 0.0047 | 0.35 | 41/388 | For Switch Mode Power Supplies |
| 1 | 13 | B2 | 0.22 | 1x 0.0047 | 0.35 | 41/269 | |
| 3 | .587 | I1 | 0.1 | 1x 0.0047 | 0.35 | 41/236 | Without Resistor |
| 3 | 2.39 | I3 | 0.1 | 2x 0.0047 | 0.35 | 41/290 | |
| 3 | 2.39 | B2 | 0.22 | 1x 0.01 | 0.75 | 41/234 | |
| 3 | 2.39 | B2 | 0.47 | 1x 0.01 | 0.75 | 41/246 | |
| 5 | 0.68 | B2 | 0.33 | 1x0.0047 | 0.35 | 41/137 | |
| 5 | 0.68 | B2 | 0.33 | 1x0.01 | 0.75 | 41/150 | |
| 6 | 0.68 | B2 | 0.22 | 1x0.01 | 0.75 | 41/147 | |
| 6 | 1.5 | RS1 31-49 | 0.1 | 2x 0.0033 | 0.25 | 41/612 | |
| 6 | 1.5 | RS1 31-37 | 0.22 | 2x 0.0033 | 0.25 | 41/461 | With Q.C Terminals and Ring Terminal |
| 10 | 1.247 | RS2 44-76 | 0.47 | 1x 0.01 | 0.75 | 41/252 | For Ridge Power Tools |
| 13.5 | 1.086 | RS2 44-76 | 0.33 | 1x 0.01 | 0.75 | 41/152 | |
| 16 | 0.67 | Rs3 48-91 | 0.47 | 2x 0.022 | 1.7 | 41/334 | |
| 20 | 4.0 | RS3 48-91 | 0.33 | 2x 0.033 | 2.5 | 41/579 | Very High Attenuation High Performance Filter. |
| 25 | 0.448 | RS3 48-91 | 2x 1.0 | 2x 0.022 | 1.7 | 41/374 | 5 Wire with 2 of X Capacitors |
| 25 | 0.448 | RS3 48-91 | 2x 1.0 | 2 x 0.022 | 1.7 | 41/374A | Different Wire Lengths |

# MAINS FILTERS : 5 WIRE HIGH PERFORMANCE TYPE EMH

BACK TO INDEX

These are used for high performance suppression of equipment incorporating contacts, brush motors, power controls, electronic switches etc. NB.As with all filters incorporating an earth wire, the maximum earth leakage current permitted must be taken into account.
Due to the double section network , as well as the use of double separated metal case housing this unit has a wide band attenuation for Radio frequencies.
These filters are well suited for incorporation into plug in type surge protection units with single or multiple outlets with the addition of suitable series or parallel connected surge protection units due to the fact that they may then be able to be replaced without replacing the mains filter




**TECHNICAL DATA**
Manufacturing Standard
Manufactured to BS613
**1: RATED VOLTAGE**
250 V.A.C 50/60 Hz
**2.:RATED CURRENT**
Referred to 50Hz
**3: RATED INDUCTANCE**
Measured at 1Khz at 25° C

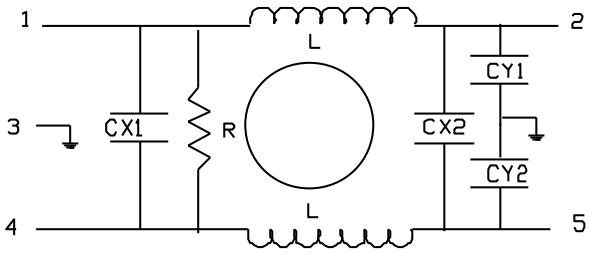
**DIMENSIONS**

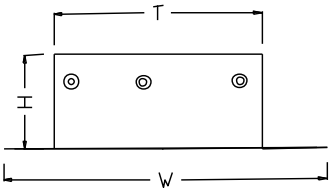
| Rated Current Amps | L | W | H | T | F | Housing | Stock Code |
|---|---|---|---|---|---|---|---|
| **5** | 82 | 73 | 29 | 53 | 9 | MB1 | 41/100 |
| **10** | 101 | 77 | 31 | 58 | 9 | MB2 | 41/101 |
| **15** | 101 | 77 | 31 | 58 | 9 | MB2 | 41/512 |
| **20** | 101 | 77 | 31 | 58 | 9 | MB2 | 41/102 |
| **25** | 116 | 77 | 37 | 62.5 | 9 | MB3 | 41/103 |
| **30** | 116 | 77 | 37 | 62.5 | 9 | MB3 | 41/104 |

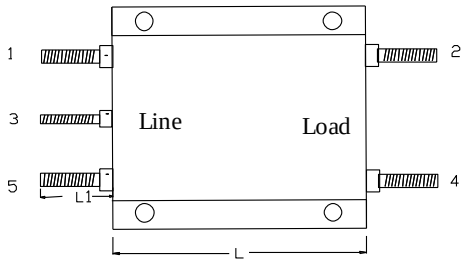
## MAINS FILTERS : 5 WIRE HIGH CURRENT TYPE EMI

BACK TO INDEX

These are used for suppression of equipment incorporating contacts, brush motors, power controls, electronic switches etc. NB.As with all filters incorporating an earth wire, the maximum earth leakage current permitted must be taken into account.
They are suitable for high current applications.
These filters are well suited for use with Parallel connected surge protection devices which may be able to be replaced without replacing the mains filter

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Manufactured to BS613
**1: RATED VOLTAGE**
250 V.A.C 50/60 Hz
**2.:RATED CURRENT**
Referred to 50Hz
**3: RATED INDUCTANCE**
Measured at 1Khz at 25° C

**DIMENSIONS**

| Rated Current Amps | L | W | H | T | F | Bolts | Hous-ing | Stock Code |
|---|---|---|---|---|---|---|---|---|
| **40** | 113 | 76 | 35 | 62 | 9 | M6 | MB3 | 41/105 |
| **60** | 120 | 10 | 50 | 100 | 15 | M8 | MB4 | 41/106 |

## EMI AND RADIO INTERFERENCE TESTING TO C.I.S.P.R SERVICE ERI

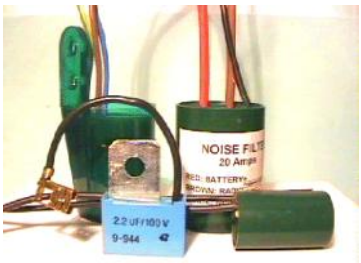
BACK TO INDEX

**EMI SERVICES . A Schwarzbeck Quasi-Peak EMI Measurement set-up is available and EMI measurement from 150Khz to 300 Mhz is available. This facility is available to Customers and Engineers to assist in obtaining compliance with local and International EMI requirements on their equipment. Measurement can be done on 250VAC single phase apparatus up to 20 Amps. Plascraft Personnel have over 30 years experience in this field and have provided solutions to the Appliance, Automotive, Electronic equipment, Dimmers, Lighting ,Medical, Marine, TV , and Audio Industries. An extensive technical publication and information guideline is provided in the Plascraft EMI SOLUTIONS Catalogue**

# EMI AND MAINS FILTER DESIGN SERVICES ESS

BACK TO INDEX

**Plascraft personnel have been providing EMI Solutions as well as EMI Filters and Suppression Components in the Selby and Booyses Facilities in Johannesburg since 1973, as a result of the Introduction of TV in South Africa and the ensuing EMI Regulations. To date well over 20 Million of these units have been produced using Locally Manufactured Capacitors and Inductors . An EMI measurement facility has been established to measure to C.I.S.P.R Standards.**
**Measurements are done from 150 Khz to 30 Mhz using a L.I.S.N and From 30 to 300 Mhz using an MDS clamp.**
**EMI Products are produced to IEC Standards.**
**These designs and components have provided turnkey solutions for our Customers to enhance their product's functionality , safety and the environmental harmony of electronic products used in domestic , marine , military, industrial and automotive sectors.**




**AUTOMOTIVE SUPPRESSORS AND NOISE FILTERS These components are used to prevent interference from automotive engines and accessories from affecting Radios , On-board Computer equipment, High Performance Car Sound Systems and any other electronic equipment installed in motor vehicles. Noise Filters and A-line Chokes are available up to 30 Amps, Automotive Suppression Inductors, filters and Capacitors are available in a large variety of configurations. A technical document on vehicle noise suppression is available in the Plascraft EMI SOLUTIONS Catalogue.**

**MAINS FILTERS . These units are used to suppress electrical equipment that generate Electro Magnetic Interference. Selection of the correct units allow the equipment to comply with the C.I.S.P.R Standards.They are available in Metal Box and Plastic Housing Construction with a variety of Circuit configurations and terminations. Rated at 250 Volt AC and in Current Ratings up to 25 Amps. EMI Attenuation in 3 performance Levels are available.**

**CAPACITOR NETWORKS are used for EMi Suppression where low noise levels are generated.. They are available in Plastic Box Construction with Flexible Leads. Operating Voltage is 250VAC. A variety of Terminals are available for connection to equipment and Self healing , X Type and Y Type Safety Capacitors are used for additional safety and performance.**

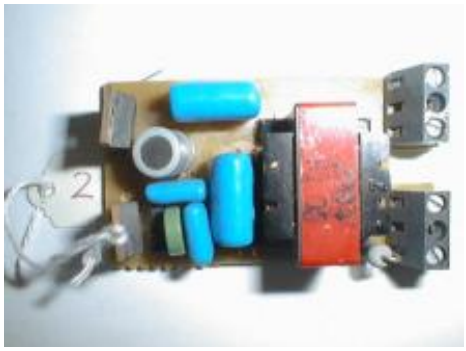
## CONTRACT ASSEMBLY :
## SURGE PROTECTION PRODUCTS ASSEMBLY COS

BACK TO INDEX

**CONTRACT ASSEMBLY:- Assembly of surge products in plastic housings. We are able to test these items using a variety of specialised insulation , circuit and high voltage testers.**

# CONTRACT ASSEMBLY: SMPS PC BOARD ASSEMBLY (THROUGH HOLE) CPC

BACK TO INDEX



**CONTRACT ASSEMBLY:-** **Assembly of Switch Mode Power Supply printed circuit boards as well as specialised filters to customer requirements on PC boards or housings. We are able to test these items using a variety of specialised insulation , circuit and high voltage testers.**

## CONTRACT ASSEMBLY : WIRE CUTTING AND TERMINATING CTW

BACK TO INDEX

**LEAD CUTTING AND TERMINATING:- Cutting of Spvc wire with terminations of brass or nickel. We have a range of dies for Ring, Spade , ferrule and other types of terminals**

# CONTRACT ASSEMBLY : ENCAPSULATION OF COMPONENTS OR COMPONENT ASSEMBLIES CEN

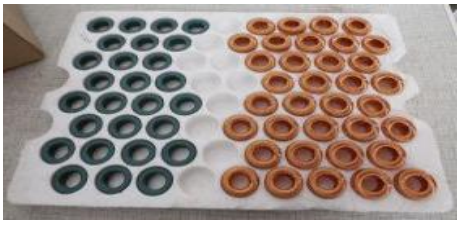
BACK TO INDEX

**ENCAPSULATION OF CIRCUITS OR COMPONENT ASSEMBLIES:- Encapsulation of customer circuits or components in housings supplied by us or yourselves**

## PACKAGING PAC

BACK TO INDEX

Polybag Packaging.



Polystyrene Packaging

Display Packaging.
Product can be individu-
ally packed
In Polybags with a label
for display


Carton 1 Size 23x15x15cm ,5175cu cm ,193 cartons cu. metre
Carton 2 Size 25x15x25,9375cu. Cm , Max weight 18Kgs
Carton 3 Size 30x21x28, 17640cu.cm. Max weight 18Kgs

**Carton Identification.**
Plascraft
Customer Name and Address
(If Contents are 1 Item)
Product Type
Stock Code
Product Description .
Quantity.

(If Contents contain more than 1 Item)
Plascraft
Customer Name and Address

**Bag Identification**
Plascraft. 011-4937782
Product Type
Stock Code
Product Description
Capacitors: Capacitor Type, Value,
Voltage, Tolerance, Lead Spacing

Inductors: Inductance, Current Rating,
Voltage