



Power Resistors Cooled by auxiliary Heatsink (not supplied)

- Technology : thick film deposited on ceramic
- Cold system without external radiation
- High power / volume ratio
- Non inductive
- Easy assembly, self calibrated pressure (120 to 160 N)

GENERAL CHARACTERISTICS

Dielectric base :	alumina
Resistive circuit :	cermet
Encapsulation :	resin filled case
Ohmic serie :	E12
Standard tolerance :	$\pm 5\%$ or $\pm 10\%$
Insulation :	$10^5 \text{ M}\Omega$ at 500 Vcc
Temperature coefficient :	$\pm 150 \text{ ppm}/^\circ\text{C}$
Temperatures range :	-55°C to $+125^\circ\text{C}$
Materials complies with the standard UL 94-V0	
NOMINAL POWER at 100°C	250 W
MAXIMUM POWER at 70°C	500 W
Min. Ohm value :	0,47 Ω
Max. Ohm value :	1M Ω

SPECIFIC CHARACTERISTICS

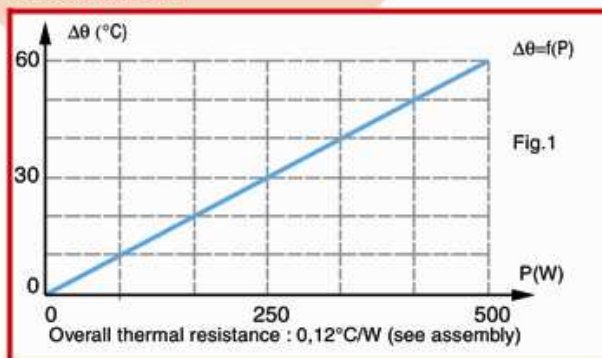
TYPE	500L	500	500H	500HV
Max operating voltage between terminals	5000 V			
Max. test voltage (Veff 50Hz 1 min)	6000 V	7000 V	12000 V	12000 V
Creeping distance	42 mm	42 mm	42 mm	75 mm
Clearance distance	12 mm	12 mm	26 mm	30 mm
Capacitance / ground	120 pf			
Capacitance / parrallel	40 pf			
Self inductance	$\leq 40 \text{ nH}$			
Partial discharge	$< 10 \text{ pC} / 5000 \text{ Veff}$	$\leq 500 \text{ pC} / 7000 \text{ Veff}$ $\leq 10 \text{ pC} / 5000 \text{ Veff}$ Other cases : Consult us		
Weight	120 g max			

PERFORMANCES

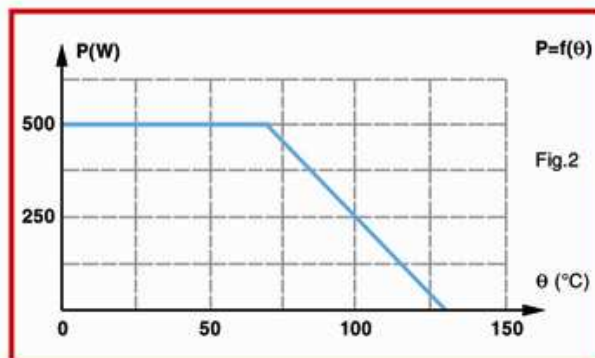
TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES
Overload	1000W/10s $\theta=70^{\circ}\text{C}$	2%	0,2 %
Damp heat	56 days 40°C 95% HR	2% or $0,05\Omega^*$	0,2 %
VRT	$-55 +125^{\circ}\text{C}$ 5 cycles	Insul $>10^3 \text{ M}\Omega$	0,2 %
Shock	40A / 4000	2% or $0,05\Omega^*$	0,25 %
Vibrations	500 / 10	0,5% or $0,05\Omega^*$	0,25 %
Terminal strength	200Ncm / 200N	0,5% or $0,05\Omega^*$	0,1 %
Endurance	2000 cycles Pn 30mn on / 30mn off	1% or $0,05\Omega^*$	0,2 %

* the higher of either value

DISSIPATION

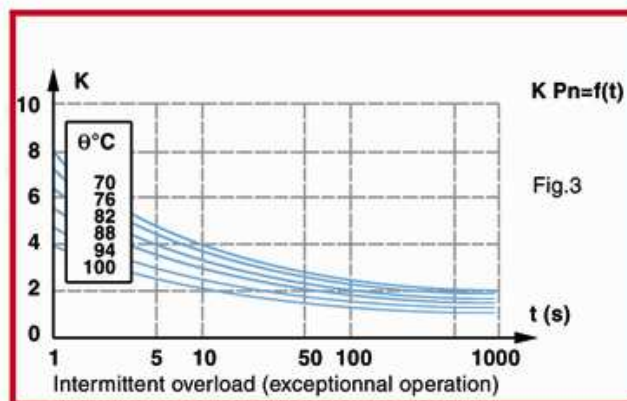


Temperature rise as a function of the power applied



Permanent applicable power as a function of heatsink temperature

OVERLOAD



ENERGY ABSORPTION

$R < 390 \Omega$

Repetitive operation : $7 \text{ J} / \tau = 50 \mu\text{s}$

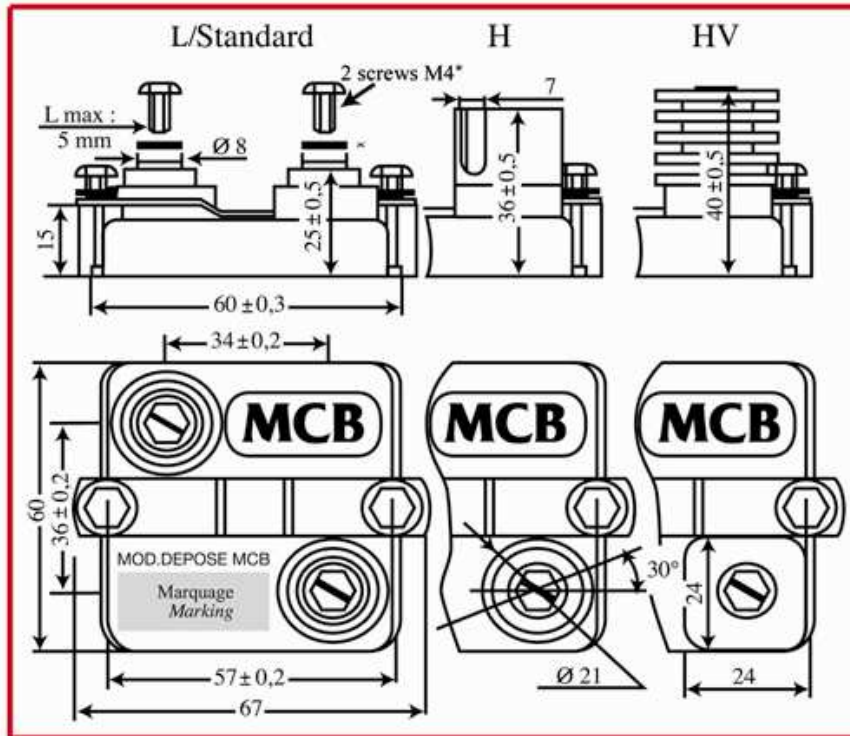
Accidental operation : $20 \text{ J} / \tau = 50 \mu\text{s} / 120 \text{ impulsions max}$

$R > 390 \Omega$

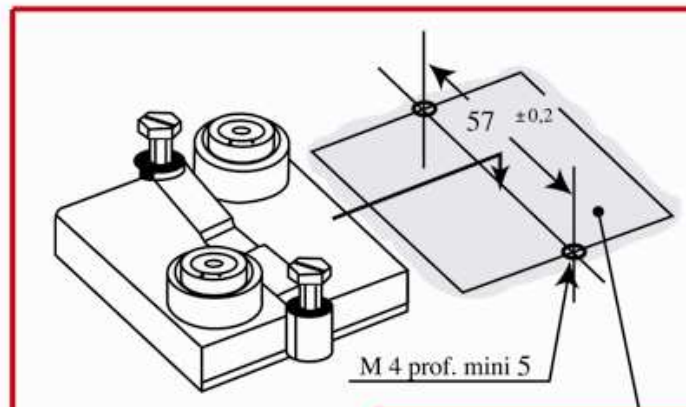
Repetitive operation : $3,5 \text{ J} / \tau = 50 \mu\text{s}$

Other τ Values : Consult us

DIMENSIONS



ASSEMBLY



Thermal compound
Resistance < 0,05 °C / W / 0,025 mm
See MCB Ind technical data sheet STR008

Screws and bolts supplied
Max. tightening torque :

200 Ncm. mechanical mounting
200 Ncm. electrical connections

COOLING

The temperature of the heatsink may be maintained at the specified values with :

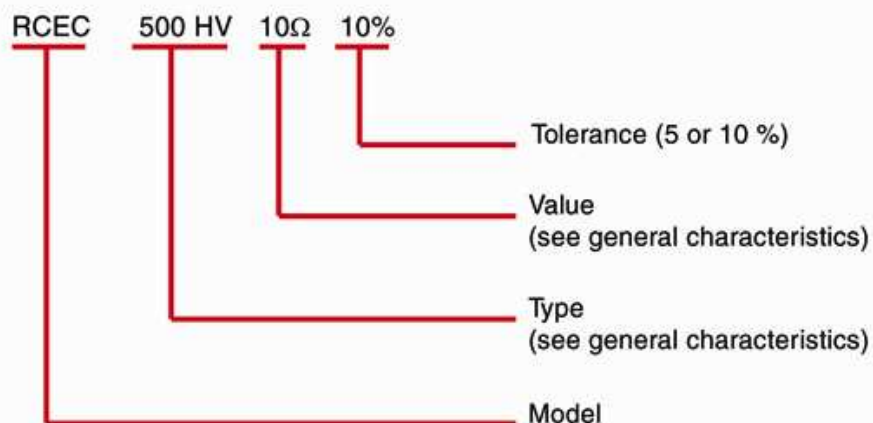
- forced air ventilation
 - Internal circulation of a liquid cooling
- | | |
|-------------------------------------------------------------------|-----------------|
| Heatsink contact surface : | Ra 6,3 μ ▽▽ |
| Evenness defect : | 0,05 mm max. |
| Surface temperature gradient (isotherm) : | 20°C max. |
| Thermal compound not supplied (Resistance <0,05°C / W / 0,025 mm) | |

THE USER MUST SELECT THE THERMAL RESISTANCE OF THE HEATSINK ACCORDING TO THE POWER APPLIED

TERMINAL OPTIONS

- Electrical Terminals M5
- Other terminal size
- Output cable

HOW TO MAKE OUT YOUR ORDER



For information only and subject to amendment

