



**CASCADE SERIES**

**TA-DA-60-12-CS**



### **Features**

- The Cascade Series (CS) is designed and manufactured using custom multistage thermoelectric modules which are produced by Crystal Ltd.
- The use of custom designed multistage thermoelectric modules provides achievement of higher values of temperature difference than for the standard DA assemblies.
- Low noise pressure.
- Compact design.
- Low weight.
- Precision of temperature maintenance
- Various positioning in space.
- No CFC refrigerants.

### **Applications**

- Photonics laser systems.
- Thermostat for biological assays.
- Medical diagnostics.
- Industrial measuring instrument.
- Analytical devices.
- Food and beverage cooling
- Others.

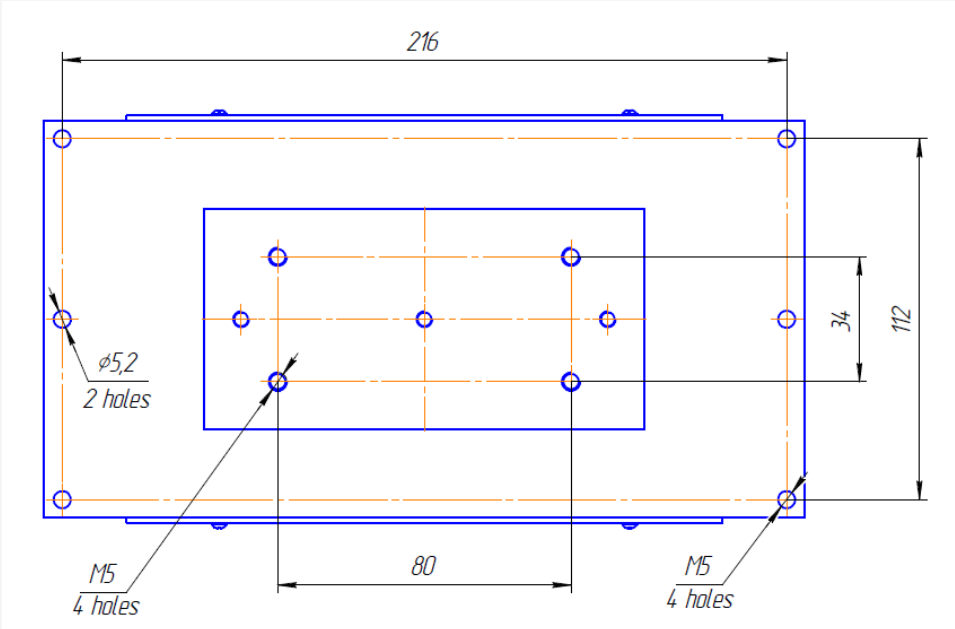


Type	TA-DA-60-12-CS
Voltage (nominal /maximal)	12/14 VDC
Amperage ±10% (nominal/starting)	9.2A/11A (at 12VDC)
Max ripple	5%
Cooling capacity at dT = 0°C and nominal voltage . <sup>1</sup>	58W
Operating temperature of the heatsink on the inner and outer side, not more than <sup>2</sup>	85°C
Temperature range (external /internal)	-40°C to +60°C/-20°C to +60°C
Fans lifetime (at temperatures not higher than +40°C) and nominal voltage	≥60,000 hours
Sound level (distance 1m.)	39dB(A)
Mode of operation	long-term
Protection of heatsink	Anodizing. Film thickness of 10-20 microns
Overheat protection	at the request of the customer ( Additional option )
Type of connector	Terminal block with cage clamps
Weight ±3%	1.8kg



$dT$   
 $dT^{\circ}C = T^{\circ} \text{ ambient} - T^{\circ} \text{ internal}$   
 Q – cooling capacity, Watts  
 at ambient air temperature +35°C and nominal voltage

**MOUNTING SCHEME**



1-Cooling capacities at 12 VDC and 14 VDC are rated at an external temperatures from +35°C to + 50°C.  
 2-Possibility of increasing to 150°C. (Additional option).  
**NOTE!** A method of transferring heat is forced convection.  
 Not recommended to reduce airflow on the external side.

Contact us for more information  
 e-mail: [info@crystalltherm.com](mailto:info@crystalltherm.com).  
 +7-495-664-24-31 , +7-495-519-88-52 , +7-495-519-00-69  
 Fax: +7-495-515-40-94

MECHANICAL DRAWING

