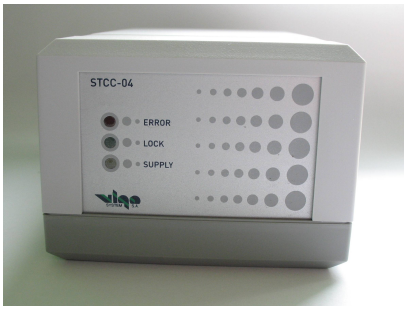


Description

The STCC-04 thermoelectric cooler controller with +/- 0.01 C stability. The unit provides low noise power supply for integrated preamplifiers Controller offers variable adjustment of temperature from 205 to 278K (covered by temperature sub ranges).

Features

- Provides Proper Detector Cooling
- Includes Preamplifier Power Supply
- Temperature Lock Indicator

Specification

Parameter	Unit	Value			Conditions and Remarks
		Min	Typ	Max	
Long term stability	**°C**		*±0.01*		T_{det}=233K (-40°C)
Signaling accuracy of the set temperature reaching (LOCK indicator)	**°C** **°C** **°C**		*±0.08* *±0.09* *±0.25*		T_{det}=233K(-40°C) T_{det}=243K(-30°C) T_{det}=278K(+5°C)
Settling time the set detector temperature	**s** **s** **s**		*25* *300* *300*		T_{det}=233K (-40°C) Δt_{det}=0.1°C T_{det}=205K (-60°C) Δt_{det}=0.1°C T_{det}=193K (-80°C) ΔT_{det}=0.1°C
Thermistor bias current	**µA** **µA**		 *40*	*130*	R_{th}=0 R_{th}=40kΩ
Thermistor bias voltage	**V** **V**	 *0.2*		*2.6* *2.0*	R_{th}=∞ Operation
Maximal voltage across TEC element	**V** **V** **V**		*2.5* *4.0* *7.7*		STCC-04-xx-2 STCC-04-xx-3 STCC-04-xx-4
Ripple of output current	**%**			*0.5*	I_{tec}=1A
Output current of the built-in power supply	**mA** **mA** **mA**		*±100* *±100* *±100*		STCC-04-09 STCC-04-12 STCC-04-15
Supply Voltage	**V** **V**	*4.5* *11.5*		*5.5* *12.5*	STCC-04-xx-2; STCC-04-xx-3 STCC-04-xx-4
Supply current	**mA** **mA** **mA**		*20* *350* *1100*		STCC=-04-00, I_{tec}=0 STCC-04-00, I_{tec}=1A, U_{tec}=1V STCC-04-15, I_{pre}=±100mA, I_{tec}=1A, U_{tec}=1V
Series resistance of the connecting cable	**mΩ**		*1000*		Total resistance of the wires supplying TEC element
Dimensions	**mm** **mm** **mm**		*82* *60* *150*		Width Height Depth
Mass	**kg** **kg** **kg**		*0.25* *0.27* *0.14*		STCC-04-00 Remaining models Cable connecting IR detecting set
Storage temperature	**°C**	*-25*		*50*	
Ambient temperature	**°C**	*10*		*35*	
Electrical characteristics @ T_a=20°C					

STCC-04 - 15 - 2 A - RC

Extended Symbol

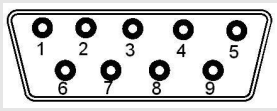
STCC-04	Product Identifier
-15	Type of built-in power supply: **00** – no power supply **09** – power supply ±9V / ±100mA **12** – power supply ±12V / ±100mA **15** – power supply ±15V / ±100mA **G1** – combined power supply (+12V, -5V) for VPAC-1000F Preamplifier
-2	Type of TE cooler: **2** – two-stage cooler(standard) **3** – three-stage cooler **4** – four-stage cooler
A	Type of thermistor: **A** – TB06-222 (standard) **B** – BR14KA132J-A (only for certain types of IR detectors)
-RC	Programmed temperature of IR detector: P5 – 278K (+5ºC) 30 – 243K (-30ºC) 35 – 238K (-35ºC) 40 – 233K (-40ºC) 60 – 213K (-60ºC) 80 – 193K (-80ºC) RC – precisely adjusted within the range 233 to 278K (-40 to +5ºC) R4 – switched within the range 233 to 243K (-40 to -30ºC) Custom-set temperatures are also available.

Pin Configuration

Power supply and cooling control connector configuration

Pin Number	Function
1	Thermocooler (+)
2	Thermocooler (-)
3	GND
4	Thermistor (+)
5	Thermistor (-)
6	Power supply input (-)
7	GND
8	N.C.
9	Power supply input (+)

DB-9 Output Connector



For more details about using TE cooled detectors see the IR detector catalog.

Recommended Accessories	
L.T.E. GFP181DA-0530	AC Adaptor
Nordic Power 06215	AC Adaptor

Dimensions