



Standard cooler controller



Cooler controller with regulation

DESCRIPTION

The STCC-04 is a thermoelectric cooler controller with +/- 0.01°C stability. The unit provides low noise power supply for integrated preamplifiers.

FEATURES

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

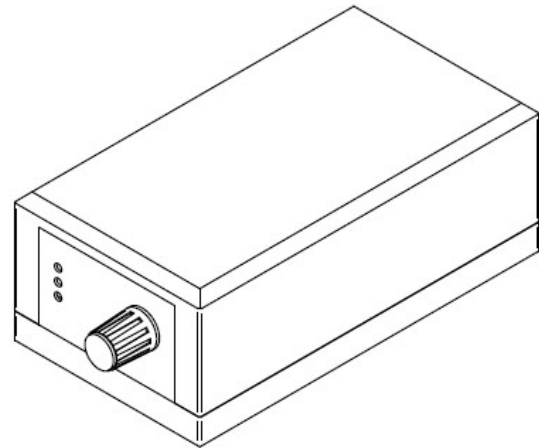
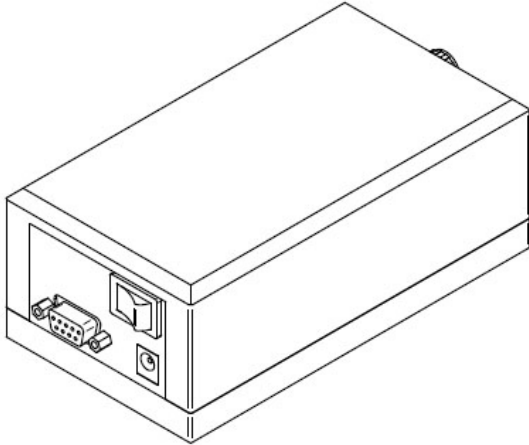
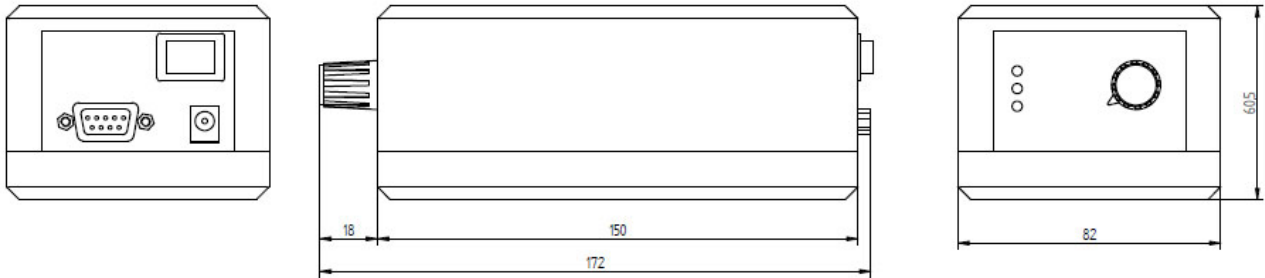
SPECIFICATION

Parameter	Unit	Value			Conditions and Remarks
		Min	Typ	Max	
Long term stability	°C		±0.01		$T_{det}=233K (-40^{\circ}C)$
Settling time of the set detector temperature	s		25		$T_{det}=233K (-40^{\circ}C) \Delta T_{det}=0.1^{\circ}C$
	s		300		$T_{det}=205K (-60^{\circ}C) \Delta T_{det}=0.1^{\circ}C$
	s		300		$T_{det}=193K (-80^{\circ}C) \Delta T_{det}=0.1^{\circ}C$
Maximum voltage across TEC element	V		2.5		STCC-04-xx-2
	V		4.0		STCC-04-xx-3
	V		7.7		STCC-04-xx-4
Ripple of output current	%			0.5	$I_{tec}=1A$
Output current of the built-in power supply	mA		±100		STCC-04-09
	mA		±100		STCC-04-12
	mA		±100		STCC-04-15
Power supply voltage V_{sup}	V	4.5		5.5	STCC-04-xx-2; STCC-04-xx-3
	V	11.5		12.5	STCC-04-xx-4
Power supply current I_{sup}	mA		20		STCC-04-00, $I_{tec}=0$
	mA		350		STCC-04-00, $I_{tec}=1A, U_{tec}=1V$
	mA		1100		STCC-04-15, $I_{pre}=\pm 100mA, I_{tec}=1A, U_{tec}=1V$
Series resistance of the connecting cable	mΩ		1000		Total resistance of the wires supplying TEC element
Dimensions	mm		82		Width
	mm		60		Height
	mm		150		Depth
Mass	kg		0.25		STCC-04-00
	kg		0.27		Remaining models
	kg		0.14		Cable connecting IR detecting set
Storage temperature	°C	-25		50	
Ambient temperature	°C	10		35	

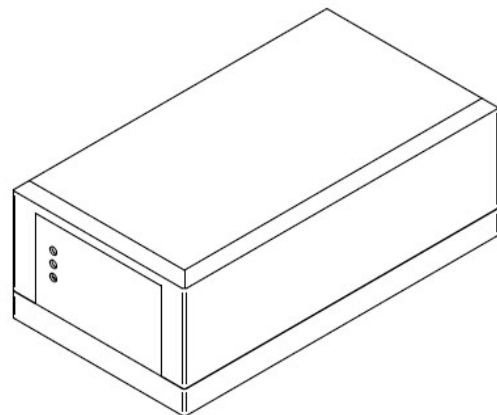
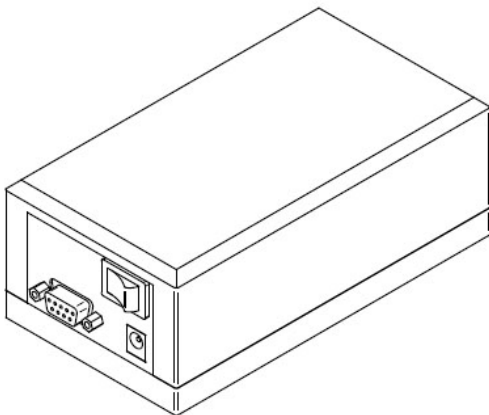
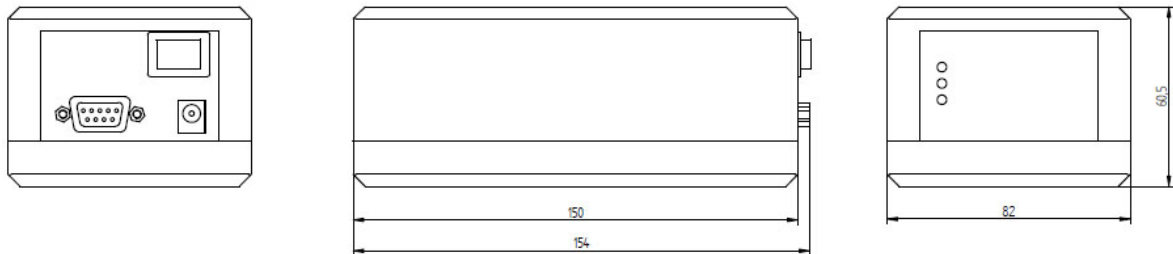
Electrical characteristics @ $T_a=20^{\circ}C$

DIMENSIONS [mm]

Cooler controller with regulation



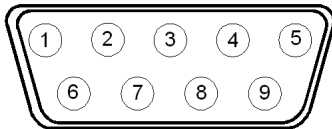
Standard cooler controller



STCC-04	-	XX	-	X	A	-	XX
		00		2	A		P5
		09		3	B		40
		12		4			60
		15					80
		G1					RC
							R4





POWER SUPPLY CONNECTOR

Pin Number	Symbol	Function
1	TEC+	TEC supply output (+)
2	TH1	Thermistor output
3	GND	GND
4	+V _{sup}	Power supply output (+)
5	TH2	Thermistor output
6	-V _{sup}	Power supply output (-)
7	GND/FAN+	Power ground or FAN (+)
8	N.C.	N.C.
9	+V _{sup}	Power supply output (+)



DB9 Connector

ACCESSORIES

DB9 - DB9	DB9 - LEMO	AMP 2x4 - LEMO	POWER SUPPLY
			

TEC & Supply cable
for stand alone or integrated
detection modules

TEC & Supply cable
for stand alone or integrated
detection modules

TEC & Supply cable
for stand alone or integrated
detection modules

Power Supply type
Nordic Power 06215
(110-230VAC)

Extended Symbol

STCC-04	Product Identifier
-15	Type of built-in power supply: 00 – no power supply 09 – power supply $\pm 9V / \pm 100mA$ 12 – power supply $\pm 12V / \pm 100mA$ 15 – power supply $\pm 15V / \pm 100mA$ G1 – combined power supply (+12V, -5V) for VPAC-1000F Pre-amplifier
-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 (+5°C) 30 – 243K (-30°C) 35 – 238K (-35°C) 40 – 233K (-40°C) 60 – 213K (-60°C) 80 – 193K (-80°C) RC – precisely adjusted within the range 233 to 278K (-40 to +5°C for 2,3 TE cooled detectors only) R4 – switched within the range 233 to 243K (-40 to -30°C for 2,3 TE cooled detectors only) Custom-set temperatures are also available (for 2,3 TE cooled detectors only).

Note: for 4TE cooled detectors STCC-04 are available with fixed temperature only.