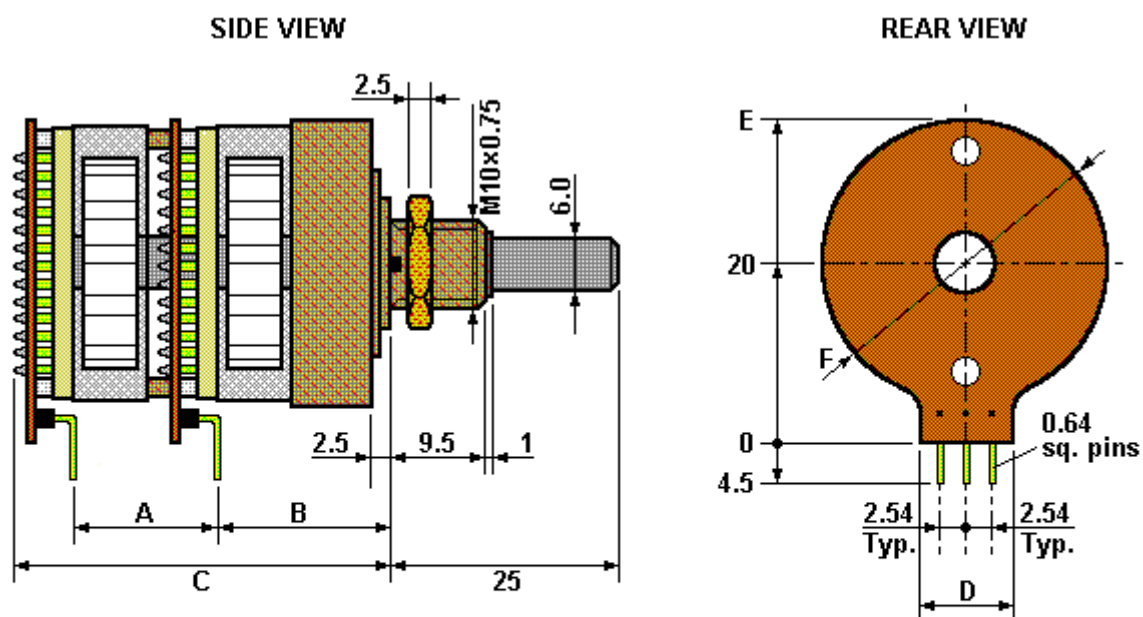




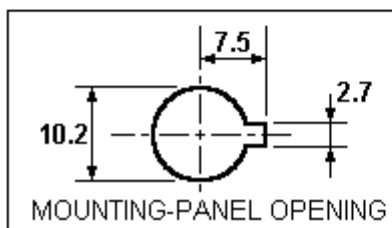
# CT1 and CT2

Audio Attenuators / Volume Controls

## OUTLINE DRAWING AND DIMENSIONS



DIMENSIONS mm



### APPROX. DIMENSIONS (mm)

Dim.	Description	CT1	CT1	CT1	CT2	CT2
		(1 deck)	(2 decks)	(4 decks)	(2 decks)	(6 decks)
A	Distance between terminal sets	-	17.5	3 x 17.5	14.5	3 x 14.5 2 x 20.0
B	Mounting plane to first terminal set	18	18	18	14	14
C	Total build-in depth	28	45.5	80.5	42	112
D	PCB width (bottom)	10	10	10	9	9
E	Total height when mounted on a PCB	36.5	36.5	36.5	36	36
F	PCB diameter (click-house for CT2)	32	32	32	32	32

### SPECIFICATIONS

MAXIMUM RATINGS

Note	Parameter	(conditions / comments)	Value	Unit
			<b>CT1 &amp; CT2</b>	
1	Switching capacity	(resistive load)	2V/2A 24V/0.6A 42V/0.4A	AC/DC
1	Power dissipation	(each resistor, CT1 / CT2)	125 / 100	mW
1	Operating ambient temp. range		-25 to +70	deg.C
1	Storage temperature range		-40 to +85	deg.C

### MECHANICAL CHARACTERISTICS

Note	Parameter	(conditions / comments)	Value	Unit
			<b>CT1 &amp; CT2</b>	
	Number of positions		24	
	Indexing angle		15	deg.
	Switching function		Shorting	
	Gold plating, contacts	(hard-gold)	3	um
	Gold plating, wiper	(hard-gold)	8	um
2	Mechanical life		> 25,000	cycles
	Switching torque		1.5	Ncm
	Nut tightening torque		Max. 300	Ncm

### DC ELECTRICAL CHARACTERISTICS

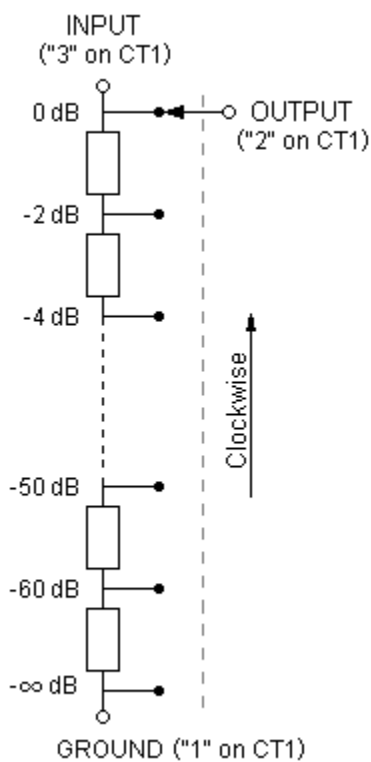
Note	Parameter	(conditions / comments)	Value	Unit
			<b>CT1 &amp; CT2</b>	
	Total resistance range		10,20,50,100,250, 500 (500:CT2 only)	kOhm
3	Total resistance accuracy	(new)	0.1	%
	Attenuation steps	(source output impedance = 0), (load input impedance = infinite)	0,2,4,6,8,10,12,14,16, 18,20,22,24,26,28, 30,32,34,38,42,46,50, 60,infinite	dB
3	Attenuation accuracy	(new)	+/- 0.05	dB
3	Matching accuracy (tracking)	(2 decks)	+/- 0.05	dB
4	Contact resistance	(new)	Max. 0.01	ohm
	Contact capacitance	(adjacent contacts)	1	pF
	Series inductance	(10 kOhm, input to ground)	Max. 0.2	uH

### AC ELECTRICAL CHARACTERISTICS

Note	Parameter	(conditions / comments)	Value	Unit
			<b>CT1 &amp; CT2</b>	
4	-3dB bandwidth	(10k, A = -6dB)	50	MHz
5	Noise voltage	(10k, input to ground pin)	12.8	nV/Hz
6	Total harmonic distortion	(A = -6dB, fo = 1kHz)	Max. 0.0001	%

#### Notes

- 1 Exposure to maximum rating conditions for extended periods of time may affect device reliability
- 2 One cycle is defined as a full rotation from one end stop to the other and return
- 3 Typical values at +25 deg. C ambient temperature. Output (pin 2) unloaded
- 4 Measuring probe input capacitance 1 pF
- 5 Theoretical value for an ideal 10k resistor
- 6 Measured with Panasonic Audio Analyzer VP-7722P



**CT1 / CT2 schematic**

## ORDERING INFORMATION

<u>Part number</u>	<u>Description</u>
CT1-xxxx-1	Mono (1 deck) version of CT1 in 10k, 20k, 50k, 100k or 250kOhm
CT1-xxxx-2	Stereo (2 decks) version of CT1 in 10k, 20k, 50k, 100k or 250kOhm
CT1-xxxx-4	Balanced stereo (4 decks) version of CT1 in 10k, 20k, 50k, 100k or 250kOhm
CT2-xxxx-2	Stereo (2 decks) version of CT2 in 10k, 20k, 50k, 100k, 250k or 500kOhm
CT2-xxxx-6	A/V (6 decks) version of CT2 in 10k, 50k, or 100k ( 20k, 250k and 500kOhm on special request)
CT-knob1	Stainless steel knob for CT1, CT2 and CT3, raw steel look, 25 mm (1") diam.
CT-ext1/S	Shaft extension kit. Version with short extension shaft (200mm = 7.87")
CT-ext1/L	Shaft extension kit. Version with long extension shaft (400mm = 15.75")
CT-conn1	Gold plated connector for CT1 and CT2. Includes 3 pcs 30cm (12") long wires
CT1-mod1/xxxx	Resistor kit for modifying the attenuation curve of CT1 (resistors for 1 deck)

**NOTE. xxxk refers to the resistance 10k, 20k, 50k, 100k, 250k or 500kOhm**