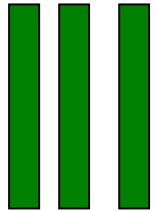


# Electrohm Fixed/Adjustable Tubular Wire wound Power Resistors

## 'T' SERIES RESISTOR



ELECTROHM'S 'T' SERIES WIRE-WOUND RESISTORS ARE AVAILABLE IN 19 SIZES CONSTRUCTED FROM UNGLAZED HIGH TEMPERATURE TUBULAR PORCELAIN FORMERS WOUND WITH A SPECIAL RESISTANCE ALLOY HAVING A MAIN COMPOSITION OF CR/FE.

### OPEN SPACED WOUND

THE RESISTANCE WIRE IS SPACE-WOUND (SPACING IN BETWEEN EACH TURN) THEREBY ELIMINATING VOLTAGE BREAKDOWN COMMONLY ASSOCIATED WITH OTHERWISE CLOSE WOUND RESISTORS. FLEXIBLE MICA BONDED WITH SILICON IS FITTED BETWEEN THE PORCELAIN TUBE AND THE RESISTANCE WIRE PROVIDING A TWO-FOLD EFFECT:

1. TO EMBED THE WIRE UNDER TENSION ONTO THE MICA THUS LIMITING THE POSSIBILITY OF THE 'WINDINGS' BECOMING LOOSENERD UNDER THE EFFECT OF THERMAL EXPANSION.
2. WHEN THE RESISTOR IS POWERED, THE SILICA CONTENT OF THE MICA TENDS TO CURE THUS INCREASING ITS BONDING WITH THE WIRE.

STANDARD RESISTANCE TOLERANCE IS  $\pm 10\%$ .  
WHEN ADJUSTABLE TAPPING BANDS ARE FITTED THE STANDARD TOLERANCE IS  $-5\% + 15\%$



### MOUNTING STYLES

ELECTROHM TUBULAR RESISTORS CAN BE SUPPLIED UNMOUNTED OR EITHER OF TWO MOUNTING STYLES:

1. THROUGH BOLT FITTING
2. 'L' BRACKETS FOR HORIZONTAL OR VERTICAL

'L' SHAPED MOUNTING BRACKETS ARE SUPPLIED IN TWO STYLES:

- i) SPRING FIT PUSH-ON
- ii) FIXED

SPRING FIT PUSH-ON MOUNTING FEET UP TO SIZE T35 ARE SUPPLIED AS LOOSE ITEMS FOR CUSTOMERS TO FIT. FIXED MOUNTING FEET ARE SUPPLIED FOR THE COMPLETE RANGE FACTORY ASSEMBLED.

FOR BOTH STYLES, THE RESISTOR CAN BE ROTATED ALONG IT'S AXIS TO PROVIDE A MORE SUITABLE ANGLE FOR THE CONNECTION OF THE INCOMING WIRES TO THE TERMINALS AS LONG AS THE AIR CLEARANCES BETWEEN THE LIVE AND EARTH PARTS ARE CONSISTENT WITH THE VOLTAGE CRITERIA.

### VITREOUS ENAMELLED

THE VITREOUS ENAMEL COATING APPLIED TO THESE RESISTORS PROTECTS THE WINDING FROM ADVERSE ENVIRONMENTAL CONDITIONS MAKING THEM IDEAL FOR INSTALLATIONS WHERE ATMOSPHERE IS POLLUTED WITH CHEMICAL VAPOURS OR SEA SALT AND SIMILAR. THESE TYPE OF RESISTORS ARE SUPPLIED IN FIXED RESISTANCE ONLY (WITHOUT ADJUSTABLE TAPPING)

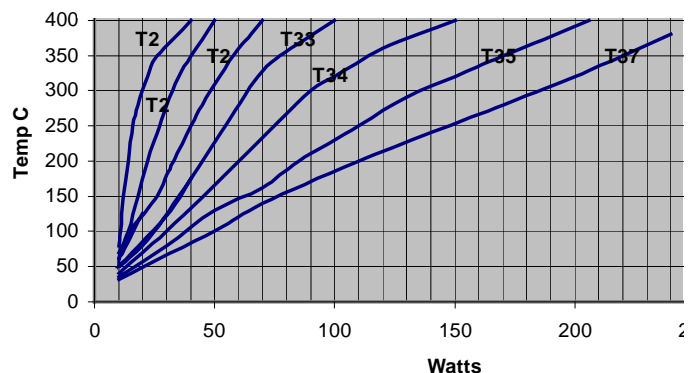
### CEMENT COATED

SILICON CEMENT COATED RESISTORS ARE THE ECONOMY VERSION OF THE VITREOUS ENAMELLED RESISTORS. THE COATING PROTECTS THE WINDING AND ELIMINATE ANY MOVEMENT OF WINDING DUE TO EXPANSION OF WIRE WHEN SUBJECTED TO REPETITIVE HEATING AND COOLING. THESE TYPE OF RESISTORS ARE MORE COMMONLY USED FOR HIGH RESISTANCE VALUES AND CAN BE SUPPLIED WITH ADJUSTABLE TAPPINGS.

### POWER DERATING

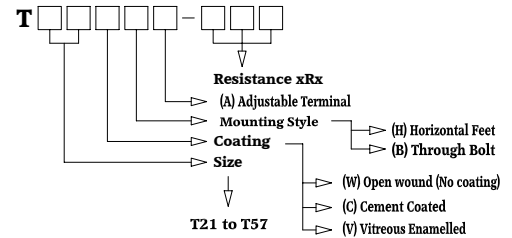
DERATE LINEARLY FROM 100% @ 20°C TO 0% @ 400°C

LOADING GRAPH



SIZE	POWER DISIPATION WATTS @ °C			RESISTANCE RANGE		DIMENSIONS mm										
	280	320	350	Min.	Max.	A	D	C	d	L	E	H1	H2	h1	hi	Φ
T21	18	22	26	0.05	100	33	21	45	9.5	55	21	45	56	44	34	M3.5
T22	30	35	40	0.08	240	51	21	63	9.5	73	39	45	56	44	34	M3.5
T23	33	40	50	0.16	420	70	21	82	9.5	92	58	45	56	44	34	M3.5
T24	40	45	60	0.28	640	102	21	114	9.5	124	90	45	56	44	34	M3.5
T25	80	100	130			165	21	177	13	187	153	45	56	44	34	M3.5
T32	45	50	55	0.11	340	51	34	64	19	78	38	57	70	58	45	M4
T33	58	65	72	0.18	590	70	34	83	19	97	57	57	70	58	45	M4
T34	80	100	130	0.38	880	102	34	115	19	129	89	57	70	58	45	M4
T35	130	150	170	0.56	1450	152	34	165	19	179	139	57	70	58	45	M4
T36	160	180	200	0.67	1840	178	34	191	19	205	165	57	70	58	45	M4
T37	170	200	220	0.85	2200	216	34	229	19	243	203	57	70	58	45	M4
T38	200	250	300	1	2740	267	34	280	19	294	254	57	70	58	45	M4
T39	250	280	330	1.2	3200	305	34	318	19	332	292	57	70	58	45	M4
T42	200	220	250	0.7	1730	152	43	165	29	202	130	66	70	58	45	M6
T43	300	350	380	0.9	2400	203	43	235	29	255	170	66	100	87	54	M6
T44	400	450	480	1.2	3240	254	43	286	29	304	222	66	100	87	54	M6
T55	500	550	600	1.5	4300	254	53	286	38	304	222	76	104	98	64	M6
T56	600	660	700	1.8	5300	305	53	337	38	355	273	76	104	98	64	M6
T57	750	810	865	2.3	6230	356	53	388	38	406	324	76	104	98	64	M6

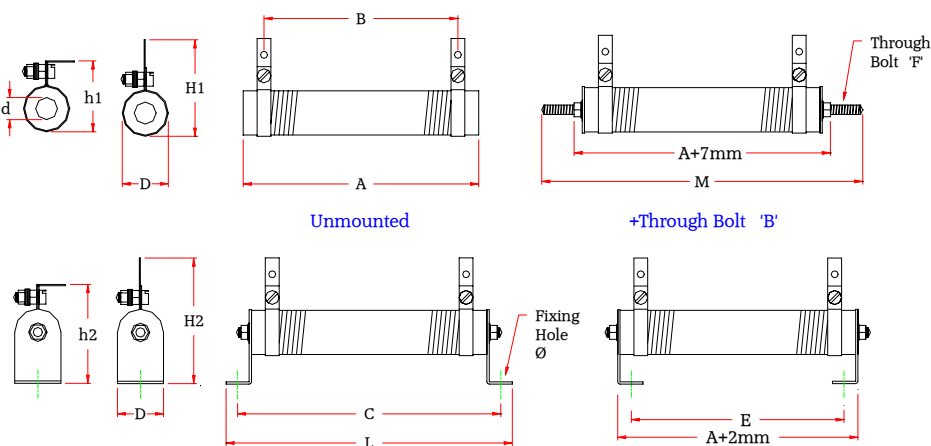
### Part Number Construction



### Examples:

- T57WHA-20R (Size T57 Open Wound + Feet + Adjustable, 20 Ohms)
- T34WB-1K2 (Size T34 Open Wound + Through Bolt, 1200 Ohms)
- T24C-3R3 (Size T24 Cement Coated no Mounting nor Adjustable 3.3 Ohms)

- RESISTANCE TOLERANCE IS  $\pm 10\%$  NOMINAL
- TEMPERATURE RISES/POWER SHOWN ARE APPROXIMATE CARRIED OUT IN LABORATORY CONDITIONS.
- GROUPING OF RESISTORS, HIGH AMBIENT, POLLUTED ATMOSPHERE, RESTRICTION OF FREE AIR SUPPLY WILL INCREASE THE TEMPERATURE FOR A GIVEN POWER RATING.
- RESISTORS CAN BE OVER RATED FOR SHORT TIME OR CYCLIC CONDITIONS. TYPICALLY 10 TIME RATED POWER FOR 5 SECONDS.
- MOUNTING FEET FOR RESISTORS T2X & T3X SERIES ARE PUSH-IN TYPE NORMALLY SUPPLIED AS A SEPARATE ITEM. OTHERS ARE SUPPLIED WITH FITTED FIXED FEET.
- IN CONDITIONS WHERE VIBRATION WOULD BE PRESENT, FIXED FEET ARE RECOMMENDED FOR ALL TYPES.
- HORIZONTAL PUSH-IN PART NUMBERS:  
T2X SERIES: EL00633-1  
T3X SERIES: EL00633-3
- TYPICAL INSULATION LEVELS OF RESISTORS TO EARTH ARE 250 VOLTS WORKING. WHEN HIGHER VOLTAGES ARE REQUIRED, OUR SALES STAFF SHOULD BE ADVISED.



T series resistors can be supplied in enclosures or in groups. Contact our sales staff for more information. Protection class from IP00 to IP65

### SPECIFICATION SUBJECT TO CHANGE WITHOUT NOTICE

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