

# CEMENT WIREWOUND RESISTORS (MIL TYPE LRW) 水泥電阻

## MIL TYPE LRW

Mil type lrw are made by winding the resistance wires on the alkaliess ceramic cores, then coated with noncorrosive, heat-proof and humidity-proof material. Cement type is the one with special flameproof cement stuffed in the ceramic case.

## FEATURES

- Small dimension,excellent stability in high temperature,resistant to humidity and shock.
- Completely insulated character suitable for printed circuit board.
- Precision resistance values with longer life.
- In high resistance values,the winding cores will be replaced by power film cores.
- Super heat dissipation;small linear temperature coefficient.
- Instant overload capability; low noise figures and low annual shift on resistance values.

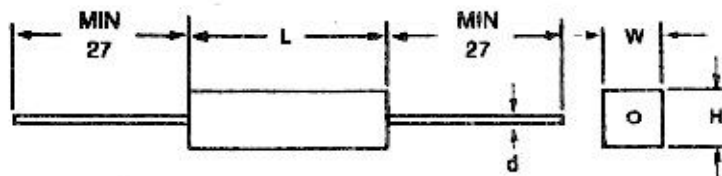
## 水泥電阻

把電阻線繞在無鹼性耐熱瓷件上，外面加上耐熱、耐濕、及耐腐蝕之材料保護固定而成。水泥型電阻是把繞線電阻體放入方形瓷器框內，用特殊不燃性耐熱水泥充填密封而成。

## 特性

- 體積小、耐震、耐濕及良好散熱，低價格
- 全絕緣，適用於印刷電路板
- 瓷棒上繞線然後點焊，製出精確電阻值
- 高電阻值採用金屬氧化膜體代替繞線方式
- 耐熱性優，電阻溫度係數小，呈直線變化
- 耐短時間超負載；低雜音，阻值經年無變化

### SQP

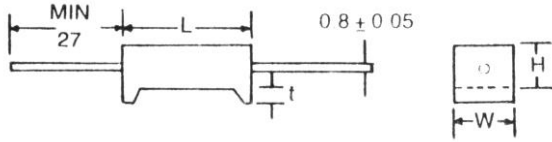


TYPE	DIMENSIONS(mm)				RESISTANCE RANGE (Ω)		MAX WORKING VOLTAGE
	L±1	W±1	H±1	d±1	WIRE WOUND	MO	
<b>SQP</b>							
<b>2W</b>	18.0	7.0	7.0	0.65	0.01Ω~ 50Ω	50~20KΩ	150V
<b>3W</b>	22.0	8.0	8.0	0.8	0.01Ω~ 50Ω	50~33KΩ	350V
<b>5W</b>	22.0	9.5	9.0	0.8	0.01Ω~ 50Ω	50~50KΩ	350V
<b>7W</b>	35.0	9.5	9.0	0.8	0.01Ω~ 500Ω	500~50KΩ	500V
<b>10W</b>	48.0	9.5	9.0	0.8	0.01Ω~ 500Ω	500~50KΩ	750V
<b>15W</b>	48.0	12.5	12.0	0.8	0.01Ω~ 500Ω	500~150KΩ	1000V
<b>20W</b>	60.0	14.0	13.0	0.8	0.01Ω~ 500Ω	500~150KΩ	1000V
<b>25W</b>	60.0	14.0	13.0	0.8	0.01Ω~ 500Ω	500~150KΩ	1000V

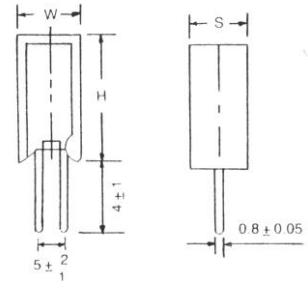
※ NOTE:Non-inductive type up to 27Ω

※ 30W,40W on request

## SQT



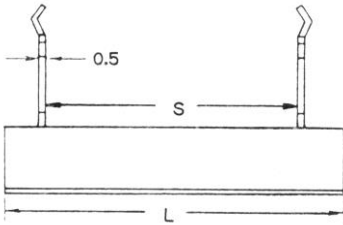
## SQM



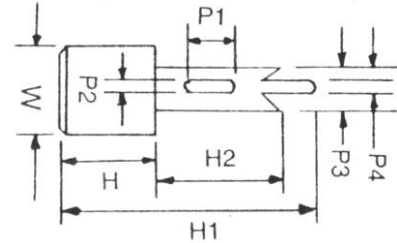
TYPE	DIMENSION(mm)				RESISTANCE RANGE (Ω)	
	W ± 1	H ± 1	L ± 1.5	t ± 0.5	WIRE WOUND	MO
<b>5W</b>	10	9	22	1.5	0.1~50Ω	50Ω~50KΩ
<b>7W</b>	10	9	35	3.0	0.1~500Ω	500Ω~47KΩ
<b>10W</b>	10	9	48	3.0	0.1~500Ω	500Ω~47KΩ

TYPE	DIMENSION(mm)			RESISTANCE RANGE (Ω)	
	H ± 1.5	W ± 1	S ± 1	WIRE WOUND	MO
<b>3W</b>	25	12	9	0.1~50Ω	50~50KΩ
<b>5W</b>	25	13	9	0.1~50Ω	50~50KΩ
<b>7W</b>	39	13	9	0.1~500Ω	500~47KΩ
<b>10W</b>	51	13	9	0.1~500Ω	500~47KΩ

※NOTE: values lower than 0.1 OHM and higher than 47K OHM are available upon request



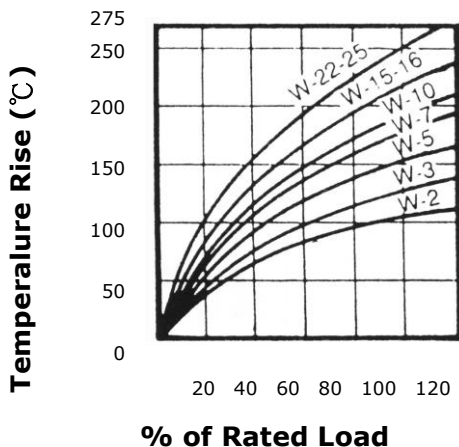
## SQZ



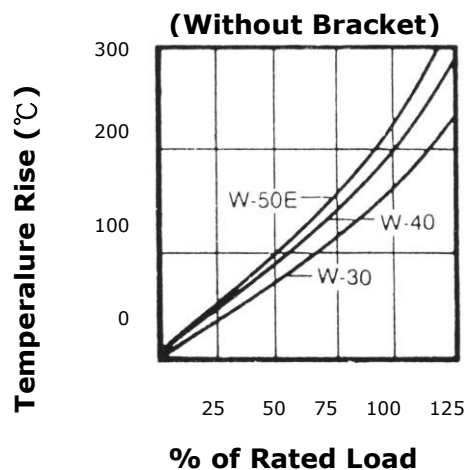
TYPE	RESISTANCE RANGE(Ω)		DIMENSIONS (mm)									
	WIRE WOUND	MO	L ± 1.5	H ± 1	W ± 1	S ± 1.5	H1 ± 1	H2 ± 1	P1 ± 0.2	P2 ± 0.2	P3 ± 0.2	P4 ± 0.2
<b>5W</b>	0.1Ω-100Ω	100Ω-50KΩ	27.0	9.5	9.5	15.0	24.0	9.5	4.0	2.0	5.0	1.4
<b>7W</b>	0.1Ω-500Ω	500Ω-50KΩ	35.0	9.5	9.5	22.5	24.0	9.5	4.0	2.0	5.0	1.4
<b>10W</b>	0.2Ω-500Ω	500Ω-50KΩ	48.0	9.5	9.5	35.0	24.0	9.5	4.0	2.0	5.0	1.4
<b>15W</b>	0.5Ω-500Ω	500Ω-150KΩ	48.0	12.5	12.5	32.5	34.5	15.0	7.0	6.0	10.0	2.7
<b>20W</b>	1Ω-50Ω	500Ω-150KΩ	63.5	12.5	12.5	45.0	34.5	15.0	7.0	6.0	10.0	2.7
<b>25W</b>	1Ω-50Ω	500Ω-150KΩ	63.5	12.5	12.5	45.0	34.5	15.0	7.0	6.0	10.0	2.7

※NOTE: Resistance up to 50 Ω maximum for Non-Inductive type

TEMPERATURE RISE AT 25 °C

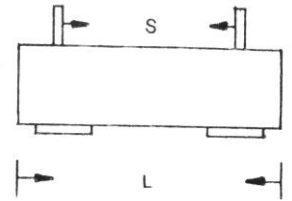
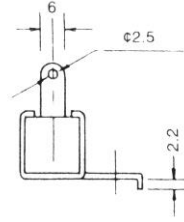
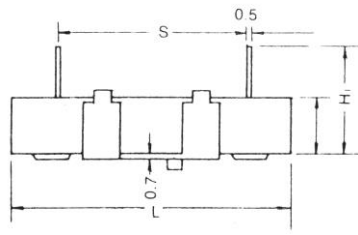
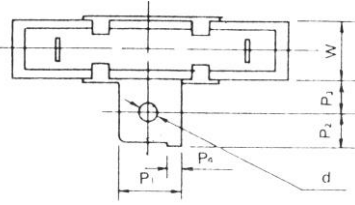


TEMPERATURE RISE AT 25°C



## SQHG

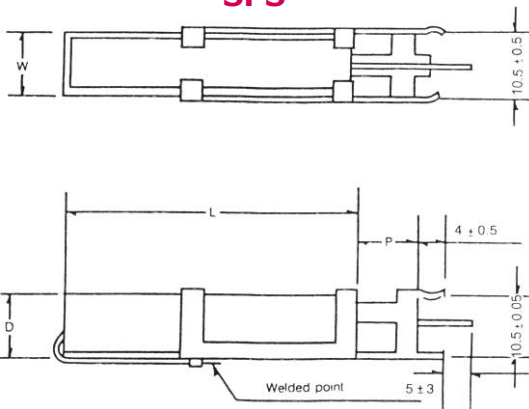
## SQH



TYPE	RESISTANCE RANGE( $\Omega$ )		DIMENSIONS(mm)									
	WIRE WOUND	MO	L $\pm$ 2	H $\pm$ 1	W $\pm$ 1	S $\pm$ 1	H1 $\pm$ 1	P1 $\pm$ 1	P2 $\pm$ 1	P3 $\pm$ 1	P4 $\pm$ 1	d $\pm$ 0.05
10W	0.5 $\Omega$ -500 $\Omega$	500 $\Omega$ -50K $\Omega$	48.0	10.0	10.0	33.0	21.0	12.0	6.0	8.0	3.0	4.0
15W	1 $\Omega$ -500 $\Omega$	500 $\Omega$ -150K $\Omega$	48.0	12.0	12.0	33.0	21.0	12.0	6.0	8.0	3.0	4.0
20W	1 $\Omega$ -500 $\Omega$	500 $\Omega$ -150K $\Omega$	63.7	12.0	12.0	42.0	24.0	12.0	6.0	8.0	3.0	4.0
30W	1 $\Omega$ -500 $\Omega$		75.0	19.0	18.0	56.0	30.0	17.0	8.0	10.0	3.0	4.0
40W	1 $\Omega$ -500 $\Omega$		90.0	19.0	18.0	68.0	30.0	17.0	8.0	10.0	3.0	4.0
50W	1 $\Omega$ -500 $\Omega$		90.0	19.0	18.0	68.0	30.0	17.0	8.0	10.0	3.0	4.0

※NOTE: Resistance up to 15 $\Omega$  maximum for Non-Inductive type

## SPS



TYPE	DIMENSION(mm)				RESISTANCE RANGE ( $\Omega$ )	
	W $\pm$ 1	D $\pm$ 1	L $\pm$ 1	P $\pm$ 1	Wirewound	MO
5W	10	9	22	5	0.1 $\Omega$ ~50 $\Omega$	56 $\Omega$ ~50K $\Omega$
7W	10	9	35	10	0.1 $\Omega$ ~300 $\Omega$	300 $\Omega$ ~50K $\Omega$
10W	10	9	48	10	0.1 $\Omega$ ~500 $\Omega$	500 $\Omega$ ~50K $\Omega$
15W	12	13	48	10	0.1 $\Omega$ ~1K $\Omega$	1K $\Omega$ ~50K $\Omega$
20W	12	13	60	10	0.1 $\Omega$ ~1K $\Omega$	1K $\Omega$ ~50K $\Omega$

## ELECTRICAL PERFORMANCE

TEST ITEMS	CONDITION	SPEC.
Resistance Temp. Coeff.	-55 $^{\circ}$ C~155 $^{\circ}$ C	$\pm$ 300ppm/ $^{\circ}$ C
Short Time Overload	10 times of rated wattage for 5 sec	$\pm$ 2%
Rated Load	Rated wattage for 30 min	$\pm$ 1%
Voltage Withstanding	1,000V AC 1min	no change
Insulation Resistance	500V megger	1,000M $\Omega$
Load Life	70 $^{\circ}$ C on-off cycle 1000hrs	$\pm$ 5%
Moisture-proof Load Life	40 $^{\circ}$ C 95%RH on-off cycle 1000hrs	$\pm$ 5%
Incombustibility	16 times of rated wattage for 5 min	not flamed