

Operating temperature range

- Wire wound : -55°C ~ + 155°C
- Metal oxide : -30°C ~ + 155°C

■ INTRODUCTION

Cement-Box type resistors offer a choice of resistive elements inside a white flameproof cement box. In addition to being flameproof, these resistors are also non-corrosive and humidity proof. The available resistive elements are:

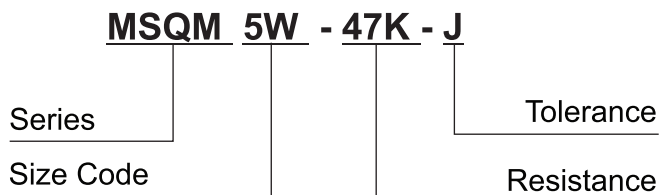
- SQM**____ - Standard wire wound, Ceramic Core (all welded construction)
- MSQM**____ - Metal oxide core (low inductance, high resistance)
- NSQM**____ - Non-inductively wound, Ceramic Core (Ayrton-Perry Method, all welded construction)

■ DIMENSIONS (mm) & RESISTANCE RANGE

Series	Dimension (mm)				Resistance Range		Max. Working Voltage (V)
					Wire Wound	Metal Oxide	
	W ± 1	T ± 1	H ± 1	P	SQM_	MSQM_	
SQM2W	11.5	7.5	20	5	0.01Ω ~ 50Ω	48Ω ~ 100KΩ	350V
SQM3W	12	8.5	25	5	0.01Ω ~ 100Ω	50Ω ~ 100KΩ	500V
SQM5W	13	9	25	5	0.01Ω ~ 180Ω	50Ω ~ 100KΩ	750V
SQM7W	13	9	39	5	0.01Ω ~ 470Ω	100Ω ~ 47KΩ	750V
SQM10W	13	9	51	5	0.01Ω ~ 680Ω	100Ω ~ 47KΩ	750V
SQMX10W	16	12	35	7.5	0.01Ω ~ 470Ω	100Ω ~ 47KΩ	750V

1. Resistance Range for standard resistance, below or over this resistance range on request.
2. Non-inductive type up 50Ω only

■ PART NUMBER EXAMPLE



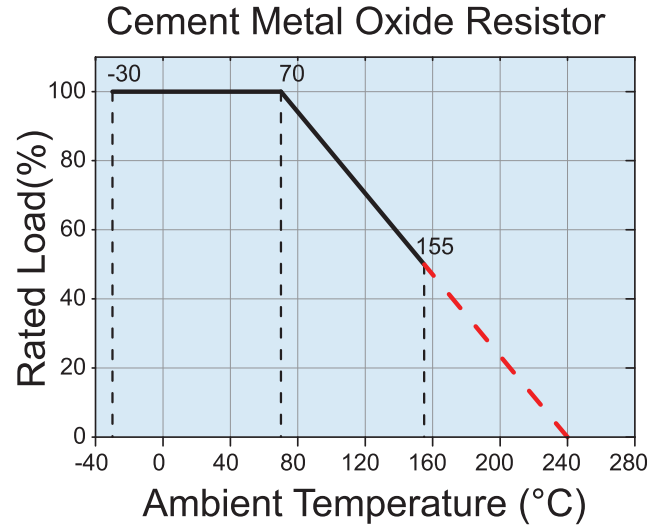
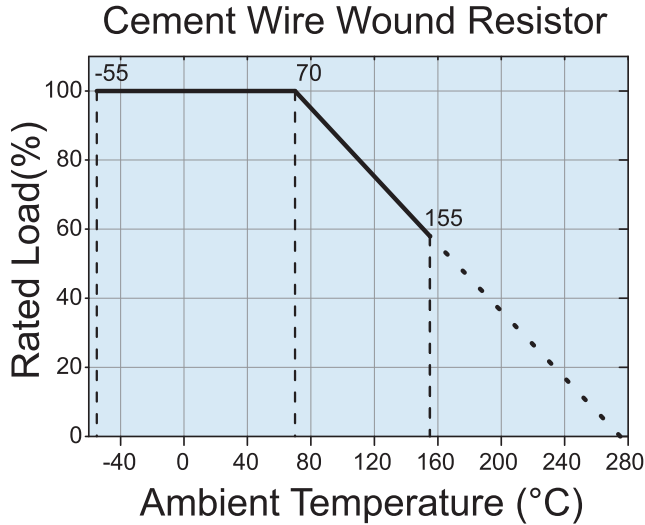
■ RESISTANCE RANGE

Ohms	0.22	2.0	22	220	2.2K	22K
Code	0R22	2R0	22R	220R	2K2	22K

■ TOLERANCE other tolerance on request

Tolerance	± 1%	± 2%	± 5%	± 10%
Code	F	G	J	K

POWER DERATING CURVE



ELECTRICAL CHARACTERISTICS

Test Items	Method	Wire Wound	Metal Oxide
Short Time Overload	JIS-C-5202 5.5 10 times RCWV for 5 seconds	±(2%+0.05Ω)	±(0.25%+0.05Ω)
Temperature Coefficient	Resistance value at room temperature and room temperature +100°C	±400ppm	±200ppm
Load Life	JIS-C-5202 7.10 70°C at RCWV for 1000hrs (1.5hrs on; 0.5hrs off)	±(5%+0.05Ω)	±(1.5%+0.05Ω)
Load Life in Humidity	JIS-C-5202 7.9 40 ± 2°C, 90~95% RH at RCWV for 1000 hrs (1.5hrs on ; 0.5hr off)	±(5%+0.05Ω)	±(1.5%+0.05Ω)
Solder Ability	JIS-C-5202 6.5 235 ± 5°C for 2 ± 0.5 seconds	95% min. Coverage	95% min. Coverage
Pulse Overload	JIS-C-5202 5.8	Max. 1500V	Max. 1500V
	4 times RCWV for 10,000 cycles (1 sec. on; 25 secs. Off)	±(1%+0.05Ω)	±(1%+0.05Ω)
Dielectric Withstanding Voltage		Max. 1000V	Max. 1000V

$$\text{Rated continuous Working Voltage (RCWV)} = \sqrt{\text{POWER.RATING.} * \text{RESISTANCE.VALUE}}$$