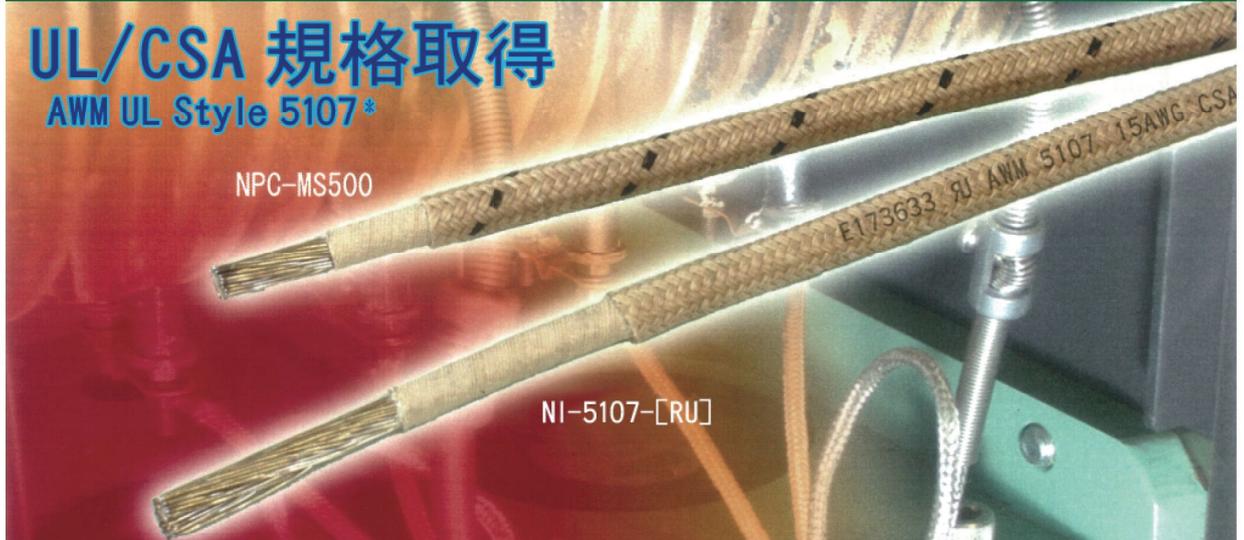


## 超耐熱電線

NI-MS500  
NPC-MS500  
NI-5107-[RU]  
NPC-5107-[RU]

UL/CSA 規格取得  
AWM UL Style 5107\*

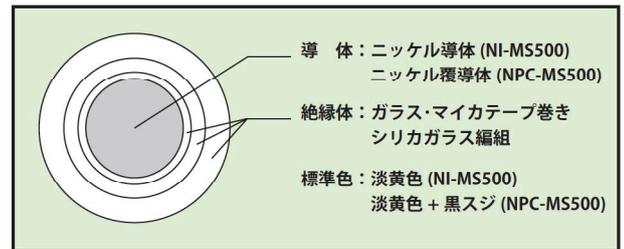


The maximum operating temperature is 500°C !  
The rated voltage is 600V !

### Features

Silica-glass-yarn braided super heat-resistant wire, MS500 series products, is made of various highly heat-resistant and corrosion-resistant conductors wrapped in glass-mica tape coated with silica-glass fiber.

High-quality coating, which is light yellow and excels in insulating characteristics, is applied to the insulation of MS500.



### Applications

MS500 series products are used for applications such as the lead wire in an electric heater, which must be highly resistant to heat as well as corrosion, and wire in high-temperature equipment.

品名	公称断面積 mm <sup>2</sup> (AWG)	導 体		テープ厚さ mm	編組厚さ mm	仕上外径 mm	導体抵抗 (23℃・標準) Ω/km	絶縁抵抗 (20℃・最小) MΩ・km	試験電圧 (AC 1分)	1条の最大 長さ m	概算質量 kg/km
		構成 本/mm	導体外径 mm								
NI-MS500	0.75(19)	14/0.26	1.1	0.85	0.4	3.6	128	10	2,000	100	25
	1.25(17)	24/0.26	1.5	0.85	0.4	4.0	77.0	10	2,000	100	32
	2(15)	37/0.26	1.8	0.85	0.4	4.3	49.8	10	2,000	100	35
	3.5(12)	66/0.26	2.4	0.85	0.4	4.9	27.9	10	2,000	100	50
	5.5(10)	35/0.45	3.1	1.0	0.45	6.0	17.6	10	2,000	100	80
	8(8)	50/0.45	3.7	1.2	0.45	7.0	12.3	10	2,000	50	105
	14(6)	88/0.45	4.9	1.2	0.8	8.9	7.00	10	2,000	50	155
22(4)	7/20/0.45	7.0	1.2	0.8	11.0	4.49	10	2,000	50	250	

品名	公称断面積 mm <sup>2</sup> (AWG)	導 体		テープ厚さ mm	編組厚さ mm	仕上外径 mm	導体抵抗 (23℃・標準) Ω/km	絶縁抵抗 (20℃・最小) MΩ・km	試験電圧 (AC 1分)	1条の最大 長さ m	概算質量 kg/km
		構成 本/mm	導体外径 mm								
NPC-MS500	0.75(19)	14/0.26	1.1	0.85	0.4	3.6	29.7	10	2,000	100	25
	1.25(17)	24/0.26	1.5	0.85	0.4	4.0	17.8	10	2,000	100	32
	2(15)	37/0.26	1.8	0.85	0.4	4.3	11.5	10	2,000	100	35
	3.5(12)	66/0.26	2.6	0.85	0.4	5.1	6.46	10	2,000	100	50
	5.5(10)	35/0.45	3.1	1.0	0.45	6.0	4.07	10	2,000	100	80
	8(8)	50/0.45	3.7	1.2	0.45	7.0	2.85	10	2,000	50	105
	14(6)	88/0.45	5.5	1.2	0.8	9.5	1.62	10	2,000	50	155
22(4)	7/20/0.45	7.0	1.2	0.8	11.0	1.04	10	2,000	50	250	

※ This products have hygroscopicity, their insulating characteristics differ depending on the atmosphere in which each of them is routed. Therefore, avoid using this products in humid or wet places.  
Please feel free to contact our Sales Department for custom-made products not listed above.

## 《List of allowable current values》

品名	サイズ	周辺温度													
		140℃	160℃	180℃	200℃	220℃	240℃	260℃	280℃	300℃	320℃	340℃	350℃	360℃	
NI-MS500	0.75SQ	24.3	23.9	23.4	23.0	22.5	21.9	21.3	20.7	19.9	19.2	18.3	17.8	17.3	
	1.25SQ	25.8	25.4	24.9	24.4	23.9	23.3	22.7	22.0	21.2	20.4	19.5	19.0	18.5	
	2SQ	33.3	32.8	32.2	31.5	30.9	30.1	29.3	28.4	27.5	26.4	25.2	24.6	23.9	
	3.5SQ	47.6	46.9	46.0	45.2	44.2	43.1	42.0	40.8	39.4	37.9	36.2	35.3	34.3	
	5.5SQ	64.4	63.4	62.3	61.1	59.9	58.5	56.9	55.3	53.4	51.4	49.2	47.9	46.6	
	8SQ	81.3	80.1	78.8	77.3	75.7	73.9	72.0	69.9	67.6	65.1	62.2	60.7	59.0	
	14SQ	114	112	110	108	106	104	101	98.5	95.3	91.7	87.7	85.4	83.1	
	22SQ	160	157	155	152	149	146	142	138	133	128	123	119	116	
	サイズ	周辺温度													
		370℃	380℃	390℃	400℃	410℃	420℃	430℃	440℃	450℃	460℃	470℃	480℃	490℃	
		0.75SQ	16.8	16.2	15.7	15.0	14.3	13.6	12.8	11.9	10.9	9.8	8.5	7.0	4.9
		1.25SQ	17.9	17.3	16.7	16.0	15.3	14.5	13.7	12.7	11.7	10.5	9.1	7.5	5.3
		2SQ	23.2	22.4	21.6	20.7	19.8	18.8	17.7	16.5	15.1	13.6	11.8	9.7	6.8
		3.5SQ	33.3	32.2	31.0	29.8	28.5	27.0	25.4	23.7	21.7	19.5	17.0	14.0	9.8
5.5SQ		45.2	43.7	42.2	40.5	38.6	36.6	34.5	32.2	29.5	26.6	23.1	18.9	13.5	
8SQ		57.2	55.4	53.4	51.2	49.0	46.5	43.8	40.8	37.4	33.6	29.4	24.0	17.1	
14SQ		80.6	78.0	75.2	72.2	69.0	65.4	61.5	57.4	52.7	47.5	41.3	34.0	24.0	
22SQ		113	109	105	101	96.9	91.9	86.5	80.7	74.1	66.7	58.0	47.6	33.6	

品名	サイズ	周辺温度													
		140℃	160℃	180℃	200℃	220℃	240℃	260℃	280℃	300℃	320℃	340℃	350℃	360℃	
NPC-MS500	0.75SQ	39.5	38.9	38.1	37.4	36.6	35.6	34.7	33.6	32.4	31.2	29.8	29.0	28.2	
	1.25SQ	55.0	54.0	53.1	52.0	50.9	49.7	48.3	46.9	45.2	43.5	41.6	40.5	39.4	
	2SQ	79.7	78.4	77.0	75.5	73.9	72.1	70.2	68.1	65.8	63.3	60.4	58.9	57.3	
	3.5SQ	116	114	112	110	107	105	102	99.6	96.2	92.6	88.5	86.3	83.9	
	5.5SQ	154	151	149	146	143	139	136	132	127	122	117	114	111	
	8SQ	194	191	188	184	180	176	172	167	161	155	148	145	141	
	14SQ	273	269	265	260	254	249	242	235	227	219	209	204	198	
	22SQ	383	377	371	364	357	349	340	330	319	307	294	286	278	
	サイズ	周辺温度													
		370℃	380℃	390℃	400℃	410℃	420℃	430℃	440℃	450℃	460℃	470℃	480℃	490℃	
		0.75SQ	27.3	26.4	25.5	24.4	23.3	22.1	20.8	19.2	17.8	16.0	13.9	11.4	8.0
		1.25SQ	38.2	36.9	35.6	34.1	32.6	30.9	29.1	27.1	24.8	22.4	19.5	15.9	11.2
		2SQ	55.5	53.7	51.8	49.7	47.4	45.0	42.4	39.5	36.2	32.6	28.3	23.2	16.4
		3.5SQ	81.4	78.7	75.8	72.8	69.6	65.9	62.1	57.9	53.1	47.9	41.6	34.1	24.1
5.5SQ		108	104	100	96.5	92.5	87.7	82.6	77.1	70.6	63.5	55.3	45.3	32.2	
8SQ		136	132	127	122	117	111	104	97.4	89.5	80.4	70.2	57.5	40.9	
14SQ		192	186	180	172	165	156	147	137	126	113	98.7	81.2	57.4	
22SQ		270	262	252	242	231	219	206	193	177	159	138	113	80.4	

The above allowable current values are the values calculated based on the assumption that the products are used in a normal open atmosphere. Please use this series products with a safety current that ensures safe operation.

The above allowable current values of this series products are the reference values calculated based on our demonstration experiments.

芯数 (本)	2 ~ 3	4	5 ~ 6	7 ~ 15	16 ~ 40
電流減少係数	0.7	0.63	0.56	0.49	0.43

※上記製品を電線管等に収めたり複数束ねて使用する場合は許容電流値に電流減少係数を掛けた値を適用して下さい。

### 許容電流値 比較表

品名	導体種類	サイズ	周辺温度					
			200℃	240℃	280℃	320℃	350℃	380℃
TN430	ニッケル覆銅線	2SQ	57.9	53.1	47.1	39.5	31.7	20.2
		5.5SQ	112	103	92	77.2	62.1	39.6
NPC-MS500	ニッケル覆銅線	2SQ	75.5	72.1	68.1	63.3	58.9	53.7
		5.5SQ	146	139	132	122	114	104
TM450	ニッケル線	2SQ	23.6	21.6	19.2	16.1	12.9	8.2
		5.5SQ	45.8	42.1	37.5	31.4	25.3	16.1
NI-MS500	ニッケル線	2SQ	31.5	30.1	28.4	26.4	24.6	22.4
		5.5SQ	61.1	58.5	55.3	51.4	47.9	43.7

## 二宮電線工業株式会社 Ninomiya Electric Wire Co.,Ltd

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