

# YESO Non-Flammable Wire-Wound Power Resistors

## DR Resistor Series



A tubular ceramic resistor has two terminals, and is wound with copper wire or chromium alloy wire to provide the resistance and then coated with a high temperature, non-flammable resin. After the semi-finished resistor is cool and dry, insulation is applied through a high-temperature process and the mounts are attached. Since the winding is excellent, many taps can be added, impedance is low and the shape can be altered to produce many types of resistors. These resistors are suitable for educational modeling applications, load testing, industrial machinery, electric power distribution, instruments, automation control installations, etc. For custom specifications, please contact us to discuss the details.

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### DDR TYPE 10W-1300W

Tubular ceramic, fixed-type wire-wound resistor.

POWER RATING	DIMENSIONS 寸法 (m/m)															RESISTANCE RANGE ( $\Omega$ )
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
10W	45	12	6	15	4	54	2	9	3	62	28	1.0	6	10	1-3K $\Omega$	
20W	60	17	8	22	5	78	2	12	4	90	36	1.0	6	16	1-7K $\Omega$	
30W	80	17	8	22	5	100	2	12	4	112	36	1.0	6	16	1-10K $\Omega$	
40W	110	17	8	22	5	128	2	12	4	140	36	1.0	6	16	1-13K $\Omega$	
50W	110	25	16	30	8	150	5	18	6	166	58	1.2	6	27	0.1-25K $\Omega$	
60W	90	28	18	32	8	130	5	19	6	146	60	1.2	6	27	0.1-30K $\Omega$	
80W	110	28	18	32	8	150	5	19	6	166	60	1.2	6	27	0.1-40K $\Omega$	
100W	140	28	18	32	8	180	5	19	6	196	60	1.2	6	27	0.1-50K $\Omega$	
120W	160	28	18	32	8	200	5	19	6	216	60	1.2	6	27	0.1-60K $\Omega$	
150W	195	28	18	32	8	235	5	19	6	251	60	1.2	6	27	0.3-75K $\Omega$	
160W	185	35	24	36	10	225	5	19	8	245	76	1.6	6	34	0.3-80K $\Omega$	
200W	210	35	24	36	10	250	5	19	8	274	76	1.6	6	34	0.3-100K $\Omega$	
250W	210	40	25	38	12	250	5	20	8	274	78	1.6	6	34	0.5-125K $\Omega$	
300W	260	40	25	38	12	300	5	20	8	320	78	1.6	6	34	0.5-150K $\Omega$	
400W	330	40	25	38	12	370	5	20	8	395	78	1.6	6	34	0.5-200K $\Omega$	
500W	330	50	35	50	12	380	6	25	9	400	100	1.6	8	40	0.5-250K $\Omega$	
600W	400	50	35	50	12	450	6	25	9	470	100	1.6	8	40	0.8-300K $\Omega$	
700W	460	50	35	50	12	510	6	25	9	530	100	1.6	8	40	0.8-350K $\Omega$	
800W	460	60	40	55	15	515	6	30	10	535	110	1.6	10	50	0.8-400K $\Omega$	
1000W	540	60	40	55	15	595	6	30	10	615	110	1.6	10	50	1-500K $\Omega$	
1300W	650	65	42	62	15	702	6	30	10	722	115	1.6	10	50	1-750K $\Omega$	

### DCR TYPE 100W-250W

Tubular ceramic, C-shaped wire-wound resistor.

POWER RATING	DIMENSIONS 寸法 (m/m)				RESISTANCE RANGE ( $\Omega$ )
	A	B	C	D	
100W	28	140	165	30	20-20K $\Omega$
120W	28	165	190	30	25-25K $\Omega$
150W	28	195	220	30	30-30K $\Omega$
200W	28	254	279	30	35-35K $\Omega$
250W	28	300	325	30	40-40K $\Omega$

### HOW TO ORDER

Product type.	Rated power.	Resistance value. ( $\Omega$ )	Resistance tolerance.	Assembly method.	Product status.
DDR type DCR type	10W~1300W 100W~250W	( $\Omega$ ) Indicates resistance value in units of ohms.	J = $\pm 5\%$ K = $\pm 10\%$	2-8 part assembly G- Horizontal mount N- No mounts. Z- Vertical mount.	A~ Special order. O~ General specification. Z~ Other.

# YESO Non-Flammable Wire-Wound Power Resistors

## DNR TYPE 50W-1300W

Tubular ceramic, low inductive wire-wound resistor.

POWER RATING	DIMENSIONS 寸法 (m/m)															RESISTANCE RANGE ( $\Omega$ )
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
50W	110	25	16	30	8	150	5	18	6	166	58	1.2	6	27	0.1-10K $\Omega$	
60W	90	28	18	32	8	130	5	19	6	146	60	1.2	6	27	0.1-12K $\Omega$	
80W	110	28	18	32	8	150	5	19	6	166	60	1.2	6	27	0.1-16K $\Omega$	
100W	140	28	18	32	8	180	5	19	6	196	60	1.2	6	27	0.1-20K $\Omega$	
120W	160	28	18	32	8	200	5	19	6	216	60	1.2	6	27	0.1-24K $\Omega$	
150W	195	28	18	32	8	235	5	19	6	251	60	1.2	6	27	0.3-30K $\Omega$	
160W	185	35	24	36	10	225	5	19	8	245	76	1.6	6	34	0.3-35K $\Omega$	
200W	210	35	24	36	10	250	5	19	8	274	76	1.6	6	34	0.3-40K $\Omega$	
250W	210	40	25	38	12	250	5	20	8	274	78	1.6	6	34	0.5-50K $\Omega$	
300W	260	40	25	38	12	300	5	20	8	320	78	1.6	6	34	0.5-60K $\Omega$	
400W	330	40	25	38	12	370	5	20	8	395	78	1.6	6	34	0.5-80K $\Omega$	
500W	330	50	35	50	12	380	6	25	9	400	100	1.6	8	40	0.5-100K $\Omega$	
600W	400	50	35	50	12	450	6	25	9	470	100	1.6	8	40	0.8-120K $\Omega$	
700W	460	50	35	50	12	510	6	25	9	530	100	1.6	8	40	0.8-140K $\Omega$	
800W	460	60	40	55	15	515	6	30	10	535	110	1.6	10	50	0.8-160K $\Omega$	
1000W	540	60	40	55	15	595	6	30	10	615	110	1.6	10	50	1-200K $\Omega$	
1300W	650	65	42	62	15	702	6	30	10	722	115	1.6	10	50	1-260K $\Omega$	

## DSR TYPE 20W-1300W

Tubular ceramic, variable wire-wound resistor.

POWER RATING	DIMENSIONS 寸法 (m/m)															RESISTANCE RANGE ( $\Omega$ )
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
20W	60	17	8	22	5	78	2	12	4	90	36	1.0	6	16	1-1K $\Omega$	
30W	80	17	8	22	5	100	2	12	4	112	36	1.0	6	16	1-1.5K $\Omega$	
40W	110	17	8	22	5	128	2	12	4	140	36	1.0	6	16	1-2K $\Omega$	
50W	110	25	16	30	8	150	5	18	6	166	58	1.2	6	27	0.1-5K $\Omega$	
60W	90	28	18	32	8	130	5	19	6	146	60	1.2	6	27	0.1-6K $\Omega$	
80W	110	28	18	32	8	150	5	19	6	166	60	1.2	6	27	0.1-8K $\Omega$	
100W	140	28	18	32	8	180	5	19	6	196	60	1.2	6	27	0.1-10K $\Omega$	
120W	160	28	18	32	8	200	5	19	6	216	60	1.2	6	27	0.1-12K $\Omega$	
150W	195	28	18	32	8	235	5	19	6	251	60	1.2	6	27	0.3-15K $\Omega$	
160W	185	35	24	36	10	225	5	19	8	245	76	1.6	6	34	0.3-16K $\Omega$	
200W	210	35	24	36	10	250	5	19	8	274	76	1.6	6	34	0.3-20K $\Omega$	
250W	210	40	25	38	12	250	5	20	8	274	78	1.6	6	34	0.5-25K $\Omega$	
300W	260	40	25	38	12	300	5	20	8	320	78	1.6	6	34	0.5-30K $\Omega$	
400W	330	40	25	38	12	370	5	20	8	395	78	1.6	6	34	0.5-40K $\Omega$	
500W	330	50	35	50	12	380	6	25	9	400	100	1.6	8	40	0.5-50K $\Omega$	
600W	400	50	35	50	12	450	6	25	9	470	100	1.6	8	40	0.8-60K $\Omega$	
700W	460	50	35	50	12	510	6	25	9	530	100	1.6	8	40	0.8-70K $\Omega$	
800W	460	60	40	55	15	515	6	30	10	535	110	1.6	10	50	0.8-80K $\Omega$	
1000W	540	60	40	55	15	595	6	30	10	615	110	1.6	10	50	1-100K $\Omega$	
1300W	650	65	42	62	15	702	6	30	10	722	115	1.6	10	50	1-130K $\Omega$	

## HOW TO ORDER

<u>DSR</u>	<u>400W</u>	<u>100<math>\Omega</math></u>	<u>K</u>	<u>G</u>	<u>O</u>
↓	↓	↓	↓	↓	↓
Product type.	Rated power.	Resistance value. ( $\Omega$ )	Resistance tolerance.	Assembly method.	Product status.
DNR type DSR type	50W~1300W 20W~1300W	( $\Omega$ )Indicates resistance value in units of ohms.	J = $\pm 5\%$ K = $\pm 10\%$	2-8 part assembly G- Horizontal mount N- No mounts. Z- Vertical mount.	A~Special order. O~General specification. Z~Other.

# YESO Non-Flammable Wire-Wound Power Resistors

## PERFORMANCE SPECIFICATIONS

項目 TEST ITEM	試驗方法 TEST METHODS	性能 CHARACTERISTICS	Remark
電阻值容許誤差 Resistance tolerance	JIS-C-5202 5-1	Resistance Nominal Tolerance 1≤R 1>R ±5% (J) ±10% (K)	
電阻溫度特性 Temperature coefficient	JIS-C-5202 5-2	±200PPM/°C MAX	ETC
定額負荷 Power rating load	JIS-C-5202 5-4	Δ R/R ≤ ± (0.5% + 0.1Ω) Surface temperature up 350°C MAX	ETC
短時間過負荷 Short-term overload	JIS-C-5202 5-5 1000% rated power 5 seconds	Free of appearance or structural irregularity Δ R/R ≤ ± (2% + 0.1Ω)	ETC
絕緣抵抗 Insulation resistance	JIS-C-5202 5-6 500VDC	100MΩ min	ETC
耐電壓 Dielectric withstanding voltage	JIS-C-5202 5-7 1000VDC 1 minute Between terminal and anchor stand	Free of appearance or structural irregularity Δ R/R ≤ ± (0.1% + 0.05Ω)	ETC
端子強度 Terminal strength	JIS-C-5202 6-1 8kg 30 seconds	Free of appearance or structural irregularity	ETC
電阻器強度 Resistor strength	JIS-C-5202 6-2 30kg 30 seconds	Free of appearance or structural irregularity	ETC
耐振性 Vibration	JIS-C-5202 6-3 1.5m/m 10 ~ 50 ~ 10 Hz/min X-Y-Z 2 hours each	Free of appearance or structural irregularity Surface coating crack Δ R/R ≤ ± (1% + 0.05Ω)	ETC
熱衝擊 Thermal shock	JIS-C-5202 7-3 Room temp 30 minutes ON-55°C 15 minutes OFF	Resistor free of structural irregularity Δ R/R ≤ ± (2% + 0.1Ω)	ETC
耐濕性 Humidity	JIS-C-5202 7-5 40°C 90%RH 240 hours	Free of appearance or structural irregularity Δ R/R ≤ ± (3% + 0.1Ω)	ETC
耐久性 Load life	JIS-C-5202 7-10 90 minutes ON - 30 minutes OFF 500 hours	Free of appearance or structural irregularity Δ R/R ≤ ± (3% + 0.1Ω)	ETC
難燃性 Flame retardation	JIS-C-5202 7-13-3-2 100% - 600% rated power load	US UL-94 flame retardation test V-0 grade noncombustible	

## REMARKS

1. Items noted with ETC were tested by Taiwan Electronic Testing Center as shown in report No. ET89T-03-086-C00.
2. Resistance and resistance tolerance were tested in-house with micro resistance meter.
3. Resistor coating refers to UL-certified data provided by supplier

## HOW TO ORDER

<u>DNR</u>	<u>600W</u>	<u>500Ω</u>	<u>J</u>	<u>G</u>	<u>O</u>
↓	↓	↓	↓	↓	↓
Product type.	Rated power.	Resistance value. (Ω)	Resistance tolerance.	Assembly method.	Product status.
DDR type DNR type DSR type DCR type	10W~1300W 50W~1300W 20W~1300W 100W~250W	(Ω)Indicates resistance value in units of ohms.	J = ±5% K = ±10%	2-8 part assembly G- Horizontal mount N- No mounts. Z- Vertical mount.	A~ Special order. O~ General specification. Z~ Other.