

# RESISTORS AND ASSEMBLIES

WIRE-WOUND

COATED AND OPEN WIRE WOUND

## SILICON COATED WIRE-WOUND RESISTORS



REV	DATE	CHANGE DESCRIPTION	CHANGED BY
3	2022-04-07	Single resistors and resistor assemblies: Locomotive Headlight Resistor	W. M

**DESCRIPTION**

Robust ceramic core with a high temperature and chemically resistant silicon-ceramic coating.

**APPLICATIONS**

Resistive loadbanks for testing apparatus and battery discharging, Voltage dropping circuits, Heating, Current limiting circuits.

**INDUSTRY**

Power utilities, Mining, Rail, Manufacturing.

**ACTIVE MATERIAL**

High grade nickel-chrome alloy with a low temperature coefficient.

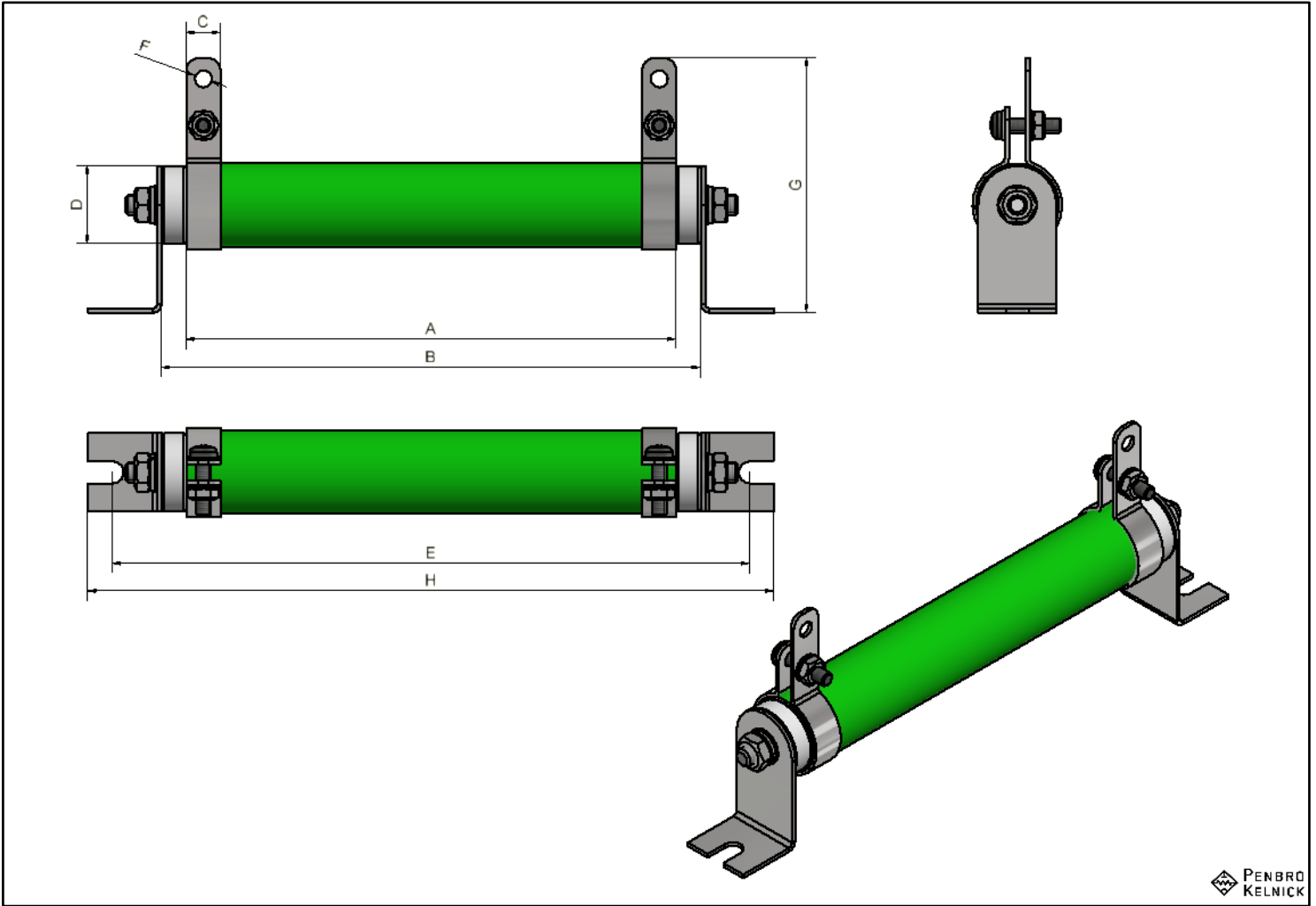
**MECHANICAL CHARACTERISTICS**

Terminals are grade 304 stainless steel and suitable for a crimp ring-lug connection with hexhead bolts or panhead screws.

**ELECTRICAL CHARACTERISTICS**

Rated Power	Minimum Resistance $\Omega$ (0.61 $\emptyset$ )	Maximum Resistance $\Omega$ (0.068 $\emptyset$ )
30W	13	5k
50W	25	10k
100W	40	15k
200W	70	30k
250W	80	35k
300W	100	45k
400W	120	55k
500W	140	65k
Resistance tolerance: +/- 5%		
Higher resistance values may be available upon request.		
Voltage rating: 600V. Higher voltage ratings upon request.		
Supplied with glazed porcelain insulating end-caps.		
Variable slider optional.		

	2022/04/07	3		1 of 5
<b>DOCUMENT NUMBER</b>	<b>PUBLISHED DATE</b>	<b>REVISION</b>	<b>CREATED BY</b>	<b>PAGE</b>



**SILICON COATED WIRE-WOUND RESISTORS**

Dimensions: mm	30W	50W	100W	200W	250W	300W	400W	500W
<b>A:</b> Tube Length	100	100	150	247	200	250	300	350
<b>B:</b> Length with Insulators	110	120	170	267	220	270	320	370
<b>C:</b> Terminal Width	7		8				10	
<b>D:</b> Tube Diameter	Ø16		Ø31				Ø45	
<b>E:</b> Mounting Hole-Hole	133	145	195	292	245	295	345	395
<b>F:</b> Terminal Hole	Ø3		Ø4				Ø6	
<b>G:</b> Height	52		80				100	
<b>H:</b> Total Length	150	165	199	302	265	315	365	415

	2022/04/07	3		2 of 5
<b>DOCUMENT NUMBER</b>	<b>PUBLISHED DATE</b>	<b>REVISION</b>	<b>CREATED BY</b>	<b>PAGE</b>

## OPEN WIRE-WOUND RESISTORS



### DESCRIPTION

Non-coated wire-wound for heavy duty applications. Generally used to obtain very low resistance values. A lower cost alternative to the silicon coated resistors.

### APPLICATIONS

Resistive Loadbanks, Battery Discharging, Voltage Dropping Circuits, Heating, Current Limiting Circuits.

### INDUSTRY

Power Utilities, Mining, Rail, Manufacturing.

### ACTIVE MATERIAL

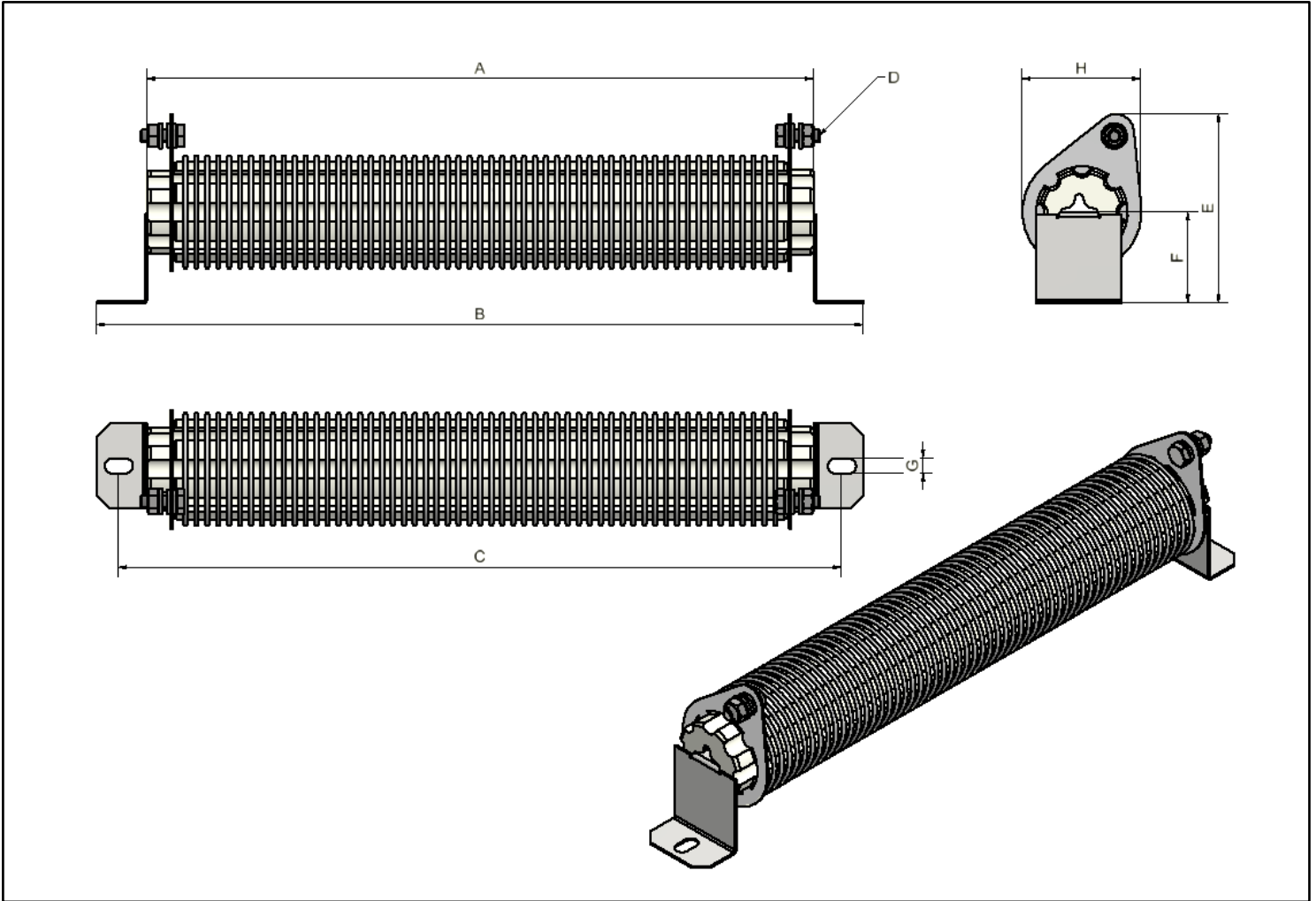
High grade chrome-aluminium or chrome-nickel alloy with a low temperature coefficient.

### MECHANICAL CHARACTERISTICS

Terminal connections are grade 304 stainless steel and suitable for a ring-lug connection with a hex bolt.

ELECTRICAL CHARACTERISTICS		
Rated Power	Minimum Resistance $\Omega$ (2.6 $\emptyset$ )	Maximum Resistance $\Omega$ (0.295 $\emptyset$ )
<b>100W</b>	0.5	80
<b>200W</b>	0.9	130
<b>300W</b>	1.2	190
<b>400W</b>	1.6	240
<b>500W</b>	2.0	300
Resistance Tolerance: +/- 5%		
Voltage rating: 600V		
Variable Slider Optional		

	2022/04/07	3		3 of 5
<b>DOCUMENT NUMBER</b>	<b>PUBLISHED DATE</b>	<b>REVISION</b>	<b>CREATED BY</b>	<b>PAGE</b>



OPEN WIRE RESISTORS					
Dimensions: mm	100W	200W	300W	400W	500W
<b>A:</b> Tube Length	105	155	205	255	305
<b>B:</b> Total Length	147	197	247	305	360
<b>C:</b> Fixing Hole-Hole	139	189	239	280	335
<b>D:</b> Terminal Bolt	M6				
<b>E:</b> Height	90			110*	
<b>G:</b> Mounting Hole	Ø6				
<b>H:</b> Width	55				
* Long feet are advised for 400W and 500W resistors.					

	2022/04/07	3		4 of 5
<b>DOCUMENT NUMBER</b>	<b>PUBLISHED DATE</b>	<b>REVISION</b>	<b>CREATED BY</b>	<b>PAGE</b>

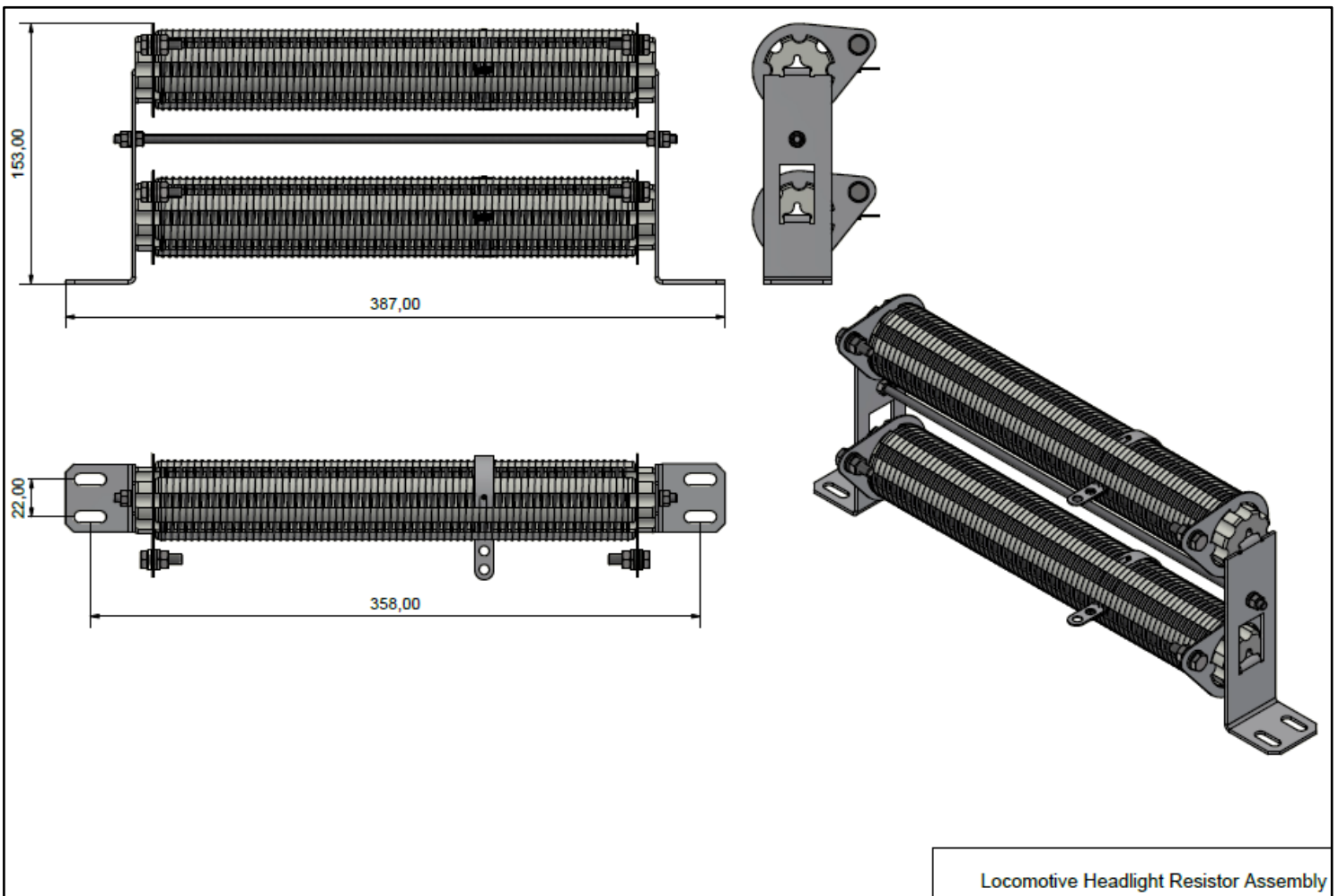
## RESISTOR ASSEMBLIES

### Locomotive Headlight Resistor

#### DESCRIPTION

Multiple resistors may be assembled to form a single assembly as shown in the image above.

- Where a single resistor is limited to a power rating of 500W, an assembly of two resistors for example, will increase the power rating to 1000W.
- Two or more resistors may also be used for a specific purpose such as a Locomotive Headlight Resistor where two resistors are required for the dual headlamp.
- More than two resistors are more suitably enclosed in a steel enclosure. Refer to our Break Resistor brochure.



	2022/04/07	3		5 of 5
<b>DOCUMENT NUMBER</b>	<b>PUBLISHED DATE</b>	<b>REVISION</b>	<b>CREATED BY</b>	<b>PAGE</b>