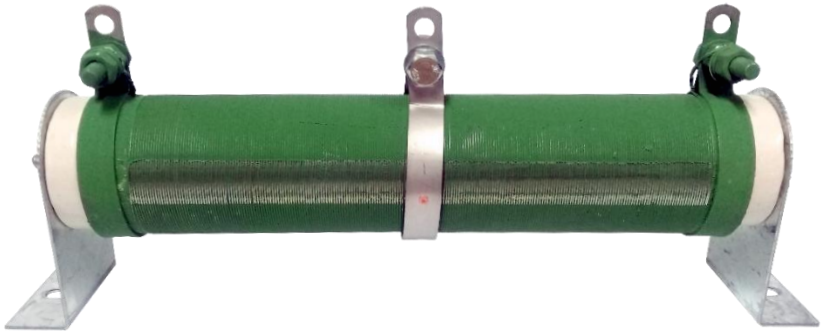
PENBRO KELNICK

RESISTORS

WIREWOUND

COATED AND OPEN WIREWOUND

SILICONE COATED WIREWOUND RESISTORS



REV	DATE	CHANGE DESCRIPTION	CHANGED BY
5	2025-08-28	Single resistors	W. M

DESCRIPTION
Robust ceramic core with a high temperature and chemically resistant silicone coating

APPLICATIONS
Resistive Loadbanks, Battery Discharging, Heating, Current Limiting

INDUSTRY
Mining, Rolling Stock, Manufacturing

ACTIVE MATERIAL
High grade chrome-nickel (Cr-Ni) alloy with a low temperature coefficient

MECHANICAL CHARACTERISTICS
Grade 304 stainless steel terminals and suitable for a crimp ring-lug connection with hexhead bolts or screws

ELECTRICAL CHARACTERISTICS		
Rated Power	**Minimum Resistance Ω** (0.61Ø)	**Maximum Resistance Ω** (0.068Ø)
30W	13	5k
50W	25	10k
100W	40	15k
200W	70	30k
250W	80	35k
300W	100	45k
400W	120	55k
500W	140	65k
750W	65	100k
Resistance tolerance	5%	
Temperature coefficient	2%/100°C	
Maximum energy absorption	20kJ	
Ambient temperature	-40 +70°C	
Cooling	Air natural	
Insulation material	Cordierite	
Connection terminals and fasteners	Grade 304 stainless steel	
Ingress protection	IP00	
Protective Coating		
Type	Silicone-ceramic	
Maximum temperature	590°C	
Protective characteristics	Water dispersible silicone resin Resistance to salt spray Resistance to chemical corrosion Resistance to thermal cycling	

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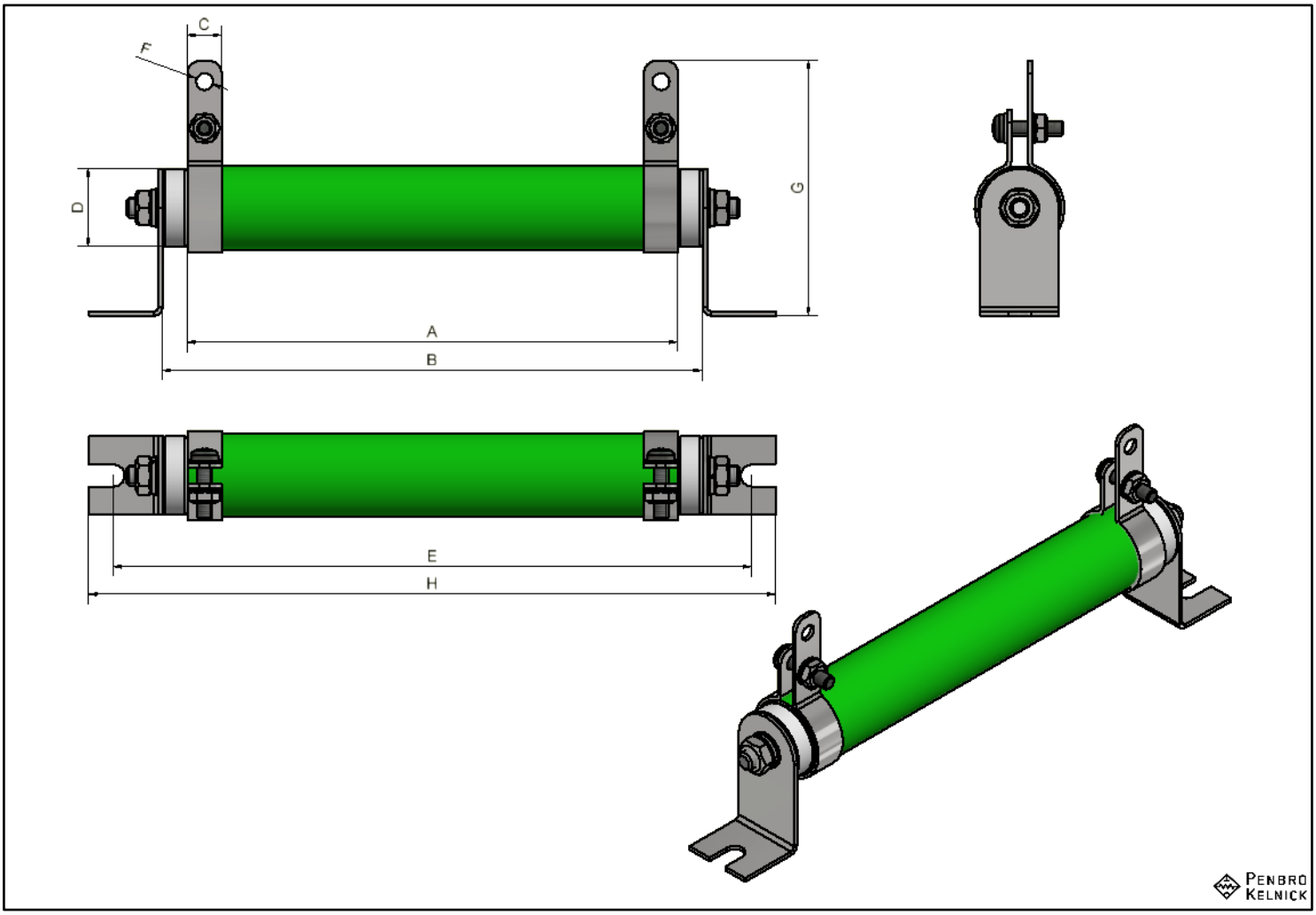
- Higher resistance values may be available upon request
- Voltage rating: 600V. Higher voltage ratings upon request
- Supplied with glazed porcelain insulators
- Variable slider, optional



Dimensions	30W	50W	100W	200W	250W	300W	400W	500W	750W
A: Tube Length	100	100	150	247	200	250	300	350	410
B: With Insulators	110	120	170	267	220	270	320	370	410
C: Terminal Width	7	8			10				12
D: Tube Diameter	Ø16	Ø31			Ø45				54
E: Mounting	133	145	195	292	245	295	345	395	435
F: Terminal Hole	Ø3	Ø4			Ø6				
G: Height	52	80			100				75
H: Total Length	150	165	199	302	265	315	365	415	448

OPEN WIRE-WOUND RESISTORS

DESCRIPTION

Non-coated wire-wound for heavy duty applications. Generally used to obtain very low resistance values

APPLICATIONS

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

INDUSTRY

Power Utilities, Mining, Rolling stock, Manufacturing

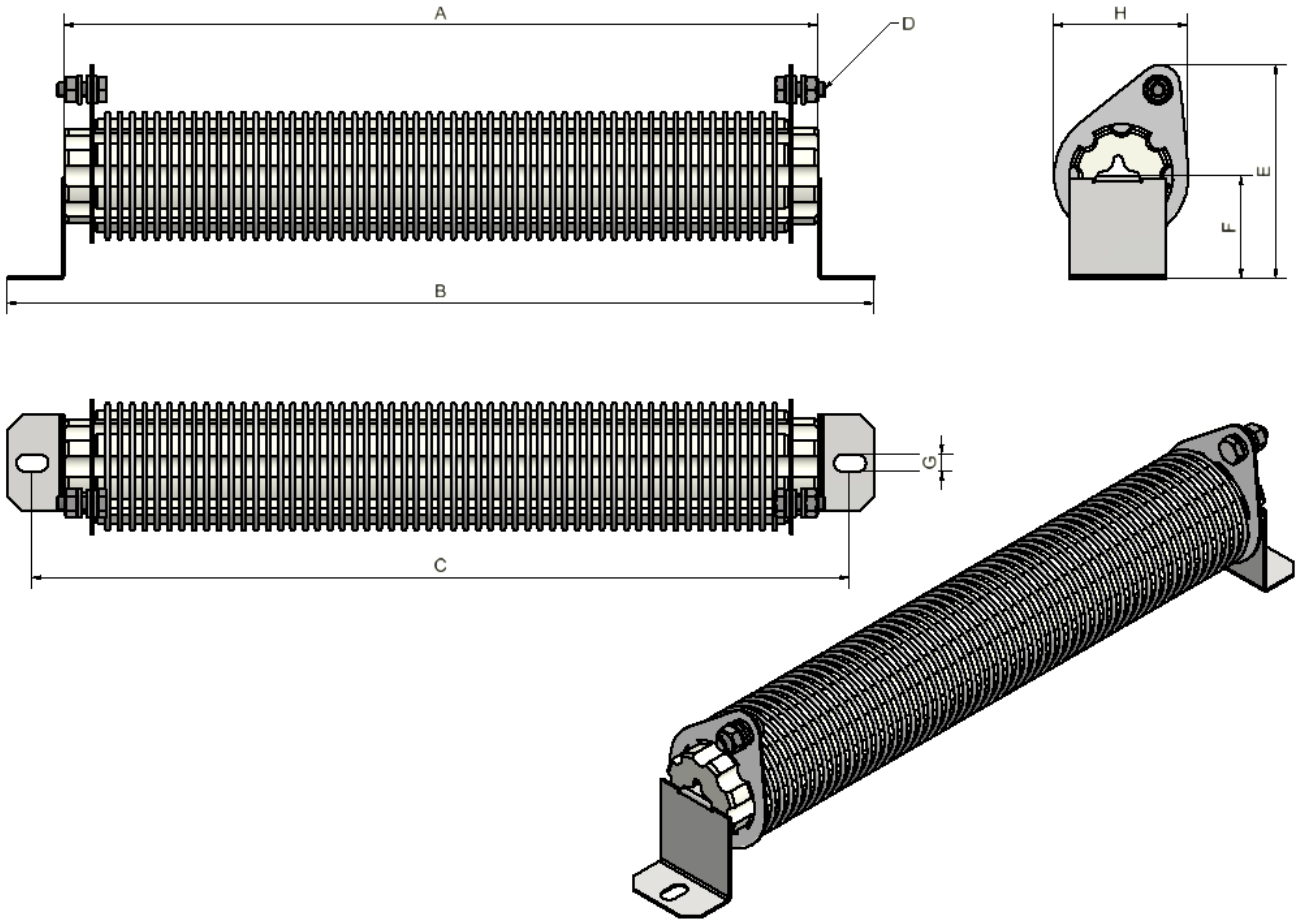
ACTIVE MATERIAL

High grade chrome-aluminium (Cr-Al or chrome-nickel (Cr-Ni) alloy with a low temperature coefficient

MECHANICAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS		
Power	**Minimum Resistance Ω** (3.25Ø)	**Maximum Resistance Ω** (0.5Ø)
100W	≤0.3	30
200W	≤0.6	35
300W	≤0.8	50
400W	≤1.0	70
500W	≤1.3	85
Resistance Tolerance: +/- 5%		
Voltage rating: 600V		
Variable Slider, Optional		



OPEN WIRE RESISTORS					
Dimensions: mm	**100W**	**200W**	**300W**	**400W**	**500W**
A: Tube Length	105	155	205	255	305
B: Total Length	147	197	247	305	345
C: Fixing Hole-Hole	139	189	239	280	325
D: Terminal Bolt	M6				
E: Height	90			110*	
G: Mounting Hole	Ø6				
H: Width	55				

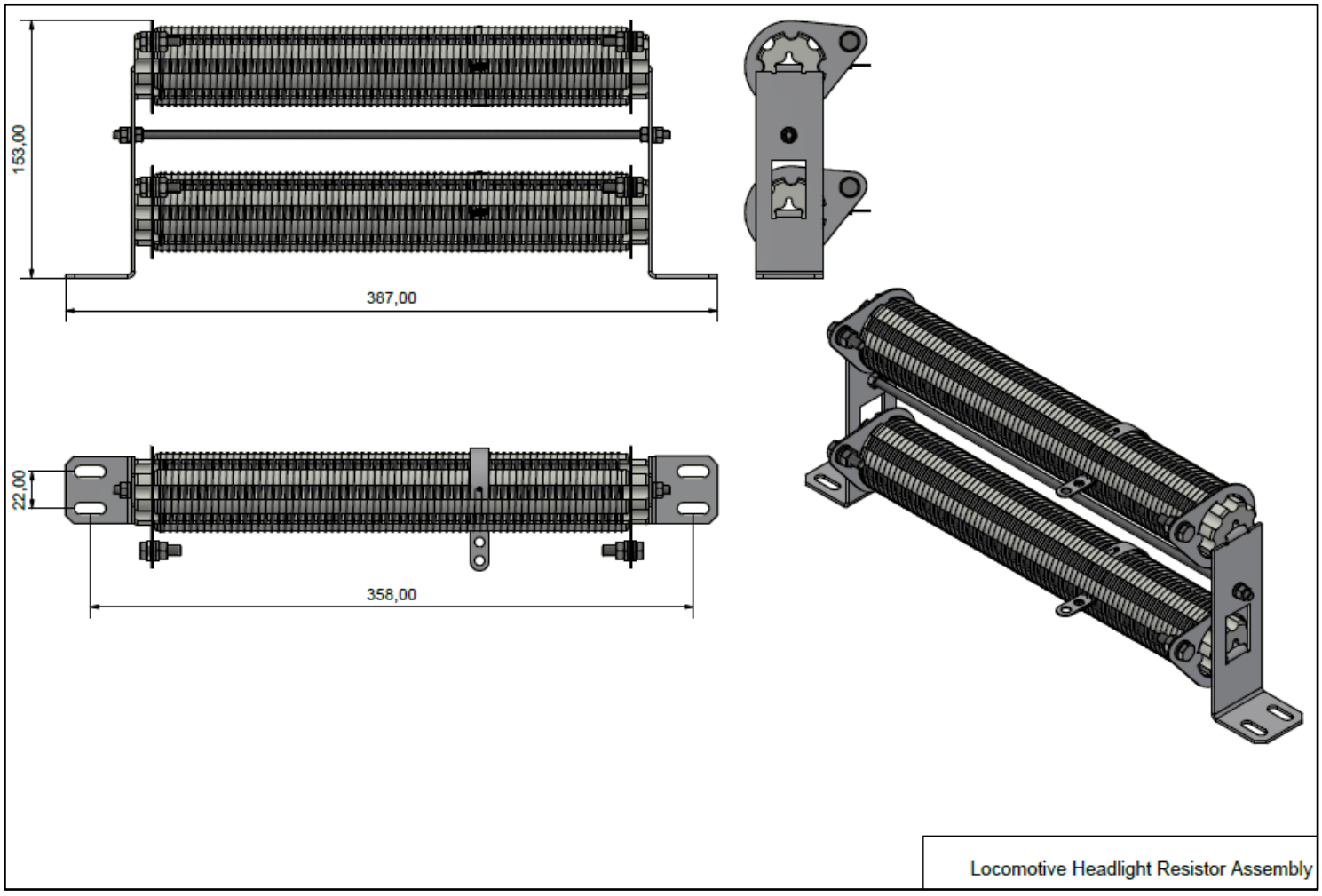
RESISTOR ASSEMBLIES

Locomotive Headlight Resistor

DESCRIPTION

Multiple resistors may be assembled to form a single assembly

- 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 Brake Resistor brochure.



Locomotive Headlight Resistor Assembly

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