INLANX Disc-Type Wirewound Rheostat

Model RHEOSTAT-300W-34R | Equivalent to Miller 605960 Wire Wound

Product Overview

The Power Rheostat series disc-type adjustable resistor, also known as a ceramic disc rheostat, arm-type variable resistor or sliding potentiometer, is a high-power adjustable wirewound resistor. Nichrome / constantan resistance alloy wire is uniformly wound onto a ceramic ring. A central shaft drives a carbon brush (sliding contact) to rotate and slide along the resistance wire, continuously changing the inserted resistance to achieve stepless adjustment of voltage and current in the circuit.



INLANX 300W disc-type rheostat (shown with control knob)

Key Features

- Rated power 300 W, nominal resistance 34 ohm (34R).
- Ceramic base, protected by a glazed coating or flame-retardant resin paint.
- High power rating, moisture- and high-temperature resistant, smooth adjustment, strong overload capability.
- Can be used as a two-terminal rheostat (A-C or B-C), or as a three-terminal potentiometer (A-B full resistance + C sliding .

Key Applications

- Welding machine current control: dedicated for Miller engine-driven welder remote hand controllers (RHC-3 series); OEM part No. 605960.
- Motor speed control: speed regulation of DC motor armature / field circuits.
- Load testing: adjustable dummy load.

Physical Dimensions

(varies slightly by manufacturer)

Dimension	INLANX	Miller 605960
Outer disc diameter	~155 mm	152 mm (6 in)
Overall width (incl. lugs)	170 mm	-
Height	55 mm	57 mm (2.25 in)
Shaft	dia 8.5 mm	dia 9.5 mm

Construction

Component	Description
Resistance element	Nichrome / constantan wire uniformly wound on a ceramic ring; all areas except the sliding contact surface are coated with insulating protective paint.
Base	High-insulation ceramic disc; high-temperature resistant and provides good heat dissipation.
Adjustment mechanism	Central shaft drives a copper carbon brush that slides along the resistance wire; rotation angle 300 deg +/-10 deg.
Terminals	Screw terminals (three terminals: fixed ends A / B + sliding end C).
Mounting	Two rear hanging lugs / panel mounting; control knob available.

Electrical Specifications (300W-34R)

Item	Parameter
Model	300 W - 34 ohm (34R), three-terminal combination
Rated power	300 W (full load below +40 C; derate at high temperature)
Nominal resistance	34 ohm
Resistance tolerance	+/-5% (J) / +/-10% (K)
Rated current	approx 2.97 A (I = sqrt(P/R) = sqrt(300/34))
Full-resistance voltage	approx 101 V (U = sqrt(P*R) = sqrt(300*34))
Temperature coefficient	+/-200~400 ppm / C
Insulation resistance	>=100 Mohm (500 Vdc)
Dielectric strength	1000 Vdc / 1 min
Operating temperature	-55 C ~ +315 C
Rotation angle	300 deg +/-10 deg
Applicable voltage	AC <=380 V / DC <=220 V

Operating Precautions

1. Power depends on resistance position: rated power can be carried continuously only at the maximum- resistance position. As the resistance is turned down, the allowable power decreases proportionally (e.g., at the half-resistance position only about half the power is available).

2. Adjust slowly and evenly: turn the knob smoothly. Avoid rapid shocks that cause brush arcing or local overheating of the resistance wire.

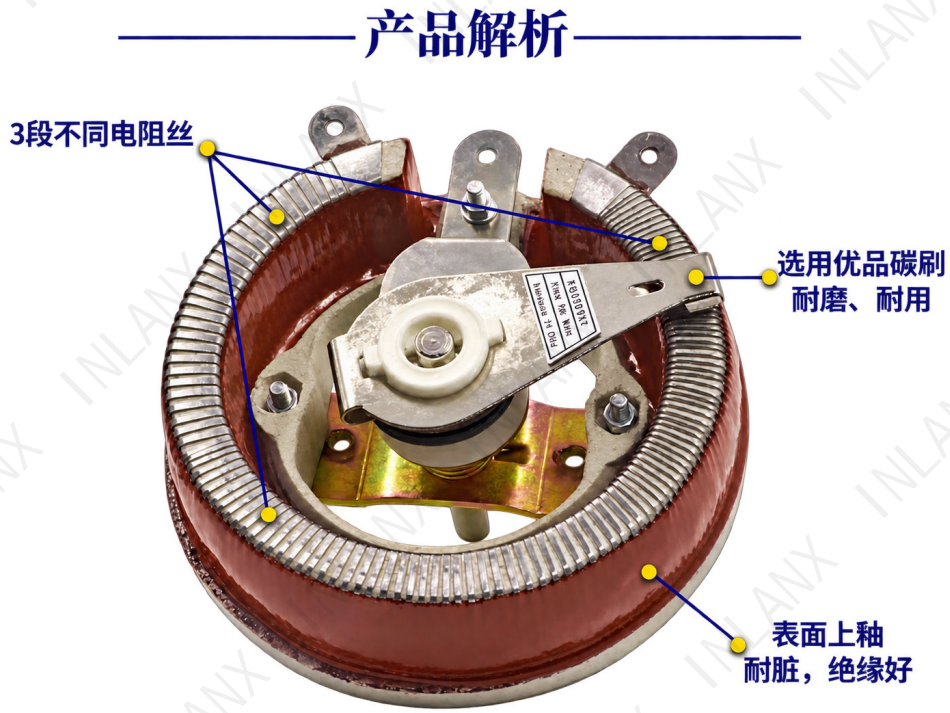
3. Allow heat-dissipation space: the surface becomes very hot during operation (can exceed 300 C). Ensure ventilation and keep it away from flammable materials.

4. Wiring: rheostat connection requires only two wires (a fixed end + the sliding end); three terminals are needed only when used as a voltage divider.

RHEOSTAT-300W-34R

Product & Outline Dimensions

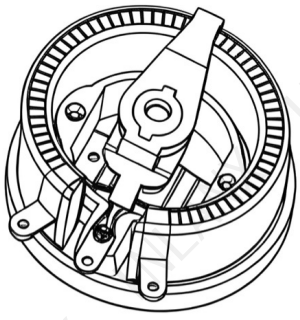
Product Image



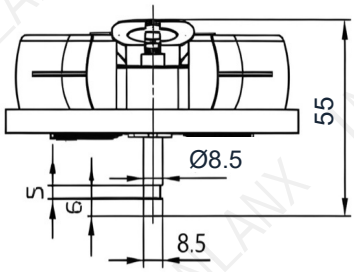
Outline and Dimensions (mm)

INLANX: disc Ø~155 mm; overall width 170 mm; height 55 mm; shaft Ø8.5 mm.

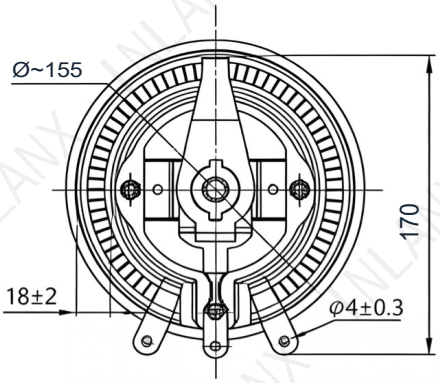
300W disc rheostat N.W. 1.20kg



Isometric view



Front view



Top view