

# High Power Decade Resistance Substituter

## HPRS Series

p. 1 of 2

Economic high-performance, high-power resistance for all laboratory, test, and calibration needs.

- Resistance from 1 m $\Omega$  to 10 M $\Omega$
- Wide choice: 3 to 9 decade units
- Accuracy: 0.5% or 1%
- Power Rating : 225 W/decade, 250 W max. or higher
- Voltage Rating: 1000 V or higher
- Rack mounting available
- Special and custom configurations available



Standard 6-Decade HPRS High Power Decade Resistance Substituter

### See also:

- More economical: [RS Series](#)
- Higher accuracy: [HARS-X](#) or [HARS-LX Series](#)
- Higher resistance: [HRRS Series](#)
- Higher voltage: [HRRS-5kV](#) and [HRRS-10kV Series](#)
- RTD simulators: [RTD Series](#)
- Programmable models: [PRS Series](#)

## SPECIFICATIONS

Resistance per step	Total decade resistance	Max current*	Max power per step* (W)	Temperature coefficient (ppm/°C)	Resistor Type
1 m $\Omega$	0.009 $\Omega$	8 A	0.036	$\pm 50$	Resistance Wire
10 m $\Omega$	0.09 $\Omega$	6 A	0.36	$\pm 50$	
100 m $\Omega$	0.9 $\Omega$	6 A	3.6	$\pm 20$	
1 $\Omega$	9 $\Omega$	5 A	25	-20 to +80	Power Film
10 $\Omega$	90 $\Omega$	1.5 A	25	-20 to +80	
100 $\Omega$	900 $\Omega$	0.5 A	25	-20 to +80	
1 k $\Omega$	9 k $\Omega$	150 mA†	25†	-20 to +80	
10 k $\Omega$	90 k $\Omega$	50 mA†	25†	-20 to +80	Wirewound/ metal film
100 k $\Omega$	900 k $\Omega$	V limit†	V limit†	-20 to +80	
1 M $\Omega$	9 M $\Omega$	V limit†	V limit†	$\pm 50$	Wirewound/film

\*Subject to maximum of 250 W max. per unit

†Subject to 1000 V (dc+ac) peak max

### Accuracy:

after subtraction of zero resistance, at 23°C; traceable to SI

**Option F:**  $\pm(1\% + 20 \text{ m}\Omega)$

**Option C:**  $\pm(0.5\% + 20 \text{ m}\Omega)$

### Zero Resistance:

<5 m $\Omega$  per decade

### Terminals:

Two five-way binding posts and one ground post electrically connected to case.

### Dimensions:

43.9 cm W x 8.9 cm H x 10.2 cm D (17.3" W x 3.5" H x 4" D)

### Weight:

2.4 kg (5.3 lbs), nominal



HPRS - 30 ampere unit



IET LABS, INC. in the **GenRad** Tradition  
534 Main Street, Westbury, NY 11590

www.ietlabs.com  
TEL: (516) 334-5959 • (800) 899-8438 • FAX: (516) 334-5988

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### ORDERING INFORMATION

Model* (1.0% accuracy shown)	Total resistance ( $\Omega$ )	No of Dials	Resolution ( $\Omega$ )
HPRS-F-3-0.001	0.999	3	0.001
HPRS-F-3-0.01	9.99	3	0.01
HPRS-F-3-0.1	99.9	3	0.1
HPRS-F-3-1	999	3	1
HPRS-F-3-10	9.99 k	3	10
HPRS-F-3-100	99.9 k	3	100
HPRS-F-3-1K	999 k	3	1 k
HPRS-F-3-10K	9.99 M	3	10 k
HPRS-F-4-0.001	9.999	4	0.001
HPRS-F-4-0.01	99.99	4	0.01
HPRS-F-4-0.1	999.9	4	0.1
HPRS-F-4-1	9.999 k	4	1
HPRS-F-4-10	99.99 k	4	10
HPRS-F-4-100	999.9 k	4	100
HPRS-F-4-1K	9.999 M	4	1 k
HPRS-F-5-0.001	99.999	5	0.001
HPRS-F-5-0.01	999.99	5	0.01
HPRS-F-5-0.1	9.999 9 k	5	0.1
HPRS-F-5-1	99.999 k	5	1
HPRS-F-5-10	999.99 k	5	10
HPRS-F-5-100	9.999 9 M	5	100

Model* (1.0% accuracy shown)	Total resistance ( $\Omega$ )	No of Dials	Resolution ( $\Omega$ )
HPRS-F-6-0.001	999.999	6	0.001
HPRS-F-6-0.01	9.999 99 k	6	0.01
HPRS-F-6-0.1	99.999 9 k	6	0.1
HPRS-F-6-1	999.999 k	6	1
HPRS-F-6-10	9.999 99 M	6	10
HPRS-F-7-0.001	9.999 999 k	7	0.001
HPRS-F-7-0.01	99.999 99 k	7	0.01
HPRS-F-7-0.1	999.999 9 k	7	0.1
HPRS-F-7-1	9.999 999 M	7	1
HPRS-F-8-0.001	99.999 999 k	8	0.001
HPRS-F-8-0.01	999.999 99 k	8	0.01
HPRS-F-8-0.1	9.999 999 9 M	8	0.1

\* For 0.5% accuracy, substitute "C" for "F" in part number

#### Options:

-RM for rack mountable version



HPRS-600W: One of the various HPRS custom configurations to suit particular applications

