

# High Power Decade Resistance Substituter

## HPRS Series

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



Standard 6-Decade HPRS High Power Decade Resistance Substituter

### Features:

- Resistance from 1 mΩ to 10 MΩ
- Wide choice: 3 to 9 decade units
- Accuracy: 0.5% or 1%
- Power Rating : 225 W/decade, 250 W max. or higher
- Rack mounting available
- Special and custom configurations available

### 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](#) -- without zero subtraction
- 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 mΩ	0.009 Ω	8 A	0.036	±50	Resistance Wire
10 mΩ	0.09 Ω	6 A	0.36	±50	
100 mΩ	0.9 Ω	6 A	3.6	±20	
1 Ω	9 Ω	5 A	25	-20 to +80	Power Film
10 Ω	90 Ω	1.5 A	25	-20 to +80	
100 Ω	900 Ω	0.5 A	25	-20 to +80	
1 kΩ	9 kΩ	150 mA†	25†	-20 to +80	
10 kΩ	90 kΩ	50 mA†	25†	-20 to +80	Wirewound/metal film
100 kΩ	900 kΩ	V limit†	V limit†	-20 to +80	
1 MΩ	9 MΩ	V limit†	V limit†	±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:** ±(1% + 20 mΩ)

**Option C:** ±(0.5% + 20 mΩ)

### Zero Resistance:

<5 mΩ 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



### 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 (HPRS-150)	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 (HPRS-200)	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 (HPRS-200W)	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

