

High Resistance 5 kV Decade Substituter

HRRS-5kV Series p. 1 of 2

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

- High accuracy - to .01%
- High stability - to 10 ppm/yr
- Excellent TC - as low as 5 ppm/°C
- Low current solid silver alloy contact switches
- One to seven decades up to 10 TΩ
- Low voltage coefficient - as low as 0.2 ppm/V



6 Decade **HRRS** High Resistance Substituter

SPECIFICATIONS

Decade Resistance	Resistance per step	Accuracy Option**			Max Voltage* per step	Maximum* Voltage	Temp. Coefficient ±ppm/°C	Voltage Coefficient ±ppm/V	Stability ±ppm/year
		Q	B	F					
100 Ω	10 Ω	±0.01%	±0.03%	±0.1%	2.5 V		15	0	10
1 kΩ	100 Ω	±0.01%	±0.03%	±0.1%	8 V		5	0	10
10 kΩ	1 kΩ	±0.01%	±0.03%	±0.1%	23V		5	0	10
100 kΩ	10 kΩ	±0.01%	±0.03%	±0.1%	70 V		5	0	10
1 MΩ	100 kΩ	±0.01%	±0.03%	±0.1%	230 V		5	0	10
10 MΩ	1 MΩ	±0.03%	±0.1%	±0.5%	1000 V	5000 V	15	0.2	10
100 MΩ	10 MΩ	±0.03%	±0.1%	±1%	3500 V	5000 V	15	0.2	25
1 GΩ	100 MΩ	±0.1%	±0.2%	±1%	5000 V	5000 V	25	1.5	100
10 GΩ	1 GΩ	±0.2%	±0.5%	±1%	5000 V	5000 V	25	5	500
100 GΩ	10 GΩ	±0.5%	±1%	±1%	5000 V	5000 V	25	5	500
1 TΩ	100 GΩ	±0.5%	±1%	±1%	5000 V	5000 V	200	5	500
10 TΩ	1 TΩ	±2%	±5%	±5%	5000 V	5000 V	200	5	500

* dc + ac peak

Zero Resistance: <3 mΩ per decade at dc.

Operating Conditions: 10°C to 23 °C; <50% RH.

Terminals: Two five-way binding posts on 2 special, low leakage, Kel-F insulating sockets and one metal ground post electrically connected to the case.

Dimensions: 43.2 cm W x 14.2 cm H x 13.5 cm D (17" x 5.6" x 5.3"). for 3 and 4 decades. 48.2 cm W x 22.2 cm H x 33 cm D (19" x 8.75" x 13") for 7, 8 and 9 decades. 48.2 cm W x 30.1 cm H x 21.6 cm D (19" x 12.2" x 8.5") for 10 and 11 decades.

Setting of value:

Standard: 11 positions, "0"-10"; silver contacts, high voltage switch.

Binding Posts (optional): units use binding posts and shorting links in lieu of rotary switches to set resistance values.



HRRS-5KV High Resistance Substituter with binding posts; various and custom configurations are available



Single decade HRRS-5KV High Resistance Substituter with binding posts; various and custom configurations are available



High Resistance 5 kV Decade Substituter

HRRS-5kV Series p. 2 of 2

ORDERING INFORMATION

Model*	Total Resistance (Ω)	No. of Decades	Resolution (Ω)
HRRS-B-1G-5KV	10 G	1	1 G
HRRS-B-1-10G-5KV	100 G	1	10 G
HRRS-F-1-100G-5KV	1 T	1	100 G
HRRS-B-2-1M-5KV	110 M	2	1 M
HRRS-B-2-10M-5KV	1.1 G	2	10 M
HRRS-B-2-100M-5KV	11 G	2	100 M
HRRS-B-2-1G-5KV	110 G	2	1 G
HRRS-B-2-10G-5KV	1.1 T	2	10 G
HRRS-B-2-100G-5KV	11.1 T	2	100 G
HRRS-B-3-100K-5KV	111 M	3	100 k
HRRS-B-3-1M-5KV	1.11 G	3	1 M
HRRS-B-3-10M-5KV	11.1 G	3	10 M
HRRS-B-3-100M-5KV	111 G	3	100 M
HRRS-B-3-1G-5KV	1.11 T	3	1 G
HRRS-B-3-10G-5KV	11.1 T	3	10 G
HRRS-B-4-10K-5KV	111.1 M	4	10 k
HRRS-B-4-100K-5KV	1.111 G	4	100 k
HRRS-B-4-1M-5KV	11.11 G	4	1 M
HRRS-B-4-10M-5KV	111.1 G	4	10 M
HRRS-B-4-100M-5KV	1.111 T	4	100 M
HRRS-B-4-1G-5KV	11.11 T	4	1 G
HRRS-B-5-1K-5KV	111.11 M	5	1 k
HRRS-B-5-10K-5KV	1.111 1 G	5	10 k
HRRS-B-5-100K-5KV	11.111 G	5	100 k
HRRS-B-5-1M-5KV	111.11 G	5	1 M
HRRS-B-5-10M-5KV	1.111 1 T	5	10 M
HRRS-B-5-100M-5KV	11.111 T	5	100 M

Model*	Total Resistance (Ω)	No. of Decades	Resolution (Ω)
HRRS-B-6-10-5KV	11.111 1 M	6	10
HRRS-B-6-100-5KV	111.111 M	6	100
HRRS-B-6-1K-5KV	1.111 11 G	6	1 k
HRRS-B-6-10K-5KV	11.111 1 G	6	10 k
HRRS-B-6-100K-5KV	111.111 G	6	100 k
HRRS-B-6-1M-5KV	1.111 11 T	6	1 M
HRRS-B-6-10M-5KV	11.111 1 T	6	10 M
HRRS-B-7-10-5KV	111.111 1 M	7	10
HRRS-B-7-100-5KV	1.111 111 G	7	100
HRRS-B-7-1K-5KV	11.111 11 G	7	1 k
HRRS-B-7-10K-5KV	111.111 1 G	7	10 k
HRRS-B-7-100K-5KV	1.111 111 T	7	100 k
HRRS-B-7-1M-5KV	11.111 11T	7	1 M
HRRS-B-8-1-5KV	111.111 11M	8	1
HRRS-B-8-10-5KV	1.111 111 1 G	8	10
HRRS-B-8-100-5KV	11.111 111 G	8	100
HRRS-B-8-1K-5KV	111.111 11 G	8	1 K
HRRS-B-8-10K-5KV	1.111 111 1 T	8	10 K
HRRS-B-8-100K-5KV	11.111 111 T	8	100 K
HRRS-B-9-0.1-5KV	111.111 111 M	9	0.1
HRRS-B-9-1-5KV	1.111 111 11G	9	1
HRRS-B-9-10-5KV	11.111 111 1 G	9	10
HRRS-B-9-100-5KV	111.111 111 G	9	100
HRRS-B-9-1K-5KV(0.6T)	1.111 111 1 T	9	1 k
HRRS-B-9-1K-5KV	1.111 111 1 T	9	1 k
HRRS-B-9-10K-5KV	11.111 111 1 T	9	10 K

* Replace "B" with "Q" for higher grade accuracy;
replace "B" with "F" for 1% accuracy.

Single Decade Version See HARS-X data sheet (p. 16)

OPTIONS

- RM Rack mountable case for standard 19" rack
- K Kelvin type 4-terminal binding posts
- RO Rear outputs
- BP Binding posts in lieu of rotary switches

