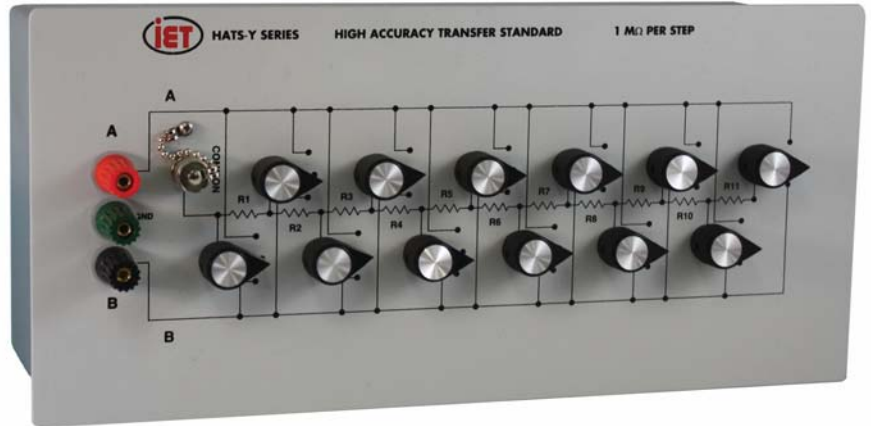


# High Accuracy Transfer Standards High Resistance

## HATS-Y Series

Each of the HATS-Y transfer standards consists of 11 equal steps. These steps are available in increments of 100 kΩ, 1 MΩ, 10 MΩ, & 100 MΩ. The HATS-Y provides a three terminal connection for each step or for a series of resistance steps. Specially designed lever switches separate each resistor from the others. This allows the standard to be configured in series, parallel, series-parallel, or separately without the use of external shorting bars.



HATS-Y High Accuracy Transfer Standard

### Features:

- Resistance transfers from 10 kΩ to 1.1 GΩ
- 11 equal-value precision resistors
- Three available models with steps of: 100 kΩ, 1 MΩ, 10 MΩ, or 100 MΩ
- High transfer accuracy, better than 2 ppm
- May be used as a precision voltage divider

### SPECIFICATIONS

Step Size	Adjustment accuracy	Transfer accuracy	Stability ppm/year	Stability long term	Temperature coefficient	Matching	
						Adj. Acc.	TC
100 kΩ	±10 ppm	±2 ppm	±10 ppm	±30 ppm	±3 ppm/°C	±10 ppm	±3 ppm
1 MΩ	±20 ppm	±2 ppm	±15 ppm	±30 ppm	±3 ppm/°C	±10 ppm	±3 ppm
10 MΩ	±20 ppm	±2 ppm	±15 ppm	±30 ppm	±5 ppm/°C	±10 ppm	±3 ppm
100 MΩ	± 100 ppm	±30 ppm	±30 ppm	±50 ppm	±5 ppm/°C	±20 ppm	±5 ppm

#### Calibration conditions:

23°C, low-power, with meter guard applied to COMMON and ground applied to GND, traceable to SI  
Initial calibration data for each resistor is supplied with the instrument.

#### Leakage resistance:

>10 TΩ from terminal to case

#### Power coefficient:

<±0.05 ppm/mW per resistor

#### Maximum applied input:

2500 V, or 1 W per resistor, or 10 W for entire unit (whichever applies first)

#### Connection terminals:

Three gold-plated, 5-way, tellurium-copper binding posts with low thermal emf and low resistance.  
One shielded bnc terminal labeled COMMON, used when the unit is employed as a precision voltage divider.

#### Breakdown voltage:

3,500 peak between any terminal and case

#### Environmental conditions:

Operating: 10°C to 40°C; <50% RH  
Storage: -40°C to 70°C

#### Dimensions:

35.6 cm W x 16.5 cm H x 10.2 cm D (14" x 6.5" x 4")

#### Weight:

5 kg (11 lbs)

### OPERATION

#### Operation:

	R0	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
To set standard to R/10	↓	↑	↓	↓	↓	↓	↓	↓	↓	↓	↓	Off
To set standard to 10R	↓	Off	Off	Off	Off	Off	Off	Off	Off	Off	↑	Off
To set standard to 1R	↓	Off	Off	↑	Off	Off	↓	Off	Off	↑	Off	Off

Note: R0 is the left most switch

### ORDERING INFORMATION

- HATS-Y-100K 100 kΩ/Step Transfer Standard
- HATS-Y-1M 1 MΩ/Step Transfer Standard
- HATS-Y-10M 10 MΩ/Step Transfer Standard
- HATS-Y-100M 100 MΩ/Step Transfer Standard

#### Options:

-RM: Rack mountable case for standard 19" rack



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