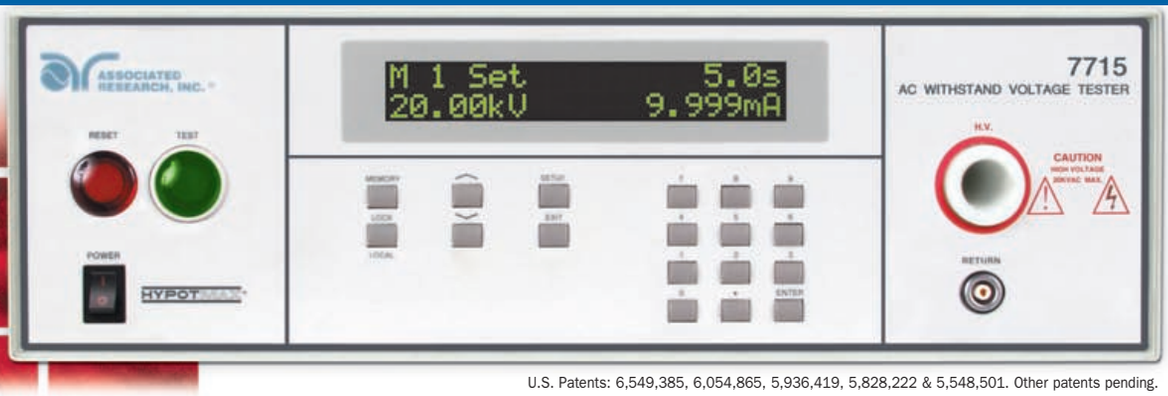
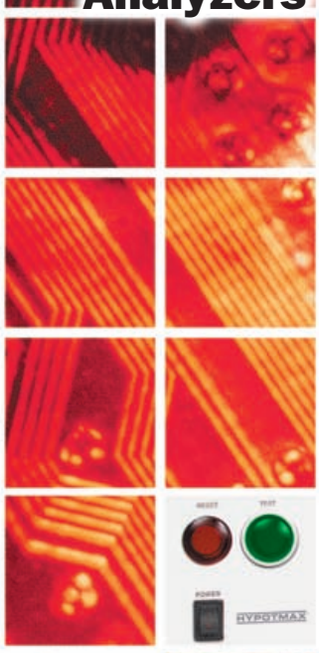


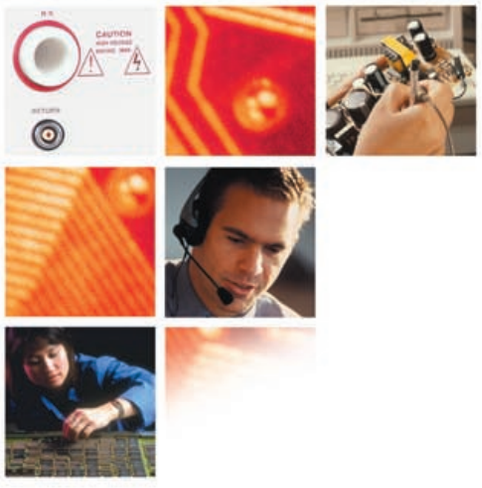
U.S. Patents: 6,549,385, 6,054,865, 5,936,419, 5,828,222 & 5,548,501. Other patents pending.

HYPOTMAX™

Safety agency listed.

High Voltage and High Current Electrical Safety Compliance Analyzers





Model 7700
AC/DC Hipot, Insulation Resistance with 500VA AC Output

Model 7704
AC/DC Hipot, Insulation Resistance, Ground Bond/ Continuity with 500VA AC Output

Model 7705
10KV AC Hipot

Model 7710
12KV DC Hipot

Model 7715
20KV AC Hipot

Model 7720
20KV DC Hipot

Features and Benefits

- Patented SmartGFI® safety circuit protects the operator from shock hazards
- 50 memories that can be stored and recalled. Multi-function models include 8 steps per memory
- Patented RAMP HI and CHARGE LO systems for more effective DC Hipot testing
- 500VA models available for Higher Current Hipot test applications
- Up to 20kV AC or DC Hipot testing for manufacturers with higher voltage testing requirements
- RS-232 or GPIB automation interfaces available. Use your own software or our stand alone test software
- 4 wire measurement and milliohm offset for accurate Ground Bond test results (Model 7704)

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Input Specifications

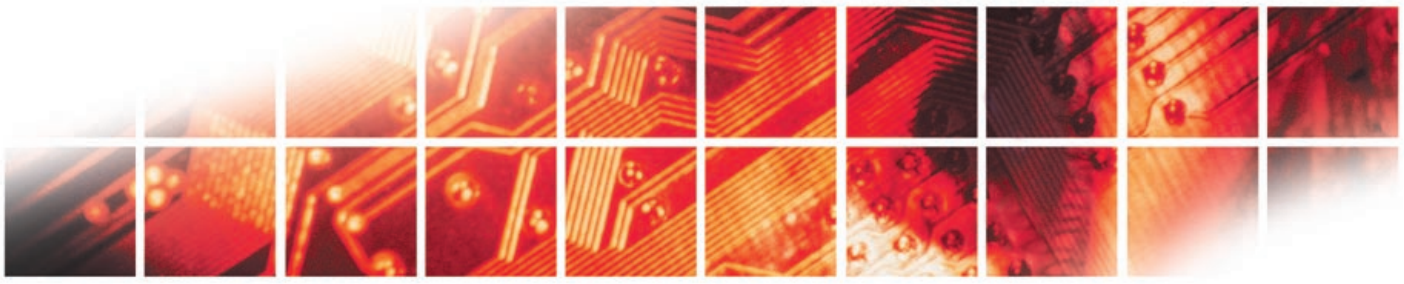
Voltage	7700/7704	100/115/200/230 VAC ± 10%, single phase, user selection
	7705/7710/7715/7720	115/230 VAC ± 10%, single phase, user selection
Frequency	7700/7704	47 - 63 Hz
	7705/7710/7715/7720	50/60 Hz ± 5%
Fuse	7700/7704	15 Amp 250 V fast blow internal
	7705/7710/7715/7720	10 Amp, 250 V

Dielectric Withstand Test Mode

Output Rating	7700/7704	5 KV @ 100 mA AC, 6 KV @ 10 mA DC
	7705	10 KV @ 20 mA AC
	7710	12 KV @ 10 mA DC
	7715	20 KV @ 10 mA AC
	7720	20 KV @ 5 mA DC
Output Adjustment	7700/7704	Range: 0 - 5 KV AC, 0 - 6 KV DC Resolution: 1 V/step Accuracy: ± (2% of setting + 5 V)
	7705	Range: 0 - 10 KV AC Resolution: 1V Accuracy: ± (2% of setting + 10 V)
	7710	Range: 0 - 12 KV DC Resolution: 1V Accuracy: ± (2% of setting + 10 V)
	7715	Range: 0 - 20 KV AC Resolution: 10 V/step Accuracy: ± (2% of setting + 10 V)
	7720	Range: 0 - 20 KV DC Resolution: 10 V/step Accuracy: ± (2% of setting + 10 V)
HI-Limit and LO-Limit	7700/7704	AC Range: 0.00 - 99.00 mA Resolution: 0.01 mA/step DC Range: 0 - 9999 µA Resolution: 1 µA/step Accuracy: AC or DC ± (2% of setting + 2 counts)
	7705	Range 1: 0.0 - 9.999 mA Resolution: 0.001 mA Range 2: 10.00 - 20.00 mA Resolution: 0.01 mA Accuracy: ± (2% of setting + 2 counts)
	7710	Range 1: 0.000 - 999.9 µA Resolution: 0.1 µA Range 2: 1000 - 9999 µA Resolution: 1 µA Accuracy: ± (2% of setting + 2 counts)
	7715	Range: 0.00 - 10.00 mA Resolution: 0.01 mA/step Accuracy: ± (2% of setting + 2 counts)
	7720	Range: 0.0 - 5000 µA Resolution: 1 µA Accuracy: ± (2% of setting + 2 counts)
DC Ramp HI	7700/7704	12 mA peak maximum, (ON/OFF selectable all models)
DC Charge LO	7700/7704	Range: 0.0 - 350 µA DC or auto set
Arc Detection		Range: 1 - 9
Failure Detector		Audible and visual

Dielectric Withstand Test Mode (Continued)

Voltage Display	7700/7704	Range: 0.00 - 6.00 KV full scale Resolution: 10 V/step Accuracy: ± (2% of reading + 2 counts)
	7705	Range: 0.00 - 10.00 KV Full scale Resolution: 0.01 mA Accuracy: ± (2% of reading + 20 V)
	7710	Range: 0.00 - 12.00 KV Full scale Resolution: 0.01 KV Accuracy: ± (2% of reading + 2 counts)
	7715	Range: 0.00 - 20.00 KV Full scale Resolution: 10 V Accuracy: ± (2% of reading + 20 V)
	7720	Range: 0.00 - 20.00 KV Full scale Resolution: 10 V Accuracy: ± (2% of reading + 20 V)
Current Display	7700/7704	Auto Range
	AC	Range 1: 0.000 mA - 3.500 mA Resolution: 0.001 mA/step Accuracy: ± (2% of reading + 0.003 mA) Range 2: 3.00 - 99.00 mA Resolution: 0.01 mA/step Accuracy: ± (2% of reading + 0.06 mA)
	DC	Range 0.0 µA - 350.0 µA Resolution: 0.1 µA/step Accuracy: ± (2% of reading + 0.3 µA) Range 2: 300 µA - 3500 µA Resolution: 1 µA/step Accuracy: ± (2% of reading + 2 µA) Range 3: 3000 µA - 9990 µA Resolution: 10 µA/step Accuracy: ± (2% of reading + 60 µA)
	7705	Auto Range Range 1: 0.000 mA - 3.500 mA Resolution: 0.001 mA Range 2: 3.00 - 20.00 mA Resolution: 0.01 mA Accuracy: ± (2% of reading + 3 counts)
	7710	Auto Range Range 1: 0.0 - 350.0 µA Resolution: 0.001 µA Range 2: 300 - 5000 µA Resolution: 0.01 µA Accuracy: ± (2% of reading + 3 counts)
	7715	Auto Range Range 1: 0.000 mA - 3.500 mA Resolution: 0.001 mA Range 2: 3.00 - 10.00 mA Resolution: 0.01 mA Accuracy: ± (2% of reading + 3 counts)
	7720	Auto Range Range 1: 0.0 - 350.0 µA Resolution: 0.1 µA Range 2: 300 - 5000 µA Resolution: 1 µA Accuracy: ± (2% of reading + 3 counts)
DC Output Ripple	7700/7704	≤ 4% Ripple RMS at 6 KV DC @ 3.5 mA, Resistive load
	7710	< 5% (12 KV/9999 µA at Resistive Load)
	7720	< 5% (20 KV/4999 µA at Resistive Load)
AC Output Waveform		Sine Wave, Crest Factor = 1.3 - 1.5
AC Output Regulation	7705/7710/7715/7720	± (1% of setting + 10 V) from no load to full load



Dielectric Withstand Test Mode (Continued)

Output Frequency		Range: 60 or 50 Hz, user selection Accuracy: ± 1%
Output Regulation	7700/7704	± (1% of output + 5 V) from no load to full load
Discharge Time	7705/7710/7715/7720	≤ 200 m secs
Dwell Timer	7700/7704	Range: 0, 0.3 - 999.9 sec (0 = Constant) Resolution: 0.1 sec increments Accuracy: ± (0.1% + 0.05 sec)
	7705/7710/7715/7720	AC Range: 0, 0.3 - 999.9 sec or min (0 = Constant) DC Range: 0, 0.4 - 999.9 sec or min (0 = Constant) Resolution: 0.1 second or minute increments Accuracy: ± (0.1% + 0.05 sec)
Ramp Timer	7700/7704	AC Range: 0.1 - 999.9 sec DC Range: 0.4 - 999.9 sec Resolution: 0.1 sec increments Accuracy: ± (0.1% + 0.05 sec)
	7705/7710/7715/7720	Range: 0.1 - 999.9 sec Resolution: 0.1 sec increments Accuracy: ± (0.1% + 1 count)
Ground Continuity	7700	Current: DC 0.1 A ± 0.01 A, fixed Max. Ground Resistance: 1 Ω ± 0.1 Ω, fixed
Ground Fault Interrupt	7700/7704	GFI Trip Current: 450 µA max (AC or DC) HV Shut Down Speed: < 1ms

Insulation Resistance Test Mode (Models 7700 & 7704 only)

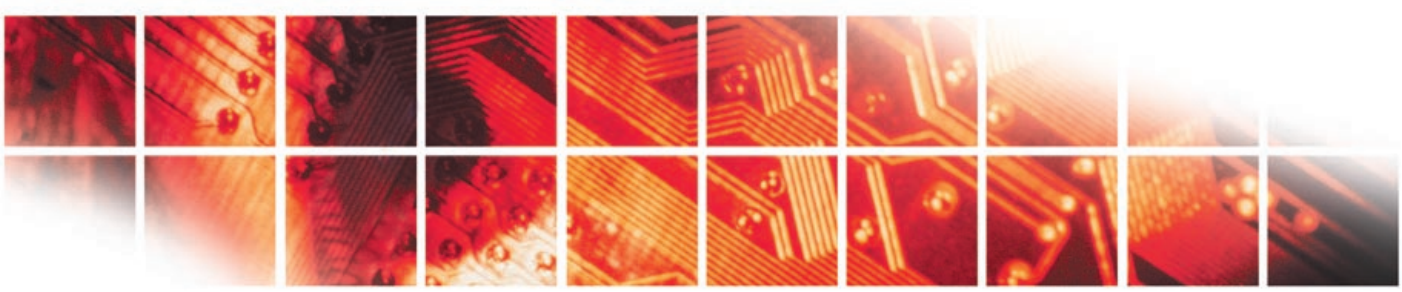
Output Voltage	Range: 100 - 1000 V DC Resolution: 1 V/step Accuracy: ± (2% of reading + 2 V)
Short Circuit Current	Maximum: 12 mA peak
Voltage Display	Range: 0 - 1000 V Resolution: 1 V/step Accuracy: ± (2% of reading + 2 counts)
Resistance Display	Range: 1 - 9999 MΩ (4 digit, auto ranging) Resolution: 500 V DC 1000 V DC MΩ MΩ MΩ 0.001 1.000 - 5.388 1.000 - 9.999 0.01 1.40 - 53.88 2.80 - 99.99 0.1 14.0 - 538.8 28.0 - 999.9 1 140 - 9999 280 - 9999 Accuracy: ± (2% of reading + 2 counts) at test voltage 500 - 1000 V and 1 - 1000 MΩ ± (8% of reading + 2 counts) at test voltage 500 - 1000 V and 1000 - 9999 MΩ ± (8% of reading + 2 counts) at test voltage 100 - 500 V and 0 - 1000 MΩ
Charge-LO	Range: 0.000 - 3.500 µA or auto set
HI-Limit	Range: 0 - 9999 MΩ (0 = OFF)
LO-Limit	Range: 1 - 9999 MΩ
Delay Timer	Range: 0, 0.5 - 999.9 sec (0 = Constant) Resolution: 0.1 sec/step Accuracy: ± (0.1% + 0.05 sec)
Ground Fault Interrupt	GFI Trip Current: 450 µA max (AC or DC) HV Shut Down Speed: < 1 ms

Ground Bond Test Mode (Model 7704 only)

Output Voltage (Open Circuit Limit)	Range: 3.00 - 8.00 V AC Resolution: 0.01 V/step Accuracy: ± (2% of setting + 0.03 V) O.C. condition
Output Frequency	Range: 50 or 60 Hz, user selection Accuracy: ± 1%
Output Current	Range: 3.00 - 30.00 A AC Resolution: 0.01 A/step Accuracy: ± (2% of setting + 0.02 A)
Current Display	Range: 0.00 - 30.00 A Resolution: 0.01 A/step Accuracy: ± (3% of reading + 0.03 A)
Resistance Display	Range: 0 - 600 mΩ Resolution: 1 mΩ/step Accuracy: ± (3% of reading + 2 mΩ)
HI & LO Limit	Range: 0 - 600 mΩ for 3 - 10 A 0 - 150 mΩ for 3 - 30 A Resolution: 1 mΩ/step Accuracy: ± (2% of setting + 2 mΩ)
Dwell Timer	Range: 0, 0.5 - 999.9 sec (0 = constant) Resolution: 0.1 sec/step Accuracy: ± (0.1% + 0.05 sec)
Milliohm Offset	Maximum Offset Capability: 200 mΩ Resolution: 1 mΩ/step Accuracy: ± (2% of setting + 2 mΩ)

General Specifications

PLC Remote Control		Input: Test, Reset, Recall 1 - 3, Remote Interlock (Remote Interlock optional on 7700/7704) Output: Pass, Fail, Test-in-Process
Interface		Standard RS-232, Optional GPIB
Memory	7700/7704	50 memories w/8 Steps per memory
	7705/7710/7715/7720	50 Memories
Security		Programmable password lockout capability to avoid unauthorized access to test set-up program
Safety		Built-in SmartGFI® circuit
Display		2 x 20 characters with front panel contrast setting
Alarm Volume Setting		Front panel adjustable with 10 set points
Line Cord		Detachable 7 ft. (2.13 m) power cable terminated in a three prong grounding plug
Terminations		Detachable 5 ft. (1.52 m) high voltage & return lead with clips
Mechanical		Tilt up front feet
Dimensions	7700/7704	(WxHxD) 17 x 5.8 x 16.5 in. (432 x 147 x 419 mm)
	7705/7710/7715/7720	(WxHxD) 17 x 5.8 x 15.75 in. (432 x 147 x 400 mm)
Weight	7700	61.65 lbs (28 kgs)
	7704	68.75 lbs (31.25 kgs)
	7705/7710/7715/7720	48.7 lbs (22.1 kgs)
Environmental		Operating temperature: 32˚ - 104˚ F (0˚ - 40˚ C) Relative humidity: 20% - 80%
Calibration		Traceable to National Institute of Standards & Technology (NIST). Calibration controlled by software. Adjustments are made through front panel keypad in a restricted access calibration mode. Calibration information stored in non-volatile memory.



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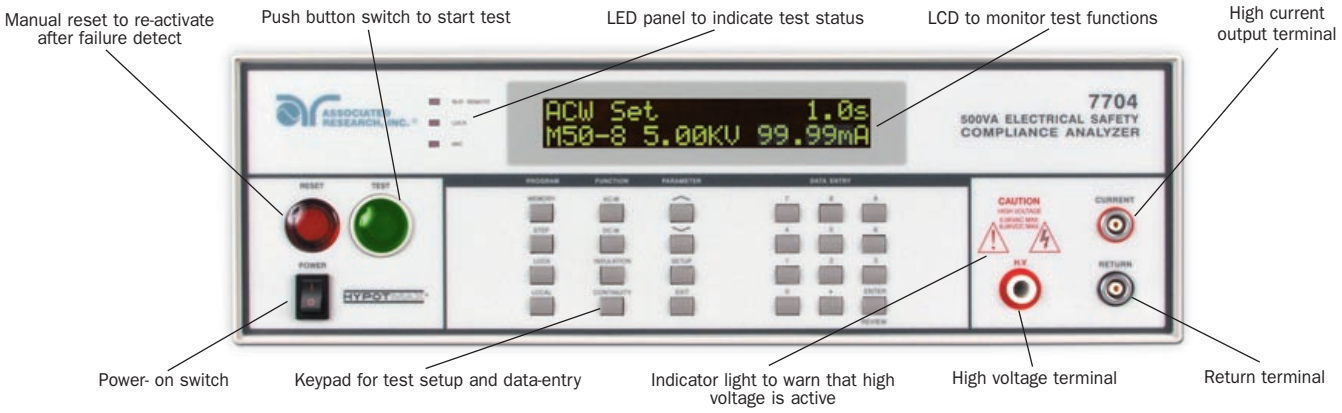

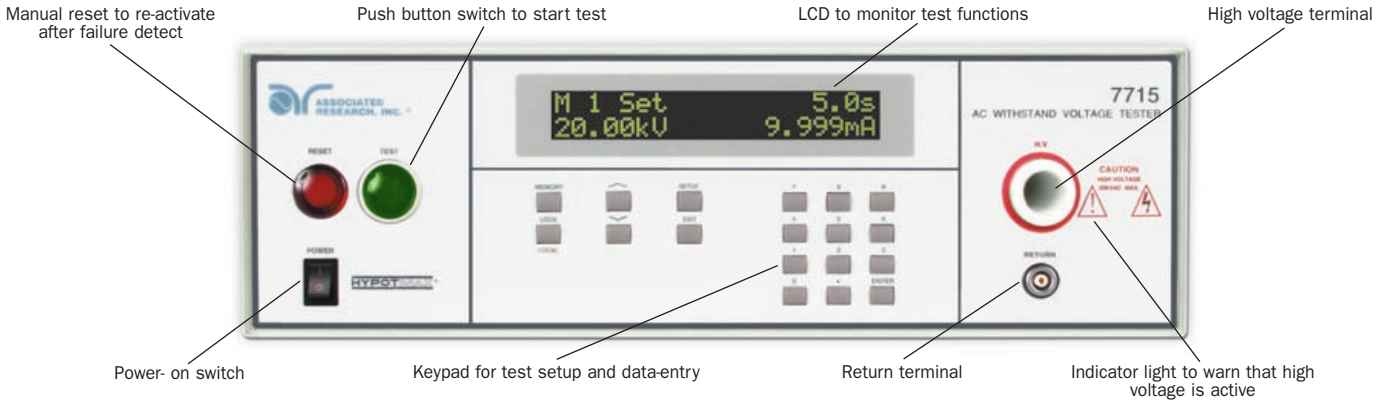

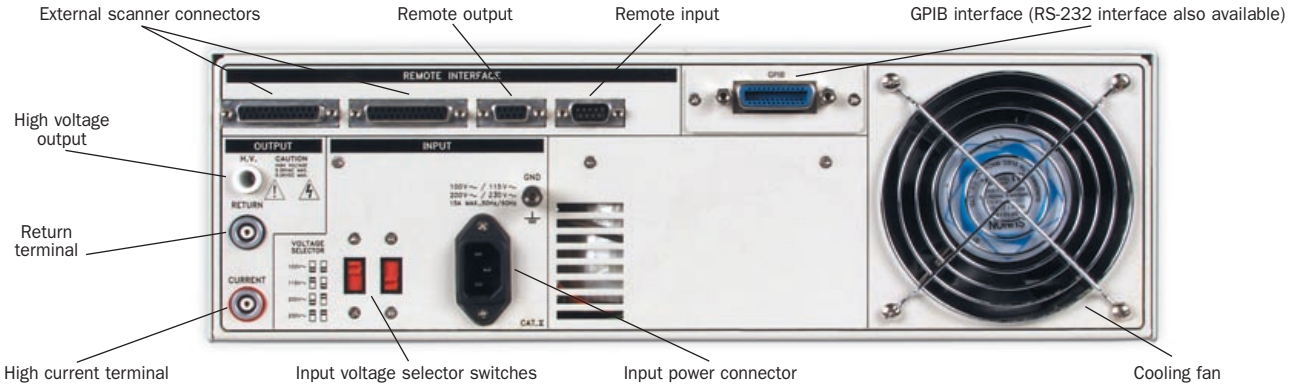

Rear panel of 7704 shown.
(Some features may not be available on all models.)

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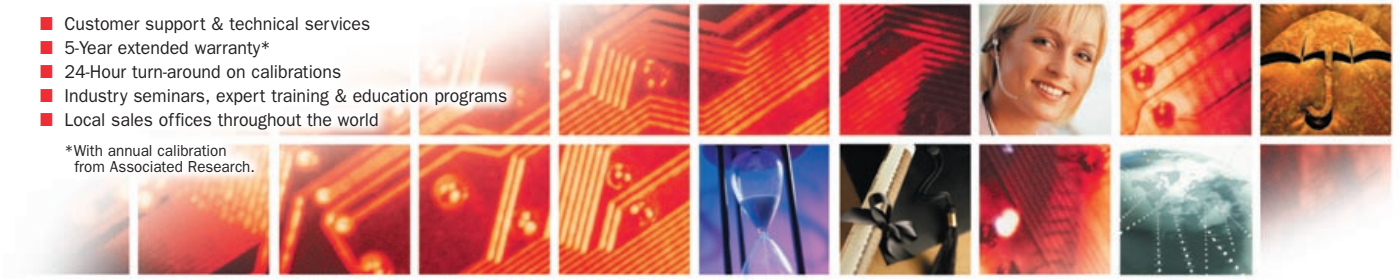

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