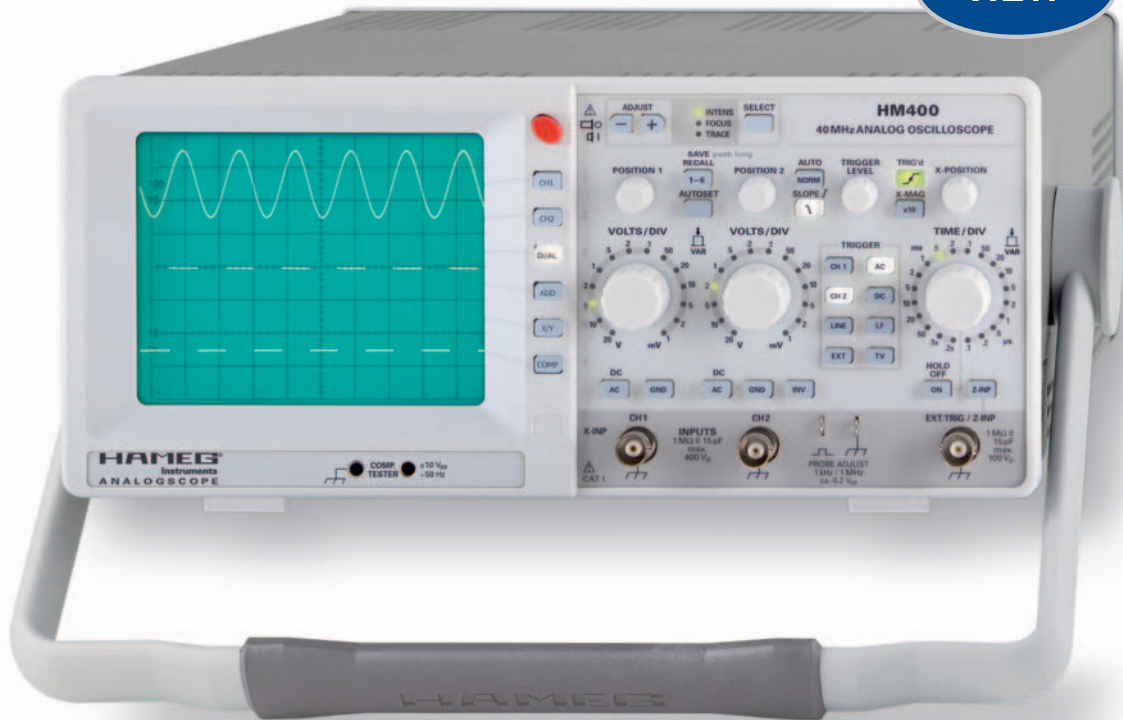


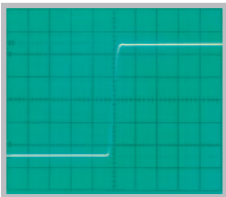
40MHz Analog Oscilloscope HM400

NEW

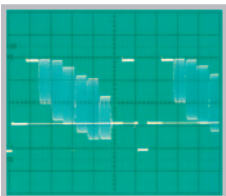


HM400

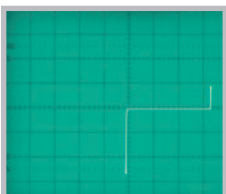
No signal distortion
resulting from overshoot



Line triggered composite
video signal



Characteristic of a Z-Diode
with component test mode



- ✓ **Reference-Class in sensitivity and input voltage range**
- ✓ **2 Channels with deflection coefficients 1 mV/div....20 V/div., variable to 50 V/div.**
- ✓ **Time Base 0.2 s/div....100 ns/div., with X magnification to 10 ns/div.**
- ✓ **Low noise measuring amplifiers with high pulse fidelity and minimum overshoot**
- ✓ **Peak to peak trigger for stable triggering 0...50 MHz at 0.5 div. signal level (to 80 MHz at 1 div.)**
- ✓ **Autoset, Save/Recall Memories for 6 instrument settings**
- ✓ **Yt- and XY-Mode with Z-Input for intensity modulation**
- ✓ **Component characterisation with component tester (two terminal network measurement) for use within service etc.**
- ✓ **Low power consumption, no fan**

40 MHz Analog Oscilloscope HM400

All data valid at 23 °C after 30 minute warm-up

Vertical Deflection

Operating Modes:	Channel 1 or 2 only Channels 1 and 2 (alternate or chopped) Sum or Difference of CH 1 and CH 2
Invert:	CH 2
XY Mode:	CH 1 (X) and CH 2 (Y)
Bandwidth [-3 dB]:	
DC, 5mV/div...20V/div.:	0...40MHz
AC, 5mV/div...20V/div.:	2Hz...40MHz
DC, 1mV/div...2mV/div.:	0...10MHz
AC, 1mV/div...2mV/div.:	2Hz...10MHz
Rise Time [calculated]:	<35 ns (1 mV/div...2 mV/div.) <8,75 ns (5 mV/div...20 V/div.)
Deflection Coefficient:	1-2-5 Sequence ± 5% (1 mV/div...2 mV/div.) ± 3% (5 mV/div...20 V/div.) Variable (uncalibrated): > 2.5:1 to > 50 V/div.
Input Impedance:	1 MΩ 15 pF
Input Coupling:	DC, AC, GND (ground)
Max. Input Voltage:	400 V (DC + peak AC)

Triggering

Automatic (Peak to Peak):	5 Hz...50 MHz (≥ 0.5 div.), 50 MHz...80 MHz (≥ 1 div.)
Normal with Level Control:	0...50 MHz (≥ 0.5 div.), 50 MHz...80 MHz (≥ 1 div.)
Slope:	Rising or falling
Sources:	Channel 1 or 2, Line and External
Coupling:	AC (5 Hz...80 MHz), DC (0...80 MHz), LF (0...1.5 kHz)
Trigger Indicator:	LED
External Trigger:	
Input Impedance:	1 MΩ 15 pF
External Trigger Signal:	0,3 V _{pp} ≤ 5 V, DC (0...50 MHz), AC (20 Hz...50 MHz)
Max. input voltage:	100 V (DC + Peak AC)
Active TV sync. separator:	Field and Line, +/-

Horizontal Deflection

Time Base:	0.2 s/div...100 ns/div. (1-2-5 Sequence)
Accuracy:	± 3 % Variable (uncalibrated): > 2.5:1 to > 1.25 s/div.
X Magnification x 10:	up to 10 ns/div.
Accuracy:	± 5 %
Hold-Off Time:	variable to approx. 10 : 1
XY	
Bandwidth X amplifier:	0...2.5 MHz (-3 dB)
XY Phase shift < 3°:	< 120 kHz

Operation / Readout / Control

Manual:	via controls and buttons
Autoset:	automatic signal related parameter settings
Save and Recall:	6 instrument parameter settings

Component Tester

Test Voltage:	approx. 7 V _{rms} (open circuit)
Test Current:	max. 7 mA _{rms} (short-circuit)
Test Frequency:	approx. 50 Hz
Test Connection:	2 banana jacks 4 mm Ø One test circuit lead is grounded via protective earth (PE)

Miscellaneous

CRT:	D14-363GY, 8 x 10 div. with internal graticule
Acceleration Voltage:	approx. 2 kV
Trace Rotation:	adjustable on front panel
Z-Input (Intens. modulation):	max. + 5 V (TTL), 10 kHz
Probe ADJ Output:	1 kHz / 1 MHz Square Wave Signal ca. 0.2 V _{pp} (tr < 5 ns) for probe adjustment
Power Supply (Mains):	105/253 V, 50/60 Hz ± 10 %, CAT II
Power Consumption:	approx. 30 Watt at 230 V/50 Hz
Safety class:	Safety class I (EN61010-1)
Operating temperature:	+5°C...+40°C
Storage temperature:	-20°C...+70°C
Max. rel. humidity:	5%...80% (non condensing)
Dimensions (W x H x D):	285 x 125 x 380 mm
Weight:	approx. 4.8 kg

Accessories supplied: Line Cord, Operators Manual, 2 Probes 1:1/10:1 (HZ154) with LF/HF adjustment

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