

Philips PM3050/3055

With compliments
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Display

CRT 8 x 10cm viewing area
 P31 phosphor
 16kV acceleration voltage
 Parallax-free graticule with continuously variable illumination
 Separate LCD for display of menus, settings, status indications etc. LCD is constantly illuminated by backlighting
 Autoset sets vertical deflection, timebase speed and triggering for easy-to-read display of input signals

Vertical deflection

Display modes $Y_A, Y_B, -Y_B, Y_A + Y_B, Y_A - Y_B$
 Trigger view (PM 3055 only) in any combination, chopped or alternate

Frequency response

DC... >50 MHz -3dB (20mV/div...10V/div.)
 DC... >35 MHz -3dB (2mV/div...10mV/div.)
 In AC mode, lower -3dB point is <10Hz

Rise time

<7ns (20mV/div...10V/div.)
 <10ns (2mV/div...10mV/div.)
 Max. pulse aberration <1.5sub. div. peak-to-peak (input pulse 5div., rise time 1ns)

Deflection coefficient

2mV/div...10V/div. in steps of 1, 2, 5 sequence
 Error limit 3%
 Continuous control between steps with '>' flashing in LCD as warning symbol for uncal. amplitude

Input impedance

1 M Ω \pm 2% // 20pF \pm 2pF
 Max. rated input voltage 400V (DC + AC peak)

Dynamic range

> \pm 24div. at 10MHz
 >8div. at 50MHz
 CMRR 100:1 at 1MHz

Trig. view (PM 3055 only)

Frequency response DC... <50MHz -3dB (via Ext., Y_A, Y_B)
 Deflection coefficient 100mV/div. via Ext. input 2mV/div... 10V/div. via Y_A or Y_B

HORIZONTAL DISPLAY MODES

NTB, MTB, Alt., TB, DTB, X-defl. (PM 3055)
 TB, X-defl. (PM 3050)

Main timebase (MTB) of timebase (TB)

Time coefficient 0.5s/div... 50ns/div. in steps of 1, 2, 5 sequence
 Expansion x10 fastest sweep speed 5ns/div.
 Error limit 3%
 Error limit total incl. x10 magn. 4%
 Continuous control between steps with '>' flashing in LCD as warning symbol for uncal. sweep
 Hold-off continuously adjustable up to 10x min. value

Delay timebase (DTB) (PM 3055 only)

Time coefficient 1ms/div... 50ns/div. in steps of 1, 2, 5 sequence
 Expansion x10 fastest sweep speed 5ns/div.
 Error limit 3%
 Error limit total incl. x10 magnification 4%
 Continuous control between steps with '>' flashing in LCD as warning symbol for uncal. sweep
 Trace separation > \pm 4div. DTB shift only

Delay timebase multiplier (DIM) (PM 3055 only)

Resolution 1:10000
 Error limit total 4% (in x10 magn.)
 Delay time jitter 1:>20000

Triggering (MTB or TB)

Trig. modes: Auto (free run), Trig., Single
 Trig. source: A, B, Composite (A, B), Ext. (DC or AC), Line
 LCD indicates 'Not triggered', 'Triggered' or 'Armed' status
 Trig. coupling: Peak-to-peak (P-P), DC, TVL, TVF

Triggering (DTB) (PM 3055 only)

Starts, A, B, Composite (A, B), Ext.
 TVL (only if MTB TVF selected)

MTB and DTB Trig. sensitivity

	Int.	Ext.
10MHz	0.5div.	50mV
50MHz	1div.	150mV
100MHz	2div.	500mV
TVF/TVL	0.7div. sync.	70mV sync.
Level range	\pm 8div.	\pm 800mV
Slope pos. (), or neg. (), TVF or TVL pos. (+) or neg. (-)		

X-DEFLECTION

Deflection coefficient:
 via channel A or B 2mV/div... 10V/div.
 via Ext. input 100mV/div
 Freq. response DC... 2MHz
 Error limit 5%
 Phase shift <3 $^\circ$ (at 100kHz)
 Ext. input 1 M Ω \pm 2% // 20pF \pm 2pF
 Max. input voltage 400V (DC + AC peak)

POWER SUPPLY

Safety requirements meet following specifications: IEC 348 Class I, UL 1244, CSA 556B, VDE 0411
 AC nominal voltage 100... 240V
 DC nominal voltage 145... 335V
 Line frequency 50... 400Hz
 Power consumption (AC source) max. 50W

MISCELLANEOUS

Cal. output 1.2V \pm 1%, frequency 2kHz
 Z modulation input TTL-compatible, >2.0V blanks display,
 <0.8V max. intensity, analog control possible between 2.0V and 0.8V

MECHANICAL DATA

Width	387mm (15.2-in.) incl. handle 350mm (13.8-in.) excl. handle
Length	518mm (20.4-in.) incl. handle, excl. knobs 433.5mm (17.1-in.) excl. handle and knobs 530.5mm (20.9-in.) incl. handle and knobs 455.6mm (17.9-in.) excl. handle, incl. knobs
Height	146.5mm (5.8-in.) incl. feet 134.5mm (5.3-in.) excl. feet 132.5mm (5.2-in.) excl. lower cabinet
Weight	approx. 7.5kg (16.5lb) excl. access.

ENVIRONMENTAL DATA

Temperature	
rated range of use	+10 $^\circ$... +40 $^\circ$ C
limited range of operation	0 $^\circ$... +50 $^\circ$ C
storage	-40 $^\circ$... +75 $^\circ$ C
Altitude:	
operating	4500m (15000ft.)
transport	12000m (40000ft.)
EMI	Meets requirements of MIL-STD-461 Class B, VDE 687 and VDE 0875 Grenzwertklasse B

Standard models	PM 3050 (single time base)
	PM 3052 (single time base rack mount-factory installed)
	PM 3055 (dual time base)
	PM 3057 (dual time base rack mount-factory installed)

INSTRUMENT OPTIONS

option 11: P7 phosphor
 option 70: Y-output
 option 74: Sweep + gate output (PM 3050/52)
 MTB Sweep + MTB gate + DTB gate output (PM 3055/57)

Note: Combinations of options are possible, but if options 70 and option 74 are combined, sweep output will not be included.

Service manual: 4822 872 05309 (PM 3050)
 4822 872 05311 (PM 3055)

POWER CORD AND PLUG OPTIONS

001 Universal/Euro	220 V/16 A, 50 Hz
003 Standard North America	120 V/15 A, 60 Hz
004 UK	240 V/13 A, 50 Hz
005 Switzerland	220 V/10 A, 50 Hz
008 Australia	220 V/10 A, 50 Hz

Ordering example **PM 3057/70 3**
 Dual time base rack mount / Y out / Standard North America line cord

(Optional accessories are listed on the previous page.)