

1.2. TECHNICAL DATA

General information:

On delivery from the factory, the instrument complies with the safety regulations of measuring and control equipment. The information and warnings contained in this instruction manual must be followed by the user to ensure safe operation and to maintain the instrument in a safe condition.

- Only data with indicated tolerances or limits are guaranteed; data without tolerances are given only for guidance.
- All specifications will be met after a warm-up time of 30 min. when keeping the instrument in a constant mounting position.
- Inaccuracies (absolute or in %) relate to the indicated reference value.

SPECIFICATIONS

1.2.1. RF Generator

Frequency range	0,1 – 125 MHz
Ranges	0,1 – 0,25 MHz 0,25 – 0,5 MHz 0,5 – 1 MHz 1 – 2,5 MHz 2,5 – 5 MHz 5 – 10 MHz 10 – 25 MHz 25 – 50 MHz 50 – 125 MHz
Frequency display	5-digit LED display, red, 11 mm high; 3 decimal points; 2 LEDs for dimension kHz, MHz
Error of the display	$< 10^{-4}$ typical, ± 1 digit
Temperature coefficient of the display	$\pm 5 \times 10^{-6}/^{\circ}\text{C}$ at $23^{\circ}\text{C} \pm 20^{\circ}\text{C}$
Temperature coefficient of the frequency	$< 10^{-5}/^{\circ}\text{C}$

1.2.2. RF Sweep generator

Ranges	.4/.5 MHz 10/11 MHz 36/41 MHz 75/110 MHz
wave form	semi-rectangular

1.2.3. RF output

	for all RF ranges and all sweep ranges
Connection:	BNC connector RF OUT
Impedance:	75 Ω
max. output voltage:	50 mV into 75 Ω
Frequency response:	$< \pm 2$ dB (1 dB typ.) for all RF ranges
Attenuator	> 100 dB total 0 – 80 dB continuous 3 dB, 40 dB calibrated

1.2.4. Modulation

Modulation modes

unmodulated
amplitude-modulated, AM
frequency-modulated, FM

Frequency response

Modulating output MOD OUT

see also table in chapter 3.2.

all RF ranges and all sweep ranges
all RF ranges and all sweep ranges
sweep ranges 10/11 and 75/110 MHz

< 2 dB in .4/.5 and 10/11 MHz ranges
< 0.2 dB in 36/41 and 75/110 MHz ranges

1 kHz sine, 2 V
resp. external modulating signal at MOD IN

Amplitude modulation

unmodulated

AM, internal

all RF ranges and all sweep ranges

all RF ranges and all sweep ranges

Modulation frequency: 1 kHz sine

Modulation depth: 30 %

AM, external

Modulation depth: 0 – 100 %

Modulation coefficient: 200 mV/10 % AM

3 dB band width: 20 Hz – 20 kHz

Input impedance: > 10 k Ω

Frequency modulation

10/11 and 75 /110 MHz ranges

FM, internal

Modulation frequency: 1 kHz sine

Sweep (Δf): 22,5 kHz

FM, external

Modulation signal: 20 Hz – 60 kHz (3 dB)

Sweep (Δf): 0 – 75 kHz

Modulation coefficient: 200 mV/ $\pm 7,5$ kHz

3 dB band width: 20 Hz – 60 kHz

Input impedance: > 10 k Ω

1.2.5. Wobulation

Ranges, wobulation width

Range	Width ($\Delta 2 f$)
.4/.5 MHz	0 – 50 kHz
10/11 MHz	0 – > 1 MHz
36/41 MHz	0 – 10 MHz
75/110 MHz	0 – 1 MHz

Frequency response

< 0,2 dB in .4/.5 and 10/11 MHz ranges

Wobble frequency, triangle

3 – 30 Hz, blanking during fly-back

– Linearity error

< 5 %

Wobble frequency, sine-wave

50/60 Hz line frequency, phase variable

Center frequency

adjustable within the full ranges

Wobulating output SWEEP OUT

– Signal

triangle

sine-wave

– Frequency

3 – 30 Hz

50/60 Hz line frequency

– Amplitude

2,5 – 10,5 Vpp

2,5 – 10,5 Vpp

– Impedance

1 k Ω

1 k Ω

1.2.6.	Marker generator	prepared by one of the RF SWEEP RANGE buttons (indicator-LED MARKER is illuminated); switched in by button MARKER OFF/ON	
	variable frequency markers fixed frequencies for adjustable frequency marker spectrum	from RF generator, adjusted frequency on the display	
	Marker Amplitude Output Impedance	Range	Marker distance
		.4/.5 MHz	10 kHz
		10/11 MHz	100 kHz
		36/41 MHz	1 MHz
		75/110 MHz	100 kHz
		Marker mixing, superposition; (birdy-marker)	
		2 Vpp	
		2 loop-through BNC connectors	
		> 500 k Ω	
1.2.7.	Counter	PM 5326:	
	Frequency range	1 – 999.99 kHz	
	Input voltage	50 mV – 50 V	
	Input impedance	1 M Ω	
		PM 5326 X:	
		1 kHz – 99.999 MHz	
		30 mV – 50 V	
		1 M Ω	
1.2.8.	Power supply	AC mains	
	Reference value	230 V	
	Nominal values	115 V/230 V selectable by solder links	
	Frequency range	48 – 63 Hz	
	Power consumption	18 W	
1.2.9.	Environmental conditions		
	Ambient temperature		
	Reference value	+ 23 °C \pm 1 °C	
	Nominal working range	+ 5 °C ... +40 °C	
	Safe operation temperature range	–15 °C ... +55 °C	
	Limits for storage and transit	–40 °C ... +70 °C	
	Relative humidity		
	Reference range	45 ... 75 %	
	Nominal working range	20 ... 80 %	
	Air pressure		
	Reference value	1013 mbar ($\hat{=}$ 760 mm Hg)	
	Nominal working range	800 ... 1066 mbar (up to 2200 m height)	