

# Technical data

## 1.1 Test patterns

### Standard colour bar pattern

Colour carrier amplitude and phase position:

Yellow	$\pm 0,33 / 167^\circ$
Cyan	$\pm 0,47 / 284^\circ$
Green	$\pm 0,44 / 241^\circ$
Magenta	$\pm 0,44 / 61^\circ$
Red	$\pm 0,47 / 104^\circ$
Blue	$\pm 0,33 / 347^\circ$

Reference value:

Black/white level	= 1,00
Burst phase	= $180^\circ \pm 45^\circ$

Tolerances:

Amplitude	= $\pm 5\%$
Phase angle	= $\pm 3^\circ$

The brightness signal corresponds to the following grey scale pattern

### Grey scale pattern

Brightness value:

White	= 1,00
Yellow	= 0,67
Cyan	= 0,52
Green	= 0,44
Magenta	= 0,31
Red	= 0,22
Blue	= 0,08

### Colour raster "Red":

Red	$\pm 0,47 / 104^\circ$
Blue	$\pm 0,33 / 347^\circ$
Green	$\pm 0,44 / 241^\circ$

Can be switched internally to "Blue" or "Green"

### Colour axis test pattern

Colour difference signals from left to right:

(R - Y)	: + $90^\circ$
-(R - Y)	: + $270^\circ$
(B - Y)	: + $0^\circ$
-(B - Y)	: + $180^\circ$

For the grey scale the above signals are reduced in amplitude by 50% and the phase position rotated by  $90^\circ$ .

Tolerance of the phase angle:  $\pm 3^\circ$

### Cross hatch pattern:

14 horizontal and 19 vertical lines

### Dot pattern

### Chess board pattern

### Circle test pattern

Circle size adjustable:  
Deviation from the circular form:  $\leq 2\%$  (from radius)

## 1.2 Synchronizing signals

Frame frequency: 50 Hz

Line frequency: 15,625 Hz

Line pulse width: 4,7  $\mu\text{s}$

Line blanking: 12  $\mu\text{s}$

Coupling ratio: 284 : 1

Colour carrier frequency: 4,433618 MHz  $\pm 20$  Hz

Burst amplitude, cal.:  $\pm 0,23$  (black/white level = 1,00)

Burst amplitude adjustable: ca.  $\pm 0,35$

Burst position: Starts 5,6  $\mu\text{s}$  after the leading edge of the line pulse.

Burst oscillations:  $10 \pm 1$  ( $\cong 2,2 \mu\text{s}$ )

Front black porch: 1,5  $\mu\text{s}$

Rear black porch: 5,8  $\mu\text{s}$

Frame pulse width: approx. 150  $\mu\text{s}$

Frame blanking: approx. 1,5 ms

Frame and line frequencies are coupled according to standard.

The line frequency is obtained by division from the colour carrier frequency.

### 1.3 HF-Section

HF-carrier	
VHF band I:	Channel 2 ... 4
band III:	Channel 5 ... 12
UHF band IV/V:	Channel 21 ... 65
<b>Sound</b> (can be switched out)	
Sound modulation:	FM approx. 1 kHz (internal)
Deviation:	approx. 50 kHz
Sound/vision carrier interval:	$5,5 \text{ MHz} \pm 3 \cdot 10^{-4} / ^\circ \text{C}$

### 1.4 Inputs

For the external modulation of the HF signal.

Video input:	RE > 50 k $\Omega$ /BNC
Input voltage:	1 V <sub>pp</sub> , positive
Sound input:	RE > 30 k $\Omega$ /banana plug
AF-Range:	30 Hz ... 20 kHz
Input level:	1 V <sub>rms</sub> for ca. 20 kHz FM/deviation (at 1 kHz)
deviratisation sensitivity:	ca. 50 mV <sub>rms</sub> /kHz

### 1.5 Outputs

Video output:	Ri = 75 $\Omega$ /BNC
Output voltage:	$\geq 1,4 \text{ V}_{pp}$ at 75 $\Omega$ , continuously adjustable
Polarity:	Positive/negative, optional
HF output	Ri = 75 $\Omega$ /BNC
Output voltage VHF:	approx. 8 mV
Output voltage UHF:	approx. 5 mV
HF attenuator:	> 60 dB adjustable
Synchronizing signal output:	BNC/TTL
Output voltage:	4 V <sub>pp</sub> , negative; Ri = 1 k $\Omega$

### 1.6 Miscellaneous:

Power supply:	220/110 V $\pm$ 10% 50 Hz
Power consumption:	approx. 36 VA
Reference temperature:	23 $^\circ$ C
Nominal temperature:	23 $^\circ$ C $\pm$ 10 $^\circ$ C
Dimensions:	328 x 260 x 88 mm
Weight:	4,5 kg
Accessory:	HF connection cable type 3384

### 1.7 Accessories (included):

Accessories to special order HF connection cable type 308.02	HF connection cable, type 3384
HF connecting cable type 331.55	For connecting to older television receivers with 240 antenna sockets.
HF connecting cable type 331.14	Connection cable with BNC plug at one end and banana plugs at the other.
	Connection cable with BNC plugs at each end e. g. for external modulation or synchronizing connection.