

*OK 18-1-80
Sieber*

MONITOR TUBE

The M24-101W is a 24 cm-diagonal rectangular television tube with integral protection primarily intended for use as a monitor or display tube.

QUICK REFERENCE DATA

Deflection angle	90 °	
Focusing	electrostatic	
Resolution	900	lines
Overall length	≤ 260	mm

SCREEN

Metal backed phosphor		
Luminescence	white	
Light transmission of face glass	52	%
Useful diagonal	≥ 225	mm
Useful width	≥ 190	mm
Useful height	≥ 140	mm

HEATING

Indirect by a.c. or d.c.; parallel supply		
Heater voltage	V_f 6.3	V
Heater current	I_f 300	mA

FOCUSING

electrostatic

For focusing voltage providing optimum focus at a beam current of 100 μ A see under "Typical operating conditions".

DEFLECTION

magnetic

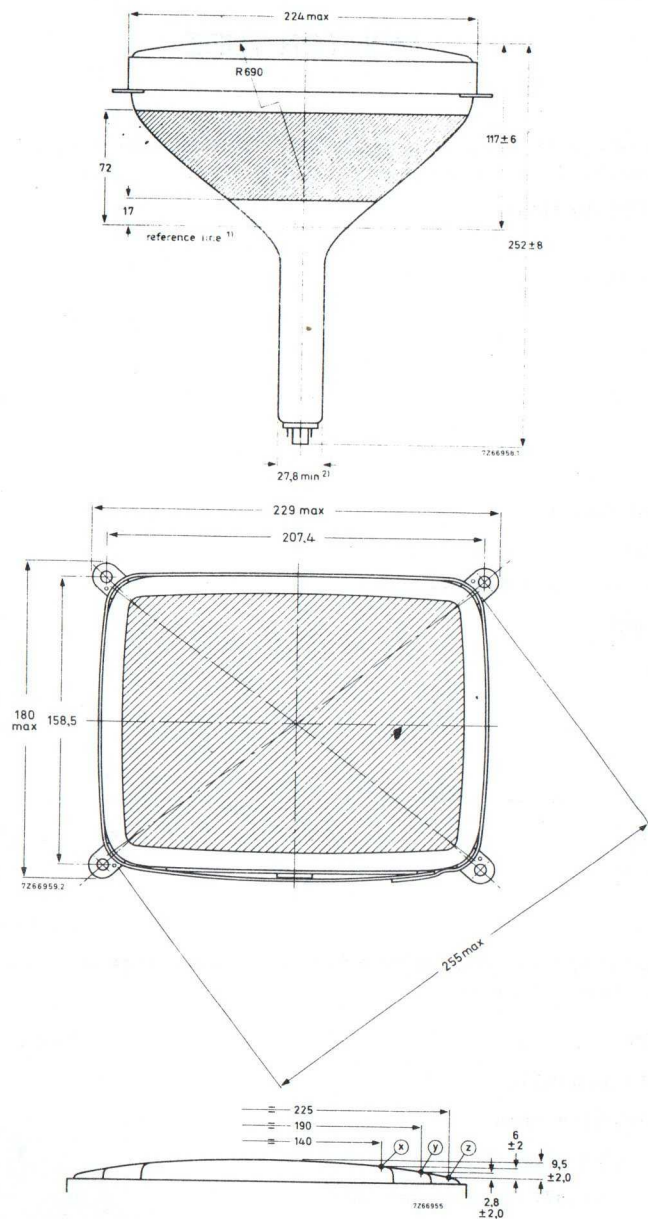
Diagonal deflection angle	90 °
Horizontal deflection angle	80 °
Vertical deflection angle	65 °

Deflection coil AT1071/03 is recommended.



MECHANICAL DATA

Dimensions in mm

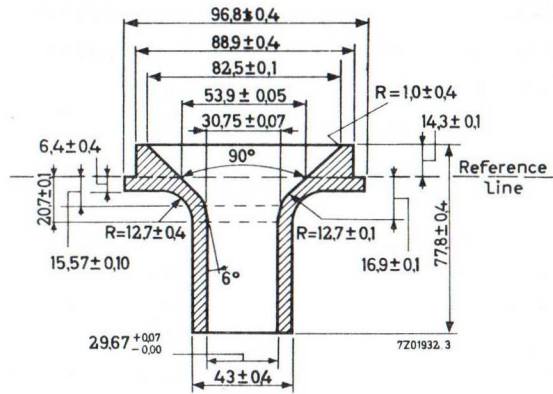


Notes see page 4.

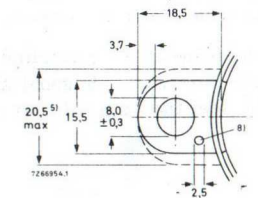
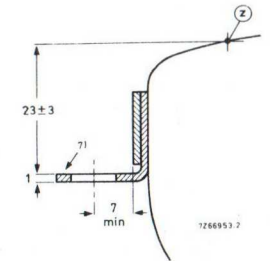
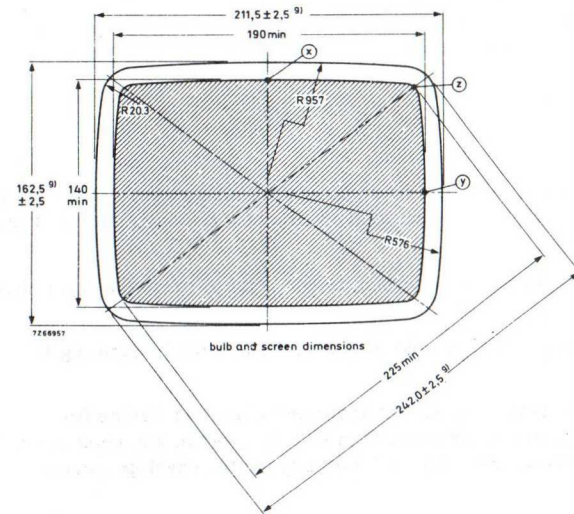
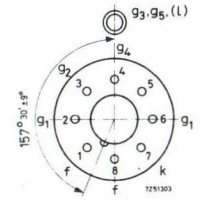
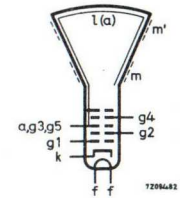
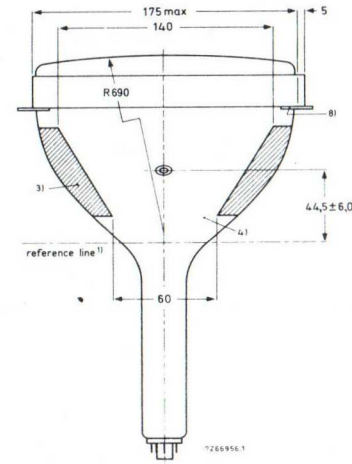


REFERENCE LINE GAUGE

Dimensions in mm



MECHANICAL DATA (continued)



Notes see page 4.



MECHANICAL DATA (continued)

Mounting position : any

Base Neo eightar (B8H), IEC 67-I-31a

Cavity contact CT8, IEC67-III-2

Accessories

Socket 2422 501 06001

Final accelerator contact connector

PICTURE CENTRING MAGNET

Field intensity perpendicular to the tube axis adjustable from 0 to 800 A/m (0 to 10 Oe). Adjustment of the centring magnet should not cause a general reduction in brightness or shading of the raster.

NOTES TO OUTLINE DRAWINGS

- 1) The reference line is determined by the plane of the upper edge of the flange of the reference line gauge with the gauge resting on the cone.
- 2) The maximum dimension is determined by the reference line gauge.
- 3) This tube has an external conductive coating (m), which must be earthed. The capacitance of this coating to the final accelerator is used for smoothing the EHT. The tube marking and warning labels are on the side of the cone opposite the final accelerator contact, and this side should not be used for making contact to the conductive coating.
- 4) This area must be kept clean.
- 5) Minimum space to be reserved for mounting lugs.
- 6) The mounting screws in the cabinet must be situated within a circle with a diameter of 4 mm drawn around the true geometrical position (corners of a rectangle of 207,4 mm x 158,5 mm).
- 7) The maximum displacement of any lug with respect to the plane through the other three lugs is 2 mm.
- 8) The metal rim-band must be earthed. The hole of 2,5 mm diameter in each lug is provided for this purpose.
- 9) The bulge at the spliceline seal may increase the indicated maximum values for envelope width, diagonal and height by not more than 6,4 mm, but at any point around the seal the bulge will not protrude more than 3,2 mm beyond the envelope surface.

CAPACITANCES

Final accelerator to external conductive coating	$C_{g3, g5(\ell)/m}$	420	pF
Final accelerator to metal band	$C_{g3, g5(\ell)/m'}$	200	pF
Cathode to all other elements	C_k	5	pF
Control grid to all other elements	C_{g1}	7	pF

TYPICAL OPERATING CONDITIONS

Final accelerator voltage	$V_{g3, g5(\ell)}$	16	kV
Focusing electrode voltage	V_{g4} 0 to	400	V
First accelerator voltage	V_{g2}	600	V
Grid 1 voltage for extinction of focused raster	V_{g1} -32 to	-85	V

RESOLUTION

Resolution at screen centre measured with the shrinking raster method (non-interlaced raster), under typical operating conditions, and at a beam current of 50 μ A: 900 lines (luminance \approx 200 cd/m²).

If necessary, the picture quality can be improved by using a beam centring magnet. This magnet, catalogue number 3322 142 11401, can be supplied on request.

LIMITING VALUES (Absolute max. rating system)

Final accelerator voltage	$V_{g3, g5(\ell)}$	max. 18 min. 10	kV kV
Focusing electrode voltage, positive	V_{g4}	max. 1000	V
negative	$-V_{g4}$	max. 500	V
First accelerator voltage	V_{g2}	max. 800 min. 300	V V
Grid 1 voltage, negative	$-V_{g1}$	max. 150	V
positive	V_{g1}	max. 0	V
positive peak	V_{g1p}	max. 2	V
Cathode to heater voltage, positive	V_{kf}	max. 250	V
positive peak	V_{kfp}	max. 300	V 1)
negative	$-V_{kf}$	max. 135	V
negative peak	$-V_{kfp}$	max. 180	V

1) During a warm-up period not exceeding 15 s the heater may be 410 V negative with respect to the cathode.

