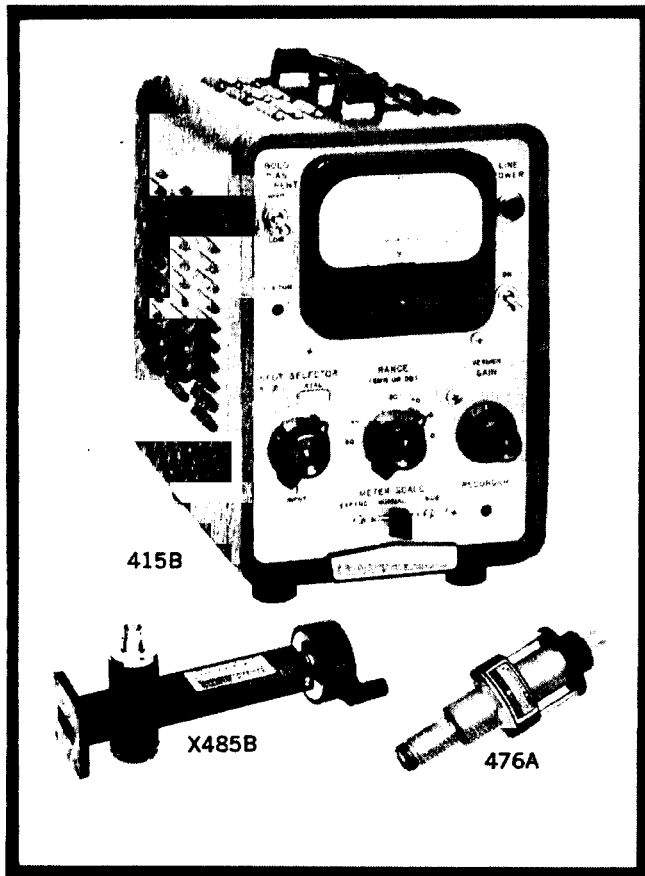


415B STANDING WAVE INDICATOR, 476A, 485B MOUNTS

For convenient swr measurements



415B

X485B

476A

415B Standing Wave Indicator

Similar to the hp 415D, this meter is a tuned voltmeter for swr measurements with hp slotted lines and detector mounts. It also is useful as a null indicator for bridge measurements, with a 200 K input circuit for this use.

A 60 db attenuator adjustable in 10 db range steps provides a calibrated range of 70 db. An output is provided for use with a recording milliammeter, and a special 5 db attenuator is incorporated to increase resolution through use of the upper portion of the logarithmic meter scale.

Inputs include a 200-ohm termination with bias of 4.3 or 8.7 ma for bolometers, unbiased for crystals, or a 200 K load for null measurements. A jack and monitor cable are provided for connecting an external milliammeter to measure bolometer current.

Specifications, 415B

Input: "Bolo" (200 ohms), bias provided for 8.7 or 4.3 ma bolometer or 1/100 amp fuse; "Crystal" (200 ohms) for crystal rectifier; "Crystal" (200 K) high impedance for crystal rectifier as null detector; BNC connector.

Sensitivity: 0.1 μ volt at 200 ohms for full-scale deflection.

Noise: at least 5 db below full scale when operated from 200-ohm resistor at room temperature.

Frequency: 1000 cps \pm 2%; other frequencies, 315 to 2020 cps, available on special order; should not be harmonically related to power line frequency.

Bandwidth: 30 cps (nominal).

Range: 70 db; input attenuator provides 60 db in 10 db steps, accuracy \pm 0.1 db per 10 db step; maximum accumulative error, \pm 0.2 db.

Scale selector: "Normal", "Expand" and "-5 db".

Output: jack provided for recording milliammeter having 1 ma full-scale deflection and internal resistance of 1500 ohms or less.

Meter scales: swr 1 to 4, swr 3 to 10, expanded swr 1 to 1.3; db 0 to 10, expanded db 0 to 2.

Power: 115 or 230 volts \pm 10%, 50 to 60 cps, 55 watts.

Dimensions: cabinet: 7 $\frac{1}{2}$ " wide, 11 $\frac{3}{4}$ " high, 12 $\frac{1}{2}$ " deep (191 x 299 x 318 mm); rack mount: 19" wide, 6-31/32" high, 10 $\frac{7}{8}$ " deep behind front panel (483 x 177 x 276 mm).

Weight: net 13 lbs (5,9 kg), shipping 16 lbs (7,2 kg) (cabinet); net 17 lbs (7,7 kg), shipping 27 lbs (12,2 kg) (rack mount).

Accessories available: plug-in filters (specify frequency): 415B-42B (315 to 699 cps), \$60, and 415B-42C (700 to 2020 cps), \$50; 10501A Cable Assembly, \$3.50; 10503A Cable Assembly, \$6.50.

Price: hp 415B, \$250 (cabinet); hp 415BR, \$255 (rack mount).

476A Bolometer Mount

Model 476A Bolometer Mount covers the 10 mc to 1 gc frequency range with very low standing wave ratio. The inherently good square law characteristics of the bolometers used make the 476A especially useful for calibrating attenuators when used with an hp 415 Series Meter.

Specifications, 476A

Nominal impedance: 50 ohms.

Maximum swr: <1.15, 20 to 500 mc; <1.25, 10 mc to 1 gc.

Maximum power level: 10 mw.

Bolometer element: four 8.25 ma instrument fuses (supplied with mount); operating level is approximately 200 ohms, positive temperature coefficient.

Replacement elements: Part #2110-0024, \$1 each.

Weight: net 1 lb (0,5 kg); shipping 2 lbs (0,9 kg).

Price: hp 476A, \$85.

485B Detector Mounts

The hp 485B Detector Mounts (3.95 to 12.4 gc) permit the accurate matching of waveguide sections to a bolometer element. The mounts are tuned by a variable short, and they can be used with a barretter or, where swr is not critical, with a silicon crystal.

Specifications, 485B

hp Model	Frequency range (gc)	Maximum swr ¹	Fits waveguide size		Length		Price
			(in.)	(EIA)	(in.)	(mm)	
G485B2	3.95 - 5.85	1.25	2 x 1	WR187	9-5/16	237	\$120
J485B2	5.85 - 8.2	1.25	1 $\frac{1}{2}$ x $\frac{3}{4}$	WR137	8 $\frac{1}{4}$	210	\$105
	5.50 - 5.85	1.35					
H485B2	5.30 - 5.50	1.50	1 $\frac{1}{4}$ x $\frac{3}{8}$	WR112	6 $\frac{3}{8}$	168	\$ 85
	7.05 - 10	1.25					
X485B2	8.2 - 12.4	1.25	1 x $\frac{1}{2}$	WR90	6-7/16	163	\$ 75

¹With Narda N821 barretter

²May use 1N21 or 1N23 for maximum detection sensitivity where swr is not critical

Detector elements are not supplied