5A, 10A, 20A, 25A BIAS UNITS
3265B & 3265BQ

Specification

Issue B

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1. SPECIFICATION

1.1 Analyzer Measurement Facilities

For a full description of facilities and specification see the 3255B/3260B user manual.

All the measurement facilities of the analyzer are available with the following exception.

Rdc **Transformer Measurements**	Not available when DC bias current is applied.

1.2 Facilities

Note

3265B/5A, 3265B/10A and 32655B/20A require a 3255B, or 3260B with firmware version 5.31 or later

DC Bias Current	25mA to 25A in 0.025A steps. – 3265B/25A and 3265BQ/25A 25mA to 20A in 0.025A steps. – 3265B/20A 25mA to 10A in 0.025A steps. – 3265B/10A 25mA to 5A in 0.025A steps. – 3265B/5A Up to five 3265B units can be connected in parallel, to give a maximum bias current of up to five times a single bias unit 125A, provided that the maximum voltage drop does not exceed the compliance voltage. 3260B and 3255B/A have an internal bias function giving current steps of 1mA, up to 1A.	
DC Bias Current Accuracy	1% of set bias current.	
Compliance Voltage	10V DC max at 1V AC drive level (f < 12kHz) 11V DC max at 0.25V AC drive level (f < 12kHz) Where f > 12kHz, deduct 0.5V	
Frequency Range	3255B	20Hz to 500kHz
	3260B	20Hz to 1MHz

1.3 Accuracy Chart

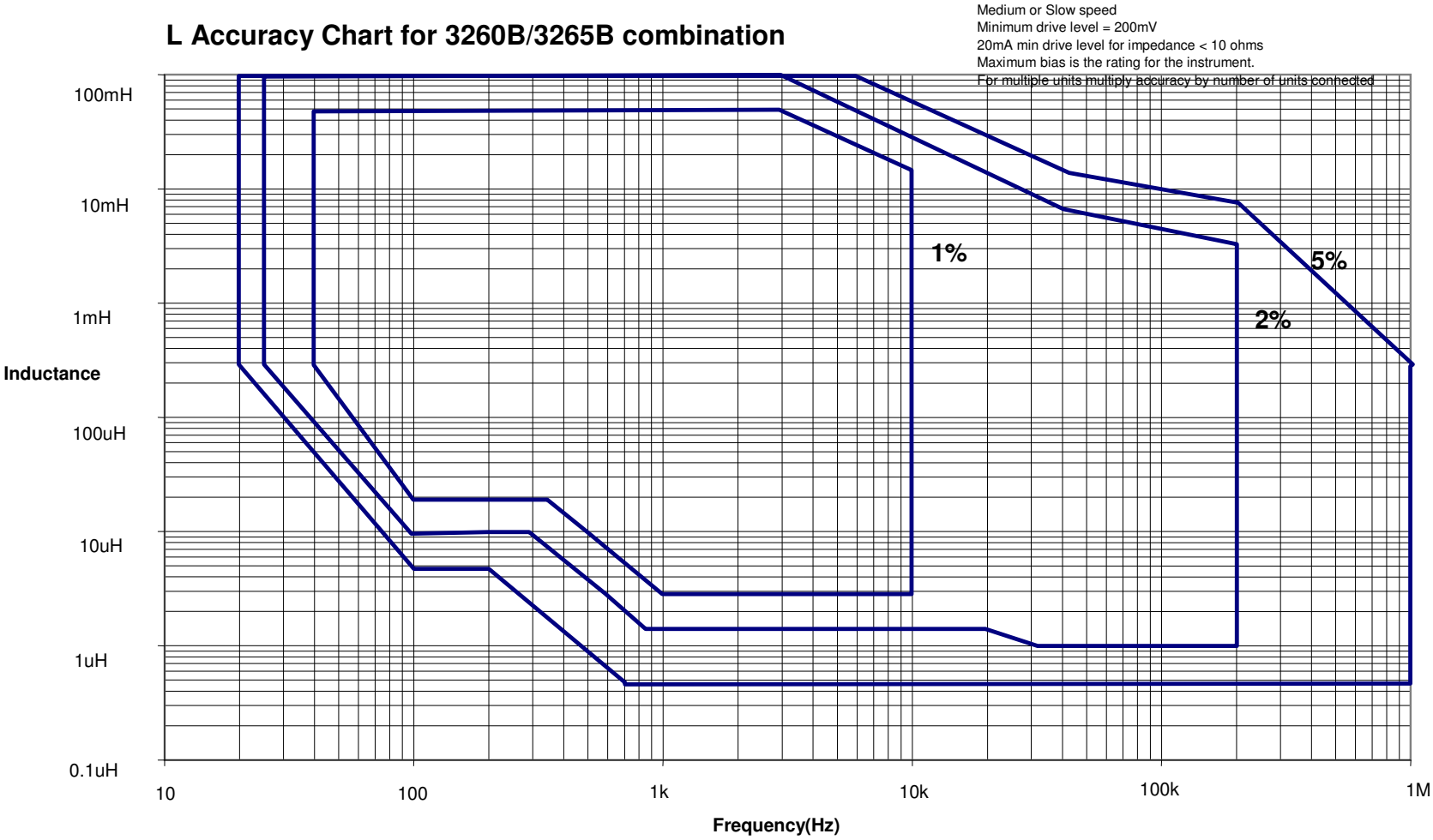

Figure 1-1 Accuracy Chart 3265B – All models

1.4 3265BQ/25A Facilities

Note 3265BQ/25A requires a 3260B fitted with firmware version 5.3 or later.

DC Bias Current	25mA to 25A in 0.025A steps. Up to two 3265B units can be connected in parallel, to give a maximum bias current of up to 50A, provided that the maximum voltage drop does not exceed the compliance voltage. 3260B and 3255B/A have an internal bias function giving current steps of 1mA, up to 1A.	
Accuracy	±1% of set bias current.	
Compliance Voltage	10V DC max at 1V AC drive level (f < 12kHz) 11V DC max at 0.25V AC drive level (f < 12kHz) Where f > 12kHz, deduct 0.5V	
Frequency Range	3255B	20Hz to 500kHz (model dependant)
	3260B	20Hz to 3MHz

1.5 3265BQ/25A Accuracy Data

Measurement conditions: 1009 test fixture, 1V/20mA drive level, Slow speed, Spot frequency trims, HF compensation applied for frequency >1MHz.

Frequency	**Bias Current**	
	Up to 25A	**Up to 50A (2 x 3265BQ/25As)**
< 1MHz	Same as 3265B	Same as 3265B
> 1MHz	L<=10µH, ±10% ±20nH	L<=10µH, ±20% ±40nH

1.6 General Data

1.6.1 Input Specification

Input Voltage	90 to 255V AC
Frequency	47 to 63Hz
Input Current	9A RMS max
Power Factor	> 0.9
Input fuse rating	10A 'T' type, 5 x 20mm HRC The input fuse is the fuse holder drawer integral to the IEC input connector.
Power-up	3265B powers up automatically when connected to a powered analyzer. Isolating switch provided.

1.6.2 Measurement Connections

4 BNC terminals to connect to the analyzer with coaxial cable.

4 BNC terminals to connect with the device under test (DUT) with Kelvin Leads.

DC bias current to connect to the DUT via two M8 studs. Use heavy duty cable (twisted) compatible with the maximum current applied.

Two Terminal Measurement	Via M8 studs
Four Terminal Measurement	Via Kelvin Leads and M8 studs

Measurement terminals are internally protected against normal inductor back-emf or accidental disconnection of inductor by two 1.6A fuses. These are easily accessible from the front panel.

1.6.3 Control Connections

I^2C bus link controls application of DC current and monitors status of 3265B. Status data includes 'Excessive Voltage Drop' and 'Over temperature'.

1.6.4 1009 High Current Fixture (Optional)

The 1009 high current fixture enables a DC bias current of up to 50A to be applied to an inductor during component test.

The 1009 bias interlock cable connects the 1009 lid safety interlock mechanism to the analyzer safety interlock ensuring operator safety by removing DC bias current when the fixture lid is opened.

1.6.5 Environmental Conditions

Altitude	Altitude up to 2000m
Relative Humidity	up to 80% non conducting.
Installation category	II (in accordance with IEC664)
Pollution degree	2 (mainly non-conductive)

This equipment is intended for indoor use only in a non-explosive, non-corrosive atmosphere.

1.6.5.1 Temperature

Storage	-40°C to +70°C (-40°F to +158°F)
Operation	0°C to +40°C (32°F to +104°F) (20A max)
Full accuracy	+15°C to +30°C (59°F to +86°F) (25A max)

1.6.6 Safety

Bias safety interlock on rear panel of measuring instrument provides door lock and closed control lines.

Designed to meet the requirements of EN61010-1.

1.6.7 EMC

Complies with EN50081-1, EN50082-1 generic emissions and immunity standards by meeting with the requirements of EN55022, EN61000-4-2, EN61000-4-3, EN61000-4-4.

Note:

When subjected to a significant electrostatic discharge (in accordance with EN61000-4-2), the analyzer may reset itself. If a bias current is being applied (either from the 3265B or the analyzer), this will be removed as part of the reset procedure. This ensures the safety of the operator under normal and test conditions.

1.6.8 Mechanical

Height	190mm ($7^1/_2$")
Width	440mm ($17^3/_8$")
Depth	520mm ($20^1/_2$")
Weight	15kg (33lb)
Cooling	Fan cooled: intake front, exhaust rear. Fan filter accessible on front panel. Over temperature trip provided.

1.6.9 Panel Symbols Used

	Refer to handbook.
	Alternating current
	Earth (ground) terminal
	CAUTION - Risk of electric shock.
	On
	Off

Figure 1-2 Panel Symbols