

# PRODUCT DATA

## DC Static Centering Unit — Type 1056

DC Static Centering Unit Type 1056 has been designed to work with Brüel & Kjær Modal Exciter Types 4824, 4825, 4826, 4827 and 4828 and matching power amplifiers. Depending upon which of the modal exciters is connected, DC Static Centering Unit serves one of two different purposes: armature suspension and centering, or the application of pre-tensioning force to a tension wire. The instrument can tolerate temperature and supply-line variations while maintaining excellent stability.

### USES

- Required electrical pre-tensioning component for Modal Exciter Types 4827 and 4828: provides armature suspension with variable stiffness and correct centering of the armature relative to the exciter's housing and the test structure, thus ensuring 'zero' positioning of the armature
- Optional unit<sup>1</sup> when used with Modal Exciter Types 4824, 4825, 4826: applies an electrical pre-tensioning force to the tension wire between the modal exciter and the input transducer attached to the test structure<sup>2</sup>

### FEATURES

- Potentiometer for continuous adjustment of armature position relative to maximum peak displacement
- Potentiometer for electrical pre-setting of suspension stiffness
- LED indicators signal when the exciter armature is at 'zero' position ( $\pm 3$  mm), and when there is armature overtravel (above or below the 'zero' position)
- Tension wire pre-tensioning force at 20% (fixed) of force rating of attached modal exciter

<sup>1</sup> When Modal Exciter Types 4824, 4825 and 4826 are mounted on top of the bracket arm of Lateral Modal Exciter Stands UA 1607 and UA 1608, it is necessary to use the DC Static Centering Unit for pre-tensioning.

<sup>2</sup> Traditional push/pull stingers do not require any pre-tensioning.

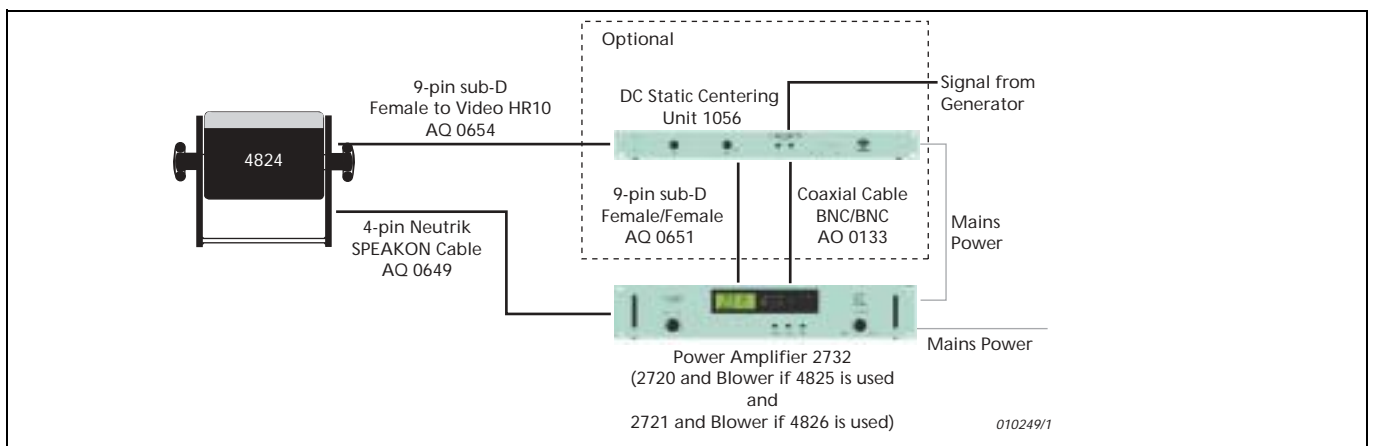


### Description

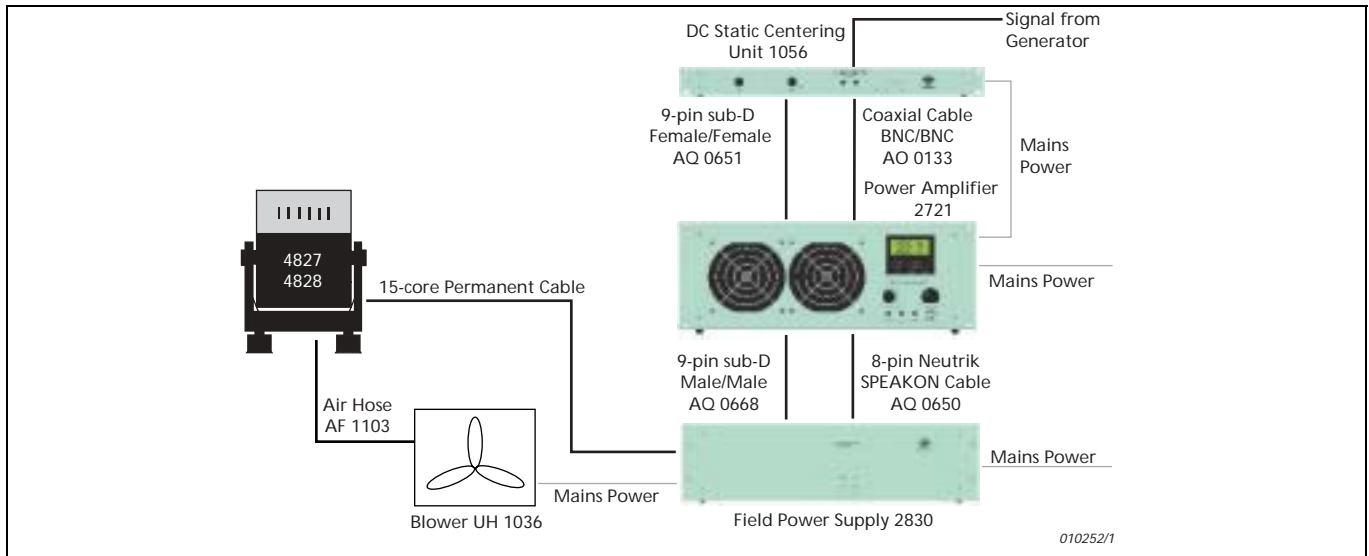
The DC Static Centering Unit detects the exact position of the armature through signals sent from the optical sensor built in Brüel & Kjær Modal Exciter Types 4824, 4825, 4826, 4827 and 4828. The optical sensor, composed of two infrared reflex-type optocouplers, scans the surface of a specially prepared arm that extends from the modal exciter's armature. In this way, the optical sensor can monitor the exact instantaneous position of the armature. The sensory input is then measured, the signal conditioned and sent to the DC Static Centering Unit for processing. The unit alerts you when there is armature overtravel via the front panel's LED indicators.

The optical sensor does not require any power supply of its own as the necessary power is supplied from DC Static Centering Unit.

Fig. 1 DC Static Centering Unit setup when used with Modal Exciter Types 4824, 4825 and 4826



**Fig. 2 DC Static Centering Unit setup when used with Modal Exciter Types 4827 and 4828**



**Specifications – DC Static Centering Unit Type 1056**

**INPUT SIGNAL**

±15 V (±5%) operating voltage of signal generator

**OUTPUT**

Internal gain ≤ 0 dB

**FREQUENCY RANGE**

0 Hz to 25 kHz

**INPUT IMPEDANCE**

>10 kΩ

**DC STABILITY**

Less than 50 mV drift from 0 V for ±10% variation of mains supply from nominal, and for 10°C to 40°C (50°F to 104°F) variation in ambient temperature

**CONTROLS**

- Start and Stop Button
- Continuously variable stiffness control
- Variable armature position setting peak-to-peak

**INDICATOR LAMPS**

- Error/Ready State
- Down, Mid and Up position of armature relative to centre position (±3 mm without calibration)

**POWER REQUIREMENTS**

Single phase 100 V to 240 V, 50 to 60 Hz  
Approx. 80 VA at full load  
Appliance inlet with fuse cartridge at rear

**FUSE**

T150 mA slow blow

**DIMENSIONS**

Height: 1 HE equivalent of 44 mm  
Width: 482.6 mm (19 in) with flanges for standard 19-inch rack mounting  
Depth: 245 mm (9.6 in)

**WEIGHT**

3.35 kg (7.4 lb)

**REAR CONNECTORS**

Input: BNC  
Output: BNC  
Optical Sensor: 9-pin Sub D  
compliance with EMC Directive



compliance with EMC Requirements of Australia and New Zealand

**SAFETY, EMC EMISSION AND EMC IMMUNITY**

According to relevant standards: EN 61010-1, IEC 61010-1, UL 3111-1, EC 61000-6-1/2/3/4, EN 61326-1, CISPR22 Class B limits, FCC Rules Part 15, EN 61326-1

**TEMPERATURE**

According to IEC 60068-2-1 and IEC 60068-2-2:

Operating Temperature: +5 to +40°C (+41 to +104°F)

Storage Temperature: -25 to +70°C (-13 to +158°F)

**HUMIDITY**

According to IEC 60068-2-78: Damp Heat: 90% RH (non-condensing at 40°C (104°F))

**MECHANICAL**

Non-operating according to IEC 60068-2-6, IEC 60068-2-27 and IEC 60068-2-29

**Ordering Information**

Type 1056	DC Static Centering Unit
Includes the following accessories:	
	Mains cable
AQ0654	Cable, 9-pin Sub-D, female, to Video HR 10
AQ0668	Cable with two 9-pin Sub-D plugs, male to male
AQ0651	Cable with two 9-pin Sub-D plugs, female to female
AQ0133	BNC to BNC cable, length 1 m

Brüel & Kjær reserves the right to change specifications and accessories without notice

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