

MECHANICAL LOADS MODELS 8911 AND 8913

Electric Power / Controls (EMS) 0.2 kW



GENERAL DESCRIPTION

The Lab-Volt 0.2-kW EMS Mechanical Loads can be used to load the 0.2-kW EMS motors. They are housed in full-size EMS modules which are constructed of heavy gauge steel finished in baked enamel, and, in the case of Model 8911, equipped with a clear plastic faceplate. All electrical components are terminated on the faceplate by 4 mm color-coded safety banana jacks (Model 8911). The 0.2-kW Mechanical Loads can also operate as dynamometers to measure the load torque which they produce. They have been carefully designed to directly indicate the torque developed by 0.2-kW EMS motors under normal load, overload, and starting conditions.

MECHANICAL LOADS MODELS 8911 AND 8913

Model 8911 – Electrodynamometer



The Model 8911 Electrodynamometer is equipped with a clear plastic faceplate fitted with a chrome piano hinge. It can be coupled to a 0.2-kW drive motor through the use of the Timing Belt (Model 8942). The faceplate can be lowered to provide access to the inside for coupling the Electrodynamometer to the drive motor. When closed, the faceplate is secured by two quick-lock fasteners.

The Electrodynamometer is made of a squirrel-cage rotor fitted in a DC-excited stator. Mechanical loading is achieved by increasing the stator field current, which generates eddy currents in the driven rotor. The stator is trunnion-mounted on ball bearings and rotates against a helicoidal spring to oppose braking torgue. The front end bell is provided with a circular scale that indicates the torque developed. The circular scale is graduated in either Imperial units (Ibf·in, Model 8911) or Metric units (N·m, Model 8911-1) depending on model numbers. A damper lever is located underneath the dynamometer to prevent oscillation if the power supply is applied while the dynamometer is turning. To measure the torque, this lever can be pushed to adjust and read the torque. The Electrodynamometer is electrically powered from standard fixed AC line supply.

Model 8913 – Prony Brake



The Model 8913 Prony Brake is a braking device based on pure mechanical friction. The friction is developed by a specially designed cast iron self-cooling friction pulley to be mounted on the shaft of the drive motor, and a friction belt slipped on the friction pulley. The friction belt is attached to a spring-scale mechanism in the Prony Brake module.

Loading is achieved by increasing the friction belt tension, which is controlled by a knurled wheel located on the faceplate. The torque developed is indicated on a circular scale that is graduated in either Imperial units (lbf·in, Model 8913) or Metric units (N·m, Model 8913-1) depending on model numbers. An important and interesting feature of the Prony Brake is that the load torque is practically constant with speed for any load setting.

SPECIFICATIONS

Model 8911 Electrodynamometer		120/208 V – 60 Hz	220/380 V – 50 Hz	240/415 V – 50 Hz		
Rating	Torque Range (8911-1)	-0.3 to +3 N·m				
	Torque Range (8911)	-3 to +27 lbf·in				
	Speed	250 to 3000 r/min				
	Accuracy	2%				
	Input Voltage	120 V – AC	220-240 V – AC			
	Input Current	2 A	0.9 A			
Physical Characteristics	Dimensions (H x W x D)	308 x 291 x 490 mm (12.1 x 11.5 x 19.3 in)				
	Net Weight	17.4 kg (38.3 lb)				
Model 8913 Prony Brake						
Rating	Torque Range (8913-1)	0 to 3.4 N·m				
	Torque Range (8913)	0 to 30 lbf·in				
	Speed	0 to 5000 r/min				
	Accuracy	2%				
Physical Characteristics	Dimensions (H x W x D)	308 x 291 x 440 mm (12.1 x 11.5 x 17.3 in)				
	Net Weight	8.8 kg (19.4 lb)				

ORDERING NUMBERS

120/208 V – 60 Hz		220/380 V – 50 Hz			240/415 V – 50 Hz	
ENGLISH	FRENCH	SPANISH	ENGLISH	FRENCH	SPANISH	ENGLISH
8911-00	8911-01	8911-02	N/A ¹	N/A	N/A	N/A
8911-10	8911-11	8911-12	8911-15	8911-16	8911-17	8911-15
8913-00	8913-01	8913-02	8913-00	8913-01	8913-02	8913-00
8913-10	8913-11	8913-12	8913-10	8911-11	8911-12	8911-10

Table 1. Equipment Ordering Numbers

Reflecting Lab-Volt's commitment to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification.

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