

耐辐照步进电机(大气环境下使用) Radiation Hardened Stepper Motors

1.8°, two phase hybrid stepper motors

AML Radiation Hardened Stepper Motors (HE) are an atmospheric version of our ultra high vacuum range and are manufactured using only radiation resistant materials to provide a long service life in a dry atmosphere gamma radiation environment.



FEATURES

英国AML的H系列的耐辐照步进电机是两相1.8°混合式步进电机,提供标准的尺寸35、42、57,由于专利设计,材料的选择,结构的改进从而使电机的耐辐照总吸收剂量为1x10^6Gy,电机的输出轴和后端盖都可以根据要求定制。

All motors are hand assembled in an ISO Class 7 cleanroom.

Model	Holding Torque mNm	Detent Torque mNm	Rotor Inertia gcm²	Max.Axial Force N	Max. Radial Force ⁽¹⁾ N	Mass g	Current Per Phase A	Phase Resistance at 20°C Ώ	Phase In- ductance mH
HE35.1-R	70	8	10	9	15	190	1.0	4.7	3.8
HE42.1-R	180	8	35	9	15	350	1.0	5.3	6.6
HE42.2-R	360	14	68	9	15	470	1.0	6.8	10.5
HE42.3-R	450	20	102	9	15	610	1.0	8.5	19.5
HE57.1-R	800	30	300	13	40	700	1.0	10.5	27

Operating temperature -10°C to +150°C Gamma radiation hardened to 1 x 10⁶ Gy Lead length 1.5m

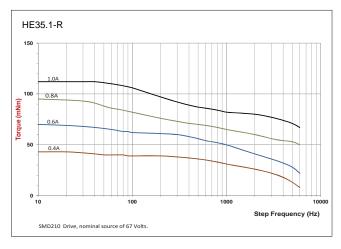
Step angle 1.8°
Step angle tolerance 5%

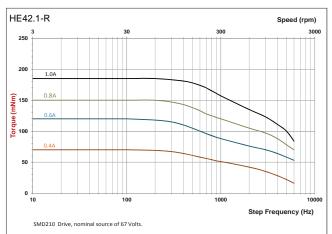
The performance shown on these graphs was obtained using an SMD210 drive operating with standard settings for step division.

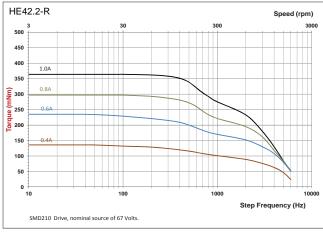
SMD210 is a switch-mode, bipolar, current-regulating drive with a nominal source of 67volts, optimised for use with vacuum motors. At low speed where step division is active the RSS (root sum of squares) of phase current is set to the nominal current. Over most of the speed range the drive operates in wave mode with nominal set current in only one energised phase.

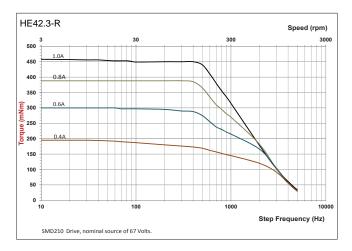
Different drives will produce different speed / torque curves. Drives capable of producing a total phase current of more than 1A RSS may damage the insulation. Drives with significantly lower source voltages may result in poor high speed performance. Use of the embedded thermocouple is essential for motor protection.

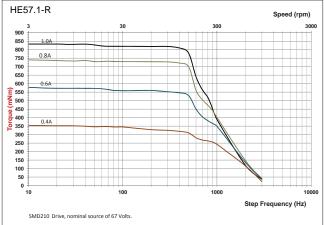




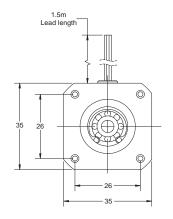


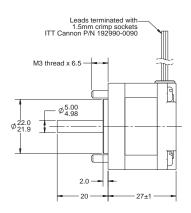




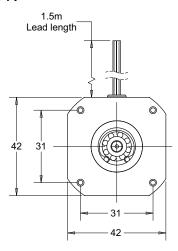


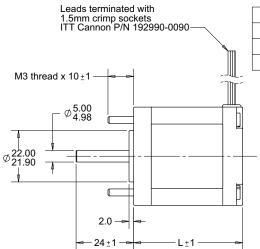
HE35.1-R





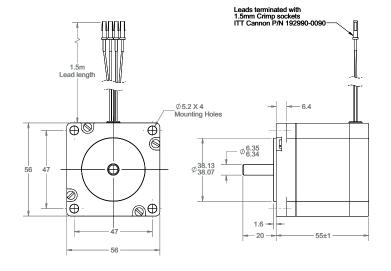
HE42.X-R

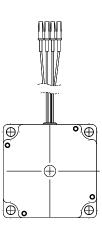


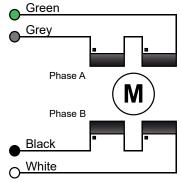


Motor	Length L
HE42.1	33
HE42.2	47
HE42.3	60

HE57.1-R







Motor windings in series

Bearings

For low duty applications where grease is not permitted specify option 'H' hybrid bearings. These have silicon nitride ceramic balls, dry lubricated with Tungsten disulfide.

扩展选项** Options

X-XV18**	Shaft modifi cation. Please provide a sketch of your requirement
H-XV18**	Hybrid ceramic bearings
PG**-**	Suitable for Planetary Gearhead
B-XV18**	Suitable for Rotating Transformer

订购型号示例: HE42.1-R-H-XV18-**

示例所选型号为:满足耐辐照环境且使用混合陶瓷轴承,**表示根据特殊要求定制,定制编码请联系我们



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