

東元低壓**Class I Division 1**防爆馬達
(NEMA)

MODEL : AEUHXG

EXPLOSION PROOF MOTORS
LOW VOLTAGE SQUIRREL CAGE
FRAME SIZE (EX) : 143TC ~ 256TC



DWG NO.

31057H10111

REV. 01

		SPECIFICATION TABLE	MODEL AEUHXG
		3-PHASE INDUCTION MOTORS LOW VOLTAGE SQUIRREL CAGE	
ITEM		STANDARD SPECIFICATION	
R A T I N G	Kind of Motors	Squirrel Cage Induction Motors (SCIM)	
	Design Standards	UL674 ; NEMA MG-1 , MG-13 ; CSA 22.2 No.145	
	Voltages	230 / 460V (208V De - Rating Operation)	
	Frequency	60Hz	
	Output Range	1HP ~ 20HP	
	R.P.M. (Syn.)	3600 ~ 900 R.P.M. (2 ~ 8 Poles)	
	Time Duty	Continuous , S.F. 1.15 (SI , MCR)	
	Frame Size (EX)	143TC ~ 256TC	
	Protection Enclosure	Totally Enclosed Fan Cooled , UL Explosion Proof .	
	Cooling Method	Self External Fan , Surface Cooling (IC 411)	
Mounting	C - Face Mounted (IM 3601) .		
A P P L I C A T I O N	Power Condition	Voltage : $\pm 10\%$, Frequency : $\pm 5\%$, and $\pm 10\%$ of Combined Voltage and Frequency , But Frequency Variation does not Exceed $\pm 5\%$.	
	Environment Conditions	Ambient Temperature : $-15^{\circ}\text{C} \sim 40^{\circ}\text{C}$ Relative Humidity : Less Than 90%RH (Non - Condensation) . Altitude : Less Than 3,300ft	
	Hazardous Location	Suitable For Division 1 , Class I, Group C.D , Class II , Group E. F. G.	
	Drive Method	Belt Service or Direct Coupling.	
	Direction of Rotation	Bi - Directional	
	Method of Starting	Full Voltage Direct On Line, For 7.5HP and up Y- Δ be Available.	
P E R F O R M A N C E	Test Procedure for Explosion Proof	According to UL674.	
	Test Procedure	IEEE - 112 Method B and Full Voltage Measuring Starting Performance.	
	Temperature Rise	Not to Exceed 90°C for S.F.1.15 (B class) by Resistance Method.	
	External Surface Temperature	Comply with Operating Temperature Code T3B for Class I Group C.D, T3B for Class II Group E,F,G of Table 51.1 of UL674, Limited by Built in Normal Close Thermostat, One Per Phase.	
	Over Speed	125% Syn. R.P.M. for 2 Minutes. (2,4 Poles) 150% Syn. R.P.M. for 2 Minutes. (the others)	
	Over Torque	160% Rated Torque for 15 Sec.	

PERFORMANCE DATA

MODEL
AEUHXG

3-PHASE SQUIRREL CAGE
PREMIUM EFFICIENCY INDUCTION MOTORS

 C C 0 0 2 A

TEFC , NEMA , T-FRAME , DESIGN - B or C ,
CLASS F , 40°C AMBIENT , CONTINUOUS DUTY ,
S.F. 1.15, 230/460V 60HZ



TYPICAL PERFORMANCE

(230 V)

HP	FULL LOAD RPM	FRAME NO.	EFFICIENCY				POWER FACTOR			CURRENT		TORQUE				ROTOR WK ² lb-ft ²	NEMA CODE LETTER
			FULL LOAD		3/4 LOAD NOM.	1/2 LOAD NOM.	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD lb-ft	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT		
			NOM.	MIN.													
1	1755	143TC	85.5	82.5	84.0	80.5	68.0	58.5	45.0	3.22	30	2.992	350	325	450	0.075	N
	1145	145TC	82.5	80.0	82.0	79.5	66.0	57.0	45.0	3.44	30	4.668	250	235	305	0.122	N
	860	182TC	77.0	74.0	75.5	70.0	58.5	49.5	38.0	4.16	30	6.215	200	130	260	0.239	N
1.5	3505	143TC	84.0	81.5	84.0	81.0	84.0	77.0	64.5	3.98	40	2.247	310	255	395	0.052	M
	1740	145TC	86.5	84.0	87.0	85.5	75.5	67.0	53.5	4.30	40	4.526	300	305	375	0.103	M
	1170	182TC	87.5	85.5	87.0	83.5	63.0	54.0	42.0	5.10	40	6.731	230	225	370	0.313	M
	860	184TC	78.5	75.5	75.5	70.0	60.5	51.5	39.5	5.91	40	9.322	185	130	250	0.275	M
2	3490	145TC	85.5	82.5	86.0	84.5	87.0	81.5	71.0	5.03	50	3.009	280	225	360	0.064	L
	1740	145TC	86.5	84.0	87.0	86.0	78.0	70.5	57.0	5.55	50	6.035	280	255	350	0.108	L
	1165	184TC	88.5	86.5	89.0	87.0	69.0	62.0	50.0	6.13	50	9.014	180	150	275	0.423	L
	865	213TC	84.0	81.5	84.0	82.5	64.0	55.0	42.5	6.97	50	12.36	225	200	275	0.586	L
3	3505	182TC	87.5	85.5	88.5	87.0	90.0	87.0	79.5	7.13	64	4.494	295	245	340	0.190	K
	1755	182TC	89.5	87.5	90.0	89.5	81.0	75.0	63.5	7.75	64	8.975	255	230	345	0.312	K
	1170	213TC	89.5	87.5	90.0	88.0	80.0	73.5	61.0	7.85	64	13.46	200	155	315	0.836	K
	865	215TC	85.5	82.5	84.0	82.5	66.0	57.0	44.5	9.96	64	18.54	240	230	305	0.821	K
5	3490	184TC	88.5	86.5	90.0	90.0	91.0	89.5	83.5	11.6	92	7.522	260	210	305	0.249	J
	1745	184TC	89.5	87.5	91.0	91.0	84.0	80.0	70.0	12.5	92	15.04	205	185	285	0.422	J
	1170	215TC	90.2	88.5	90.5	90.0	81.0	76.0	65.5	12.8	92	22.44	190	140	280	1.122	J
	870	254TC	86.5	84.0	86.5	85.5	72.0	64.0	51.5	15.0	92	30.72	190	185	240	1.660	J
7.5	3535	213TC	89.5	87.5	90.0	89.5	87.0	84.0	76.0	18.0	127	11.14	245	230	305	0.412	H
	1760	213TC	91.7	90.2	92.0	91.0	86.5	83.0	75.0	17.7	127	22.37	280	230	310	0.731	H
	1170	254TC	91.0	89.5	91.5	91.0	82.0	77.0	66.5	18.8	127	33.66	240	195	260	2.158	H
	865	256TC	86.5	84.0	85.5	84.0	71.5	63.5	50.0	22.7	127	46.34	200	190	240	2.042	H
10	3515	215TC	90.2	88.5	91.0	90.5	87.0	85.0	79.0	23.9	162	14.94	205	165	260	0.511	H
	1750	215TC	91.7	90.2	92.0	92.0	87.5	85.0	78.5	23.3	162	30.00	260	210	280	0.924	H
	1170	256TC	91.0	89.5	92.0	91.0	81.5	76.5	65.0	25.2	162	44.88	260	210	280	2.872	H
15	3530	254TC	91.0	89.5	91.5	90.5	92.0	91.0	87.0	33.6	232	22.31	235	185	285	1.088	G
	1770	254TC	92.4	91.0	92.5	92.0	85.0	82.0	73.0	35.8	232	44.50	200	145	275	2.179	G
20	3520	256TC	91.0	89.5	92.0	92.0	92.0	91.5	88.0	44.7	290	29.83	230	180	260	1.407	G
	1765	256TC	93.0	91.7	93.0	93.0	85.5	83.0	75.5	47.1	290	59.50	200	135	255	2.741	G

- NOTE :
1. The above are typical values based on test according to ANSI/IEEE standard 112 method B.
 2. Breakdown & locked rotor torques are shown as average expected values.
 3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
 4. Tolerance According to NEMA MG1-12 & IEC 60034-1.
 5. Data subject to change without notice.

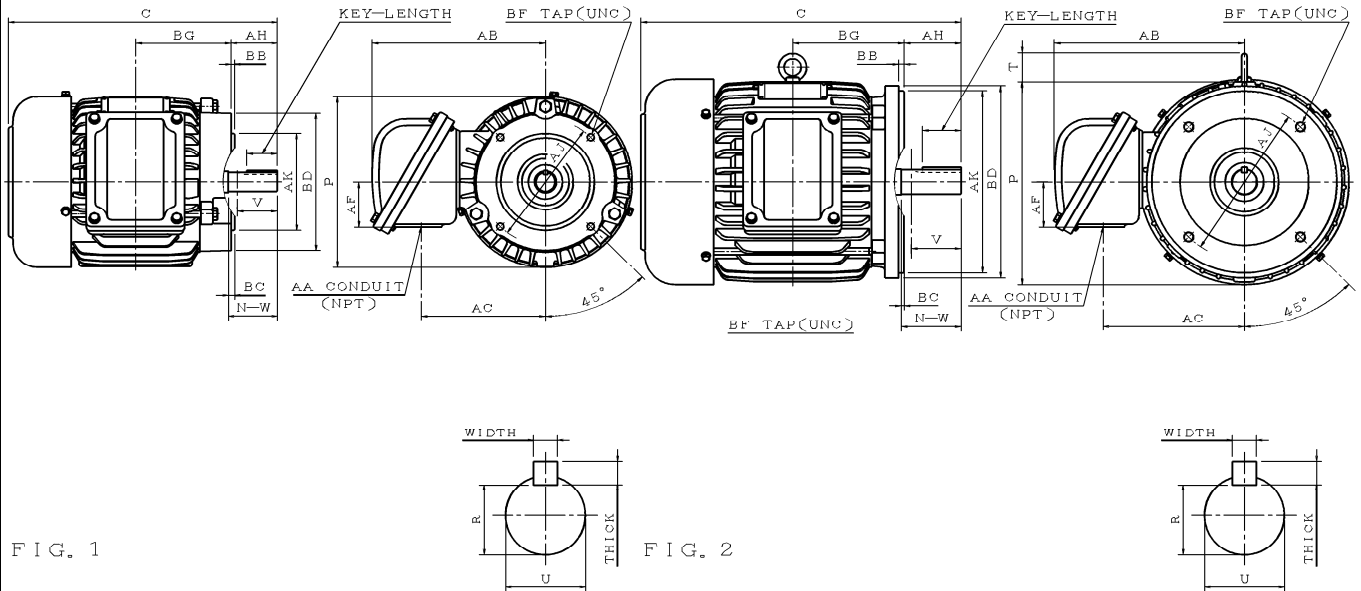
OUTLINE DIMENSIONS SHEET

MODEL

AEUHXG

EXPLOSION PROOF MOTORS
FRAME SIZE(EX) 143TC ~ 184TC

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.



Dimension in inches

Output (HP)				FRAME SIZE	FIG. NO.	C	P	T	AH	AJ	AK	BB	BC	BD	BF	
2P	4P	6P	8P												No.	Size
1.5	1	0.75	—	143TC	1	12.56	8.00	—	2.12	5.875	4.5	0.16	0.13	6.4	4	3/8-16
2	1.5 2	1	—	145TC		13.54	8.00	—	2.12	5.875	4.5	0.16	0.13	6.4	4	3/8-16
3	3	1.5	1	182TC	2	14.89	9.60	1.30	2.62	7.250	8.5	0.25	0.13	9.0	4	1/2-13
5	5	2	1.5	184TC		15.91	9.60	1.30	2.62	7.250	8.5	0.25	0.13	9.0	4	1/2-13

FRAME SIZE	Keyseat	Key			Shaft Extension			BG	Terminal Housing				Bearings		APPROX. WEIGHT LBS
	R	WIDTH	THICK	LENGTH	N-W	U	V		AA	AB	AC	AF	DRIVE END	OPPOSITE DRIVE END	
143TC	0.771	0.188	0.188	1.41	2.25	0.875	2.20	4.39	3/4	8.03	5.71	2.11	6205ZZ	6205ZZ	65
145TC	0.771	0.188	0.188	1.41	2.25	0.875	2.20	4.88	3/4	8.03	5.71	2.11	6205ZZ	6205ZZ	75
182TC	0.986	0.250	0.250	1.78	2.75	1.125	2.70	5.12	3/4	8.78	6.45	2.11	6306ZZ	6306ZZ	115
184TC	0.986	0.250	0.250	1.78	2.75	1.125	2.70	5.63	3/4	8.78	6.45	2.11	6306ZZ	6306ZZ	125

- Note :**
1. Dimension AK tolerance : +0.000 inches, -0.003 inches.
 2. Dimension U tolerance : +0.000 inches, -0.0005 inches.
 3. Dimension R tolerance : +0.000 inches, -0.015 inches.
 4. Dimension V is the length of straight part of shaft.

OUTLINE DIMENSIONS SHEET

MODEL

AEUHXG

EXPLOSION PROOF MOTORS
FRAME SIZE(EX) 213TC ~ 256TC

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.

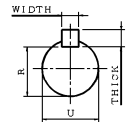
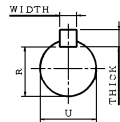
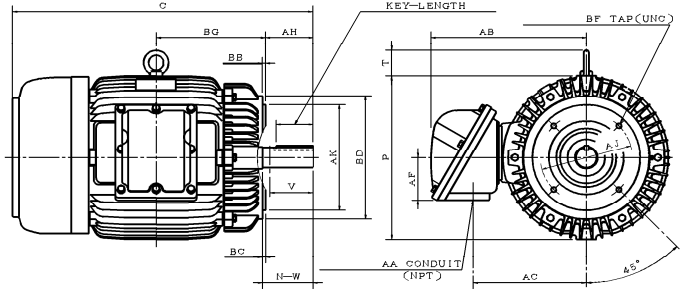
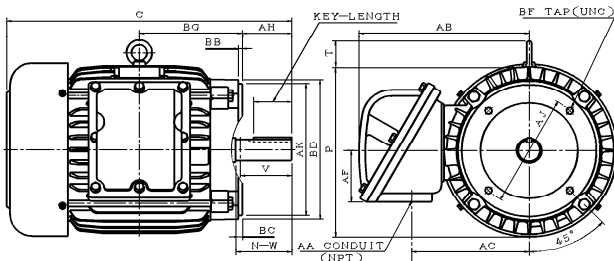


FIG. 3

FIG. 4

Dimension in inches

Output (HP)				FRAME SIZE	FIG. NO.	C	P	T	AH	AJ	AK	BB	BC	BD	BF	
2P	4P	6P	8P												No.	Size
7.5	7.5	3	2	213TC	3	18.26	11.10	1.65	3.12	7.250	8.5	0.25	0.26	9.0	4	1/2-13
10	10	5	3	215TC		19.76	11.10	1.65	3.12	7.250	8.5	0.25	0.26	9.0	4	1/2-13
15	15	7.5	5	254TC	4	23.78	13.15	2.00	3.75	7.250	8.5	0.25	0.25	9.92	4	1/2-13
20	20	10	7.5	256TC		25.52	13.15	2.00	3.75	7.250	8.5	0.25	0.25	9.92	4	1/2-13

FRAME SIZE	Keyseat	Key			Shaft Extension			BG	Terminal Housing				Bearings		APPROX. WEIGHT LBS
	R	WIDTH	THICK	LENGTH	N-W	U	V		AA	AB	AC	AF	DRIVE END	OPPOSITE DRIVE END	
213TC	1.201	0.312	0.312	2.41	3.38	1.375	3.30	6.51	1	10.73	7.45	2.31	6308ZZ	6306ZZ	195
215TC	1.201	0.312	0.312	2.41	3.38	1.375	3.30	7.26	1	10.73	7.45	2.31	6308ZZ	6306ZZ	220
254TC	1.416	0.375	0.375	2.910	4.00	1.625	3.90	8.63	1 1/4	12.24	8.95	3.43	6309ZZ	6307ZZ	330
256TC	1.416	0.375	0.375	2.910	4.00	1.625	3.90	9.50	1 1/4	12.24	8.95	3.43	6309ZZ	6307ZZ	376

Note :

- Dimension AK tolerance :
On Frames 254TC ~ 286TSC +0.000 inches , -0.003 inches.
On Frames 324TC ~ 365TSC +0.000 inches , -0.005 inches.
- Dimension U tolerance : +0.000 inches, -0.001 inches.
- Dimension R tolerance : +0.000 inches, -0.015 inches.
- Dimension V is the length of straight part of shaft.