TECO EC Motor

Ultra Premium Efficiency Integrated Motor-Drive

IE5

Energy Conservation / Emissions Reduction / Intelligence / Automation

TECO

The Smart & Energy Efficiency Solution for HVAC applications

Features and Benefits

IE5 Ultra Premium Efficiency

Electronically Commutated Motor

- Continuous speed adjustment (from 200rpm to 1800rpm)
- Dual voltage single phase 115/230V, 60/50Hz
- Precision speed control ±3rpm
- Low vibration and noise (Compliance to IEC60034-9)

Easy Installation and Operation

- No additional VFD required
- Totally enclosed IP54, suitable for both indoor and outdoor applications
- Adjust speed from 0 to 10VDC or through PWM signal
- Rotation change by a single switch
- Optional external control available for RPM or failure code
  Supports Modbus RTU or variable resistor to control motor speed

Safe and Fit Wide Variety of Applications

- Build-in soft-starter function to eliminate the inrush current
- Electronic protection: overload, over temperature and locked rotor
- Pre-programmed constant speed or constant torque for different applications
- Multi-mounting options available
- up to 1 HP

Product Specification

ITEM		STANDARD SPECIFICATION
RATING	Kind of Motors	Electronically Commutated Motor (ECM)
	Frequency	Single-phase, 50/60Hz input
	Voltages	115/230 VAC
	Output Range	1/8HP to 1HP
	R.P.M.	200 to 1800 R.P.M.
	Continuous Speed Adjustment	DC Voltage: 0 to 10VDC
	Time Duty	Continuous, S.F. 1.0 (S1)
	Frame Size	42 to 48YZ
	Protection Enclosure	Open Air Over (IP20) / Totally Enclosed Air Over (IP54)
	Mounting	Horizontal Foot Mounting, Stud Mounting
APPLICATION	Power Condition	Voltage：±10%, Frequency: ±5%, AND ±10% of Combined Voltage and Frequency, But Frequency Variation does not Exceed ±5%
	Environment Conditions	Place: Shadow, Non-Hazardous. Ambient Temperature：-15℃~40℃ Relative Humidity：Less Than 90%RH (Non-Condensation) Altitude：Less Than 3,300ft
	Vibration	Grade B (Compliance to IEC60034-14)
	Direction of Rotation	Bi-Directional

Performance Data

Output		Frame No.	RPM	Voltage (V)	Torque (lb-ft)	Current (A)	Efficiency	Phase	SF
kW	HP								
0.09	1/8	42YZ	1800	115	0.365	2.34	83.0	1	1.0
0.09	1/8	42YZ	1800	230	0.365	1.20	80.1	1	1.0
0.125	1/6	42YZ	1800	115	0.484	2.94	83.7	1	1.0
0.125	1/6	42YZ	1800	230	0.484	1.56	83.9	1	1.0
0.18	1/4	42YZ	1800	115	0.738	4.23	83.0	1	1.0
0.18	1/4	42YZ	1800	230	0.738	2.11	88.3	1	1.0
0.25	1/3	48YZ	1800	115	0.976	5.00	85.9	1	1.0
0.25	1/3	48YZ	1800	230	0.976	2.79	81.1	1	1.0
0.37	1/2	48YZ	1800	115	1.468	6.90	87.2	1	1.0
0.37	1/2	48YZ	1800	230	1.468	3.68	90.4	1	1.0
0.55	3/4	48YZ	1800	115	2.198	9.80	87.0	1	1.0
0.55	3/4	48YZ	1800	230	2.198	5.36	83.8	1	1.0
0.75	1	48YZ	1800	115	2.928	9.39	84.4	1	1.0
0.75	1	48YZ	1800	230	2.928	6.80	89.5	1	1.0

Outline Dimension

Totally Enclosed Air Over (DVBD)

FIG-1

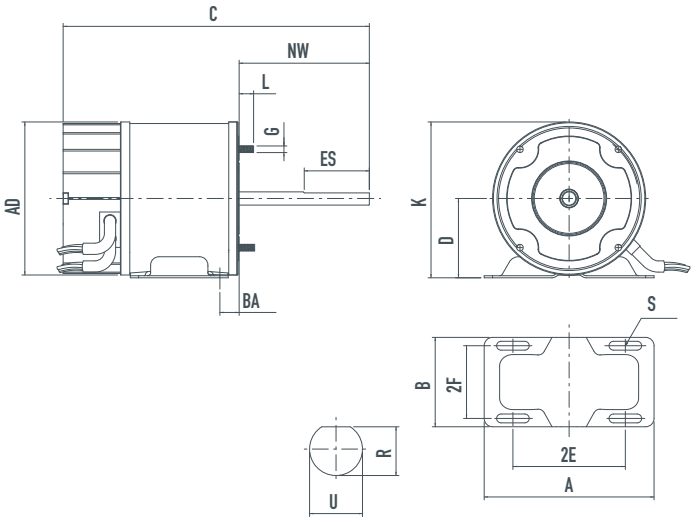
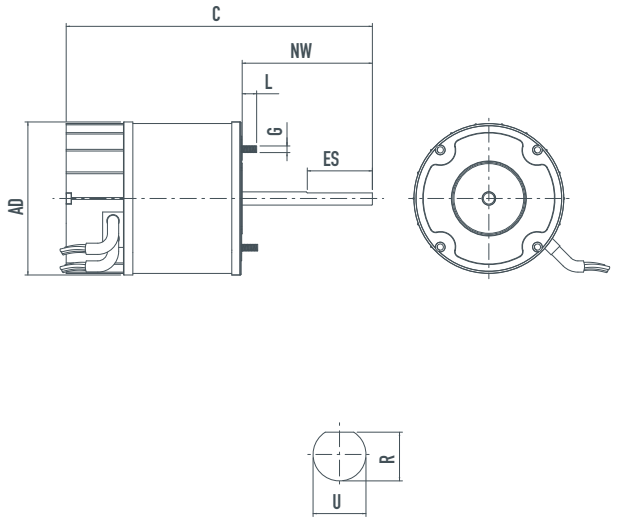


FIG-2



Dimension in inches

Output HP	Frame Size	FIG. NO.	NW	U	R	ES	AD	C	G	L	A	B	2E	2F	BA	S	D	K
1/8	42YZ	1	4.92	0.5	0.46	2.48	5.08	11	M4	0.63	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/6	42YZ	1	4.92	0.5	0.46	2.48	5.08	11	M4	0.63	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/4	42YZ	1	4.92	0.5	0.46	2.48	5.08	11	M4	0.63	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/8	42YZ	1	4.92	0.5	0.46	2.48	5.08	11	--	--	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/6	42YZ	1	4.92	0.5	0.46	2.48	5.08	11	--	--	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/4	42YZ	1	4.92	0.5	0.46	2.48	5.08	11	--	--	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/3	48YZ	1	4.92	0.5	0.46	2.48	5.67	12.62	1/2-20 UNF	0.63	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1/2	48YZ	1	4.92	0.5	0.46	2.48	5.67	12.62	1/2-20 UNF	0.63	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
3/4	48YZ	1	4.92	0.5	0.46	2.48	5.67	12.62	1/2-20 UNF	0.63	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1	48YZ	1	4.92	0.5	0.46	2.48	5.67	12.62	1/2-20 UNF	0.63	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1/3	48YZ	1	4.92	0.5	0.46	2.48	5.67	12.62	--	--	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1/2	48YZ	1	4.92	0.5	0.46	2.48	5.67	12.62	--	--	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
3/4	48YZ	1	4.92	0.5	0.46	2.48	5.67	12.62	--	--	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1	48YZ	1	4.92	0.5	0.46	2.48	5.67	12.62	--	--	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1/8	42YZ	2	4.92	0.5	0.46	2.48	5.08	11	M4	0.63								
1/6	42YZ	2	4.92	0.5	0.46	2.48	5.08	11	M4	0.63								
1/4	42YZ	2	4.92	0.5	0.46	2.48	5.08	11	M4	0.63								
1/8	42YZ	2	4.92	0.5	0.46	2.48	5.08	11	--	--								
1/6	42YZ	2	4.92	0.5	0.46	2.48	5.08	11	--	--								
1/4	42YZ	2	4.92	0.5	0.46	2.48	5.08	11	--	--								
1/3	48YZ	2	4.92	0.5	0.46	2.48	5.67	12.62	1/2-20 UNF	0.63								
1/2	48YZ	2	4.92	0.5	0.46	2.48	5.67	12.62	1/2-20 UNF	0.63								
3/4	48YZ	2	4.92	0.5	0.46	2.48	5.67	12.62	1/2-20 UNF	0.63								
1	48YZ	2	4.92	0.5	0.46	2.48	5.67	12.62	1/2-20 UNF	0.63								
1/3	48YZ	2	4.92	0.5	0.46	2.48	5.67	12.62	--	--								
1/2	48YZ	2	4.92	0.5	0.46	2.48	5.67	12.62	--	--								
3/4	48YZ	2	4.92	0.5	0.46	2.48	5.67	12.62	--	--								
1	48YZ	2	4.92	0.5	0.46	2.48	5.67	12.62	--	--								

Outline Dimension

Open Air Over (DVTD)

FIG-3

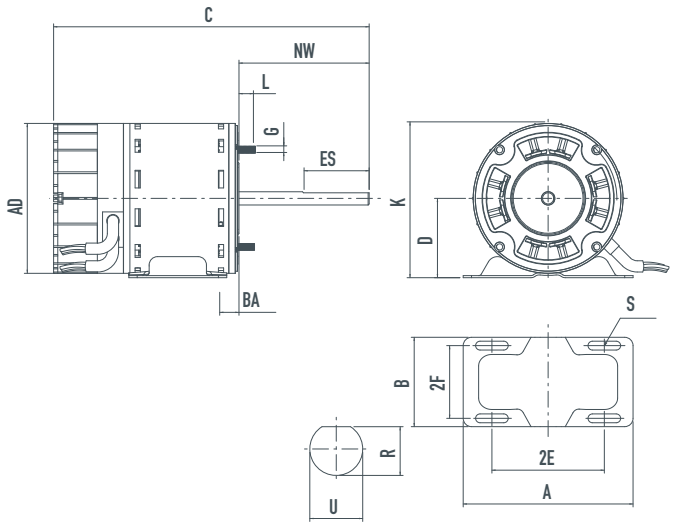
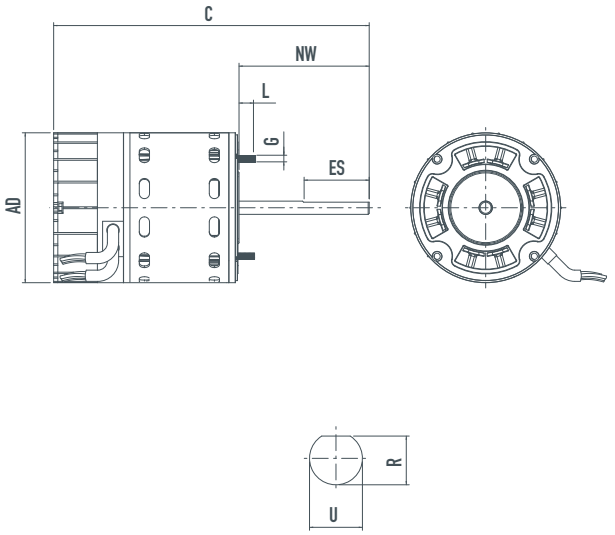


FIG-4



Dimension in inches

Output HP	Frame Size	FIG. NO.	NW	U	R	ES	AD	C	G	L	A	B	2E	2F	BA	S	D	K
1/8	42YZ	3	4.92	0.5	0.46	2.48	5.08	11	M4	0.63	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/6	42YZ	3	4.92	0.5	0.46	2.48	5.08	11	M4	0.63	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/4	42YZ	3	4.92	0.5	0.46	2.48	5.08	11	M4	0.63	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/8	42YZ	3	4.92	0.5	0.46	2.48	5.08	11	--	--	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/6	42YZ	3	4.92	0.5	0.46	2.48	5.08	11	--	--	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/4	42YZ	3	4.92	0.5	0.46	2.48	5.08	11	--	--	5.03	2.32	4	1.69	1.04	0.34	2.63	5.12
1/3	48YZ	3	4.92	0.5	0.46	2.48	5.67	11.93	1/2-20 UNF	0.63	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1/2	48YZ	3	4.92	0.5	0.46	2.48	5.67	11.93	1/2-20 UNF	0.63	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
3/4	48YZ	3	4.92	0.5	0.46	2.48	5.67	11.93	1/2-20 UNF	0.63	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1	48YZ	3	4.92	0.5	0.46	2.48	5.67	11.93	1/2-20 UNF	0.63	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1/3	48YZ	3	4.92	0.5	0.46	2.48	5.67	11.93	--	--	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1/2	48YZ	3	4.92	0.5	0.46	2.48	5.67	11.93	--	--	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
3/4	48YZ	3	4.92	0.5	0.46	2.48	5.67	11.93	--	--	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1	48YZ	3	4.92	0.5	0.46	2.48	5.67	11.93	--	--	6.42	3.38	4.25	2.75	0.74	0.34	3	5.84
1/8	42YZ	4	4.92	0.5	0.46	2.48	5.08	11	M4	0.63								
1/6	42YZ	4	4.92	0.5	0.46	2.48	5.08	11	M4	0.63								
1/4	42YZ	4	4.92	0.5	0.46	2.48	5.08	11	M4	0.63								
1/8	42YZ	4	4.92	0.5	0.46	2.48	5.08	11	--	--								
1/6	42YZ	4	4.92	0.5	0.46	2.48	5.08	11	--	--								
1/4	42YZ	4	4.92	0.5	0.46	2.48	5.08	11	--	--								
1/3	48YZ	4	4.92	0.5	0.46	2.48	5.67	11.93	1/2-20 UNF	0.63								
1/2	48YZ	4	4.92	0.5	0.46	2.48	5.67	11.93	1/2-20 UNF	0.63								
3/4	48YZ	4	4.92	0.5	0.46	2.48	5.67	11.93	1/2-20 UNF	0.63								
1	48YZ	4	4.92	0.5	0.46	2.48	5.67	11.93	1/2-20 UNF	0.63								
1/3	48YZ	4	4.92	0.5	0.46	2.48	5.67	11.93	--	--								
1/2	48YZ	4	4.92	0.5	0.46	2.48	5.67	11.93	--	--								
3/4	48YZ	4	4.92	0.5	0.46	2.48	5.67	11.93	--	--								
1	48YZ	4	4.92	0.5	0.46	2.48	5.67	11.93	--	--								

TECO

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