



EMR-Bulldozer™

Ferrite-Assisted Synchronous
Reluctance Motor Drive System
Product Series



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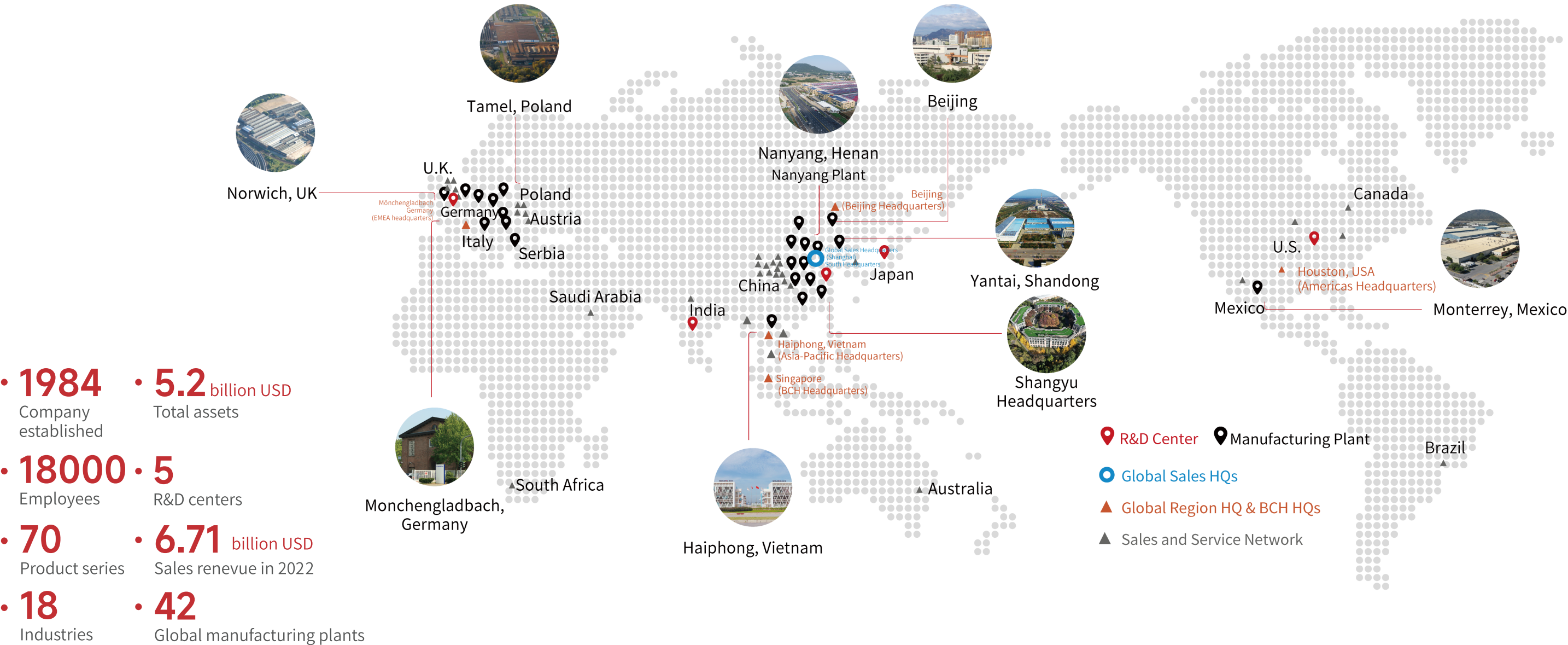
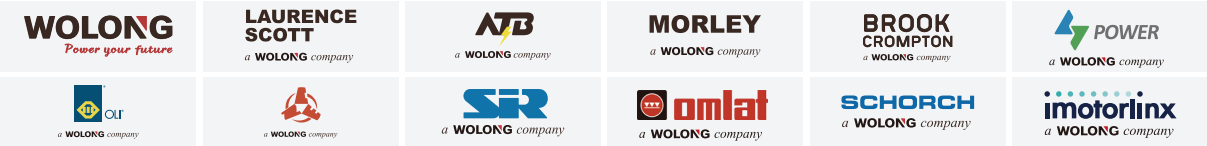


Wolong's Global Presence

Founded in 1984 and headquartered in Shaoxing, Zhejiang, Wolong is a world-leading industrial enterprise committed to providing safe, efficient, intelligent, and green electric drive system solutions to customers in the world.

With the mission of "Drive the future with science and technology, provide inexhaustible power for the world", our company focuses on high-efficiency power drive systems with effective energy utilization. Through the comprehensive application of innovative new materials, technologies and processes, the company has achieved continuous improvement in the energy efficiency of electric drive systems. Further technological innovation into smart energy systems, our products are widely use in fields of industry and agriculture, manufacturing, energy production, mining, construction and transportations. This development is contributing to the green development towards energy saving and mission reduction in various industries. Helping customers to achieve "reducing CO₂ emissions" and "carbon neutrality".

Family of Brands



Overview

Wolong’s EMR-Bulldozer™ product is high-performance integrated drive system product series, which is composed of a top-mounted controller unit and a ferrite-assisted synchronous reluctance motor. It has the advantages of system integration, high efficiency, and small footprint, etc., typically providing the best solution for fans, pumps, and compressors’ variable speed driven applications.



Highlight

High Efficiency with Constant Power Range of Rated Speed to Maximum Speed

Rare Earth Free

Advanced Motor Controls

Highly Integrated

Reliable Starting with High Torque

Custom Design of High-Level IP Protection

Ferrite-Assisted Synchronous Reluctance Motor

Efficiency IE4/IE5

Protection IP55

Rated Speed 1200/1800/2400 RPM

Power Range 3HP~20HP

Number of Poles 4

Rated Voltage 230/460V/480V/600V

Insulation Class Class F

Nomenclature

EMR 184 HP 10 S18 4 T 4 F A

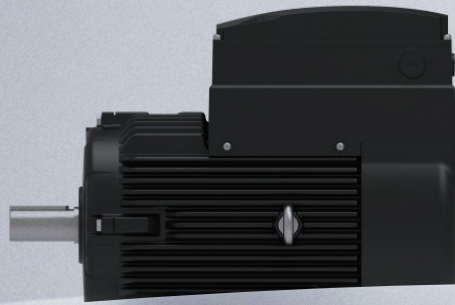
- Frame material A: Aluminum C: Cast iron S: Rolled steel
- Mounting B: C-Face foot C: C-Face footless D: D-flange F: Foot mount J: 56J stainless threaded shaft M: JM pump shaft and face S: Square flange pump mount P: JP pump close coupled
- Voltage 0: 230/460V(Motor only) 2: 200~240V 4: 480V 5: 600V
- Version M: Motor only T: Top mount drive A: Axial mount drive
- Efficiency grade 4: IE4 5: IE5
- Base speed S12: 1200rpm S18: 1800rpm S24: 2400rpm
- Power rating 03: 3HP 05: 5HP 07: 7.5HP 10: 10HP 20: 20HP
- Power type HP: Horsepower
- NEMA frame 145/184/215/256/286
- Product series EMR

Technical Specification

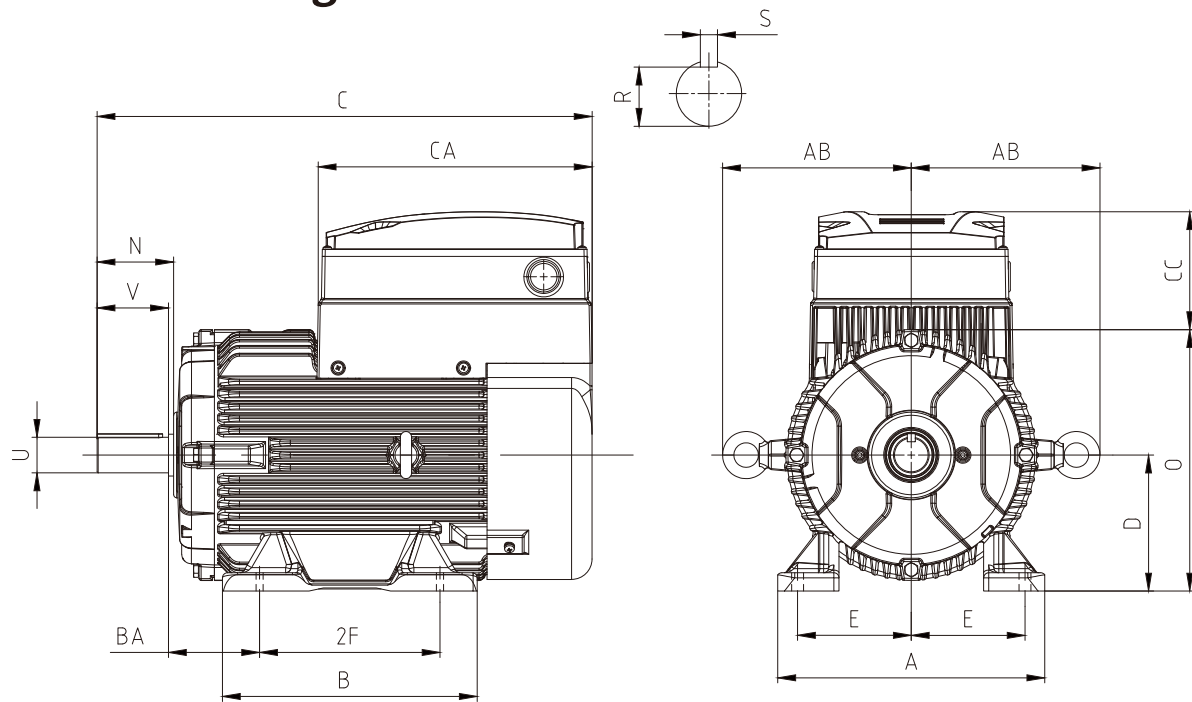
AC Input	Voltage	230/460V(motor only)220~240V/480V/600V
	Frequency	60Hz
Performance	Motor Control	Direct Flux Control
	Rated Speed	1200/1800/2400RPM
	Maximum Speed	2400/3200/4000RPM
	Speed Range	180 RPM ~ Maximum Speed
	Constant Power Zone	Rated Speed ~ Maximum Speed
	Speed Accuracy	±0.5%
	Speed Setting Resolution	1 RPM
	Overload Capacity	110% - 10 min 136% - 10 sec
Speed Setting	Operation Mode	Terminal、Modbus、Keypad
	Command Source	DI、AI、RS485
Terminal	Input	Digital (x4)、Analog (x2, 0-10V/4-20mA)、Temp (x1)
	Output	Digital (x1) 、Analog (x2, 0-10V/4-20mA)、Relay (x1)
	Communication	RS485 (x2)
	Auxiliary Power	24V (50mA Max, Short Circuit Protection)10V (50mA Max, Short Circuit Protection)
Motor	Type	Ferrite-Assisted Synchronous Reluctance
	Efficiency Class	IE4/IE5
	Rated Speed	1800 RPM
	IP	IP55
Protection	Locked Rotor、Loss of Phase 、Over Current、Overload、Over Voltage、Under Voltage、Over Temperature、Communication Fault、Current Feedback Fault、EEPROM Fault	
Environment	Ambient Temperature	-20°C~60°C
	Storage Temperature	-40°C~85°C
	Humidity	5%~95% (Non-Condensing)
	Vibration	1.6 G Peak at 5~500Hz (Operating)、2.2 G Peak at 5~500Hz (Non-Operating)
	Maximum Altitude	1000 m
	Pollution	PD2
Certification	UL/cUL	

Product Model

Model	Input Voltage (V)	Input Current (A)	Rated Power (HP)	Rated Speed (RPM)	Rated Torque (ft.lb/Nm)	Weight (lb/kg)
EMR184HP03S185T4FA	480	3.7	3	1800	8.8/11.9	64/29
EMR184HP05S185T4FA	480	5.6	5	1800	14.6/19.8	82/37
EMR215HP07S184T4FA	480	8.6	7.5	1800	21.9/29.7	95/43
EMR215HP10S184T4FA	480	11.3	10	1800	29.2/39.6	106/48

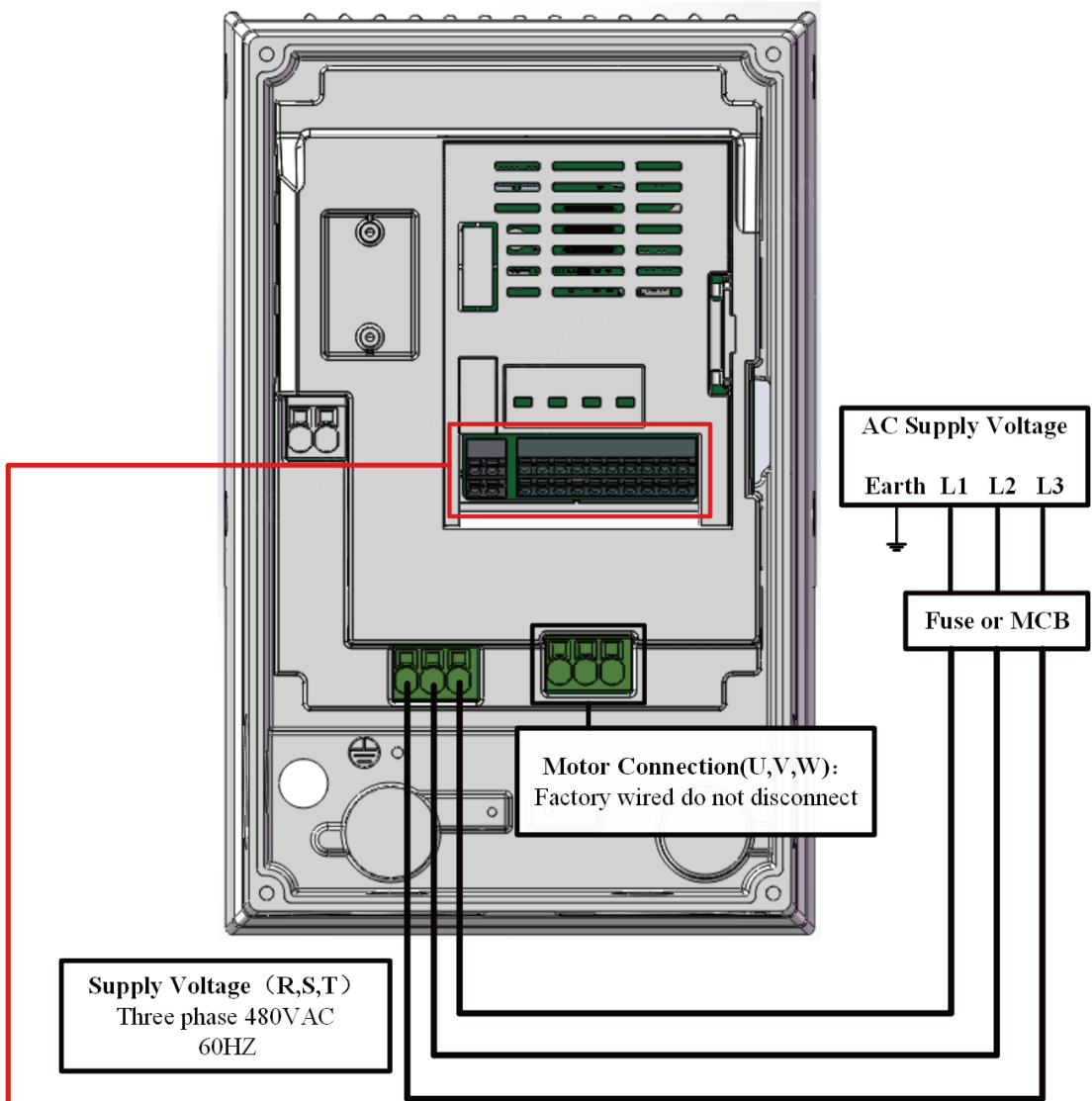


Outline Drawing and Installation Dimensions



Model	FrameDimensions(inches)																
	A	D	E	2F	B	BA	H	U	V	N	R	S	O	AB	CA	C	CC
EMR184HP03S185T4FA	9.08	4.50	3.75	5.50	7.80	2.75	0.41	1.13	2.75	2.95	0.99	0.25	8.54	5.73	10.32	17.91	4.62
EMR184HP05S185T4FA	9.08	4.50	3.75	5.50	7.80	2.75	0.41	1.13	2.75	2.95	0.99	0.25	8.54	5.73	10.32	17.91	4.62
EMR215HP07S184T4FA	10.31	5.25	4.25	7.00	9.84	3.50	0.41	1.38	3.38	3.62	1.20	0.31	10.13	6.93	10.72	19.88	4.51
EMR215HP10S184T4FA	10.31	5.25	4.25	7.00	9.84	3.50	0.41	1.38	3.38	3.62	1.20	0.31	10.13	6.93	10.72	19.88	4.51

Connection and Wiring



Control Terminals



- Factory defaults settings:
- 1.Connect a START/STOP switch to Terminal DI1 & COM
Close the contact START(enable) the drive
Open the contact STOP(disable) the drive
 - 2.Connect potentiometer to terminals +10V & AI1 & GND
Vary the speed

