

Special Electric Motors

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Speedranger

Power-matched Motor and Drive up to 1HP: Speedranger AC Motor and Drive



The Speedranger is a variable speed motor, integrating an induction motor and variable frequency drive into a single in-line power matched package. Installation and start up time are minimized eliminating all wiring and drive programming. Simply mount the motor, plug in the cord and you have variable speed at your fingertips.

The Speedranger is the right choice for any equipment or process where you need to make electric motor speed adjustments. The best solution for shop equipment, pumps, fans, blowers, mixers, conveyors and other diminishing torque applications.

Start up is fast and simple with the Speedranger. This motor with built-in drive is pre-wired and factory programmed to set parameters. No additional program configurations is required. Just plug in and go.

Key Advantages

Some of the key advantages offered by Speedranger over the more conventional approach are:

- Ease and speed of installation and maintenance
- Flexibility in re-designing plants, due to modular concept
- Reduced electrical noise, as there is less cabling between the motor and the drive
- Motor and drive are perfectly matched
- Space savings:
 - As there is no need for a control room or large control cabinets
 - A motor with a built-in drive occupies less space than the motor and separate drive
 - Reduced logistical costs for motors with a built-in drive, as only one product needs to be ordered instead of two
 - And reduced cabling costs

Motor Features

- All ratings (HP) in NEMA standard 56C frame
- 3-phase induction motor
- Ratings from 1/4 - 1HP
- Rolled Steel frame
- Enclosure: TEFC motor
- EPAct efficient
- All motors are C-Face with rigid base

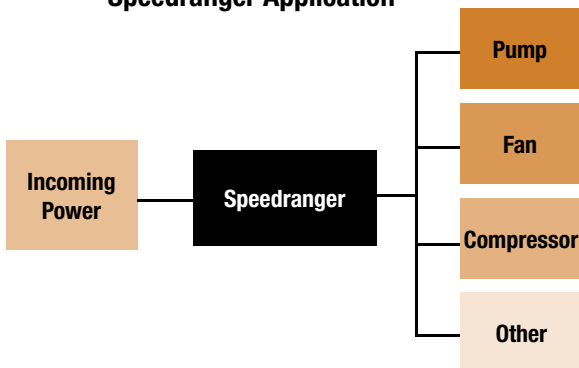


- Service Factor: 1.15
- Ambient: 40°C
- Bearings: Ball
- Class F insulation system
- Rotation CW/CCW
- Mylar nameplates
- No Conduit box. No wiring required
- Power cord and plug (115V or 230V)

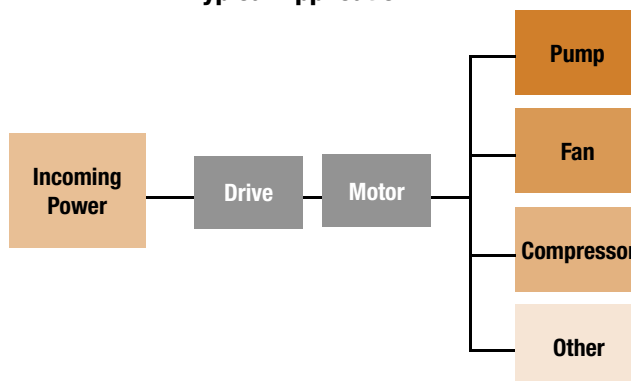
Drive Features

- Micro AC variable frequency drive
- Simple, user-friendly digital keypad
- 150% overload
- Run, Stop
- Forward, Reverse
- Speed up, Speed down
- 1 Phase input (115V or 230V)
- Enclosure NEMA 1


Speedranger Application





Typical Application



Speedranger - Integrated Motor with Variable Frequency Drive^{②③④⑤}

	Motor Specifications						Speedranger Catalog Number	List Price
	RPM	Enclosure	Frame	1HP Volts	HP	Amps		
	180 - 1800	TEFC ①	56C	115	1/4	5.8	MJ56Z1005	912
					1/2	9.8	MJ56Z1006	950
	180 - 1800			230	1/2	4.9	MJ56Z1007	950
					3/4	6.9	MJ56Z1008	1249
	360 - 3600			3/4	6.9	MJ56Z1009	1155	
180 - 1800	1			8.0	MJ56Z1010	1626		

Speedranger Details

Speedranger Catalog Number	Application Voltage	Speedranger Power Cord Specifications		
		Type	Length	NEMA Plug
MJ56Z1005 MJ56Z1006	115V	SJ	7.5 feet	NEMA 5-15P 15 A/125V 
MJ56Z1007 MJ56Z1008 MJ56Z1009 MJ56Z1010	230V	SH	7.5 feet	NEMA 6-15P 15 A/250V 

- ① A TEFC motor enclosure stands for "Totally Enclosed, Fan Cooled" for Type-1 light industrial environments.
- ② The Speedranger drive is pre-wired and factory set. VFD is pre-programmed and can NOT be modified. Insert the plug into the proper outlet 1/4 - 1/2 HP 115 volt outlet 3/4-1HP 230 volt outlet.
- ③ 120V units supplied with 7.5 foot 15A 120V NEMA Plug 5-15P power cord.
- ④ 230V units supplied with 7.5 foot 15A 250V 2-Pole 3-Wire NEMA 6-15P power cord.
- ⑤ The user must select a motor starter and over current protection suitable for this motor and it application. Consult motor starter application data as well as the National Electric Code and/or other applicable local codes.

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0 Spl. Electric Motors

SPEED

DirectStart

Integrated Motor with KTA7 Motor Protection up to 2HP

DirectStart is a compact three phase constant speed induction motor with built-in motor protection using the KTA7 motor circuit controller. The KT7 is uniquely mounted inside the motor end bell with the handle lifted on the outside. A simple turn of the KT7 handle allows the user to directly “Start” and “Stop” the motor locally.



Typically, control panels or feeder panels control electric motors which involve more time, space and labor. With the DirectStart, installation time and costs are greatly reduced...just connect L1, L2, and L3!

Short Circuit Protection and a Disconnect all in one Package

Internal to the DirectStart bell housing is a KT7 motor circuit controller to protect the motor. The KT7 Motor Circuit Controllers are UL/CSA listed as self-protected (Construction Type E) manual combination motor controllers. This Type E rating eliminates the need for individual branch fuses (per UL 198) or a thermal-magnetic circuit breaker or magnetic-only circuit breaker (per UL 489) as the Branch Circuit Protection Device (BCPD). The KT7 is also suitable as “at motor disconnect” applications.

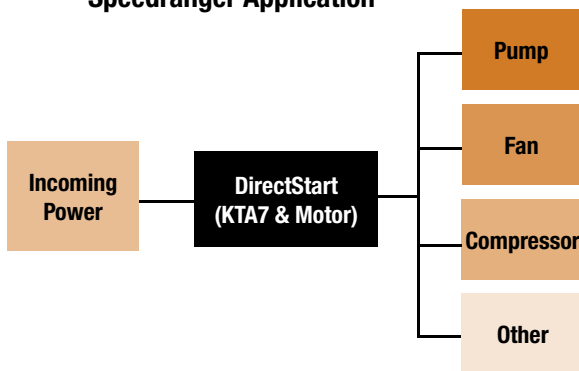
Space Savings Across-the-Line Applications

3-Phase 460V or 230V features:

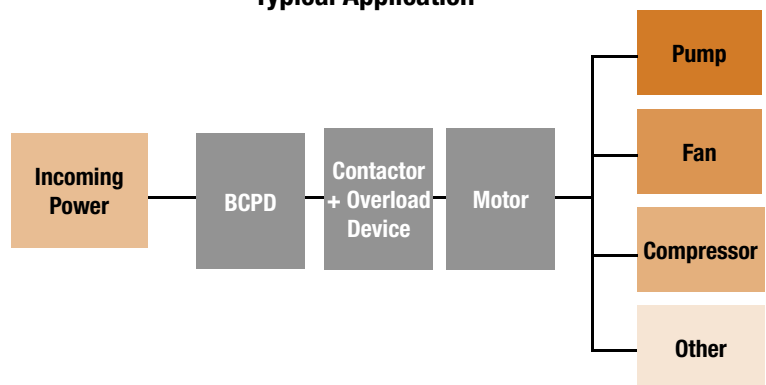
- Self-protected Type E Manual and combination controller
- Clear ON-OFF and tripped indication
- Lockable operator
- Fractional to 2HP available
- Factory matched motor and controller
- Short-circuit protection and a disconnect in one package
- Current limiting device increases motor protection from short-circuit

Install time and cost significantly reduces...just connect L1, L2, L3!


Speedranger Application



Typical Application



DirectStart - Integrated Motor with KTA7 (short-circuit and overcurrent protection)②

	Motor Specifications						Speedranger Catalog Number	List Price
	RPM	Enclosure	Frame	3HP Volts	HP	Factory Set Amps		
	1800	TEFC ❶	56C	230	1/2	2.2	DS56Z2001A	450
					3/4	3.2	DS56Z2002A	460
					1	4.2	DS56Z2003A	475
					1 1/2	6.0	DS56Z2004A	515
					2	6.8	DS56Z2005A	525
				460	1/2	1.1	DS56Z4001A	450
					3/4	1.6	DS56Z4002A	460
					1	2.1	DS56Z4003A	475
					1 1/2	3.0	DS56Z4004A	515
					2	3.4	DS56Z4005A	525

DirectStart Spare Parts ③

DirectStart Catalog Number	KTA7 Catalog Number	KTA7 Adpater Catalog Number	KTA7 Handle Catalog Number	KTA7 OL Guard Catalog Number	Motor End Bell Catalog Number
DS56Z2001A	KTA7-25S-2.5A	KT7-25-TE	KT7-KRY	KT7-25-CA	DS-0506-CVR
DS56Z2002A	KAT7-25S-4A				
DS56Z2003A	KTA7-25S-6.3A				
DS56Z2004A	KTA7-25S-6.3A				
DS56Z2005A	KTA7-25S-10A				
DS56Z4001A	KTA7-25S-1.6A				
DS56Z4002A	KTA7-25S-2.5A				
DS56Z4003A	KTA7-25S-2.5A				
DS56Z4004A	KTA7-25S-4A				
DS56Z4005A	KTA7-25S-4A				
See catalog Section F for pricing					

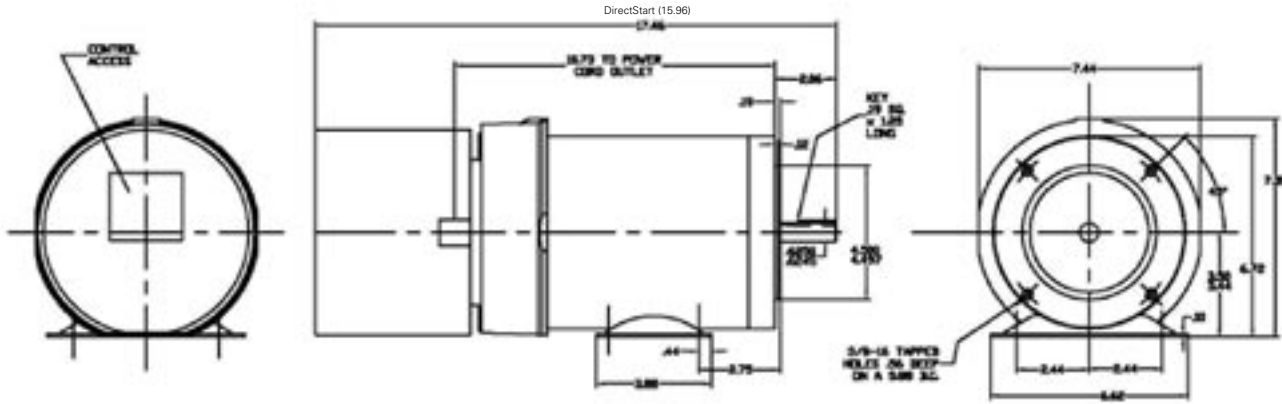
❶ A TEFC motor enclosure stands for "Totally Enclosed, Fan Cooled" for Type-1 light industrial environments.
 ② A 1/2" conduit hole is provided in the bell housing for customers 3-phase incoming power.
 ③ Motor not available as a spare part item.

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0 Spl. Electric Motors

DIRECT

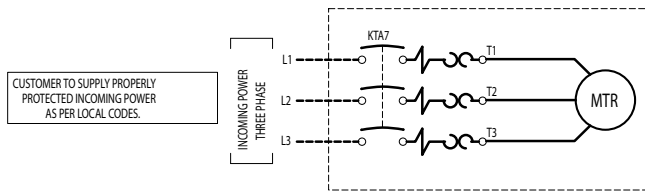
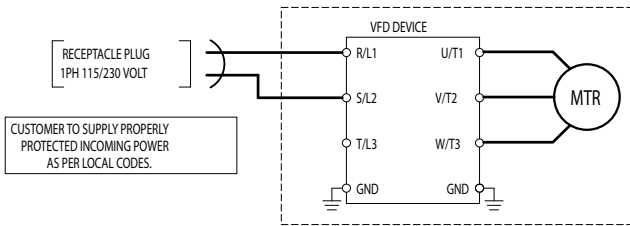
Speedranger and DirectStart



Note:
 Dimensions are in inches
 Face runout and eccentricity .004 max T.I.R.
 Shaft Runout .002 T.I.R.

Speedranger

DirectStart



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