

# Series KT5 Manual Motor Controllers

Versatile, convenient  
and space saving...  
for a variety of  
applications

Sprecher+Schuh's KT5 Manual Motor Controllers are UL Listed as Manual Motor Controllers with optional approvals for Suitable as Motor Disconnect and Suitable for use in Group Installation.

Group motor installations eliminate the need for individual branch short circuit protective devices for each motor circuit, reducing panel space, installation & wiring time, and costs. There is only one Branch Circuit Protective Device (BCPD) for the "Group".

According to UL 60947-4-1, CSA C22.2 No.60947-4-1, these devices may provide the following control and protection functions.



- Disconnect for Motor Branch Circuit
- Manual Switching (Motor control means)
- Overload Protection (Thermal Protection)



These devices meet requirement of Motor Protective Switching Devices (MPSD) according to IEC 60947-4-1 and Circuit Breaker according to IEC 60947-2 standard for application outside of North America.

These devices provide the following functions.

- Disconnect for Motor Branch Circuit
- Magnetic Short-circuit Protection
- Thermal Overload Protection
- Manual Switching (Motor control means)

KT5 devices provide trip class 10A overload protection and phase loss sensitivity protection. These are suitable for single- and three-phase applications.

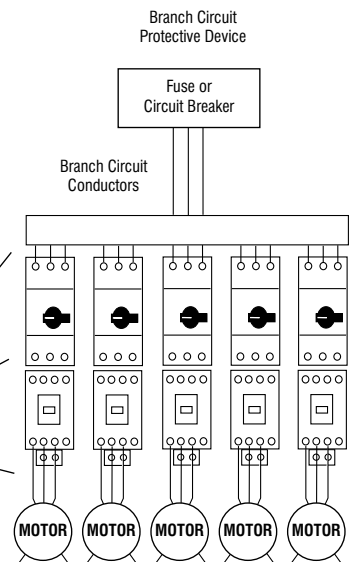
**Group Installation**  
Single motor taps must be  $\frac{1}{3}$  the ampacity of the branch circuit conductors



## Group Installation with MPCBs

There is only one Branch Circuit Protective Device (BCPD) for the "Group". Group installation has been successfully used for many years in the U.S. and Canada. It allows "two motors or one or more motors and other loads to be connected to the same branch-circuit..." The most restrictive part of the conditions specified for Group Installation is the requirement for the protection of the conductors for each motor circuit.

The image below shows an example that illustrates installations involving multiple motors with a single BCPD protecting the entire "Group".



**F**  
KT5 Manual Motor Controllers

### KTA5 Manual Motor Controllers

Max. kW, 3-Phase — AC-3 ❶				Typical Three Phase [HP] ❶				Max. Short Circuit Current (kA)		Current Adjustment Range [A]	Magnetic Release Response Current [A]	Catalog Number
230V	400/415V	500V	690V	200V	230V	460V	575V	460V	575V			
~	0.02	0.06	0.06	~	~	~	~	100	30	0.10...0.16	2	KTA5-32A-0.16A
~	0.04	0.09	0.09	~	~	~	~	100	30	0.16...0.25	3.1	KTA5-32A-0.25A
0.06	0.09	0.12	0.18	~	~	~	0.25	100	30	0.25...0.40	5	KTA5-32A-0.4A
0.09	0.18	0.18	0.25	~	~	0.25	0.33	100	30	0.40...0.63	7.9	KTA5-32A-0.63A
0.18	0.25	0.37	0.55	~	~	0.5	0.75	100	30	0.63...1.0	12.5	KTA5-32A-1.0A
0.25	0.55	0.75	1.1	0.25	0.33	1	1	100	30	1.0...1.6	20	KTA5-32A-1.6A
0.37	0.75	1.1	1.8	0.5	0.75	1.5	2	75	30	1.6...2.5	31.3	KTA5-32A-2.5A
0.75	1.5	2.2	3	1	1	~	~	75	18	2.5...4.0	50	KTA5-32A-4.0A
1.5	2.2	3	4	1.5	2	5	5	50	18	4.0...6.3	78.8	KTA5-32A-6.3A
2.2	4	6.3	7.5	3	3	7.5	10	50	18	6.3...10	150	KTA5-32A-10A
3	5.5	6.3	7.5	3	3	7.5	10	50	18	8.0...12	180	KTA5-32A-12A
4	7.5	10	13	5	5	10	15	15	18	10...16	240	KTA5-32A-16A
5.5	10	11	17	5	7.5	15	20	15	18	16...20	300	KTA5-32A-20A
5.5	11	15	22	7.5	7.5	20	20	15	18	20...25	375	KTA5-32A-25A
7.5	15	20	25	7.5	10	25	30	15	18	25...32	480	KTA5-32A-32A

Horsepower ratings shown in the table are for reference only. The final selection of the controller depends on the actual motor full load current and service factor.


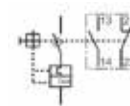
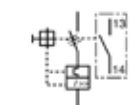
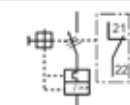
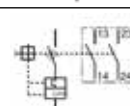

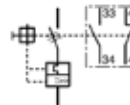
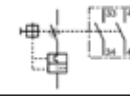
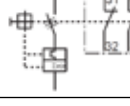


- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range.  
Example: Motor F.L.C. = 4.2A; S.F. = 1.0. - 4.2A x 0.9 = 3.78A.  
Select Catalog Number KTA5-32A-4.0A

### KTA5 Selection Using Interrupting Rating/Breaking Capacity

Catalog Number	Breaking Capacity, IEC 60947-2																	
	230V AC			400V AC			440V AC			500V AC			690V AC					
	I <sub>CS</sub> [kA]	I <sub>CU</sub> [kA]	Back-up Fuse Rating ❷ [A]	I <sub>CS</sub> [kA]	I <sub>CU</sub> [kA]	Back-up Fuse Rating ❷ [A]	I <sub>CS</sub> [kA]	I <sub>CU</sub> [kA]	Back-up Fuse Rating ❷ [A]	I <sub>CS</sub> [kA]	I <sub>CU</sub> [kA]	Back-up Fuse Rating ❷ [A]	I <sub>CS</sub> [kA]	I <sub>CU</sub> [kA]	Back-up Fuse Rating ❷ [A]			
KTA5-32A-0.16A	50	100	~❸	50	100	~❸	30	100	~❸	30	100	~❸	30	100	~❸			
KTA5-32A-0.25A	50	100		50	100		30	100		30	100		30	100		30	100	
KTA5-32A-0.4A	50	100		50	100		30	100		30	100		30	100		30	100	
KTA5-32A-0.63A	50	100		50	100		30	100		30	100		30	100		30	100	
KTA5-32A-1.0A	50	100		50	100		30	100		30	100		30	100		30	100	
KTA5-32A-1.6A	50	100		50	100		30	100		30	100		30	100		30	100	
KTA5-32A-2.5A	50	75		50	75		10	30		25 ❹	10		20	25 ❹		5	10	25 ❹
KTA5-32A-4.0A	50	75		50	75		6	18		25 ❹	6		15	25 ❹		2	3	25 ❹
KTA5-32A-6.3A	50	50		50	50		6	18		63 ❹	6		10	63 ❹		2	3	40 ❹
KTA5-32A-10A	50	50		50	50		6	18		63 ❹	6		10	63 ❹		2	3	50 ❹
KTA5-32A-12A	25	50	80 ❹	25	50	80 ❹	6	15	63 ❹	6	10	63 ❹	2	3	50 ❹			
KTA5-32A-16A	15	15	40 ❹	15	15	40 ❹	4	6	63 ❹	4	6	63 ❹	2	3	63 ❹			
KTA5-32A-20A	10	15	125 ❹	10	15	125 ❹	3	6	125 ❹	3	6	125 ❹	2	3	80 ❹			
KTA5-32A-25A	10	15	125 ❹	10	15	125 ❹	3	6	125 ❹	3	6	125 ❹	2	3	100 ❹			
KTA5-32A-32A	10	15	125 ❹	10	15	125 ❹	3	6	125 ❹	3	6	125 ❹	2	3	100 ❹			


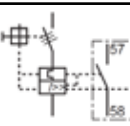
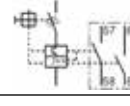
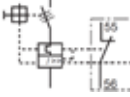
- ❶ Horsepower ratings shown are for reference. The final selection of the controller depends on the actual motor full load current.
- ❷ Back-up fuses are type gG, aM.
- ❸ No back-up fuse required if I<sub>cc</sub> < I<sub>cs</sub>.
- ❹ Rated back-up fuse for short-circuit up to 50 kA.

Accessories for KT5


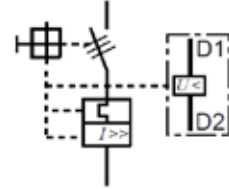

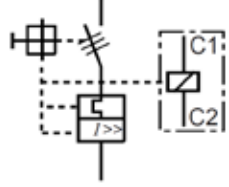
Accessory	Description	Auxiliary		Connection Diagram and Terminal Markings ⌀	For Use With	Pkg Qty	Catalog Number
		N.O	N.C				
	<b>Front mounted Auxiliary Contact</b> • No additional space required • 1 and 2-pole	1	1		KT5	10	KT5-PE1-11
		1	0				KT5-PE1-10
		0	1				KT5-PE1-01
		2	0				KT5-PE1-20
	<b>Right-side-mounted Auxiliary Contact</b> • 2-pole • Adds 9 mm to the width of the Manual Motor Starter • Use compact bus bars with 54 mm spacing	1	1		KT5	2	KT5-PA1-11
		2	0				KT5-PA1-20
		0	2				KT5-PA1-02
		Lead Contacts					KT5-PA1-20L
		2	0				

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KT5 Manual Motor Controllers


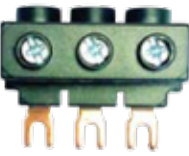
Trip Contacts

Accessory	Description	Auxiliary Contacts		Connection Diagram and Terminal Markings ⌀	For Use With	Pkg Qty	Catalog Number
		N.O	N.C				
	<b>Right-side-mounted Trip Signaling Contact</b> • 2-pole • Adds 9 mm to the width of the Manual Motor Starter • Use compact bus bars with 54 mm spacing	1	1		KT5	2	KT5-PAF1-S11
		2	0				KT5-PAF1-S20
		0	2				KT5-PAF1-S02



**Accessories for KT5**

Accessory	Description	Connection Diagram	AC Coil Voltage	Pkg Qty	For Use With	Catalog Number
	<b>Undervoltage Trip Release</b> <ul style="list-style-type: none"> <li>Left-side mounted</li> <li>Adds 18 mm to the width of the Manual Motor Starter</li> </ul>		20V, 50 Hz/ 24V, 60 Hz	1	KT5	KT5-UA-24V
			24V, 50 Hz			KT5-UA-28V
			48V, 50 Hz			KT5-UA-48V
			60V, 50 Hz			KT5-UA-60V
			110V, 50 Hz/ 120V, 60 Hz			KT5-UA-120V
			208V, 60 Hz			KT5-UA-208V
			230V, 50 Hz/ 240V, 60 Hz			KT5-UA-240V
			400V, 50 Hz			KT5-UA-400V
			415V, 50 Hz/ 480V, 60 Hz			KT5-UA-480V
			575V, 60 Hz			KT5-UA-575V
	<b>Shunt Trip Release</b> <ul style="list-style-type: none"> <li>Left-side mounted</li> <li>Adds 18 mm to the width of the Manual Motor Starter</li> </ul>		20-24 V, 50/60 Hz	1	KT5	KT5-AA-24V
			110V, 50/60 Hz			KT5-AA-110V
			200...240V, 50/60 Hz			KT5-AA-240V
			350...415V, 50/60 Hz			KT5-AA-415V

**Bus Bars**

Accessory	Description	Connection Diagram	Terminal Links	Pkg Qty	For Use With	Catalog Number	
	<b>Compact Bus Bars</b> <ul style="list-style-type: none"> <li>UL: 600V, 60 A</li> <li>IEC: 690V, 65 A</li> </ul>	<ul style="list-style-type: none"> <li>45 mm spacing</li> <li>For use with front-mounted auxiliary contact</li> </ul>	2 x 3 connections	10	KT5	KT5-32-DB-45-2	
			3 x 3 connections			KT5-32-DB-45-3	
			4 x 3 connections			KT5-32-DB-45-4	
			5 x 3 connections			KT5-32-DB-45-5	
			<ul style="list-style-type: none"> <li>54 mm spacing</li> <li>For use with side-mounted auxiliary contact</li> </ul>	2 x 3 connections	10	KT5	KT5-32-DB-54-2
				3 x 3 connections			KT5-32-DB-54-3
				4 x 3 connections			KT5-32-DB-54-4
				5 x 3 connections			KT5-32-DB-54-5
			<ul style="list-style-type: none"> <li>63 mm spacing</li> <li>For use with side-mounted trip release</li> </ul>	2 x 3 connections	10	KT5	KT5-32-DB-63-2
				3 x 3 connections			KT5-32-DB-63-3
				4 x 3 connections			KT5-32-DB-63-4
				5 x 3 connections			KT5-32-DB-63-5
	<b>Bus Bar Feeder Terminal (Flat)</b> <ul style="list-style-type: none"> <li>Supply of compact bus bars</li> <li>Increases terminal capacity</li> </ul>			10	KT5-32-DB	KT5-32-A3N	
	<b>Bus Bar Feeder Terminal (High)</b> <ul style="list-style-type: none"> <li>Supply of compact bus bars</li> <li>Increases terminal capacity</li> </ul>					10	KT5-32-A3NH

**Connecting Modules**

Accessory	Description	Pkg Qty	For Use With	Catalog Number
	<b>Connecting Module - 12 A</b> <ul style="list-style-type: none"> <li>For DOL Starters</li> <li>Starters mount on single DIN Rail (KT5 on DIN rail)</li> <li>Electrical and mechanical interconnection of KT5 and CA8 Contactors</li> </ul>	1	KT5 to CA8	KT5-32-PEK12
	<b>Connecting Module - 25 A</b> <ul style="list-style-type: none"> <li>For DOL Starters</li> <li>Starters mount on single DIN Rail (KT5 on DIN rail)</li> <li>Electrical and mechanical interconnection of KT5 and CA7 Contactors</li> </ul>	1	KT5 to CA7-9...23	KT5-32-PEC23






Accessories for KT5

Accessory	Description	Color	Legend	For Use with	Pkg Qty	Catalog Number
	<b>Blank Space Cover</b> • For covering unused terminal links • Must be ordered in multiples of 10 (10pcs/pkg)	Gray/Black		KT5	50	KT5-WSN
	<b>Screw Adapter</b> • For screw arrangement of a motor protection circuit breaker • Hat (DIN) Rail 35 x 7.5 mm • 44 mm length	Red/Yellow		KT5	10	KT5-N45
	<b>Enclosure</b> • Up to three padlocks in OFF position • Protection Class: IP65; UL/CSA Type 12	Red/Yellow	0 - I OFF -ON Trip	KT5	1	KT5-ENY65
		Black Handle				KT5-ENN65
	<b>Door Mounting Kit</b> • Up to three padlocks in OFF position • Protection Class: IP65; UL/CSA Type 12	Red/Yellow	0 - I OFF -ON Trip	KT5	1	KT5-DMY65
		Black Handle				KT5-DMN65
	<b>Door Coupling Handle</b> • Up to three padlocks in OFF position • Defeatable	Red/Yellow	0 - I OFF -ON Trip	KT5	1	KT5-HCRY
		Black/Black	0 - I OFF - ON Trip			KT5-HTC
	<b>Coupler</b> • Coded - Positioning of ON indication dependent from mounting orientation of the KT5 • Uncoded - Positioning of ON indication independent from mounting orientation of the KT5	Driver with screw		KT5	1	KT5-DNC
		Driver without coding, with screw				KT5-DNUC
	<b>Shaft Alignment Ring</b> • Supports the long shafts for alignment to the handle inlet. It makes closing panel doors easier • Use for shafts			KT5	1	KT5-SAR
	<b>Extension Shaft</b>	105 mm (4.13 in.)		KT5	10	KT5-HT
		180 mm (7.1 in.)				KT5-HTM
	<b>Extension Shaft Support</b> • Supports the shaft in the extension of handle (KT5-HTC/KT5-HTRY) • Required for shaft lengths > 130 mm (5.1 in.) • Snaps on the right side of the KT5 controller • Width 9 mm. • For use with screw-mounted or hat rail mounted devices.			KT5	1	KT5-SHS
	<b>Lockable Handle Accessory</b> • For locking KT5 devices in the OFF position			KT5	10	KT5-KN

### Technical Information

Standards Compliance	IEC	IEC/EN 60947-2, IEC/EN 60947-4-1, IEC/EN 60947-1	
	cULus	UL 60947-1, UL 60947-4-1	
Certification	Global	RINA (Marine)	
	Regional	CCC, KC, EAC, CE, IEC, cULus, CB Scheme	
Rated Operating Voltage	IEC [V]	690	
Rated Impulse Withstand Voltage	UL, CSA [V]	600	
	Main Circuits	6kV	
	Auxiliary Circuits	6kV	
Rated Frequency	[Hz]	50...60	
Rated Operating Current	[A]	0.1...32 (15 ranges)	
Number of Operations	Mechanical [operations]	100,000 Cycles	
	Electrical [operations]	100,000 Cycles (0.1...16A); 50,000 Cycles (20...32A)	
Ambient Temperature	Storage	-50...+80°C (-58...+176°F)	
	Operating	Open-compensated	-25...+55°C (-13...+131°F) ❶
		Open	-25...+70°C (-13...+158°F) ❶
		Enclosed	0...+40°C (32...104°F)
Maximum Operating Altitude Permissible		2000m	
Pollution Degree		3	
Phase loss sensitivity		Yes	
Disconnect Function per IEC/60947-2		Yes	
Resistance to shock per IEC 60068-2-27		25g/11ms	
Resistance to vibration per IEC 60068-2-6		5g/3...150Hz	
Minimum distance to other units same type	Horizontal	0 mm (0 in.)	
	Vertical	150 mm (5.9 in.)	
Minimum Distance to Electrical Conductive Bus Bar	Horizontal, up to 400V	0mm (0 in.)	
	Vertical, up to 690V	> 1.5mm (0.06 in.)	
Degree of Protection	Housing	IP20	
	Mwain Terminal	IP10	
Utilization Category	IEC 60947-2 (Circuit breaker)	A	
	IEC 60947-4-1 (Motor Starter)	AC-3	
Power Loss in all three poles up to:	0.16...1.6A	5.1 W	
	2.5...6.3A	5.4 W	
	10...12A	7.2 W	
	16...25A	8.4 W	
	32A	9.3 W	

### Terminal Connections

Connection		No. of Conductors	Devices Rated ≤ 16 A	Devices Rated 20...32 A
Type of terminals				
Connection Screw			M3.5/Pozidriv No.2	M4/Pozidriv No.2
Wiring	Solid	 1 or 2	1...4 mm <sup>2</sup>	1...2.5 mm <sup>2</sup> 2.5...6 mm <sup>2</sup>
	Flexible with ferrule	 1 or 2	0.75...2.5 mm <sup>2</sup>	0.75...6 mm <sup>2</sup>
	Flexible	 1 or 2	0.75...2.5 mm <sup>2</sup> / No. 16...12 AWG	1.5...2.5 mm <sup>2</sup> / No.16...8 AWG 2.5...6 mm <sup>2</sup> / No.16...8 AWG
	Stranded per UL/CSA	 1 or 2	1...4 mm <sup>2</sup> / No. 16...12 AWG	1...2.5 mm <sup>2</sup> / No.16...8 AWG 2.5...6 mm <sup>2</sup> / No.16...8 AWG
	Stripping length		9 mm (0.35 in.)	10 mm (0.39 in.)
Tightening torques			0.8...1.2 N•m / 7...10 lb•in	2 N•m / 18 lb•in

❶ With derating. See UL/CSA Listed Applications ratings table on page F120.7

### UL/CSA Listed Application Ratings, Manual Motor Controller Only

Catalog Number	UL 60947-4-1 — Manual Motor Controller				
	Branch Circuit Protection Max. Size per NEC/CEC [A]	Max. Short Circuit Current [kA]			
		Motor Disconnect		Group Installation	
		480V	600V	480V	600V
KTA5-32A-0.16A	175	30	5	30	5
KTA5-32A-0.25A	175	30	5	30	5
KTA5-32A-0.4A	175	30	5	30	5
KTA5-32A-0.63A	175	30	5	30	5
KTA5-32A-1.0A	175	30	5	30	5
KTA5-32A-1.6A	175	30	5	30	5
KTA5-32A-2.5A	175	30	5	30	5
KTA5-32A-4.0A	175	18	5	18	5
KTA5-32A-6.3A	175	18	5	18	5
KTA5-32A-10A	175	18	5	18	5
KTA5-32A-12A	175	18	5	18	5
KTA5-32A-16A	175	18	5	18	5
KTA5-32A-20A	400	18	5	18	5
KTA5-32A-25A	400	18	5	18	5
KTA5-32A-32A	400	18	5	18	5

### Application Ratings, KT5 to CA8 Miniature Contactors

Catalog Number	UL 60947-4-1 — Manual Motor Controller					
	Max. Fuse or Circuit Breaker Size per NEC [A]	For Use With Contactor Cat. No.	Max. Short Circuit Current [kA]			
			Motor Disconnect		Group Installation	
			480V	600V	480V	600V
KTA5-32A-0.16A	175	CA8-09	30	5	30	5
KTA5-32A-0.25A	175	CA8-09	30	5	30	5
KTA5-32A-0.4A	175	CA8-09	30	5	30	5
KTA5-32A-0.63A	175	CA8-09	30	5	30	5
KTA5-32A-1.0A	175	CA8-09	30	5	30	5
KTA5-32A-1.6A	175	CA8-09	30	5	30	5
KTA5-32A-2.5A	175	CA8-09	30	5	30	5
KTA5-32A-4.0A	175	CA8-09	18	5	18	5
KTA5-32A-6.3A	175	CA8-12	18	5	18	5
KTA5-32A-10A	175	CA8-12	18	5	18	5
KTA5-32A-12A	175	CA8-12	18	5	18	5
KTA5-32A-16A	175	CA8-12	18	~	18	~

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KT5 Manual Motor Controllers

### Application Ratings, KT5 to CA7 Contactors

Catalog Number	UL 60947-4-1 — Manual Motor Controller					
	Max. Fuse or Circuit Breaker Size per NEC [A]	For Use With Contactor Cat. No.	Max. Short Circuit Current [kA]			
			Motor Disconnect		Group Installation	
			480V	600V	480V	600V
KTA5-32A-0.16A	175	CA7-9	30	5	30	5
KTA5-32A-0.25A	175	CA7-9	30	5	30	5
KTA5-32A-0.4A	175	CA7-9	30	5	30	5
KTA5-32A-0.63A	175	CA7-9	30	5	30	5
KTA5-32A-1.0A	175	CA7-9	30	5	30	5
KTA5-32A-1.6A	175	CA7-9	30	5	30	5
KTA5-32A-2.5A	175	CA7-9	30	5	30	5
KTA5-32A-4.0A	175	CA7-9	18	5	18	5
KTA5-32A-6.3A	175	CA7-9	18	5	18	5
KTA5-32A-10A	175	CA7-9	18	5	18	5
KTA5-32A-12A	175	CA7-12	18	5	18	5
KTA5-32A-16A	175	CA7-16	18	5	18	5
KTA5-32A-20A	400	CA7-23	18	5	18	5
KTA5-32A-25A	400	CA7-30	18	5	18	5
KTA5-32A-32A	400	CA7-30	18	5	18	5

### Type 2 Coordination Ratings, KT5 to CA7 Contactors, Standard Motor Protection

Catalog Number	IEC 60947-4-1		UL 60947-4-1					
	400/415V		480V			600V		
	Max. Short Circuit Current [kA]	For Use With Contactor Cat. No.	Max. Fuse or Circuit Breaker Size per NEC [A]	Max. Short Circuit Current [kA]	For Use With Contactor Cat. No.	Max. Fuse or Circuit Breaker Size per NEC [A]	Max. Short Circuit Current [kA]	For Use With Contactor Cat. No.
KTA5-32A-0.16A	50	CA7-9	175	30	CA7-9	175	5	CA7-9
KTA5-32A-0.25A	50	CA7-9	175	30	CA7-9	175	5	CA7-9
KTA5-32A-0.4A	50	CA7-9	175	30	CA7-9	175	5	CA7-9
KTA5-32A-0.63A	50	CA7-9	175	30	CA7-9	175	5	CA7-9
KTA5-32A-1.0A	50	CA7-9	175	30	CA7-9	175	5	CA7-9
KTA5-32A-1.6A	50	CA7-9	175	30	CA7-9	175	5	CA7-9
KTA5-32A-2.5A	50	CA7-9	175	30	CA7-12	175	5	CA7-12
KTA5-32A-4.0A	50	CA7-9	175	18	CA7-23	175	5	CA7-23
KTA5-32A-6.3A	50	CA7-9	175	18	CA7-23	175	5	CA7-23
KTA5-32A-10A	50	CA7-9	175	18	CA7-30	175	5	CA7-30
KTA5-32A-12A	25	CA7-12	175	18	CA7-30	175	5	CA7-30
KTA5-32A-16A	16	CA7-23	175	18	CA7-30	175	5	CA7-30
KTA5-32A-20A	10	CA7-30	400	18	CA7-30	400	5	CA7-30
KTA5-32A-25A	10	CA7-30	400	18	CA7-30	400	5	CA7-30
KTA5-32A-32A	10	CA7-30	400	18	CA7-30	400	5	CA7-30



### Auxiliary Contact, Signaling Contact, and Short-circuit Signaling Contact Specifications

Specifications of Accessories		KT5-PA... Side-mounted Auxiliary, Signaling, and Short-circuit Signaling Contacts	KT5-PE... Front-mounted Auxiliary Contacts
Standards Compliance	IEC	IEC/EN 60947-1, IEC/EN 60947-5-1	IEC/EN 60947-1, IEC/EN 60947-5-1
	UL/cULus	UL 60947-4-1, CAN/CSA22.2 No. 60947-4-1	UL 60947-4-1, CAN/CSA22.2 No. 60947-4-1
Rated Operating Voltage	[U <sub>e</sub> ]	690V AC/600V DC	250V AC / 250V DC
Rated Thermal Current	[I <sub>th</sub> ]	6 A	5 A
Rated Frequency	[Hz]	50...60	50...60
Rated Impulse withstand Voltage	[U <sub>imp</sub> ]	6 kV	6 kV
Rated insulation voltage	[U <sub>i</sub> ]	690 V AC	250 V AC
Pollution Degree		3	3
Ambient Temperature	Operation	-25... +60 °C (-13... +140 °F)	-25... +60 °C (-13... +140 °F)
	Storage	-50... +80 °C (-58... +176 °F)	-50... +80 °C (-58... +176 °F)
Resistance to shock per IEC 60068-2-27		25g / 11 ms	25g / 11 ms
Resistance to vibrations per IEC 60068-2-6		5g / 3...150 Hz	5g / 3...150 Hz
Rated operational current I <sub>e</sub> AC-15 per IEC/EN 60947-5-1 for utilization category	24 V, 120 V	6 A	3 A
	240 V	4 A	1.5 A
	400 V	3 A	~
	440 V, 690 V	1 A	~
Rated operational current I <sub>e</sub> DC-13 per IEC/EN 60947-5-1 for utilization category	24 V	2 A	1 A
	125 V	0.55 A	250 V 0.27 A
	250 V	0.27 A	0.11 A
	440 V, 600 V	0.15 A	~
Minimum switching capacity		17 V DC / 5 mA	17V DC / 5 mA
Short-circuit protective device (N.O, N.C)		10 A Type gG	10 A Type gG
Duty time		100 %	100 %
Mounting		Right side	Front
Number of operations	Mechanical	50,000 cycles	50,000 cycles
	Electrical		
<b>Contact utilization characteristics according to UL/CSA</b>			
Rated operating voltage U <sub>e</sub> per UL/CSA		600 V AC / 600 V DC	250V AC / 250V DC
Pilot duty		B600, Q600	B300, R300
AC thermal rated current		5A	5 A
AC maximum volt-ampere	making	3600	3600 VA
	breaking	360	360 VA
DC thermal rated current		2.5 A	2.5 A
DC maximum volt-ampere	making	69 VA	28 VA
	breaking		





### Undervoltage Release Specifications

Attribute	Value	
Standards compliance	IEC	IEC/EN 60947-1, IEC/EN 60947-5-1
	UL/cULus	UL 60947-4-1, CAN/CSA22.2 No. 60947-4-1
Rated control supply voltage	See Catalog page F120.4	
Rated frequency	See Catalog page F120.4	
Operating voltage	Tripping	$0.35 \dots 0.7 \times U_s$
	Coil	$0.85 \dots 1.1 \times U_s$
Rated impulse withstand voltage	[U <sub>imp</sub> ]	6 kV
Rated insulation voltage	[U <sub>i</sub> ]	690V
Pollution degree	3	
Ambient air temperature	Operation	-25...+60 °C (-13...+140 °F)
	Storage	-50...+80 °C (-58...+176 °F)
Resistance to shock per IEC 60068-2-27	25g / 11 ms	
Resistance to vibrations per IEC 60068-2-6	5g / 3...150 Hz	
Mounting	left side of Manual Motor Controller	

### Shunt Trip Specifications

Attribute	Value	
Standards compliance	IEC	IEC/EN 60947-1, IEC/EN 60947-5-1
	UL/cULus	UL 60947-4-1, CAN/CSA22.2 No. 60947-4-1
Rated control supply voltage	See Catalog page F120.4	
Rated frequency	See Catalog page F120.4	
Operating voltage	Tripping	$0.7 \dots 1.1 \times U_s$
Rated impulse withstand voltage	[U <sub>imp</sub> ]	6 kV
Rated insulation voltage	[U <sub>i</sub> ]	690V
Pollution degree	3	
Ambient air temperature	Operation	-25...+60 °C (-13...+140 °F)
	Storage	-50...+80 °C (-58...+176 °F)
Resistance to shock per IEC 60068-2-27	15g/11ms	
Resistance to vibrations per IEC 60068-2-6	5g / 3...150 Hz	
Mounting	left side of Manual Motor Controller	

### Terminal Connections






Connection	No. of Conductors		Side Mounted	Front Mounted	
Wiring	Solid		1 or 2	1...1.5 mm <sup>2</sup>	1...2.5 mm <sup>2</sup>
	Flexible with ferrule		1 or 2	0.75...1.5 mm <sup>2</sup>	
	Flexible		1 or 2	0.75...1.5 mm <sup>2</sup>	
	Stranded per UL/CSA		1 or 2	No. 16...14 AWG	
	Stripping length			8 mm (0.31 in.)	
Tightening torques			0.8...1.2 N•m / 7lb•in		
Recommended screwdriver			Pozi driv No.2		

**IEC Performance Data**

**Feeder Terminal and Bus Bar Current Ratings**

Attribute	KT5-32-DB-45..., -54..., -63...	KT5-32-A3N...
Rated operational voltage	U <sub>e</sub>	690 V
	U <sub>e</sub> per UL/CSA	600V AC
Rated operational current	I <sub>e</sub>	65 A
	U <sub>e</sub> per UL/CSA	60 A
Suitable for enclosure size	(UL)	200% of Size of KT5 with bus bars
Rated frequency		50/60 Hz
Rated impulse withstand voltage	U <sub>imp</sub>	6 kV
Rated insulation voltage	U <sub>i</sub>	690V AC

**Main Circuit Connecting Characteristics**

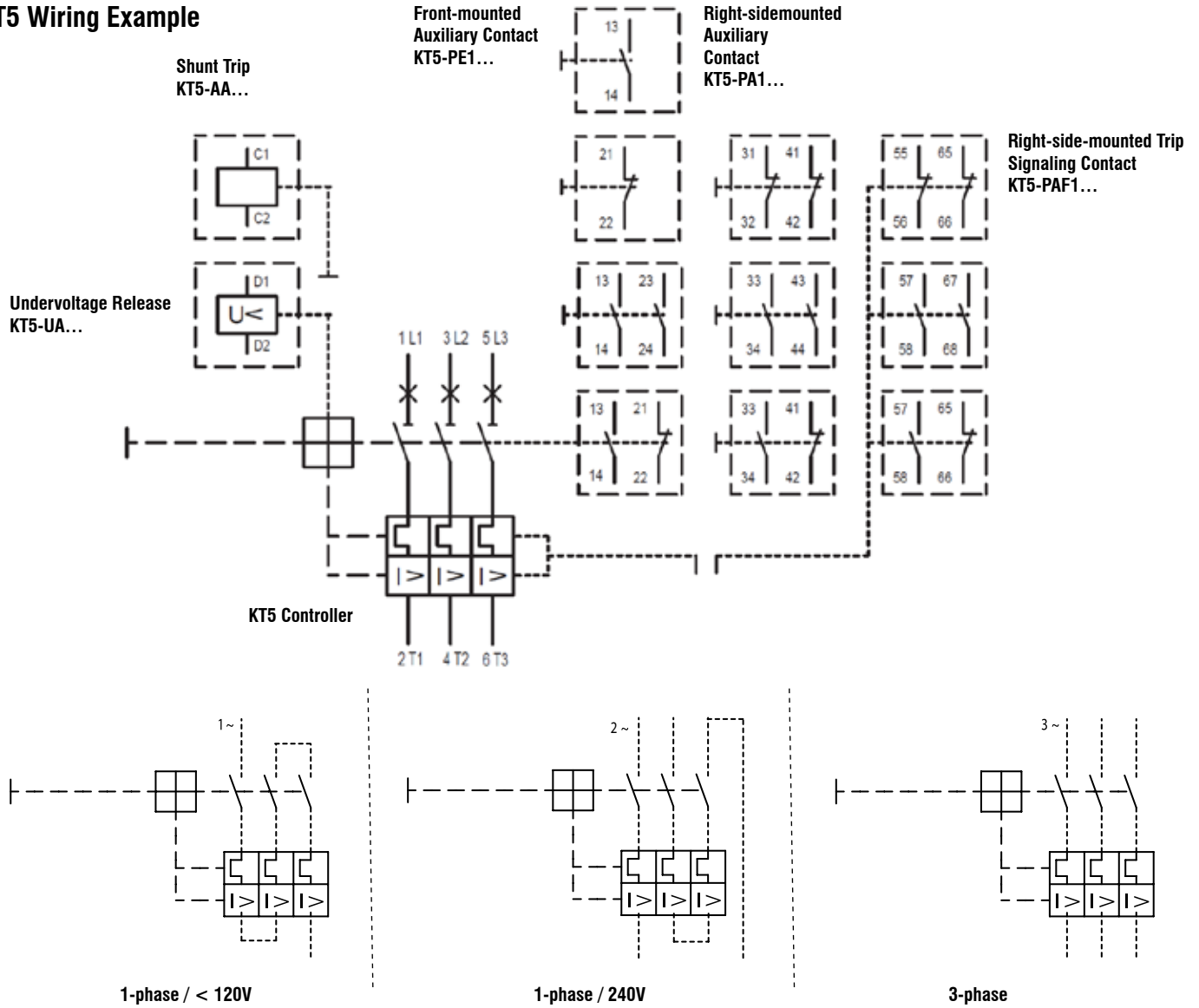
Connection	No. of Conductors	Value	
Wiring	Solid 	1	6...25 mm <sup>2</sup>
	Flexible with ferrule 	1	6...16 mm <sup>2</sup>
	Flexible with insulated ferrule 	1	6...16 mm <sup>2</sup>
	Flexible 	1	6...16 mm <sup>2</sup>
	Stranded per UL/CSA 	1	No. 10...4 AWG
	Stripping length		10 mm (0.39 in.)
Tightening torques		2.5 N•m / 22 lb•in	
Recommended screwdriver		Pozidriv No.2	

**Weights**

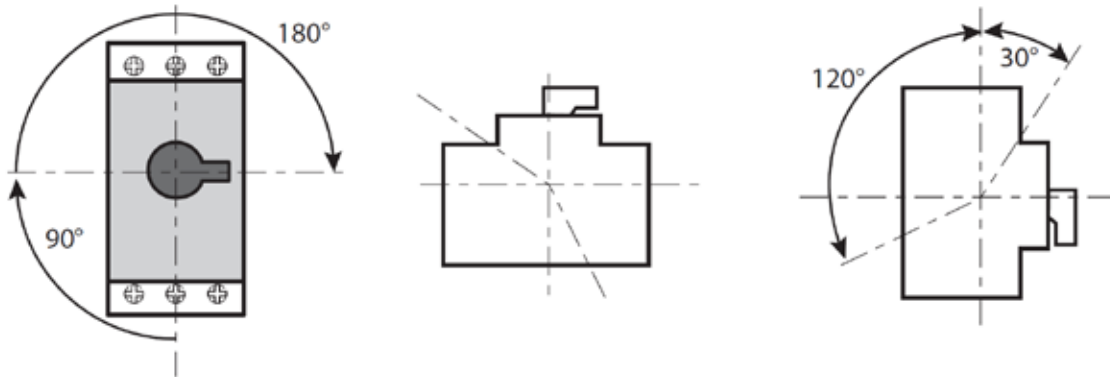
Description	Catalog Number	Weight	Description	Catalog Number	Weight	Description	Catalog Number	Weight
Motor Controllers	KTA5-32A-0.16A	246 g	Undervoltage Trip	KT5-AA-24V	110 g	Blank space cover	KT5-WSN	4 g
	KTA5-32A-0.25A			KT5-AA-110V		Screw adapter	KT5-N45	2 g
	KTA5-32A-0.4A			KT5-AA-240V		Lockable handle	KT5-KN	6 g
	KTA5-32A-0.63A			KT5-AA-415V		Enclosure	KT5-ENY65	428 g
	KTA5-32A-1.0A			KT5-UA-24V		KT5-ENN65	435 g	
	KTA5-32A-1.6A		KT5-UA-28V	Door mounting kit	KT5-DMY65	258 g		
	KTA5-32A-2.5A	KT5-UA-48V	KT5-DMN65	268 g				
	KTA5-32A-4.0A	KT5-UA-60V	Door coupling handle	KT5-HCRY	78 g			
	KTA5-32A-6.3A	KT5-UA-120V	KT5-HTC	80 g				
	KTA5-32A-10A	KT5-UA-208V	Extension shaft	KT5-HT	28 g			
	KTA5-32A-12A	KT5-UA-240V	KT5-HTM	50 g				
	KTA5-32A-16A	KT5-UA-400V	KT5-DNC	17 g				
	KTA5-32A-20A	KT5-UA-480V	Coupler	KT5-DNUC	4 g			
	KTA5-32A-25A	KT5-UA-575V	Shaft alignment ring	KT5-SAR	22 g			
KTA5-32A-32A	KT5-32-DB-45-2	37 g	Extension shaft support	KT5-SHS	50 g			
Auxiliary contacts - internal mount	KT5-PE1-11	20 g	Bus Bar connections	KT5-32-DB-45-3	58 g	Connecting module	KT5-32-PEC23	23 g
	KT5-PE1-10	16 g		KT5-32-DB-45-4	81 g			
	KT5-PE1-01	16 g		KT5-32-DB-45-5	103 g			
	KT5-PE1-20	20 g		KT5-32-DB-45-2	39 g			
Auxiliary contacts - side mount	KT5-PA1-11	80 g		KT5-32-DB-54-2	39 g			
	KT5-PA1-20			KT5-32-DB-54-3	60 g			
	KT5-PA1-02			KT5-32-DB-54-4	90 g			
	KT5-PA1-20L			KT5-32-DB-54-5	113 g			
Trip contacts - side mount	KT5-PAF1-S11	80 g		KT5-32-DB-63-2	43 g			
	KT5-PAF1-S20			KT5-32-DB-63-3	70 g			
	KT5-PAF1-S02			41 g	KT5-32-DB-63-4	94 g		
				KT5-32-DB-63-5	123 g			
				KT5-32-A3N	41 g			
				KT5-32-A3NH	51 g			

**F**  
KT5 Manual Motor Controllers

#### KT5 Wiring Example



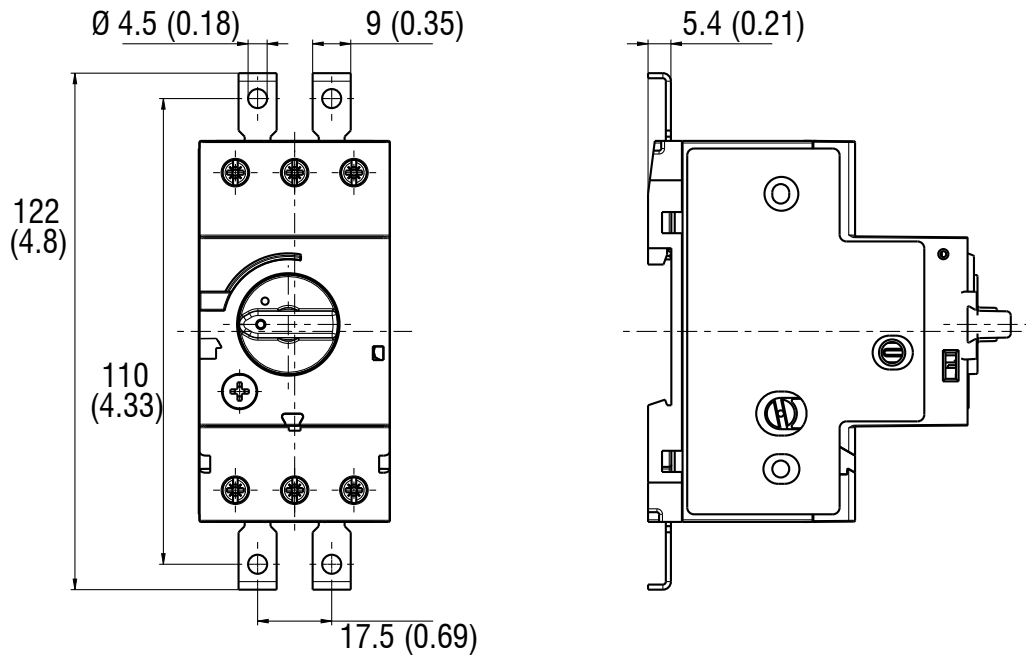
#### KT5 Mounting Position



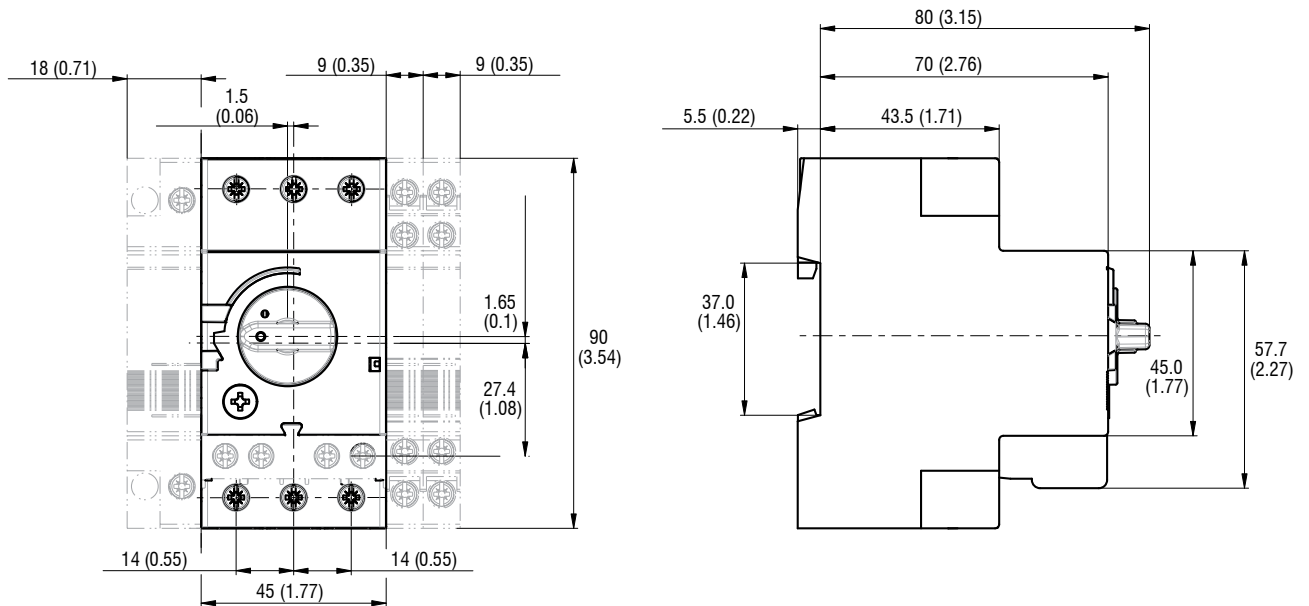
ⓘ No backup fuse required.

**KTA5-32A-0.16A...16A Manual Motor Controller**

Dimensions are in millimeters (inches). Dimensions not intended for manufacturing purposes.

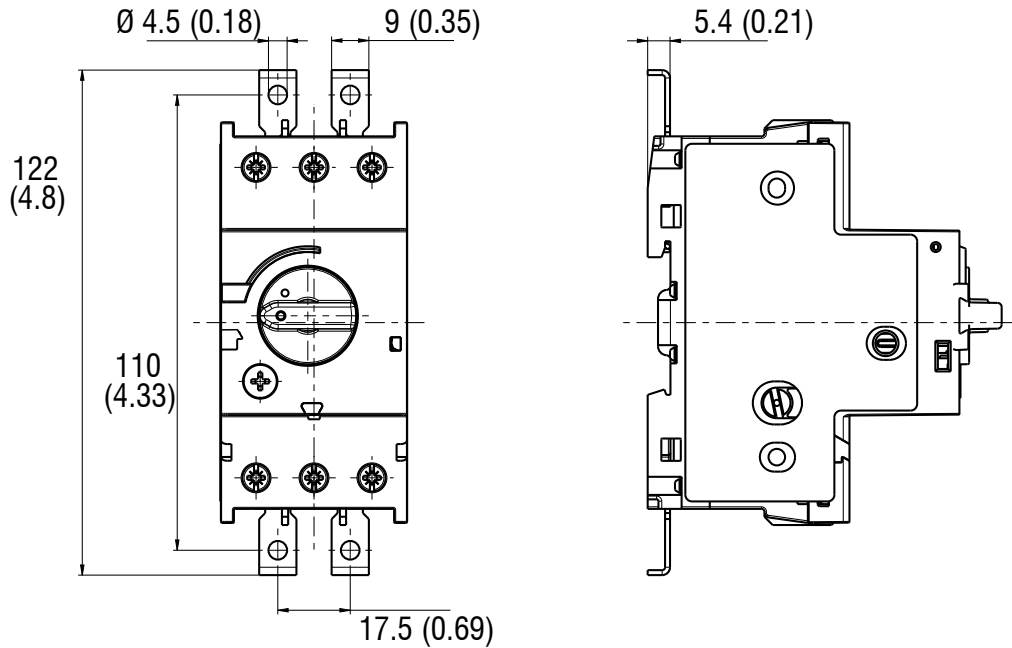


**KTA5-32A-0.16A...16A Manual Motor Controller (with Accessories)**

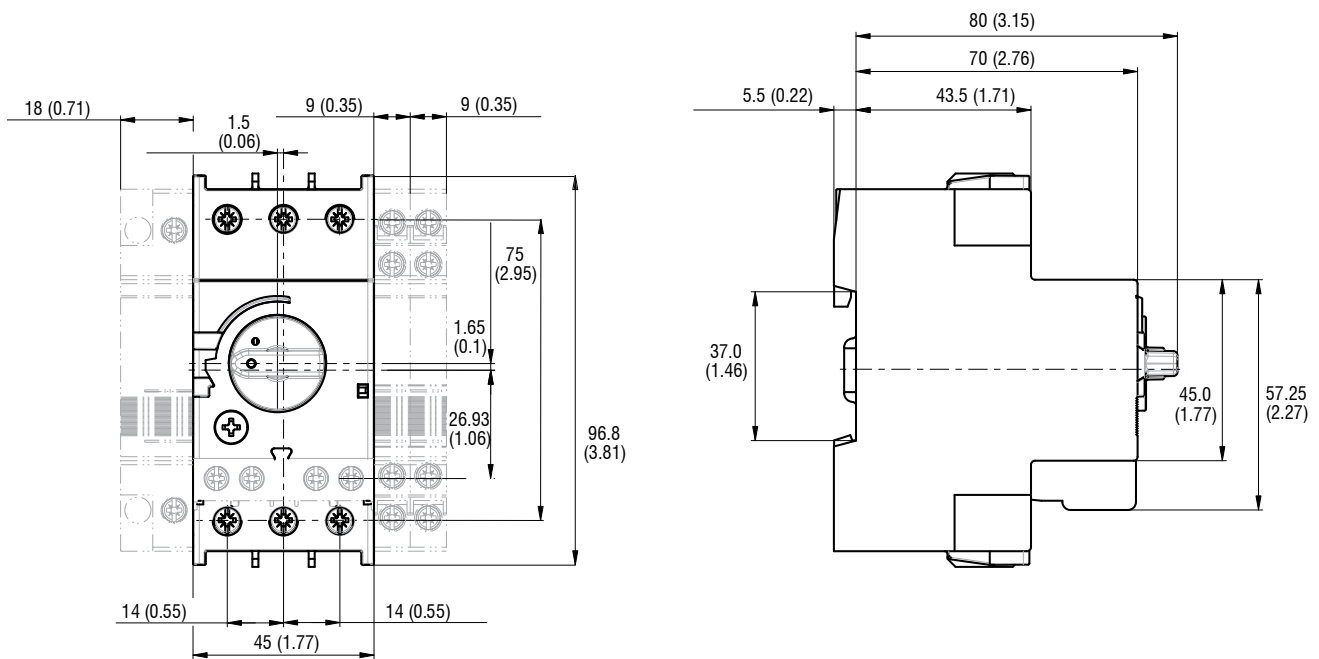


**KTA5-32A-20A...32A Manual Motor Controller**

Dimensions are in millimeters (inches). Dimensions not intended for manufacturing purposes.



**KTA5-32A-20A...32A Manual Motor Controller (with Accessories)**



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KT5 Manual Motor Controllers

