

#### IEC Performance Data

		Catalog Number KTA7-25S...32S														
		0.16A	0.25A	0.4A	0.63A	1A	1.6A	2.5A	4A	6.3A	10A	16A	20A	25A	29A	32A
<b>Rated Operational Current, <math>I_e</math></b>	[A]	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10	16	20	25	29	32
<b>Magnetic Release Current</b>	[A]	2.1	3.3	5.2	8.2	13	21	33	52	82	130	208	260	325	406	448
<b>Switching of Standard Three-Phase Motors</b>																
AC-2, AC-3																
230/240V	[kW]	~	~	0.06	0.09	0.18	0.25	0.37	0.75	1.5	2.2	4.0	5.5	5.5	7.5	7.5
400/415V	[kW]	0.02	0.04	0.09	0.18	0.25	0.55	0.75	1.5	2.2	4.0	7.5	10	11	13	15
500V	[kW]	0.06	0.09	0.12	0.18	0.37	0.75	1.1	2.2	3.0	6.3	10	11	15	18.5	20
690V	[kW]	0.06	0.09	0.18	0.25	0.55	1.1	1.8	3.0	4.0	7.5	13	17	22	25	25
<b>Back-up Fuses</b>																
gG, gL, only if $I_{cc} \geq I_{cu}$																
230/240V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	100	100	125	125
400/415V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	80	100	100	125	125
440/460V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	63	63	80	80	100	100
500V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	80	80	80	80	100	100
690V	[A]	⓪	⓪	⓪	⓪	⓪	16	20	35	50	50	63	63	63	80	80
<b>Ultimate Short-Circuit Breaking Capacity</b>																
$I_{cu}$																
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100	100	65	65	50	50
400/415V	[kA]	100	100	100	100	100	100	100	100	100	100	65	50	15	15	15
440/460V	[kA]	100	100	100	100	100	100	100	100	100	50	10	6	6	6	6
500V	[kA]	100	100	100	100	100	100	100	100	100	50	10	6	6	6	6
690V	[kA]	100	100	100	100	100	8	6	6	4	4	3	3	3	3	3
<b>Rated Service Short-Circuit Breaking Capacity</b>																
$I_{cs}$																
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100	100	50	50	25	25
400/415V	[kA]	100	100	100	100	100	100	100	100	100	100	50	15	15	15	15
440/460V	[kA]	100	100	100	100	100	100	100	100	100	50	6	6	6	6	6
500V	[kA]	100	100	100	100	100	100	100	100	100	50	6	6	6	6	6
690V	[kA]	100	100	100	100	100	8	6	6	4	4	3	3	3	3	3

⓪ No backup fuse required.

### IEC Performance Data

		Catalog Number KTA7-25H...32H								Catalog Number KTA7-45H...						
		2.5A	4A	6.3A	10A	16A	20A	25A	29A	32A	10A	16A	20A	25A	32A	45A
<b>Rated Operational Current, <math>I_e</math></b>	[A]	2.5	4	6.3	10	16	20	25	29	32	10	16	20	25	32	45
<b>Magnetic Release Current</b>	[A]	33	52	82	130	208	260	325	406	448	130	208	260	325	416	585
<b>Switching of Standard Three-Phase Motors</b>																
AC-2, AC-3																
230/240V	[kW]	0.37	0.75	1.5	2.2	4.0	5.5	5.5	7.5	7.5	2.2	4.0	5.5	6.3	7.5	13
400/415V	[kW]	0.75	1.5	2.2	4.0	7.5	10	11	13	15	4.0	7.5	10	11	15	22
500V	[kW]	1.1	2.2	3.0	6.3	10	11	15	18.5	20	6.3	10	11	15	20	30
690V	[kW]	1.8	3.0	4.0	7.5	13	17	22	25	25	7.5	13	17	22	30	40
<b>Back-up Fuses</b>																
gG, gL, only if $I_{cc} \geq I_{cu}$																
230/240V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪
400/415V	[A]	⓪	⓪	⓪	⓪	⓪	100	100	125	125	80	100	100	100	125	125
440/460V	[A]	⓪	⓪	⓪	⓪	80	100	100	125	125	80	100	100	100	125	125
500V	[A]	⓪	⓪	⓪	⓪	80	80	80	100	100	80	100	100	100	125	125
690V	[A]	20	35	50	50	63	63	63	80	80	63	80	80	80	100	100
<b>Ultimate Short-Circuit Breaking Capacity</b>																
$I_{cu}$																
230/240V	[kA]	100	100	100	100	100	100	100	65	65	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	65	50	50	100	100	100	65	65	65
440/460V	[kA]	100	100	100	50	50	50	50	25	25	65	65	65	65	65	50
500V	[kA]	100	100	100	50	50	50	50	25	25	50	50	50	50	50	50
690V	[kA]	10	10	6	6	6	6	6	6	6	10	10	10	10	10	10
<b>Rated Service Short-Circuit Breaking Capacity</b>																
$I_{cs}$																
230/240V	[kA]	100	100	100	100	100	100	100	50	50	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	50	25	25	25	25	50	50	50	50	50	50
440/460V	[kA]	100	100	100	50	50	25	25	20	20	50	50	50	50	50	50
500V	[kA]	100	100	100	50	50	25	25	20	20	50	50	50	50	50	50
690V	[kA]	10	10	6	6	4	4	4	4	4	10	10	10	10	6	6

F  
KT7 Motor Circuit Controllers

⓪ No backup fuse required.

### IEC Performance Data

		Catalog Number KTB7-25S...						
		0.16A	0.25A	0.4A	0.63A	1A	1.6A	2.5A
<b>Rated Operational Current, <math>I_e</math></b>	[A]	0.16	0.25	0.4	0.63	1	1.6	2.5
<b>Magnetic Release Current</b>	[A]	2.1	3.3	5.2	8.2	13	21	32
<b>Switching of Standard Three-Phase Motors</b>								
AC-2, AC-3								
230/240V	[kW]	~	~	0.06	0.09	0.18	0.25	0.37
400/415V	[kW]	0.02	0.04	0.09	0.18	0.25	0.55	0.75
500V	[kW]	0.06	0.09	0.12	0.18	0.37	0.75	1.1
690V	[kW]	0.06	0.09	0.18	0.25	0.55	1.1	1.8
<b>Back-up Fuses</b>								
gG, gL, only if $I_{cc} \geq I_{cu}$								
230/240V	[A]	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ
400/415V	[A]	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ
440/460V	[A]	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ
500V	[A]	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ
690V	[A]	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	16	20
<b>Ultimate Short-Circuit Breaking Capacity</b>								
$I_{cu}$								
230/240V	[kA]	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100
440/460V	[kA]	100	100	100	100	100	100	100
500V	[kA]	100	100	100	100	100	100	100
690V	[kA]	100	100	100	100	100	10	6
<b>Rated Service Short-Circuit Breaking Capacity</b>								
$I_{cs}$								
230/240V	[kA]	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100
440/460V	[kA]	100	100	100	100	100	100	100
500V	[kA]	100	100	100	100	100	100	100
690V	[kA]	100	100	100	100	100	8	6

ⓘ No backup fuse required.

### IEC Performance Data

		Catalog Number KTB7-25H...32H							Catalog No. KTB7-45H...		
		2.5A	4A	6.3A	10A	16A	25A	32A	25A	32A	45A
<b>Rated Operational Current, <math>I_e</math></b>	[A]	2.5	4	6.3	10	16	25	32	25	32	45
<b>Magnetic Release Current</b>	[A]	32	52	82	130	208	325	448	325	416	585
<b>Switching of Standard Three-Phase Motors</b>											
AC-2, AC-3											
230/240V	[kW]	0.37	0.75	1.5	2.2	4.0	5.5	7.5	6.3	7.5	13
400/415V	[kW]	0.75	1.5	2.2	4.0	7.5	11	15	11	15	22
500V	[kW]	1.1	2.2	3.0	6.3	10	15	20	15	20	30
690V	[kW]	1.8	3.0	4.0	7.5	13	22	25	22	25	40
<b>Back-up Fuses</b>											
gG, gL, only if $I_{cc} \geq I_{cu}$											
230/240V	[A]	①	①	①	①	①	①	①	100	125	125
400/415V	[A]	①	①	①	①	①	100	125	100	125	125
440/460V	[A]	①	①	①	①	80	100	125	100	125	125
500V	[A]	①	①	①	①	80	80	100	100	125	125
690V	[A]	20	35	50	50	63	63	80	80	100	100
<b>Ultimate Short-Circuit Breaking Capacity</b>											
$I_{cu}$											
230/240V	[kA]	100	100	100	100	100	100	65	100	100	100
400/415V	[kA]	100	100	100	100	100	65	50	100	65	65
440/460V	[kA]	100	100	100	50	50	50	25	65	65	50
500V	[kA]	100	100	100	50	50	25	25	50	50	50
690V	[kA]	10	6	10	6	6	6	6	10	10	10
<b>Rated Service Short-Circuit Breaking Capacity</b>											
$I_{cs}$											
230/240V	[kA]	100	100	100	100	100	100	50	100	100	100
400/415V	[kA]	100	100	100	100	50	25	25	50	50	50
440/460V	[kA]	100	100	100	50	50	25	20	50	50	50
500V	[kA]	100	100	100	50	50	25	20	50	50	50
690V	[kA]	10	6	10	6	4	4	4	10	6	6

① No backup fuse required.

F  
KT7 Motor Circuit Controllers

### IEC Performance Data

		Catalog Number KTC7-25S...										
		0.16A	0.25A	0.4A	0.63A	1A	1.6A	2.5A	4A	6.3A	10A	16A
<b>Rated Operational Current, <math>I_e</math></b>	[A]	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10	16
<b>Magnetic Release Current</b>	[A]	3.2	5.2	8.2	13	21	32	52	82	130	208	260
<b>Switching of Standard Three-Phase Motors</b>												
AC-2, AC-3												
230/240V	[kW]	~	~	0.06	0.09	0.18	0.25	0.37	0.75	1.5	2.2	4.0
400/415V	[kW]	0.02	0.04	0.09	0.18	0.25	0.55	0.75	1.5	2.2	4.0	7.5
500V	[kW]	0.06	0.09	0.12	0.18	0.37	0.75	1.1	2.2	3.0	6.3	10
690V	[kW]	0.06	0.09	0.18	0.25	0.55	1.1	1.8	3.0	4.0	7.5	13
<b>Back-up Fuses</b>												
gG, gL, only if $I_{cc} \geq I_{cu}$												
230/240V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪
400/415V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	80
440/460V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	63	80
500V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	80	80
690V	[A]	⓪	⓪	⓪	⓪	⓪	16	20	35	50	50	63
<b>Ultimate Short-Circuit Breaking Capacity</b>												
$I_{cu}$												
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	100	100	100	50
440/460V	[kA]	100	100	100	100	100	100	100	100	100	10	10
500V	[kA]	100	100	100	100	100	100	100	100	100	10	10
690V	[kA]	100	100	100	100	100	8	6	6	4	4	3
<b>Rated Service Short-Circuit Breaking Capacity</b>												
$I_{cs}$												
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	100	100	100	15
440/460V	[kA]	100	100	100	100	100	100	100	100	100	10	6
500V	[kA]	100	100	100	100	100	100	100	100	100	10	6
690V	[kA]	100	100	100	100	100	8	6	6	4	4	3

⓪ No backup fuse required.

### IEC Performance Data

		Catalog No. KTC7-25H...		Catalog No. KTC7-45H...	
		16A	20A	25A	32A
<b>Rated Operational Current, <math>I_e</math></b>	[A]	16	20	25	32
<b>Magnetic Release Current</b>	[A]	260	325	416	585
<b>Switching of Standard Three-Phase Motors</b>					
AC-2, AC-3					
230/240V	[kW]	4.0	5.5	6.3	7.5
400/415V	[kW]	7.5	10	11	15
500V	[kW]	10	11	15	20
690V	[kW]	13	17	22	30
<b>Back-up Fuses</b>					
gG, gL, only if $I_{cc} \geq I_{cu}$					
230/240V	[A]	❶	❶	❶	❶
400/415V	[A]	80	100	100	125
440/460V	[A]	80	100	100	125
500V	[A]	80	80	100	125
690V	[A]	63	63	80	100
<b>Ultimate Short-Circuit Breaking Capacity</b>					
$I_{cu}$					
230/240V	[kA]	100	100	100	100
400/415V	[kA]	100	65	65	65
440/460V	[kA]	50	25	65	65
500V	[kA]	50	25	50	50
690V	[kA]	6	6	10	10
<b>Rated Service Short-Circuit Breaking Capacity</b>					
$I_{cs}$					
230/240V	[kA]	100	100	100	100
400/415V	[kA]	25	25	50	50
440/460V	[kA]	25	25	50	50
500V	[kA]	25	25	50	50
690V	[kA]	4	4	6	6

❶ No backup fuse required.

### IEC Performance Data

		Catalog Number KTV7-25H...									
		1.6A	2.5A	4A	6.3A	10A	16A	20A	25A	29A	32A
<b>Rated Operational Current, <math>I_e</math></b>	[A]	1.6	2.5	4.0	6.3	10	16	20	25	29	32
<b>Magnetic Release Current</b>	[A]	82	82	82	82	130	208	260	325	402	448
<b>Switching of Standard Three-Phase Motors</b>											
AC-3											
230/240V	[kW]	0.25	0.37	0.75	1.5	2.2	4	5.5	5.5	7.5	7.5
400/415V	[kW]	0.55	0.75	1.5	2.2	4	7.5	10	11	13	15
500V	[kW]	0.75	1.1	2.2	3	6.3	10	11	15	18.5	20
690V	[kW]	~	~	~	~	~	~	~	~	~	~
<b>Back-up Fuses</b>											
gG, gL, only if $I_{cc} \geq I_{cu}$											
230/240V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪
400/415V	[A]	⓪	⓪	⓪	⓪	⓪	⓪	100	100	125	125
440/460V	[A]	⓪	⓪	⓪	⓪	⓪	80	100	100	125	125
500V	[A]	⓪	⓪	⓪	⓪	⓪	80	80	80	100	100
690V	[A]	~	~	~	~	~	~	~	~	~	~
<b>Ultimate Short-Circuit Breaking Capacity</b>											
$I_{cu}$											
230/240V	[kA]	65	65	65	65	65	65	65	65	65	65
400/415V	[kA]	65	65	65	65	65	65	65	65	50	50
440/460V	[kA]	65	65	65	65	65	50	50	50	25	25
500V	[kA]	65	65	65	65	65	50	50	50	25	25
690V	[kA]	~	~	~	~	~	~	~	~	~	~
<b>Rated Service Short-Circuit Breaking Capacity</b>											
$I_{cs}$											
230/240V	[kA]	65	65	65	65	65	65	65	65	50	50
400/415V	[kA]	65	65	65	65	65	50	25	25	25	25
440/460V	[kA]	65	65	65	65	65	50	25	25	20	20
500V	[kA]	65	65	65	65	65	50	25	25	20	20
690V	[kA]	~	~	~	~	~	~	~	~	~	~

KT7 Motor Circuit Controllers

⓪ No backup fuse required.

## General Data

	KT7-25S/32S	KT7-25H/32H	KT7-45H
<b>Rated Insulation Voltage</b> IEC, SEV, VDE 0660 UL, CSA	690V 600V	690V 600V	690V 600V
<b>Rated Impulse Withstand Voltage</b> (main & auxiliary circuits) $U_{imp}$ /pollution degree	6kV/3	6kV/3	6kV/3
<b>Rated Frequency</b>	50/60 Hz	50/60 Hz	50/60 Hz
<b>Utilization Category</b> • IEC 60949-2 (Motor Protector) • IEC 60949-4-1 (Motor Starter)	A AC-3	A AC-3	A AC-3
<b>Life Span</b> Mechanical Electrical ( $I_e$ max.)	[operations] 100,000 100,000	100,000 100,000	30,000 30,000
<b>Switching Frequency</b> [operations]		max. 25/h. (motor starts)	
<b>Ambient Temperature</b> Storage Operation		-40° C... +80° C -25° C... +60° C	
<b>Resistance to Climatic Change</b>		IEC 68-2	
<b>Moisture / Heat Resistance</b> (60068-2-3)		40°C, 93% relative humidity, 56 days	
<b>Moisture / Change Resistance</b> (60068-2-3)		23°C, 83% relative humidity / 40°C, 92%, 56 cycles	
<b>Dry Heat</b> (60086-2-2)		100°C Relative Humidity <50% 7 Days	
<b>Site Altitude</b>		to 2,000 m N.N.	
<b>Protection Class</b>		KT 7-25/32 : IP2X from all directions KT 7-45: IP2X from front with front (upper) terminal wired	
<b>Resistance to Shock</b> (60068-2-2)		30 G, 11 ms All Axes	
<b>Resistance to Vibration</b> (60068-2-6)		5G	
<b>Rated Thermal Current <math>I_{th}</math></b> IEC, SEV, VDE 0660 Up to 60° C ambient temperature	[A] 0.1...32	1.6...32	6.3...45
<b>Dependence on Temperature</b>		40°C - 60°C No Reduction 70°C 15% Reduction of the upper rated current $I_e$	
<b>Overload Protection</b> Characteristics Ambient temperature Compensation Phase-failure protection Trip Class		IEC60947-4-1 Motor protection (except KTB7) -20° C... +60° C yes, differential release 10 (Except KTB7) fixed setting	
<b>Magnetic Release</b> Response Current (+/- 20%)		13...14 x $I_e$ max. (for KTA7/KTB7) 16...21 x $I_e$ max. (for KTC7) $I_e$ max. = maximum values of setting ranges Fixed magnetic setting for KTV7, see ratings	
<b>Total Power Loss <math>P_v</math></b> Motor protector at rated load Operating temperature	[W] 6...11.5	6...11.6	9...16
<b>Application Conditions (KTV7)</b>		PWM frequency ≤ 4kHz VFD output frequency ≤ 400 Hz	

## Weights

Description	Catalog Number	Weight	Description	Catalog Number	Weight
Motor Protectors	KTA7-25S/32S	317 g	Lockable Twist Knob	KT7-KN1	5 g
	KTA7-25H/32H	373 g		KT7-KRY1	
	KTA7-45H	782 g	Locking Tag	KT7-DS	30 g
	KTB7-25S/32S	315 g		KT7-HTN	
	KTB7-25H/32H	365 g	Door Coupling Handle	KT7-HTRY	123 g
	KTB7-45H	782 g		KT7-HT	
	KTC7-25S/32S	315 g	Extension Shaft	KT7-HT	46 g
	KTC7-25H/32H	365 g	Legend Plate	KT7-HTFC	4 g
	KTC7-45H	782 g	Feeder Terminal	KT7-32-A3E	172 g
	KT7-PE1	10 g		KT7-45-A3E	
Auxiliary Contacts	KT7-PA1	15 g	Commoning Links	KT7-32-DB-45-2	47 g
	KT7-PEF1	15 g		KT7-32-DB-45-3	80 g
	KT7-PAF1	15 g		KT7-32-DB-45-4	104 g
Undervoltage Trip	KT7-UA-*	108 g		KT7-32-DB-45-5	132 g
	KT7-AA-*	110 g		KT7-32-DB-54-2	52 g
	KT7-UA-L20-*	116 g	KT7-32-DB-54-3	86 g	
Anti-Tamper Cover	KT7-25-CA	2 g	KT7-32-DB-54-4	118 g	
			KT7-32-DB-54-5	154 g	



### General Data



KT\_7-25S/32S



KT\_7-25H/32H



KT\_7-45H

#### Features and Approvals

Max. Current I <sub>e</sub>	32 A	32 A	45 A
Current Rating	0.1...32 A	1.6...32 A	6.3...45 A
Short Circuit Protection	✓	✓	✓
Standard magnetic Trip	✓	✓	✓
High Magnetic Trip	✓	✓	✓
Magnetic Only Trip (MCP)	✓	✓	✓
Overload Protection	✓	✓	✓
Trip Class	✓	✓	✓
Application at output of VFD (multi-motor)		✓ (KTV7)	✓

#### Standards Compliance:

CSA22.2, No. 14	✓	✓	✓
UL508 (Group Installation)	✓ (see ratings)	✓ (see ratings)	✓ (see ratings)
UL508 Manual, Self-protected (Type E)	✓ (see ratings)	✓ (see ratings)	✓ (see ratings)
UL508 (Overload Protection)	✓	✓	✓
IEC60947-1,-2	✓	✓	✓
IEC60947-4-1	✓	✓	✓
CE	✓	✓	✓
ATEX (IEC60079-14)	✓ (up to 25 A)	✓ (up to 25 A except KTV7)	✓
CCC	✓ (up to 25 A)	✓ (up to 25 A except KTV7)	✓

#### Accessories

External Rotary Operator	✓	✓	✓
Auxiliary Contacts	✓	✓	✓
Trip Indicator Contacts	✓	✓	✓

KT\_7-25S/32S

KT\_7-25H/32H

KT\_7-45H

#### Power Terminals

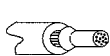
Terminal Type



Screwdriver

Pozidrive No. 2/Blade No. 3

Pozidrive No. 2/Blade No. 3



1 conductor

[mm<sup>2</sup>]/[AWG]

1...6 / No. 16...10

2.5...16 / No. 14...4



2 conductor

[mm<sup>2</sup>]/[AWG]

1...4 / No. 16...10

2.5...10 / No. 14...4



1 conductor

[mm<sup>2</sup>]/[AWG]

1.5...6 / No. 16...8

2.5...16 / No. 14...4

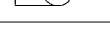


2 conductor

[mm<sup>2</sup>]/[AWG]

1.5...6 / No. 16...8

2.5...10 / No. 14...4

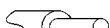


1 conductor

[mm<sup>2</sup>]/[AWG]

1...6 / No. 16...10

2.5...10 / No. 14...8



2 conductor

[mm<sup>2</sup>]/[AWG]

1...6 / No. 16...10

2.5...10 / No. 14...8



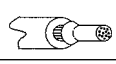
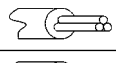

Tightening torque

[Nm]/[lb-in.]

2...2.5 / 18...22

3...3.5 / 27...30

**Accessories for KT7 Motor Circuit Controllers**

	Auxiliary Contact Blocks for Front Mounting Catalog Number KT7-PE1, KT7-PEF1			Auxiliary Contact Blocks for Right-Side Mounting Catalog Number KT7-PA1, KT7-PAF1				
<b>IEC Rated Thermal Current <math>I_{th}</math></b>								
Rated Voltage at 40°C ambient temperature	[V]		300 max.			600 max.		
at 60°C ambient temperature	[A]		5			10		
	[A]		4			6		
<b>UL/CSA Rated Thermal Current <math>I_{th}</math></b>								
Rated Voltage	[V]		300 max.			600 max.		
Continuous Thermal Current According to NEMA ①								
	AC	Class	Amps		Class	Amps		
		B 300	5		B 600	5		
	DC	Q 300	2.5		Q 600	2.5		
<b>Back-Up Fuses gG, gL</b>	[A]		10			10		
<b>Rated Thermal Current <math>I_{th}</math></b>								
AC-15	[V]	24	120	240	24	120	240	415
	[A]	4	3	1.5	6	5	3	2
	[V]	24	120	240	24	120	240	415
DC-13	[A]	2	0.5	0.25	2	0.5	0.25	0.15
								690
								0.7
<b>Terminal Parts</b>								
Terminal Type								
Screwdriver			Pozidrive No. 2/Blade No. 3			Pozidrive No. 2/Blade No. 3		
	1 conductor	[mm²]/[AWG]	0.5...1.5 / No. 18...14			0.5...2.5 / No. 18...14		
	2 conductor	[mm²]/[AWG]	0.75...1.5 / No. 18...14			0.75...2.5 / No. 18...14		
	1 conductor	[mm²]/[AWG]	0.75...1.5 / No. 18...14			0.75...2.5 / No. 18...14		
	2 conductor	[mm²]/[AWG]	0.75...1.5 / No. 18...14			0.75...2.5 / No. 18...14		
	1 conductor	[mm²]/[AWG]	0.75...1.5 / No. 18...14			0.75...2.5 / No. 18...14		
	2 conductor	[mm²]/[AWG]	0.75...1.5 / No. 18...14			0.75...2.5 / No. 18...14		
Tightening torque		[Nm]/[lb-in.]	1.2...1.5 / 10.6...13			1.2...1.5 / 10.6...13		
<b>Lockable Twist Knob (KT7-KN1 &amp; KT7-KRY1)</b>								
Tightening torque		[Nm]/[lb-in.]				1 / 8.8 (T10)		
<b>Mounting Depth – Door Coupling Handles (All KT7-HT..)</b>								
Mounting Depth when using motor circuit controller:								
	KT7-25S/32S	[mm]/[in.]				105.5 mm ± 5 mm (4.15" ± 3/16")		
	KT7-25H/32H	[mm]/[in.]				114.5 mm ± 5 mm (4.5" ± 3/16")		
	KT7-45H	[mm]/[in.]				137.1 mm ± 5 mm (5.4" ± 3/16")		
<b>Mounting Depth – Extension Shaft (KT7-HT)</b>								
Mounting Depth range when using motor circuit controller:								
	KT7-25S/32S	[mm]/[in.]				117...338 mm (4.6"...13.3")		
	KT7-25H/32H	[mm]/[in.]				126...347 mm (5.0"...13.7")		
	KT7-45H	[mm]/[in.]				149...369 mm (5.9"...14.5")		

① See page A7 for details of NEMA Contact Class.

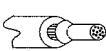
#### KT7 Accessories

		Undervoltage Trip for Left-Side Mounting Cat. Number KT7-UA-*	Undervoltage Trip with 2 Auxiliary Contacts for Left-Side Mounting Cat. Number KT7-UA-L20-*	Shunt Trip for Left-Side Mounting Cat. Number KT7-AA-*
<b>Actuating Voltage</b>	Pull-in	$0.85 \dots 1.1 \times U_s$	$0.85 \dots 1.1 \times U_s$	$0.7 \dots 1.1 \times U_s$
	Drop-out	$0.7 \dots 0.35 \times U_s$	$0.7 \dots 0.35 \times U_s$	
<b>Rated Control Voltage</b>	minimum	21V 50 Hz, 24V 60 Hz	21V 50 Hz, 24V 60 Hz	21V 50 Hz, 24V 60 Hz
	maximum	600V 50 Hz	600V 50 Hz	600V 50 Hz
<b>On-Time</b>		100%	100%	AC - 100% DC - Max. 5 sec.
<b>Coil Rating</b>	Pull-in	8.5 VA, 8 W	8.5 VA, 8 W	8.5 VA, 8 W
	Hold	4 VA, 2 W	4 VA, 2 W	4 VA, 2 W

#### Terminal Parts

Terminal Type

Screwdriver



1 conductor

[mm<sup>2</sup>]/[AWG]

2 conductor

[mm<sup>2</sup>]/[AWG]



1 conductor

[mm<sup>2</sup>]/[AWG]

2 conductor

[mm<sup>2</sup>]/[AWG]



1 conductor

[mm<sup>2</sup>]/[AWG]

2 conductor

[mm<sup>2</sup>]/[AWG]

Tightening torque

[Nm]/[lb-in.]



Pozidrive No. 2/BLADE No. 3

0.5...2.5 / No. 18...14

0.75...2.5 / No. 18...14

0.75...2.5 / No. 18...14

0.75...2.5 / No. 18...14

0.75...2.5 / No. 18...14

0.75...2.5 / No. 18...14

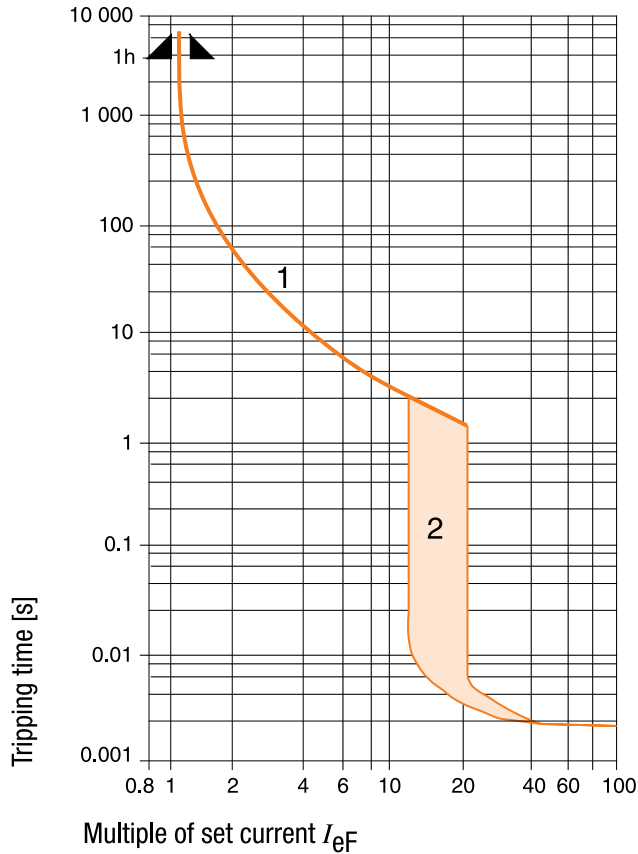
1.2...1.5 / 10.6...13.3

			Feeder Block KT7-25-A2E	Feeder Terminal KT7-32-A3E	Compact Busbar KT7-32-DB...	Feeder Terminal KT7-45-A3E	Compact Busbar KT7-45-DB...
<b>Rated Thermal Current <math>I_{th}</math></b> at 60° C ambient temperature	[V]		600	600	600	600	600
	[A]		64	64	64	120	120
	1 conductor	[mm <sup>2</sup> ]/[AWG]	4...25/No. 10...4	2.5...25/No. 14...4	~	4...50/12...1/0	~
	1 conductor	[mm <sup>2</sup> ]/[AWG]	4...25/No. 10...4	2.5...25/No. 14...4	~	2.5...50/12...1/0	~
	1 conductor	[mm <sup>2</sup> ]/[AWG]	2.5...25/No. 14...4	2.5...25/No. 14...4	~	2.5...50/12...1/0	~
	1 conductor	[mm <sup>2</sup> ]/[AWG]	14...4	14...4	~	5...6/45...54	~
Tightening torque		[Nm]/[lb-in.]	3...3.5 / 27...31	3...3.5 / 27...31	~	5...6/45...54	~

#### KF7 Fuse Holder Accessories

			KF7 Fuse Holder	
<b>Rated Thermal Current <math>I_{th}</math></b> at 60° C ambient temperature	[V]		600	
	[A]		30	
<b>Short Circuit</b>				
Withstand	[KA]		200	
$U_{imp}$	[KV]		6	
<b>Terminal Parts</b>				
Terminal Type				
Screwdriver			Pozidrive No. 2/ Blade No. 3	
	1 conductor	[mm <sup>2</sup> ]/[AWG]	1...4 / No. 16...10	
	1 conductor	[mm <sup>2</sup> ]/[AWG]	1...4 / No. 16...10	
Tightening torque		[Nm]/[lb-in.]	1.7 / 15	

**Time-Current Characteristic**



**KTA7 Motor Protection (for KTV7, see ratings)**

**1. Thermal Release Trip Current**

The adjustable current-dependent delayed bimetal release protects motors against overload. The curve shows the mean operating current at an ambient temperature of 20°C starting from the cold state. Careful testing and setting ensures effective motor protection even in the case of single-phasing. The overload characteristic is also valid for transformer protection.

**2. Magnetic Release Trip Current**

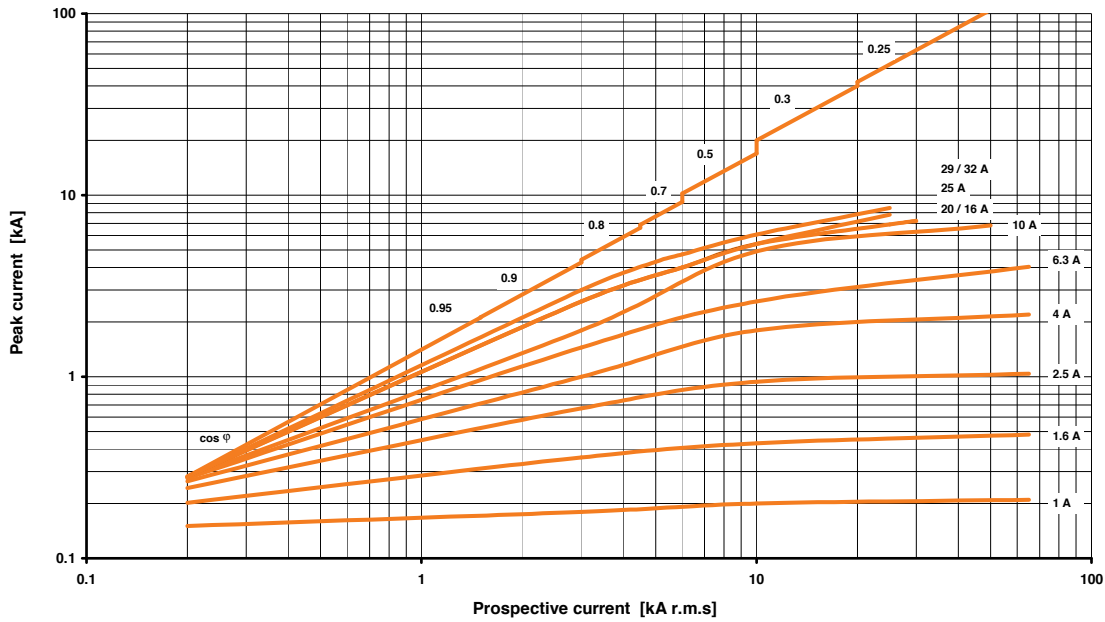
The instantaneous magnetic trip has a fixed operating current setting. This corresponds to 13 times the maximum value of setting range (high inrush protection -20 x  $I_n$  maximum). At a lower overload setting the magnetic trip is correspondingly higher.

**Current Setting  $I_{ef}$**

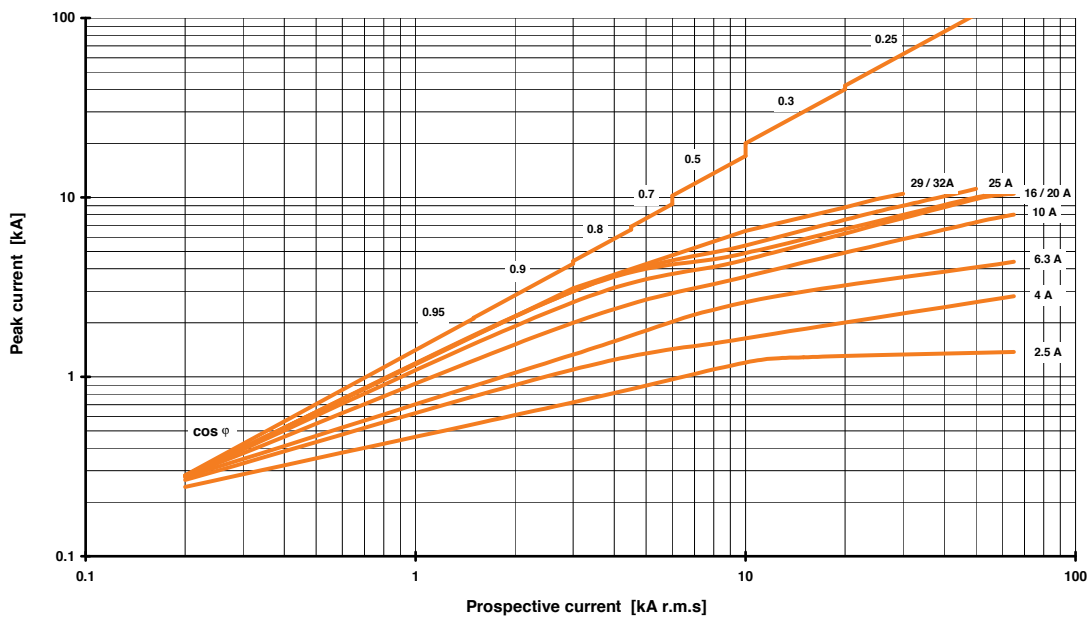
The overload trip corresponds to a thermal overload relay in a motor starter conforming to IEC 947-4-1. If a different value is prescribed (e.g., reduced  $I_n$  for cooling medium having a temperature higher than 40°C or a place of installation higher than 2000m above sea level), the setting current is equal to the reduced rated current  $I_n$  of the motor.

**Cut-off Current ❶**

**KT A/B/C7-25/32S**  
 Max. Cut-Off-Current,  $U_e = 500V$



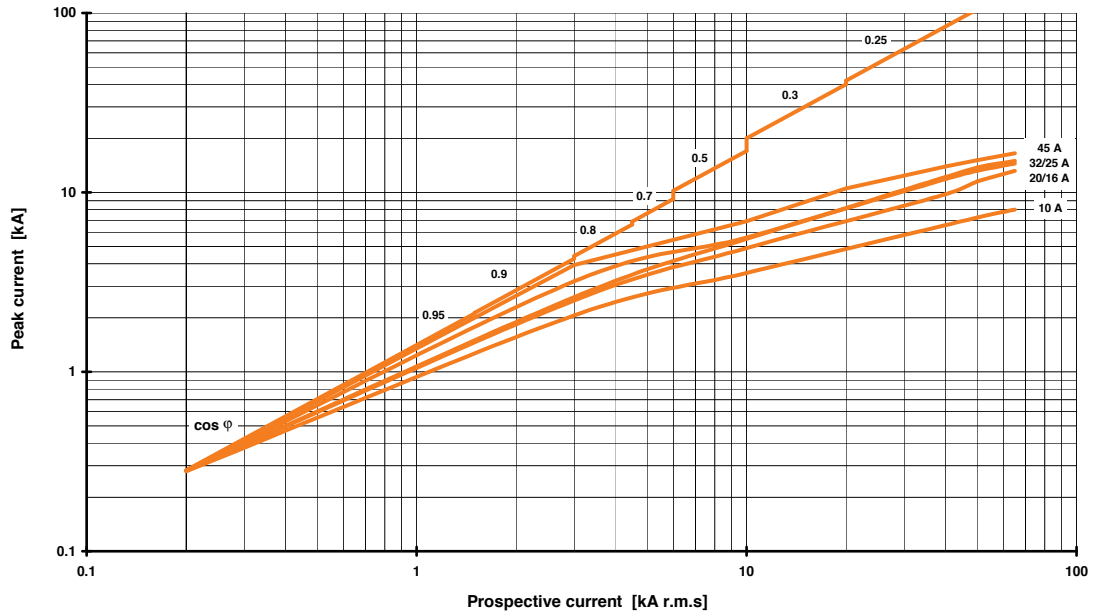
**KT A/B/C7-25/32H**  
 Max. Cut-Off Current,  $U_e = 500V$



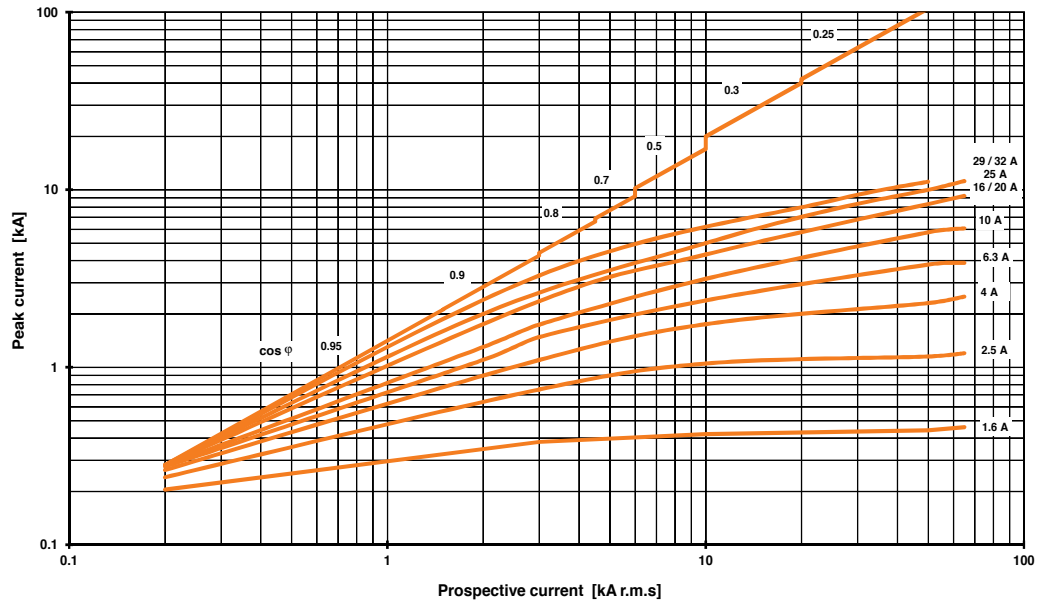
❶ A full size (8-1/2 x 11) set of "Maximum Cut-Off Current (Let-Thru Current)" and "Maximum Let-thru Energy (I<sup>2</sup>t)" curves for 400...415V, 500V and 690V can be downloaded from <http://www.sprecherschuh.com>.

**Cut-off Current ❶**

**KTA/B/C7-45H**  
 Max. Cut-Off Current,  $U_e = 500V$



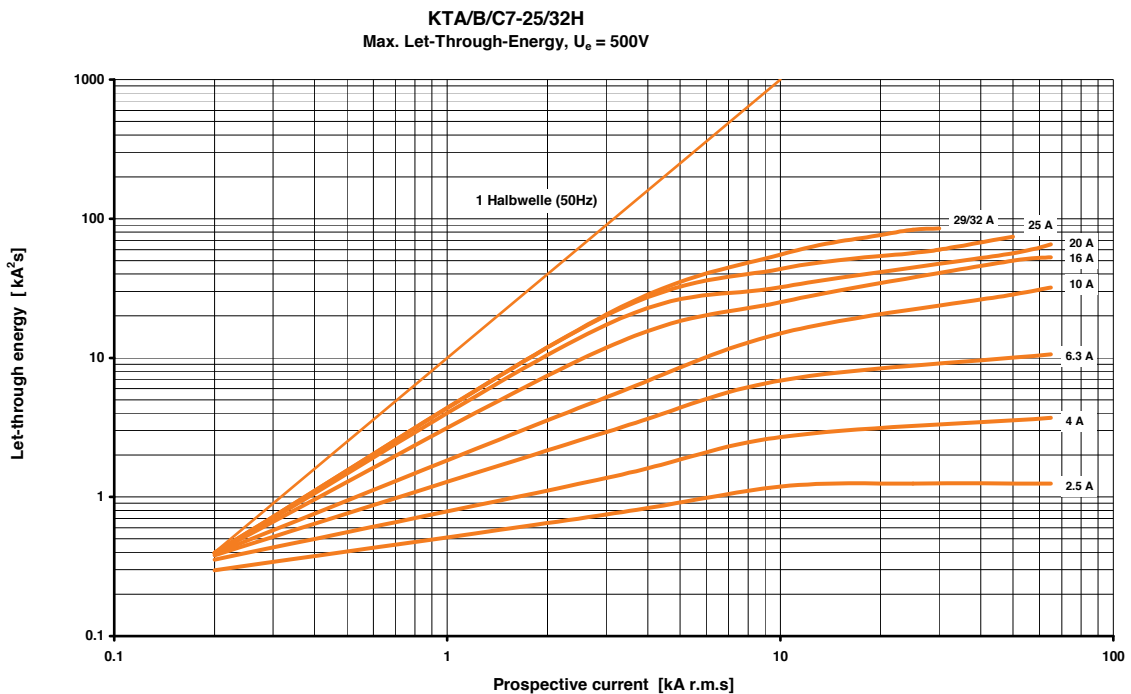
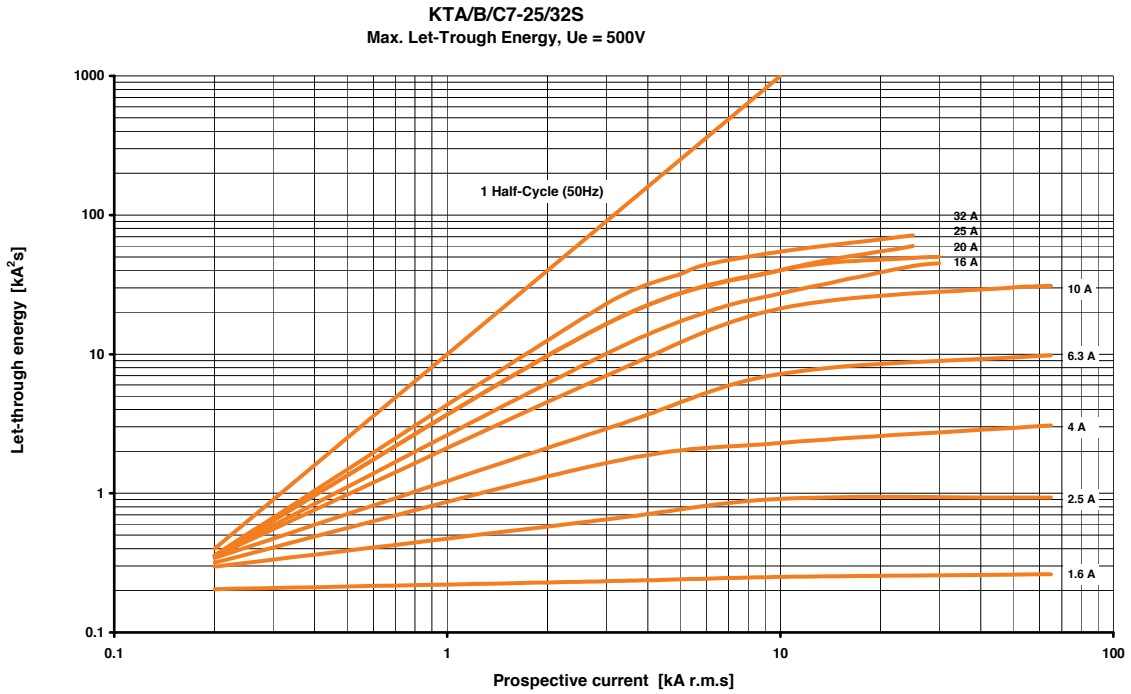
**KTV7**  
 Max. Cut-Off Current,  $U_e = 400...415V$



**F**  
 KT7 Motor Circuit Controllers

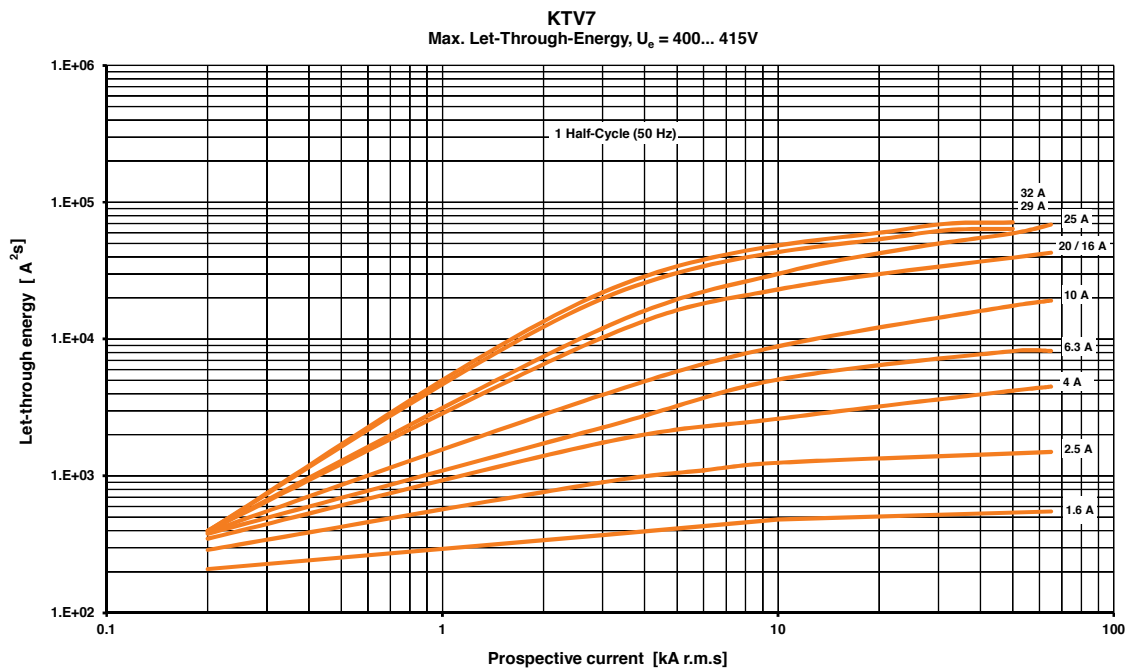
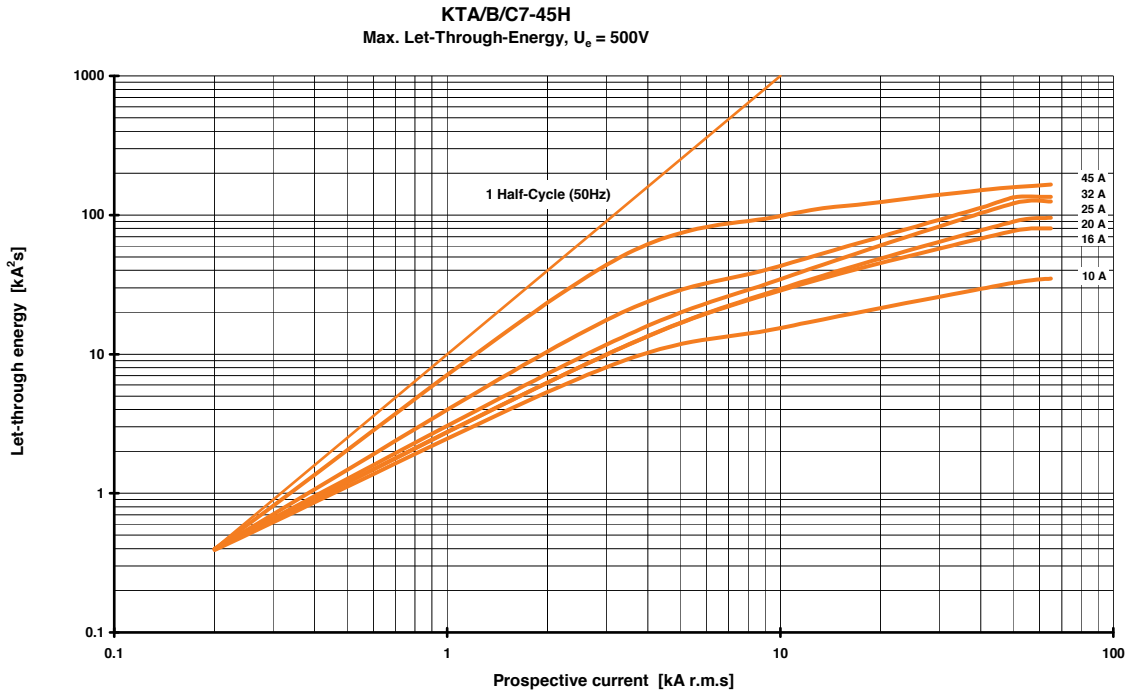
❶ A full size (8-1/2 x 11) set of "Maximum Cut-Off Current (Let-Thru Current)" and "Maximum Let-thru Energy (I<sup>2</sup>t)" curves for 400...415V, 500V and 690V can be downloaded from <http://www.sprecherschuh.com>.

**Let-Through Energy ①**



① A full size (8-1/2 x 11) set of "Maximum Cut-Off Current (Let-Thru Current)" and "Maximum Let-thru Energy (I<sup>2</sup>t)" curves for 400...415V, 500V and 690V can be downloaded from <http://www.sprecherschuh.com>.

**Let-Through Energy ①**



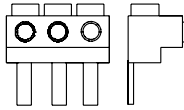
① A full size (8-1/2 x 11) set of "Maximum Cut-Off Current (Let-Thru Current)" and "Maximum Let-thru Energy (I<sup>2</sup>t)" curves for 400...415V, 500V and 690V can be downloaded from <http://www.sprecherschuh.com>.



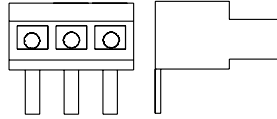
**KTA7/KTB7 & KTC7 Bus Bar and Supply Blocks**

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

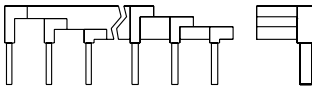
KT7-32-A3E



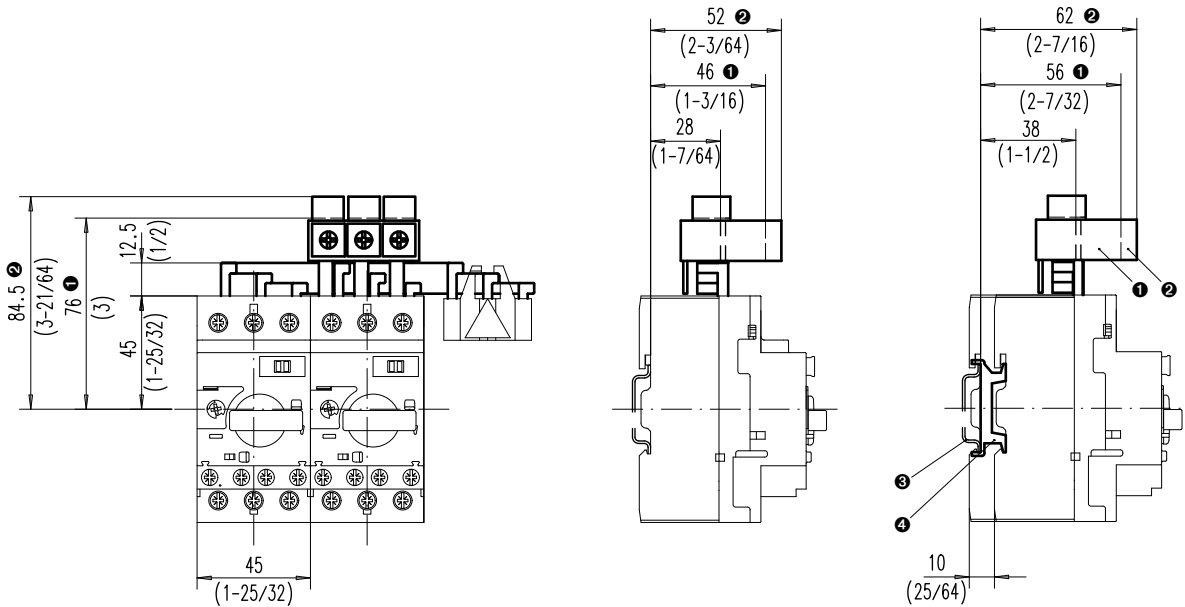
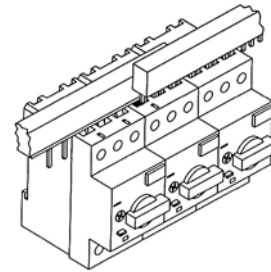
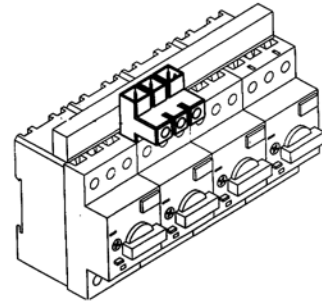
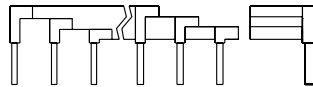
KT7-45-A3E



KT7-32-DB



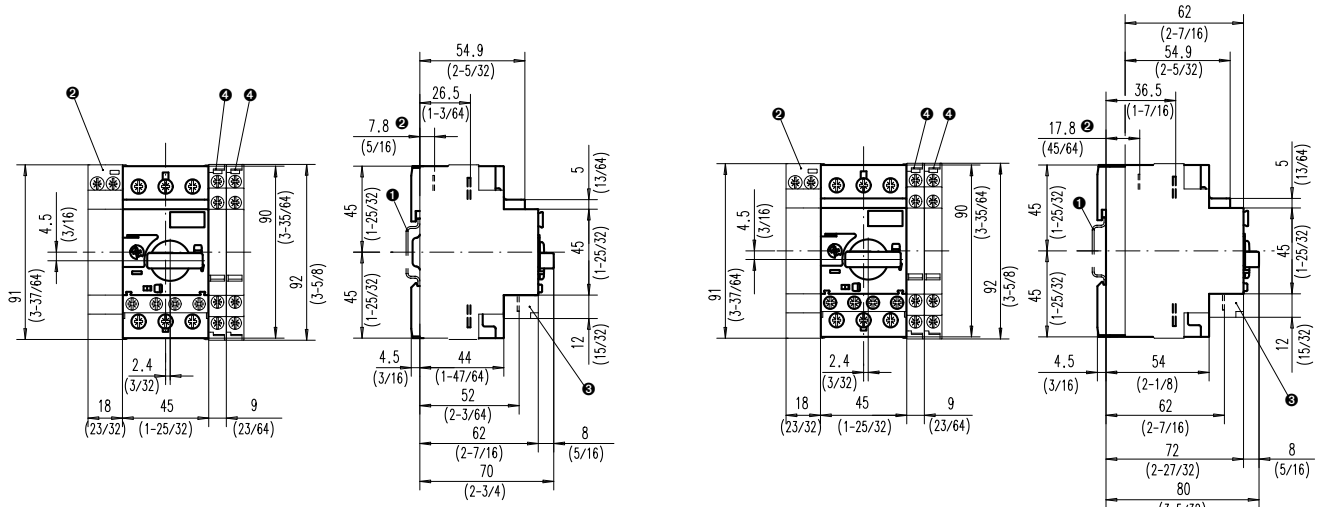
KT7-45-DB



- ❶ Compact Busbar Feeder Terminal IEC
- ❷ Compact Busbar Feeder Terminal UL type E and IEC
- ❸ Mounting on 35 mm DIN Rail
- ❹ Top Hat Rail Adapter 10 mm

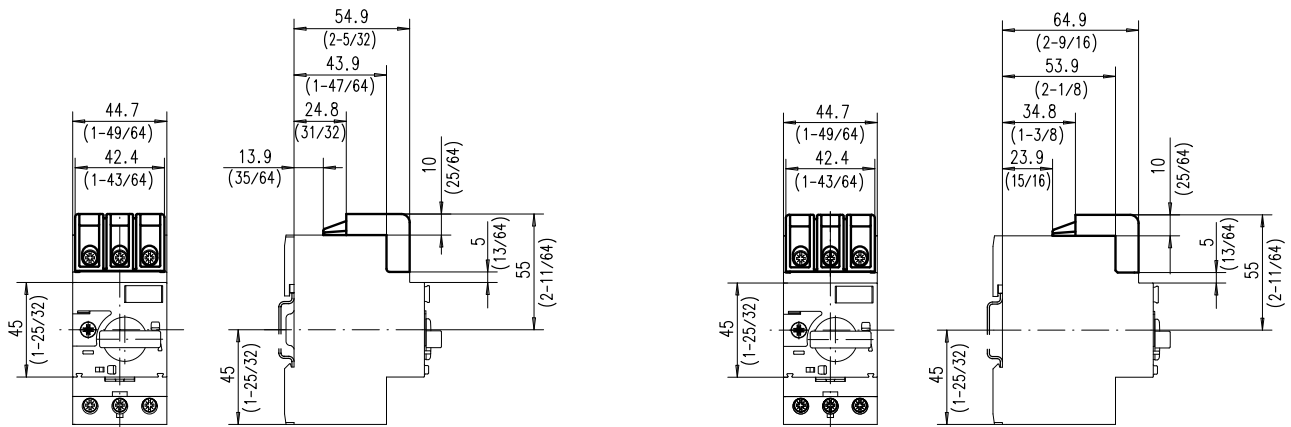
**KT\_7-25/32 Motor Circuit Controllers (without Terminal Adaptor KT7-25-TE1)**

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



- Mounting on 35 mm DIN rail
- Undervoltage/shunt trip
- Auxiliary contact (front mounted)
- Auxiliary contact (side mounted)

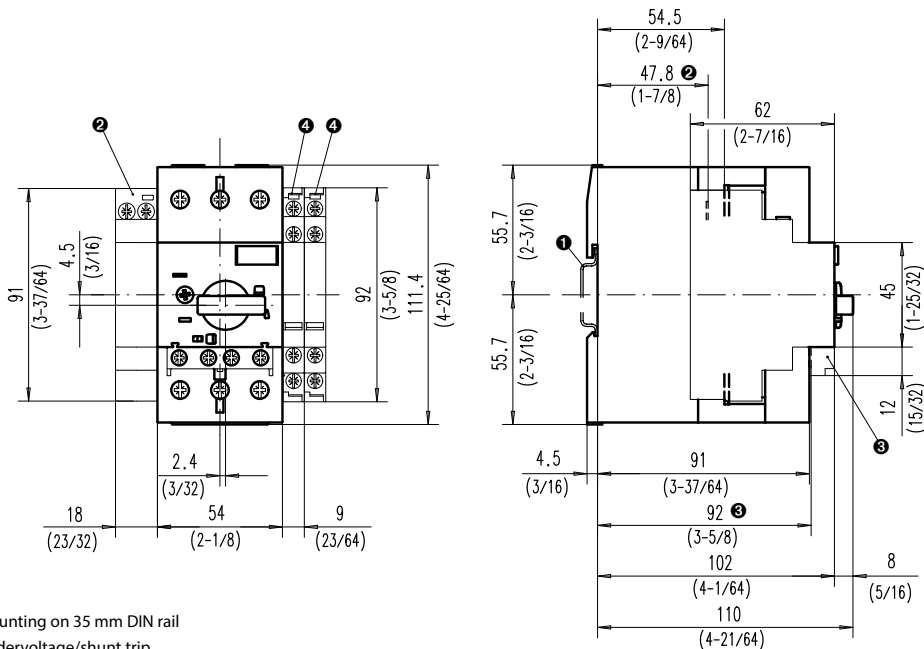
**KT\_7-25/32 Motor Circuit Controllers (with Terminal Adaptor KT7-25-TE1)**



**F** KT7 Motor Circuit Controllers

**KT\_7-45H Motor Circuit Controllers (without Terminal Adaptor KT7-45-TE)**

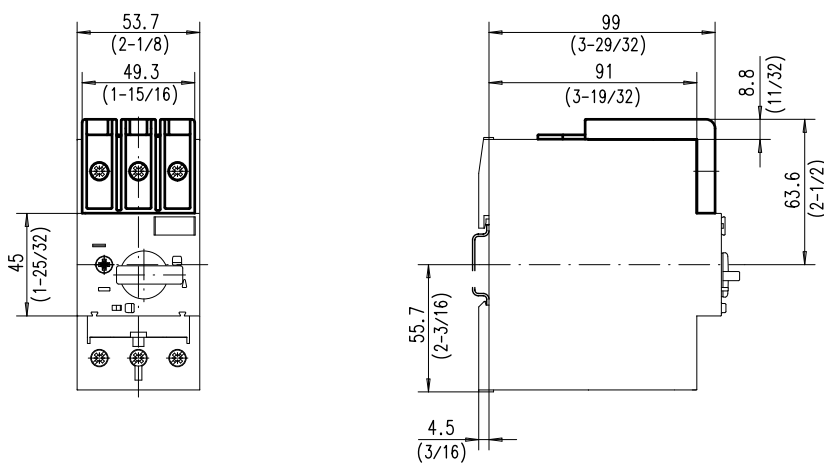
Dimensions are in millimeters (inches). Dimensions not intended for manufacturing purposes.



- ❶ Mounting on 35 mm DIN rail
- ❷ Undervoltage/shunt trip
- ❸ Auxiliary contact (front mounted)
- ❹ Auxiliary contact (side mounted)

KT\_7-45H

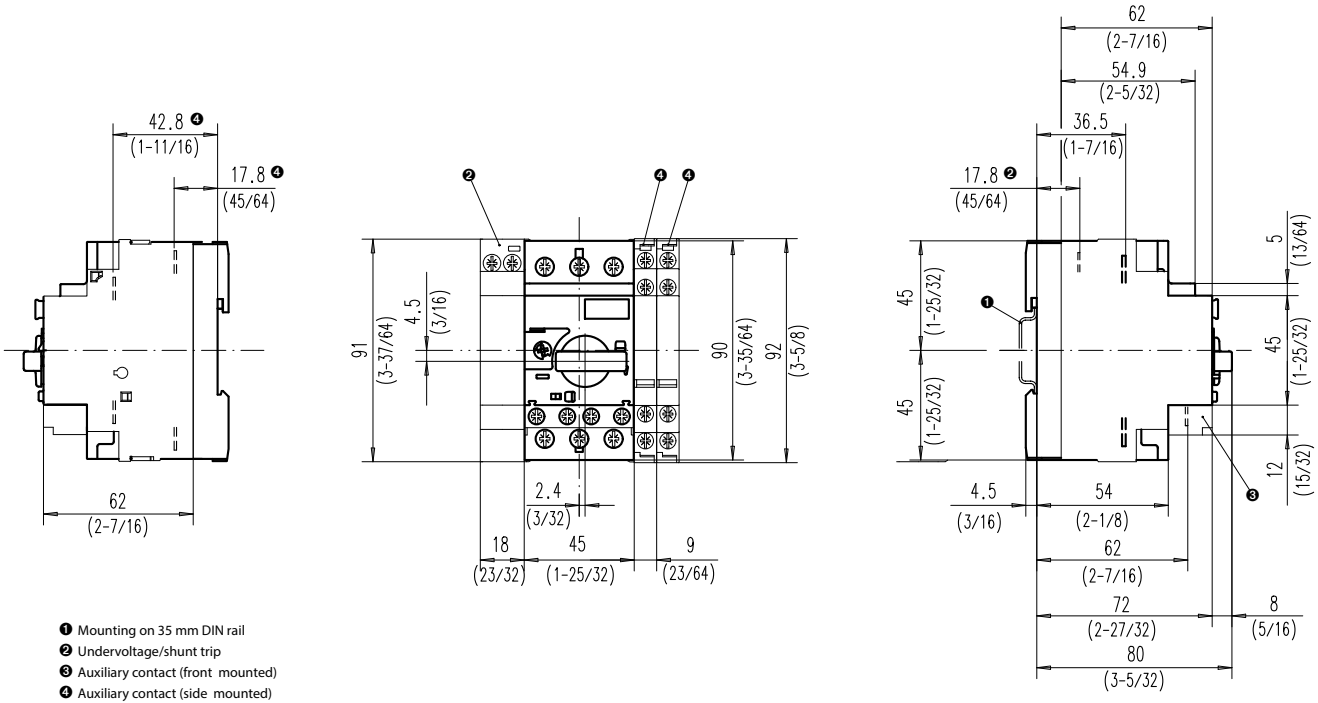
**KT\_7-45H Motor Circuit Controllers (with Terminal Adaptor KT7-45-TE)**



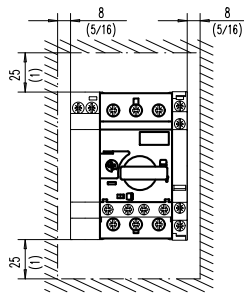
KT\_7-45H

**KTV7-25/32 Motor Circuit Controllers**

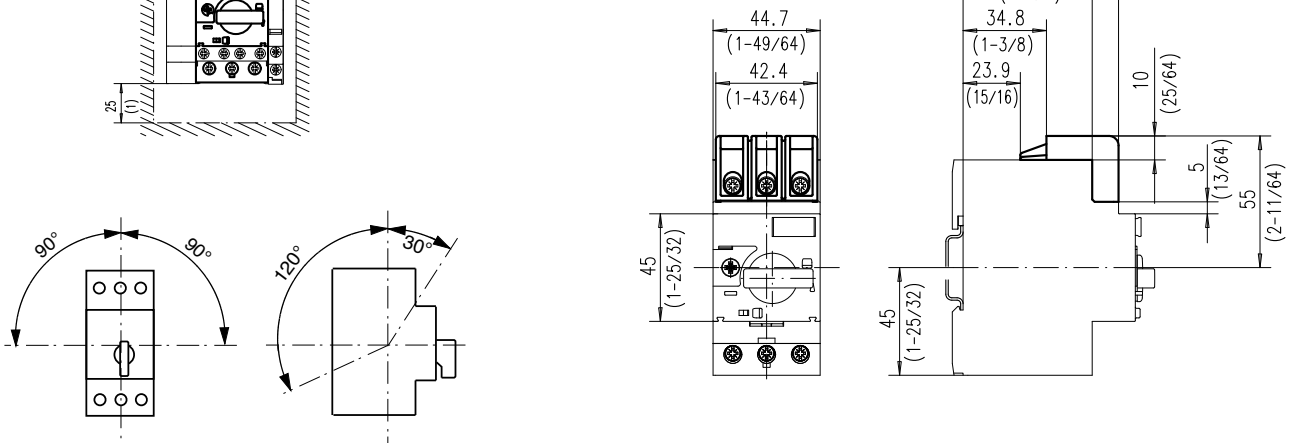
Dimensions are in millimeters (inches). Dimensions not intended for manufacturing purposes.



**Minimum distance to grounded parts or walls**

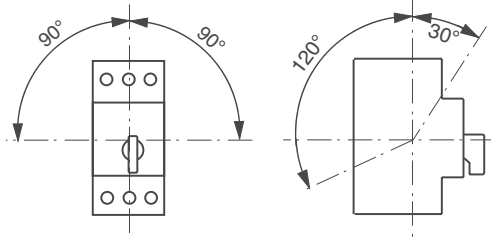


**KT7-TE1 Type E adapter on KTV7**



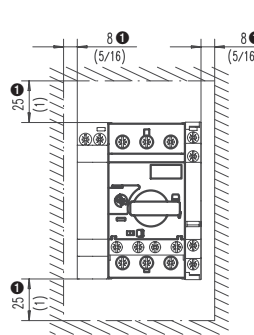
**KT7 Motor Circuit Controllers Mounting/Safety Clearance**

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

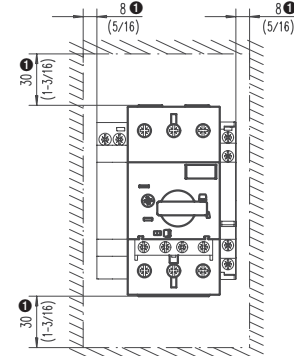


① Minimum distance to grounded parts or walls

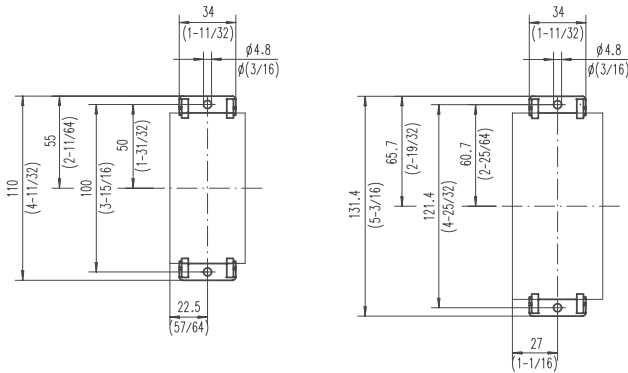
KT\_7-25/32



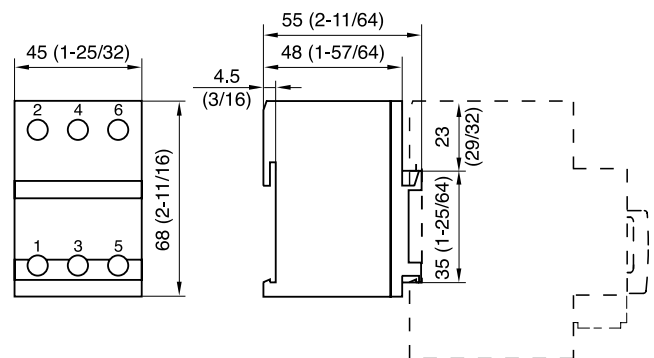
KT\_7-45H



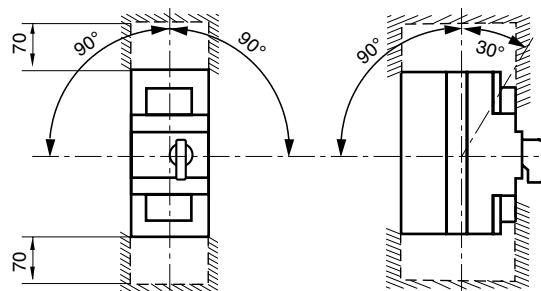
**KT7-45-AS Screw Adapter**



**KT7-25-A2E Terminal Block**



**Mounting Position KT7, KTU7**

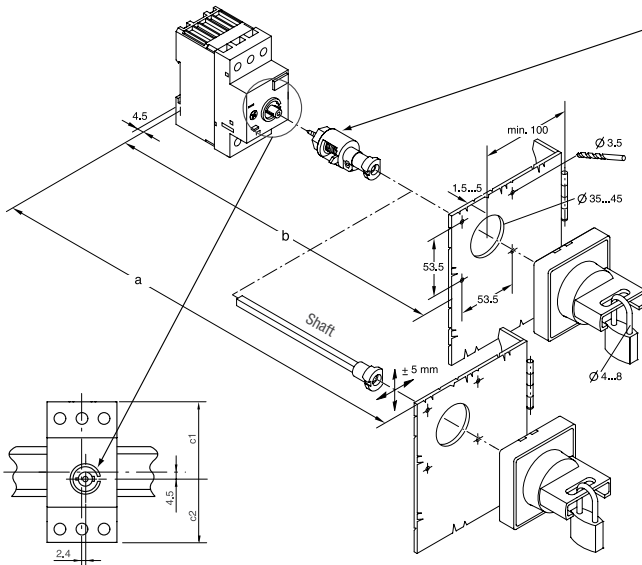


Mounting position/safety clearance

**F**  
KT7 Motor Circuit Controllers

**KT7-HTN/HTRY Motor Circuit Controller Door Coupling Handle**

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



KT7-HTC Coupling is included in Door Handle Kits KT7-HTN and KT7-HTRY. This coupling replaces the knob shipped as standard on the controller. Design "D" Door Coupling Handle Kits include an interface for the "Stops" molded into Design "C" KTA7/KTB7/KTC7 Controllers, which inhibits excessive rotation of the handle mechanism. The old Design "C" Door Handle Kits will fit new Design "C" Controllers (shipped in WHITE boxes), but will not take advantage of the "Stops". Design "D" Door Handle Kits are backward compatible.

**Shaft Dimensions**

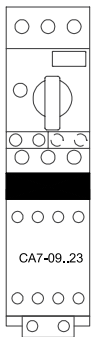
	a		b No Shaft	c1	c2
	Includes 250mm Shaft KT7-HT	Includes 400mm Shaft KT7-HTL			
<b>KT7-25S/32S</b>	117...338 (4.6...13.3 in)	117...488 (4.6...19.2 in)	105.5 ± 5	49.5	40.5
<b>KT7-25H/32H</b>	126...347 (5.0...13.7 in)	126...497 (5.0...19.6 in)	114.5 ± 5	49.5	40.5
<b>KT7-45H</b>	148.6...369.6 (5.9...14.5 in)	148.6...519 (5.9...20.4 in)	137.1 ± 5	59.35	50.35

If using KT7-SHS Shaft Support see page F41 for dimensions

**KTA7/KTB7/KTC7 with CA7 Connection Modules and Kits**

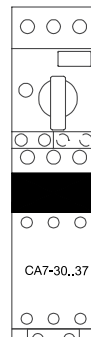
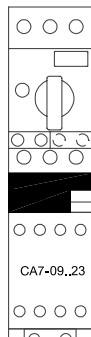
**Ecombo 1)**

KT7-25S-PEC23  
KT7-25H-PEC23

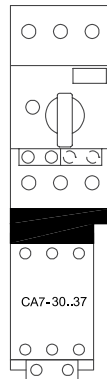


**Standard Connection Modules 2)**

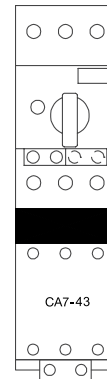
KT7-25S-PNC23 KT7-25H-PNC37  
KT7-25H-PNC37



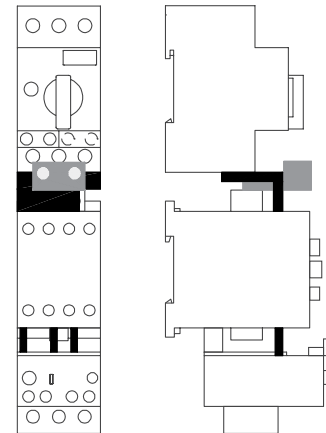
KT7-45H-PNC37



KT7-45H-PNC43



**Coil Extension Modules 3)**



**1) Ecombo Modules**

Electrical and mechanical connection between motor circuit controller and contactors with AC coil. For CA7-9...23 only. Compatible with the reversing- and WYE-delta starter components.

**2) Standard Connection Modules**

Electrical connection between motor circuit controller and contactors with AC coil. For CA7-9...43. Compatible with the reversing- and WYE-delta starter components.

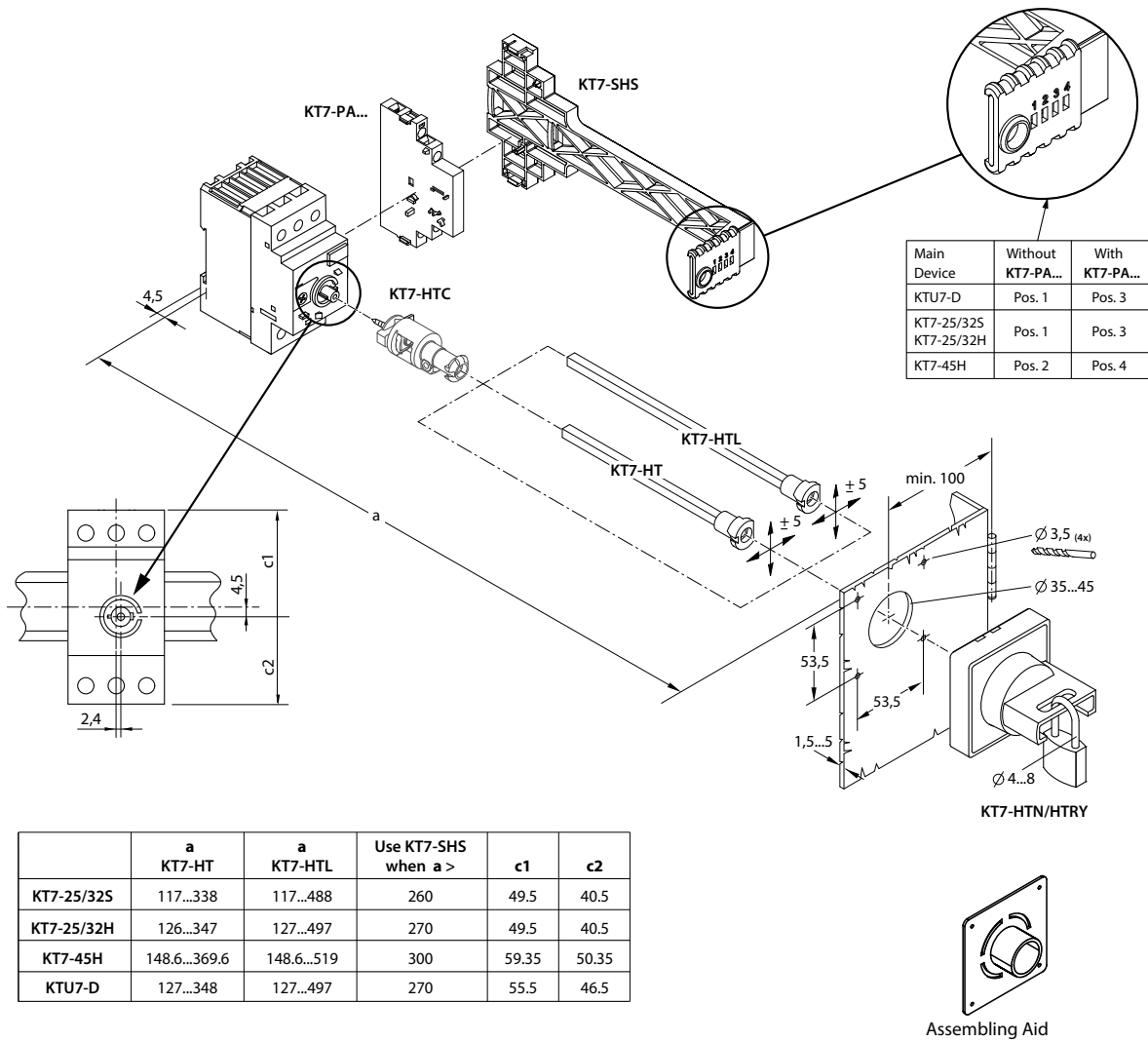
**3) Coil Extension Modules**

Simplifies access to the coil terminals on 3-component starters.

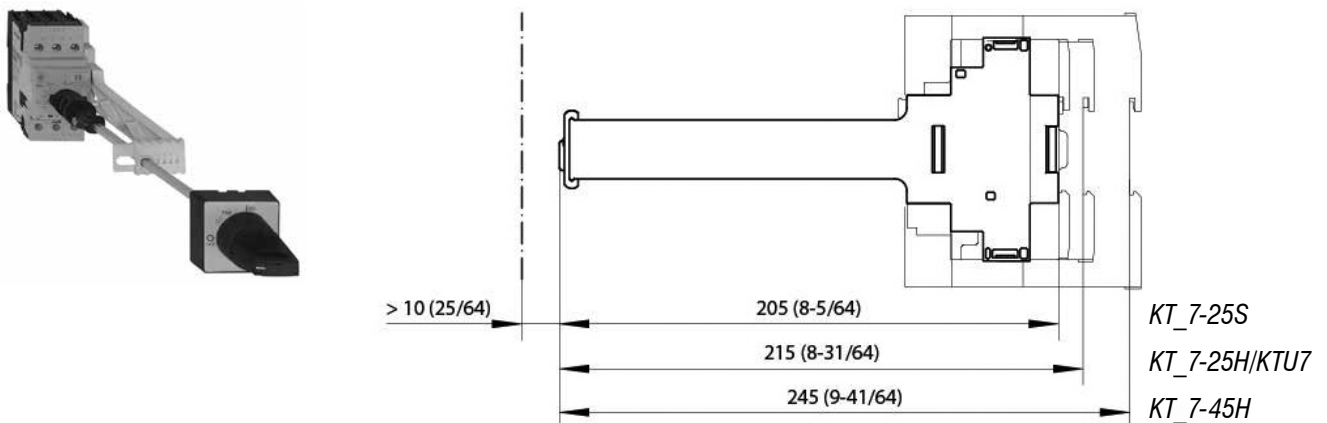
For CA7-9...23 = **KT7-25S-PSC23**

For CA7-30...43 = **KT7-45H-PSC43**

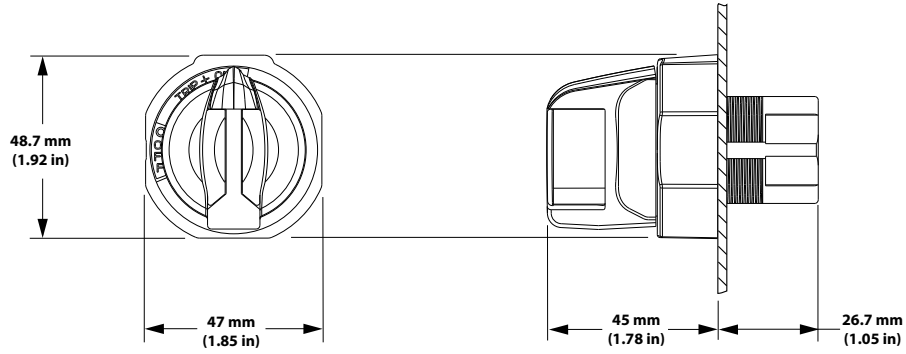
**KT7 Handle Assembly with KT7-SHS Shaft Support**



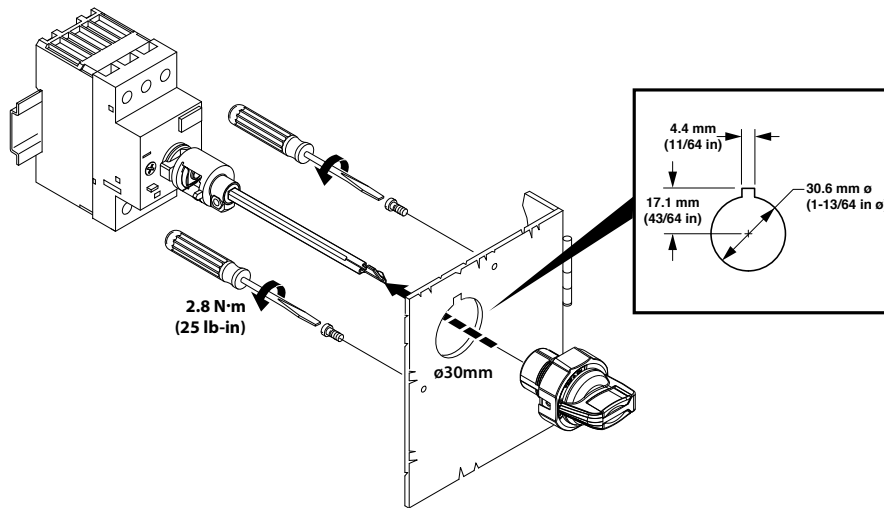
**KT7-SHS Shaft Support Dimensions**



**KT7-SY/SB Switch Handle**



**KT7-SY/SB Assembly**

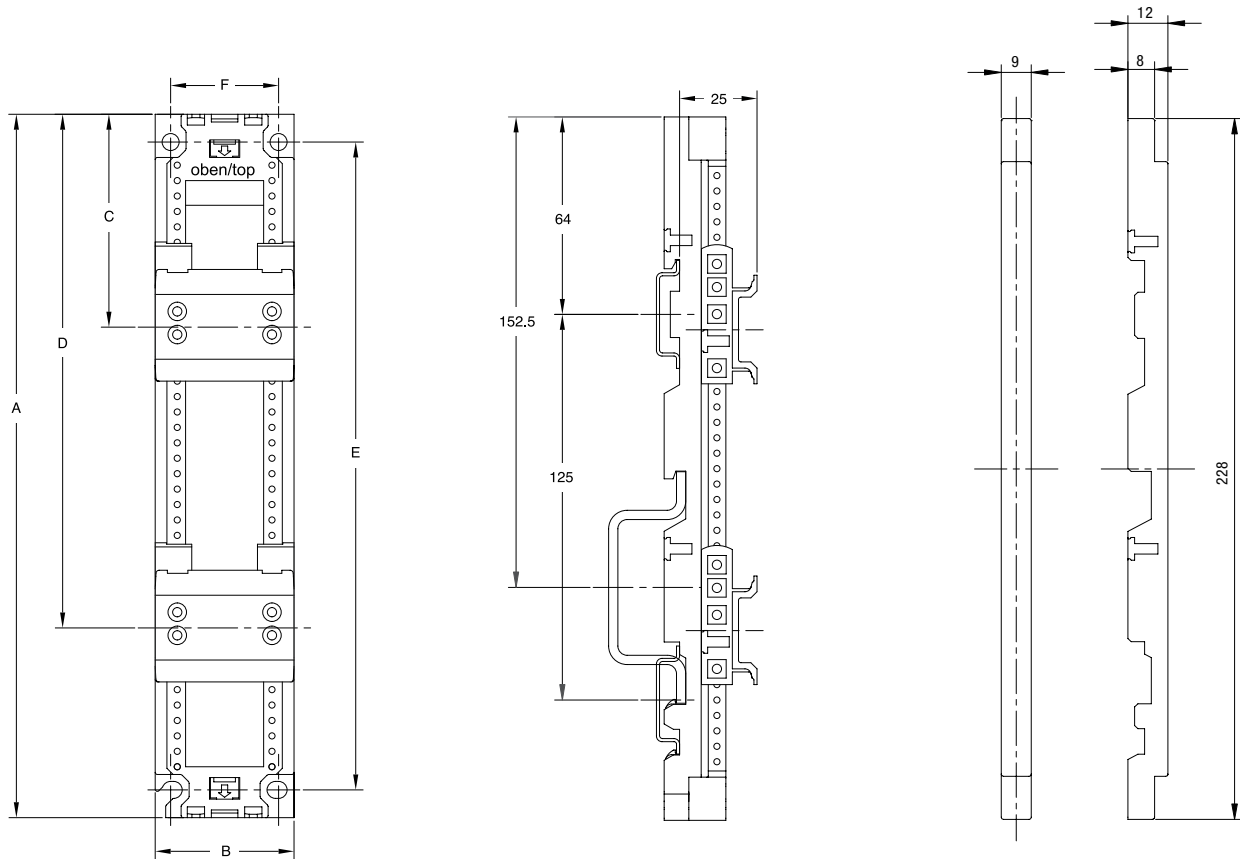


**F**  
Motor Circuit Controllers



**Type W Mounting Modules & Spacer ❶**

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



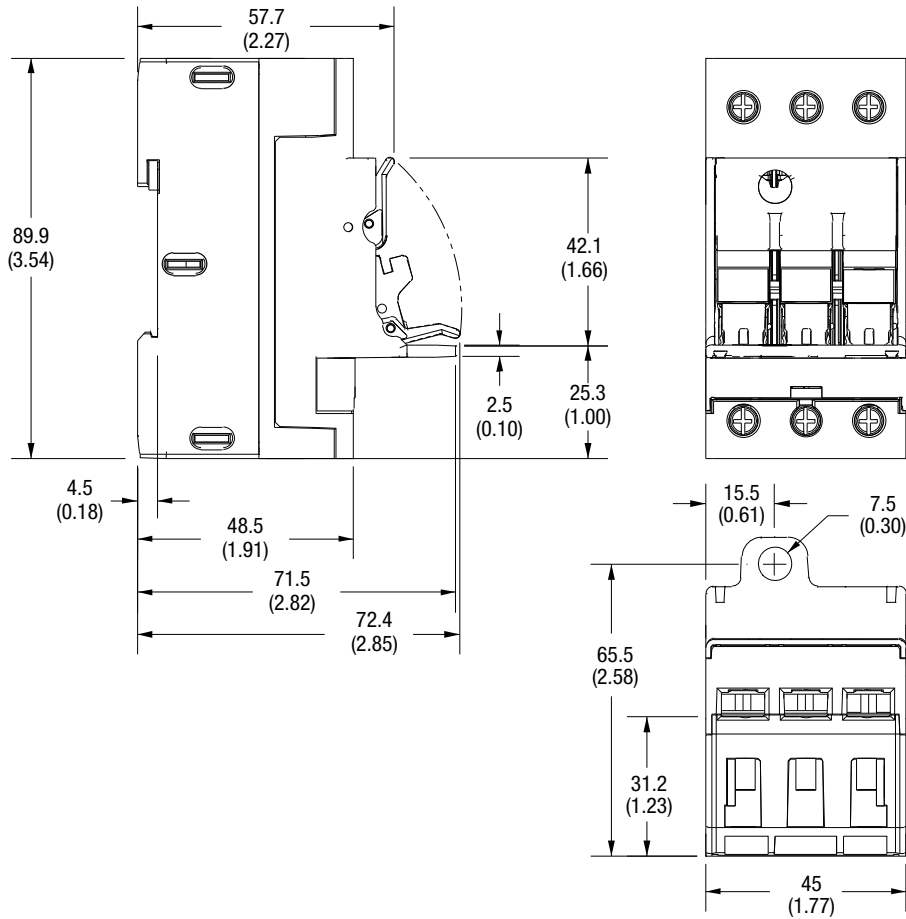
Spacer W-32955

Catalog Number	A	B	C	D	E	F
W-32489	228 (8-31/32)	45 (1-25/32)	69 (2-23/32)	165.5 (6-35/64)	210 (8-17/64)	35 (1-3/8)
W-32490	228 (8-31/32)	54 (2-1/8)	69 (2-23/32)	174 (6-27/32)	210 (8-17/64)	40 (1-37/64)
W-32496	283 (11-9/64)	45 (1-25/32)	69 (2-23/32)	166.5 (6-35/64)	265 (10-7/16)	40 (1-37/64)
W-32497	283 (11-9/64)	54 (2-1/8)	69 (2-23/32)	174 (6-27/32)	265 (10-7/16)	40 (1-37/64)

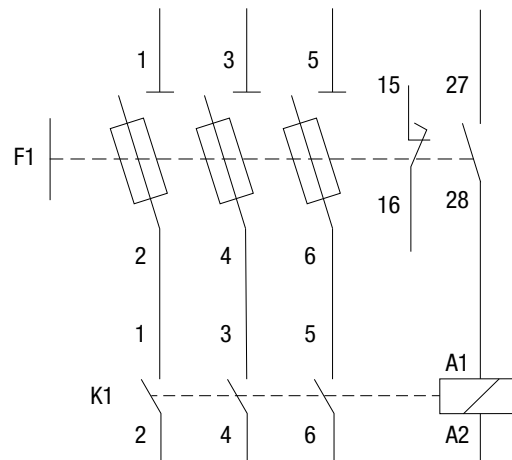
❶ Use Pozidriv #1 (PZ1) screwdriver on DIN rail screws.

**KF7 Fuse Holders Dimensions**

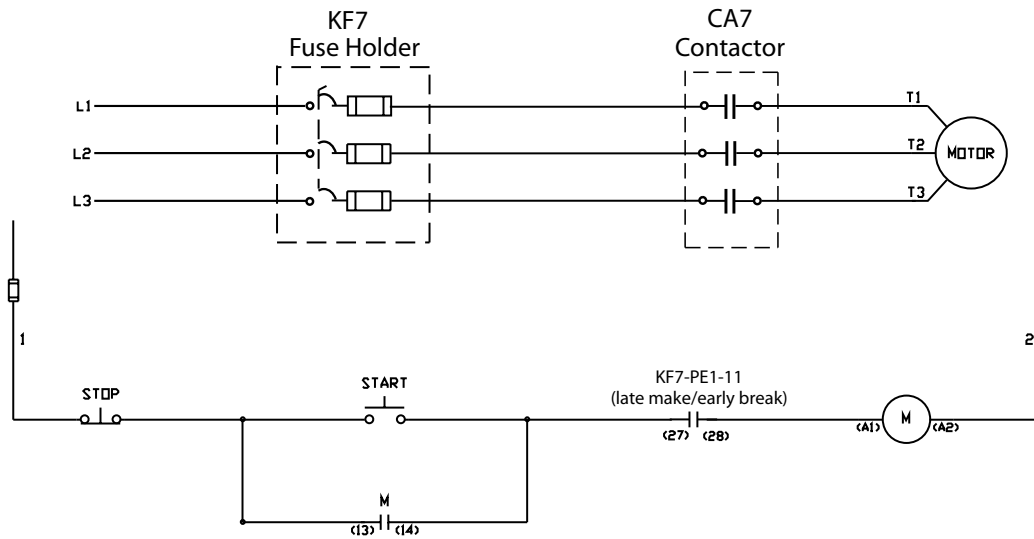
Dimensions are in millimeters (inches). Dimensions not intended for manufacturing purposes.



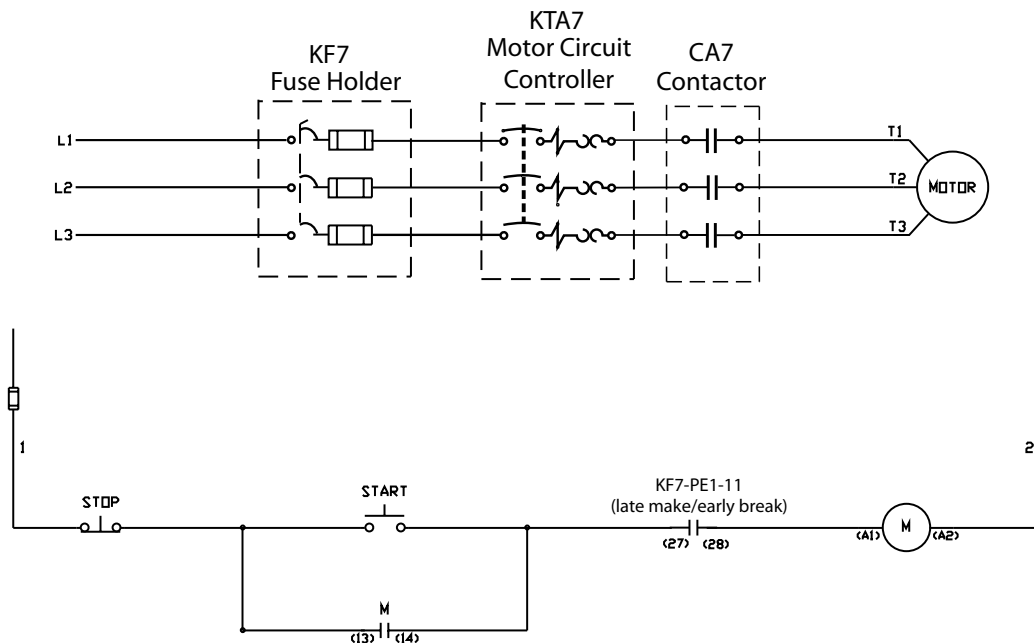
**KF7 Fuse Holders Wiring Diagram (IEC)**



KF7 Fuse Holder used with CA7 Contactor



KF7 Fuse Holder used with KTA7 Motor Circuit Controller and CA7 Contactor



**F**  
KT7 Motor Circuit Controllers

