



KT9 Motor Protection Circuit Breakers

Smart Devices



 nhp.com.au | nhpnz.co.nz

 1300 NHP NHP | 0800 NHP NHP

 sales@nhp.com.au | sales@nhp-nz.com

The new generation

Industrial operators can realise cost savings in their applications using the new Sprecher + Schuh KT9 motor protection circuit breakers and circuit protectors, which are available in sizes up to 40 amps.

The products are available as motor circuit protectors for three-component starters and motor protection circuit breakers for two-component starters. Special KT9 product variants also address specific applications, like protection of high inrush, high efficiency motors.

Part of the Sprecher + Schuh Advanced Control System, KT9 products are available with connectors to enable direct wiring to Sprecher + Schuh CA8/7 contactors.

Advanced Control System components are tested together in various combinations to give users worldwide standards compliance and certification. The components are also backed by NHP Sales and Support.

The right circuit breaker for your application

The KT9 circuit breaker family consists of two basic frame sizes, both 45mm wide in three variations with different protection characteristics covering currents up to 40 Amps.

- KTA9 Motor protection circuit breaker
- KTB9 Motor circuit protector / starter protection (magnetic only)
- KTC9 Transformer and high efficiency motors with high magnetising currents

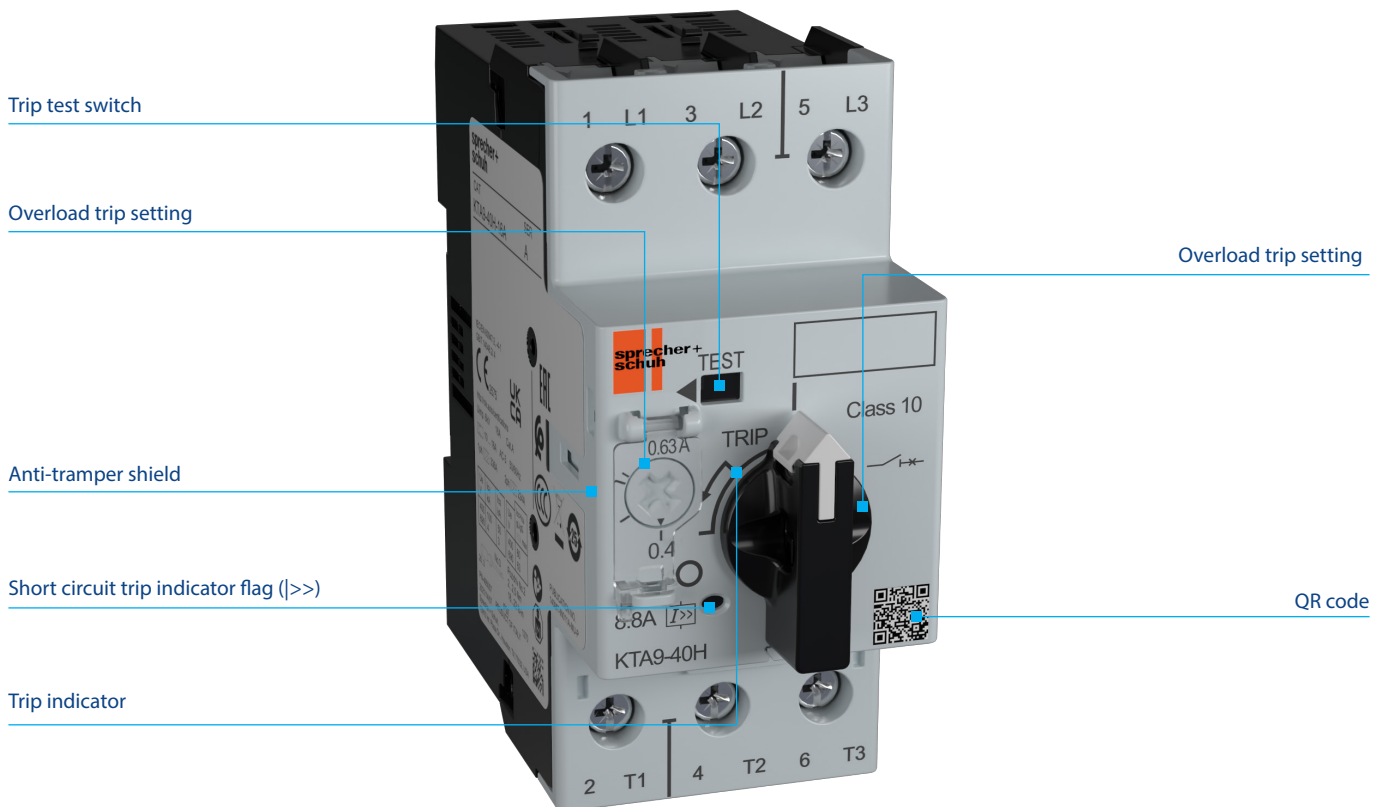
Features and Benefits

- KTA9-32S frame is up to 32A
- KT_9-40H frame is extending current range up to 40A
- Improved thermal performance compared to existing product line (lower heat loss)
- Different product variants (KTB9-MCP / KTC9-High inrush version) are covered by single frame size 40H
- Lockable knob and anti-tamper shield as standard offering for KT_9-40H
- Connecting modules for use with CA8 and CA7 contactors



	Protection characteristic	
	Magnetic	Thermal
Motor KTA9	14x In	Yes
Starter KTB9	14x In	No
Transformer KTC9	18...22x In	Yes

Features Overview



Product line Variants

KT9 C Frame 0.1-32A

- KTA9-32S

KT9 D Frame 0.1-40A

- KTA9-40H
- KTB9-40H
- KTC9-40H
- Standard lockable knob
- Standard ant-tamper shield



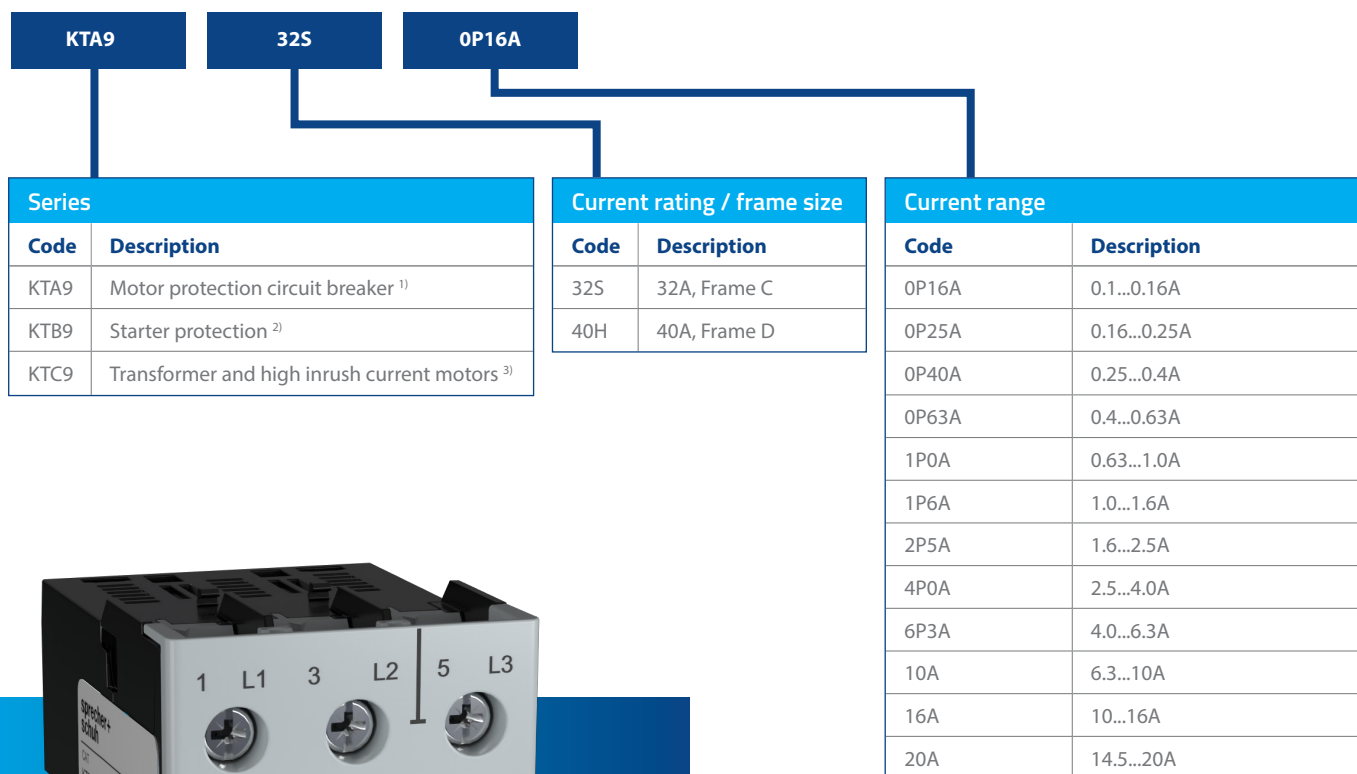
KT9 C Frame 0.1-32A



KT9 D Frame 0.1-40A

Catalogue number construction

This chart provides a general guide to creating a KT9 catalogue number to match your application. Not all possible combinations are valid.



1) Adjustable Thermal / Fixed Magnetic MPCB; 14x In up to 32A, 12x In for 36A and 40A

2) Fixed Magnetic MCP; 14x In up to 32A, 12x In for 36A and 40A

3) Adjustable Thermal / Fixed Magnetic MPCB; 18...22x In for all models

KTA9 Base Unit

KTA9-32S

C Frame, Adjustable Thermal / Fixed Magnetic (14x In)

kW AC-3 (kW @415V) ¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	Icu (kA @415VAC)	Ics (kA @415VAC)	Catalogue no.
0.02	0.10...0.16	2.2	100	100	KTA9-32S-0P16A
0.04	0.16...0.25	3.5	100	100	KTA9-32S-0P25A
0.09	0.25...0.40	5.6	100	100	KTA9-32S-0P4A
0.18	0.40...0.63	8.8	100	100	KTA9-32S-0P63A
0.25	0.63...1.0	14	100	100	KTA9-32S-1P0A
0.55	1.0...1.6	22	100	100	KTA9-32S-1P6A
0.75	1.6...2.5	35	100	100	KTA9-32S-2P5A
1.5	2.5...4	56	100	100	KTA9-32S-4P0A
2.2	4...6.3	88	100	100	KTA9-32S-6P3A
4	6.3...10	140	100	50	KTA9-32S-10A
7.5	10...16	224	65	50	KTA9-32S-16A
10	14.5...20	280	50	15	KTA9-32S-20A
11	18...25	350	15	15	KTA9-32S-25A
13	23...29	406	15	10	KTA9-32S-29A
15	26.5...32	448	15	10	KTA9-32S-32A



KTA9-32S

KTA9-40H

D Frame, Adjustable Thermal / Fixed Magnetic (14x In)

kW AC-3 (kW @415V) ¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	Icu (kA @415VAC)	Ics (kA @415VAC)	Catalogue no.
0.18	0.40...0.63	8.8	100	100	KTA9-40H-0P63A
0.25	0.63...1.0	14	100	100	KTA9-40H-1P0A
0.55	1.0...1.6	22	100	100	KTA9-40H-1P6A
0.75	1.6...2.5	35	100	100	KTA9-40H-2P5A
1.5	2.5...4	56	100	100	KTA9-40H-4P0A
2.2	4...6.3	88	100	100	KTA9-40H-6P3A
4	6.3...10	140	100	100	KTA9-40H-10A
7.5	10...16	224	100	50	KTA9-40H-16A
10	14.5...20	280	100	25	KTA9-40H-20A
11	18...25	350	65	25	KTA9-40H-25A
13	23...29	406	50	25	KTA9-40H-29A
15	26.5...32	448	50	25	KTA9-40H-32A
18.5	30...36	432	50	25	KTA9-40H-36A
20	34...40	480	50	25	KTA9-40H-40A



KTA9-40H

¹⁾ kW ratings shown are for reference. The final selection of the motor protection circuit breaker depends on the actual motor full load current.

KTA7-45H

Adjustable Thermal / Fixed Magnetic (13x In)

kW AC-3 (kW @415V) ¹⁾	Current adjustment range (A)	Magnetic re-lease response Current (A)	Icu (kA @415VAC)	Ics (kA @415VAC)	Catalogue no.
4	6.3...10	130	100	50	KTA7-45H-10A
7.5	10...16	208	100	50	KTA7-45H-16A
10	14.5...20	260	100	50	KTA7-45H-20A
11	18...25	325	100	50	KTA7-45H-25A
15	23...32	416	65	50	KTA7-45H-32A
22	32...45	585	65	50	KTA7-45H-45A

KTC9 Base Unit

KTC9-40H

D Frame, High Inrush, Adjustable Thermal / Fixed Magnetic (18...22x In)

kW AC-3 (kW @415V) ¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	Icu (kA @415VAC)	Ics (kA @415VAC)	Catalogue no.
0.02	0.10...0.16	3.2	100	100	KTC9-40H-0P16A
0.04	0.16...0.25	5.5	100	100	KTC9-40H-0P25A
0.09	0.25...0.40	8.8	100	100	KTC9-40H-0P4A
0.18	0.40...0.63	14	100	100	KTC9-40H-0P63A
0.25	0.63...1.0	22	100	100	KTC9-40H-1P0A
0.55	1.0...1.6	35	100	100	KTC9-40H-1P6A
0.75	1.6...2.5	55	100	100	KTC9-40H-2P5A
1.5	2.5...4	88	100	100	KTC9-40H-4P0A
2.2	4...6.3	139	100	100	KTC9-40H-6P3A
4	6.3...10	220	100	100	KTC9-40H-10A
7.5	10...16	320	100	50	KTC9-40H-16A
10	14.5...20	400	100	25	KTC9-40H-20A
11	18...25	450	65	25	KTC9-40H-25A



KTC9-40H

KTC7-45H

F Frame, High Inrush, Adjustable Thermal / Fixed Magnetic (16...22x In)

kW AC-3 (kW @415V) ¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	Icu (kA @415VAC)	Ics (kA @415VAC)	Catalogue no.
11	18...25	416	65	50	KTC7-45H-25A
15	23...32	585	65	50	KTC7-45H-32A

The KTC9 has a fixed magnetic trip set at 18 to 22x the maximum value of the current ad-justment range (as opposed to the KTA9's magnetic trip of approximately 14x adjustment range). KTC9 are typically used in applications where nuisance tripping might occur, as with some high efficiency motors.

¹⁾ kW ratings shown are for reference. The final selection of the motor protection circuit breaker depends on the actual motor full load current.

KTB9 Base Unit

KTB9-40H

D Frame, Motor Circuit Protectors, Fixed Magnetic (14x In)

kW AC-3 (kW @415V) ¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	I _{cu} (kA @4.15VAC)	I _{cs} (kA @4.15VAC)	Catalogue no.
0.02	0.16	2.2	100	100	KTB9-40H-0P16A
0.04	0.25	3.5	100	100	KTB9-40H-0P25A
0.09	0.4	5.6	100	100	KTB9-40H-0P4A
0.18	0.63	8.8	100	100	KTB9-40H-0P63A
0.25	1	14	100	100	KTB9-40H-1P0A
0.55	1.6	22	100	100	KTB9-40H-1P6A
0.75	2.5	35	100	100	KTB9-40H-2P5A
1.5	4	52	100	100	KTB9-40H-4P0A
2.2	6.3	88	100	100	KTB9-40H-6P3A
4	10	130	100	100	KTB9-40H-10A
7.5	16	208	100	100	KTB9-40H-16A
10	20	280	100	100	KTB9-40H-20A
11	25	325	65	25	KTB9-40H-25A
13	29	406	50	25	KTB9-40H-29A
15	32	448	50	25	KTB9-40H-32A
18.5	36	432	50	25	KTB9-40H-36A
20	40	480	50	25	KTB9-40H-40A



KTB9-40H

The KTB9 is designed without a thermal trip element (i.e. current adjustment range). It should be selected for applications where a separate motor overload protection device is used. Magnetic trip is approximately 14x operational current for the KTB9 (approximately 13x for the KTB7).





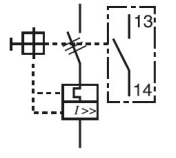

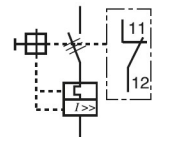
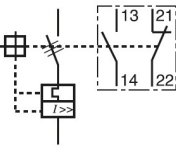
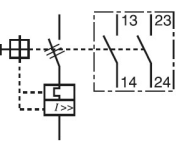
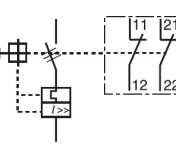

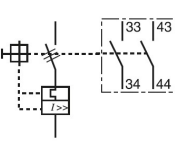
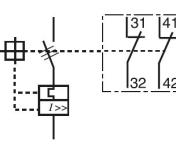
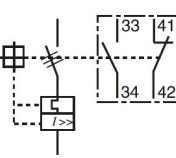
KTB7-45H

F Frame, Motor Circuit Protectors, Fixed Magnetic (13x In)

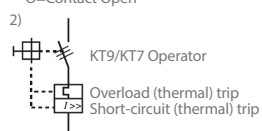
kW AC-3 (kW @415V) ¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	I _{cu} (kA @4.15VAC)	I _{cs} (kA @4.15VAC)	Catalogue no.
11	25	325	100	50	KTB7-45H-25A
15	32	416	65	50	KTB7-45H-32A
22	45	585	65	50	KTB7-45H-45A

1) kW ratings shown are for reference. The final selection of the motor protection circuit breaker depends on the actual motor full load current.


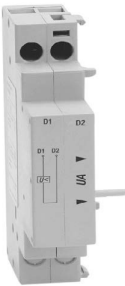
Accessories for KT9

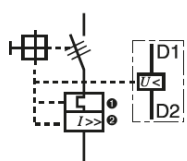
Accessory ¹⁾	Description	Operator position ¹⁾			Term. number	Type	Connection diagram and terminal markings ²⁾	For use with	Catalog number		
		OFF 	ON 	Tripped 							
	Front-Mounted Auxiliary Contact	0	X	0	13-14	1 NO		KT_9-32S KT_9-40H	KT9-PE1-10		
									KT_7-45H	KT7-PE1-10	
	<ul style="list-style-type: none"> • 1-pole or 2-pole • No additional space required • Only one per device • KT9-PE1...250V max. • KT7-PE1...300V max. 	X	0	X	11-12	1 NC		KT_7-45H	KT7-PE1-01		
		0	X	0	13-14	1 NO		KT_9-32S KT_9-40H	KT9-PE1-11		
		X	0	X	21-22	1 NC		KT_7-45H	KT7-PE1-11		
		0	X	0	13-14	1 NO		KT_9-32S KT_9-40H	KT9-PE1-20		
		0	X	0	23-24	1 NO		KT_7-45H	KT7-PE1-20		
		0	X	0	13-14	1 NO			KT_7-45H	KT7-PE1-02	
		0	X	0	23-24	1 NO					
			Right Side-Mounted Auxiliary Contact	0	X	0	33-34	1 NO		KT_9-32S KT_9-40H	KT9-PA1-20
				0	X	0	43-44	1 NO		KT_7-45H	KT7-PA1-20
				0	X	0	33-34	1 NO			
0	X			0	43-44	1 NO		KT_9-32S KT_9-40H	KT9-PA1-02		
X	0			X	31-32	1 NC		KT_7-45H	KT7-PA1-02		
X	0			X	41-42	1 NC					
X	0			X	31-32	1 NC					
				X	0	X	41-42	1 NC		KT7-PA1-02	KT9-PA1-11
0	X			0	33-34	1 NO	KT_7-45H	KT7-PA1-11			
X	0			X	41-42	1 NC					
0	X			0	33-34	1 NO					
X	0			X	41-42	1 NC					
X	0			X	41-42	1 NC					

1) X=Contact Closed
O=Contact Open

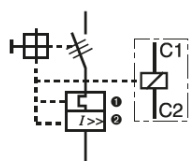


Accessories for KT9

Accessory ¹⁾	Description	For use with	AC Coil Voltage		Catalog number	
			50 Hz	60 Hz	Shunt Trip	Undervoltage
 <p>Undervoltage Trip</p> <ul style="list-style-type: none"> • Left-side mounted • Adds 18mm to the width of the device • Automatically trips MPCD/MCP when voltage falls below 35...70% <p>Shunt trip</p> <ul style="list-style-type: none"> • Left-side mounted • Adds 18mm to width of device • Provides remote tripping of the MPCB/MCF • Maximum on time for DC operated devices: 5 sec. 	<p>KTA9 KTB9 KTC9 KTV9</p>	24V	24...28V	KT9-AA-24V	KT9-UA-24V	
		110V	120V	KT9-AA-120V	KT9-UA-120V	
		220...230V	~	KT9-AA-230V	KT9-UA-230V	
		~	240...260V	KT9-AA-260V	KT9-UA-260V	
		~	277V	KT9-AA-277V	~	
		380...400V	~	KT9-AA-400V	KT9-UA-400V	
		415V	480V	KT9-AA-480V	KT9-UA-480V	
		DC Coil Voltage		Shunt Trip	Undervoltage	
		~	24VDC	KT9-AA-24D	~	
		 <p>Undervoltage Trip</p> <ul style="list-style-type: none"> • Left-side mounted • Adds 18 mm to the width of the KT7 device • Automatically trips motor protector when voltage falls below 35...70% <p>Shunt Trip</p> <ul style="list-style-type: none"> • Left-side mounted • Adds 18 mm to the width of the KT7 device • Trips motor protector when voltage is applied remotely 	<p>KTA7 KTB7 KTC7</p>	12V	14V	KT7-AA-14V
21V	24V			KT7-AA-24V	KT7-UA-24V	
24V	28V			KT7-AA-28V	KT7-UA-28V	
42V	48V			KT7-AA-48V	KT7-UA-48V	
110V	120V			KT7-AA-120V	KT7-UA-120V	
110V	127V			KT7-AA-127V	KT7-UA-127V	
220...230V	~			KT7-AA-230V	KT7-UA-230V	
~	240...260V			KT7-AA-240V	KT7-UA-240V	
240V	277V			KT7-AA-277V	KT7-UA-277V	
380V	460V			KT7-AA-460V	KT7-UA-460V	
415V	480V			KT7-AA-480V	KT7-UA-480V	
525V	600V			KT7-AA-600V	KT7-UA-600V	
DC Coil Voltage				Shunt Trip	Undervoltage	
9V DC				KT7-AA-9D	KT7-UA-9D	
12V DC				KT7-AA-12D	KT7-UA-12D	
24V DC				KT7-AA-24D	KT7-UA-24D	
36V DC				KT7-AA-36D	KT7-UA-36D	
48V DC				KT7-AA-48D	KT7-UA-48D	
60V DC				KT7-AA-60D	KT7-UA-60D	
64V DC		KT7-AA-64D	KT7-UA-64D			
72V DC		KT7-AA-72D	KT7-UA-72D			
80V DC		KT7-AA-80D	KT7-UA-80D			





**Undervoltage Trip
Connection Diagram**





**Shunt Trip
Connection Diagram**

1) For Overload (thermal) Trip of KT9/KT7.
2) For Short-Circuit (magnetic) Trip of KT9/KT7.

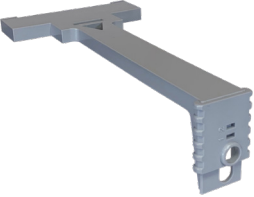

Classic Handle Assembly, Type 1/4/4X/12

Accessory ¹⁾	Description	Color	Legend	For use with	Frame Size (Length)	Catalog Number
	Classic Door Coupling Handle ¹⁾ <ul style="list-style-type: none"> • For 3 padlocks 4...8 mm (5/16") diameter • Type 1/3/3R/4/4X/12 and IP66 • Interlock override capability - Can be modified for locking in ON position • Ships with coupling — order extension shaft and legend plate separately • See Technical section for mounting depth information 	Gray/Black	O - I OFF -ON Trip	KT_9-32S, KT_9-40H ¹⁾	65 x 65mm	KT9-HTN
				KT_7-45H ¹⁾		KT7-HTN
		Red/ Yellow	O - I OFF -ON Trip	KT_9-32S, KT_9-40H ¹⁾	65 x 65mm	KT9-HTRY
				KT_7-45H ¹⁾		KT7-HTRY
	Extension Shaft ¹⁾ <ul style="list-style-type: none"> • Cut to required length for mounting depth (front of DIN Rail to front of enclosure door) • See Technical Section for mounting depth information 			KT9-HTN KT9-HTRY	250 mm	KT9-HT
				KT7-HTN KT7-HTRY		KT7-HT
				KT9-HTN KT9-HTRY	400 mm	KT9-HTL
				KT7-HTN KT7-HTRY		KT7-HTL

Contemporary Handle Assembly, Type 3R/3/4/4X

Accessory ¹⁾	Description	Color	Legend	For use with	Frame Size (Length)	Catalog Number
	Contemporary Door Coupling Handle <ul style="list-style-type: none"> • Screw Fixing • Type 3R, 3, 12, 4, 4X, IP66 • Field configurable for defeatable or nondefeatable • Ships with coupling — order extension shaft and legend plate separately • Requires 30mm hole for mounting • For up to 2 padlocks 	Black/ Black	O - I OFF -ON Trip	KT_9-32S, KT_9-40H	48.7 x 47mm	KT9-SB
				KT_7-45H		KT7-SB
		Red/ Yellow	O - I OFF - ON Trip	KT_9-32S, KT_9-40H	48.7 x 47mm	KT9-SY
				KT_7-45H		KT7-SY
	Extension Shaft <ul style="list-style-type: none"> • Cut to required length for mounting depth (front of DIN Rail to front of enclosure door) • See Technical Section for mounting depth information 			KT9-SB KT9-SY	305mm (12")	KT9-S1
				KT7-SB KT7-SY		KT7-S1
				KT9-SB KT9-SY	533mm (21")	KT9-S2
				KT7-SB KT7-SY		KT7-S2

Handle Accessories

Accessory ¹⁾	Description	For use with	Catalog Number
	Extension Shaft Support ²⁾ <ul style="list-style-type: none"> Provides consistent alignment of the shafts with handle or door coupling Recommended for shaft lengths >200mm (7.8 in) 9mm in width and snaps on right side of devices Allows for one side-mount auxiliary 	KT_9-32S, KT_9-40H	KT9-SHS
		KT_7-45H	KT7-SHS
	Legend Plate <ul style="list-style-type: none"> Marking: "Hauptschalter" and "Main Switch" (Black/Gray) Marking: "Not-Aus" and "Emergency Off" (Black/Yellow) 	KT9-HT_	KT9-HTFCN
		KT7-HT_	KT7-HTFCN
		KT9-HT_	KT9-HTFCRY
		KT7-HT_	KT7-HTFCRY




Accessories for KT9

Accessory ¹⁾	Description	Color	For use with	Catalog Number
	Lockable Twist Knob <ul style="list-style-type: none"> For 1 padlock 4...6 mm (3/16 in.) diameter shackle Can be locked in OFF position 	Black	KT_9-32S,	KT9-KN
			KT_7-45H	KT7-KN1
		Red/Yellow	KT_9-32S,	KT9-KRY
			KT_7-45H	KT7-KRY1
Locking Tag <ul style="list-style-type: none"> Padlock attachment to the lockable handles Up to three padlocks 4...8 mm (5/16 in.) diameter shackle 	Red	KT9-KN KT9-KRY1	KT9-M3	
		KT7-KN1 KT7-KRY1	KT7-DS	
	Terminal Adapter for Type E Applications ¹⁾ <ul style="list-style-type: none"> Required for self-protected combination motor controller (Type E) application of KT_9-32S, KT_9-40H and KT_7-45H Not for use with bus bars 		KT_9-32S, KT_9-40H	KT9-40-TE
			KT_7-45H	KT7-45-TE
	Anti-Tamper Shield <ul style="list-style-type: none"> Provides protection against inadvertent adjustment of the current setting 10 pieces per package (price per piece) 		KT_9-32S, KT_9-40H	KT9-CA
			KT_7-45H	KT7-25-CA
	Screw Adaptor <ul style="list-style-type: none"> For screw fixing of motor protection circuit breaker 10 pieces per package (price per piece) 		KT_9-32S, KT_9-40H,	KT9-N45
			KT_7-45H	KT7-45-AS

1) Terminal Adaptors are supplied as standard on enclosed KT9 and CX7 starters, as well as, CLE-assembled products, assuring they can be used in Type E applications. Alternatively, compact busbar supply block KT9_-A2E or -A3E meet Type E requirements for terminal spacing.

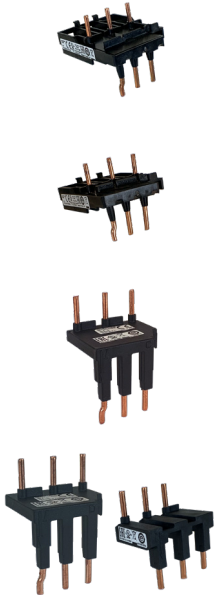
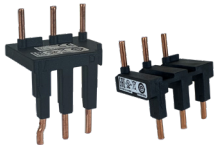
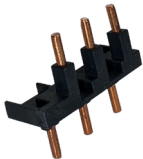
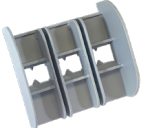
2) Minimum quantity is one package of 100. Price is each x 100 = total price.

Marking Systems

Accessory ¹⁾	Description	Pkg. Qty.	Catalog Number
	Label Sheet 1 sheet with 105 self-adhesive paper labels each, 6 x 17mm	1	CA7-FMS
	Marking Tag Sheet 1 sheet with 160 perforated paper labels each, 6 x 17mm. To be used with transparent cover	1	CA7-FMP
	Transparent Cover To be used with Marking Tag Sheets	100 ²⁾	CA7-FMC
	Tag Carrier For marking with marker cards and tags. Contact NHP for complete listing of available cards and tabs.	100 ²⁾	CA7-FMA2

Connecting Modules

(For connecting KTA7, KTB7 or KTC7 to CA8, CA7 AC coil, or CA7 Electronic DC coil contactors)

Module	Type	Description	For Connecting	Catalog Number
	ECO Connection Module 12A (IEC) , 11A (UL)	<ul style="list-style-type: none"> For DOL and reversing starters Eco-starters mount on single DIN Rail(KT_9 on DIN Rail) Electrical and mechanical interconnection of KT_9 and CA8 contactors 	KT_9-32S to CA8	KT9-32S-PEK12
	ECO Connection Module 25A (IEC) , 22A (UL)	<ul style="list-style-type: none"> Eco-starters mount on single DIN Rail (KT_9 on DIN Rail) Electrical and mechanical interconnection of KT_9 MPCB and CA7 (with AC coils or 24V DC electronic coils) contactors 	KT_9-32S to CA7-9...23	KT9-32S-PEC23
			KT_9-40H to CA7-9...23	KT9-40H-PEC23
	ECO Connection Module 38A (IEC) , 34A (UL)	<ul style="list-style-type: none"> Eco-starters mount on single DIN Rail (KT_9 on DIN Rail) Electrical and mechanical interconnection of KT_9 MPCB and CA9 (with AC coils or 24V DC electronic coils) contactors 	KT_9 -40H to CA7-30...37	KT9-40H-PEC37
	ECO Connection Module KT9...-PNC23 25A (IEC), 24A (UL) KT9...-PNC37 38A (IEC), 34A (UL)	<ul style="list-style-type: none"> Contactor and MPCB MUST BE mounted separately on (2) DIN Rails Electrical interconnection of KT_9 and CA7 (with AC coils) 	KT_9-32S to CA7-9...23	KT9-32S-PNC23
			KT_9-40H to CA7-9...23	KT9-40H-PNC23
			KT_9-40H to CA7-30...37	KT9-40H-PNC37
	Connecting Modules — 25 and 45 A	<ul style="list-style-type: none"> Contactor and MPCB MUST BE mounted separately on (2) DIN Rails Electrical interconnection of KT_7-45H and CA7 (with AC coils) 	KT_7-45H to CA7-30...37	KT7-45H-PNC37
			KT_7-45H to CA7-43	KT7-45H-PNC43
			KT_7-45H to CA7-30...43	KT7-45H-PSC43
	Spacing Adapter	<ul style="list-style-type: none"> Required for self-protected combination motor controller (Type E) applications of Bul. KT_9-32S/40H, and KT_7-40H MPCBs'. Not for use with bus bars. 	KT_9-32S, KT_9-40H	KT9-40-TE
			KT_7-45H	KT7-45-TE

1) Terminal Adaptors are supplied as standard on enclosed KT9 and CX7 starters, as well as, CLE- assembled products, assuring they can be used in Type E applications. Alternatively, compact busbar supply block KT9-...-A2E or -A3E meet Type E requirements for terminal spacing.

2) Minimum quantity is one package of 100. Price is each x 100 = total price.

Compact Busbar System for KT_9 Motor Controller¹⁾

Accessory	Description	For Use With	Catalog Number
	<p>Compact Busbar — 45 mm Spacing (Rated 64 A)</p> <ul style="list-style-type: none"> • For use with front-mounted auxiliary contact on KT_9 Motor Controllers <ul style="list-style-type: none"> – Connects 2 Motor Controllers – Connects 3 Motor Controllers – Connects 4 Motor Controllers – Connects 5 Motor Controllers 	KTA9-32S, KT_9-40H	KT9-40-DB-45-2 KT9-40-DB-45-3 KT9-40-DB-45-4 KT9-40-DB-45-5
	<p>Compact Busbar — 54 mm Spacing (Rated 64 A)</p> <ul style="list-style-type: none"> • For use with side-mounted auxiliary contact on KT_9 Motor Controllers <ul style="list-style-type: none"> – Connects 2 Motor Controllers – Connects 3 Motor Controllers – Connects 4 Motor Controllers – Connects 5 Motor Controllers 	KTA9-32S, KT_9-40H	KT9-40-DB-54-2 KT9-40-DB-54-3 KT9-40-DB-54-4 KT9-40-DB-54-5
	<p>Compact Busbar — 54mm Spacing (Rated 115 A)</p> <ul style="list-style-type: none"> • For use with front-mounted auxiliary contact on KT_7 Motor Controllers <ul style="list-style-type: none"> – Connects 2 Motor Controllers – Connects 3 Motor Controllers – Connects 4 Motor Controllers 	KT_7-45H	KT7-45-DB-54-2 KT7-45-DB-54-3 KT7-45-DB-54-4
	<p>Compact Busbar — 63 mm Spacing (Rated 115 A)</p> <ul style="list-style-type: none"> • For use with side-mounted auxiliary contact on KT_7 Motor Controllers <ul style="list-style-type: none"> – Connects 2 Motor Controllers – Connects 3 Motor Controllers – Connects 4 Motor Controllers 	KT_7-45H	KT7-45-DB-63-2 KT7-45-DB-63-3 KT7-45-DB-63-4
	<p>Top Hat Rail Adapter — 10 mm</p> <ul style="list-style-type: none"> • Adjust the depth of the KTA9-32S to the KT_9-40H • Allows the use of compact busbars across both frame sizes • Must be ordered in multiples of 10 • 10 pieces/packages 	KTA9-32S	KT9-KBH
	<p>Feeder Block for Compact Busbar</p> <ul style="list-style-type: none"> • Supply of compact busbars • Increases terminal capacity 	KTA9-32S	KT9-40-A2E
		KT_7-45H	KT7-45-A2E
	<p>Feeder Terminal for Compact Busbar</p> <ul style="list-style-type: none"> • For supply of compact busbars • Top feed — overlaps compact busbar • Meets UL Type E spacing requirements 	KTA9-32S, KT_9-40H	KT9-40-A3E
		KT_7-45H	KT7-45-A3E
	<p>Terminal Cover</p> <ul style="list-style-type: none"> • For covering of unused compact bus bar terminals • IP2X finger protection • Must be ordered in multiples of 10 • 10 pieces/pkg 	KT9-40-DB	KT9-40-DBA
		KT7-45-DB	KT7-45-DBA

¹⁾ UL Approved (File #E33916); CSA Approved (File #13908).

Product Migration

Why Upgrade or Migrate

With the launch of the new KT9 Motor Protection Circuit Breaker, Sprecher + Schuh have announced the discontinuation of the existing KT_7 (25S/32S and 25H/32H-frame) Products with short migration time line (Discontinuation date of ~March 2022).

NHP will continue to serve our customers with the balance of the KT_7 that is 45H frame up to 45A.

Mitigate and Eliminate the Risks of Obsolescence

Sprecher + Schuh understands that your Motor Protection Circuit Breakers are critical assets in your motor control system, and we support that by providing you with the latest technology to maximise your investment. New technologies can improve and extend the operation of existing equipment and provide an immediate boost to productivity. By migrating from your legacy KT7 product to new KT9 Motor Protection Circuit Breakers, you can help to decrease downtime and optimise operations well into the future.

NHP will help you to meet this demand to innovate by proactively planning and managing your transition every step of the way to help you get the highest possible return on your motor control investment.



Obsolete KT7



KT9 series

Frequently Asked Questions

Are KT7 and KT9 dimensions same and will I need to change my drawings for mounting?

KT9 device height and depth are different but width is same so replacement should be easier. Please see CAD drawings for further information.

Are the auxiliaries and accessories same as KT7?

KT9 auxiliaries and accessories are different than KT7. Please refer to migration tables for replacement part numbers.

Are connecting modules for KT9 to Sprecher + Schuh contactor product lines available?

Yes, we have various types and ratings of connecting modules available for connecting KT9 with CA7 and CA8 contactors.

What to do if I am using KT7 F frame size?

KT7 F frame is not being discontinued so please continue using KT7 F frame devices.

Can I replace one KT7 in existing panel with KT9 when KT7 are installed with Compact busbars (KT7--DB)?**

KT7 and KT9 terminal heights are different so KT7 cannot be replaced directly when installed with line-side compact busbars (KT7-**-DB).

Can we use the KT7 F Frame with KT9 on the same busbars as it is possible with the KT7?

No, KT7 F frame cannot be used in line up with KT9 due to terminal height difference.

Are external door handles same for KT7 and KT9?

External handles KT9-HTN and KT9-HTRY looks like KT7 handles but there are small differences so suggest applying new handles. KT9 SB & SY are same as existing with new catalog ID.



Comparison Guide

This comparison guide is intended to provide an overview of the features available with the existing Series KT7 and KT5 offerings along with the new Series KT9 products.

Series	KT5	KT_7-25S KT_7-32S	KTA9-32S	KT_7-25H KT_7-32H	KT_9-40H	KT_7-45H
Frame size	–	C Frame	C Frame	D Frame	D Frame	F Frame
Dimensions (W x H x D) (mm)	45 x 90 x 85.5	45 x 92 x 75	45 x 96 x 84	45 x 92 x 85	45 x 96 x 94	54 x 111 x 115
Current range (A)	0.1 - 32	0.1 - 32	0.1 - 32	1.6 - 32	0.4 - 40	6.3 - 45
SCCR @ 480V (kA)	18-30	25-65	30-65	30-65	30-50-65	65
SCCR @ 400V (kA)	15-50-100	15-65-100	15-65-100	50-65-100	50-65-100	65-100
Short Circuit Protection	✓	✓	✓	✓	✓	✓
Overload Protection	✓	✓	✓	✓	✓	✓
Overload Trip Class	10A	10A	10A	10A	10A	10A
Phase Loss Sensitivity	✓	✓	✓	✓	✓	✓
Short Circuit Indication	✗	✓	✓	✓	✓	✓
Lockable Knob	✓	✓	✓	✓	Standard	✓
Compatible at output of VFD	✗	✗	✗	✓	✓	✓
MCP Version, High Inrush Version	✗	✓	✗	✓	✓	✓

KT7 to KT9 Catalog Number Conversion

KTA7-25S/32S Existing	KTA9-32S New product
KTA7-25S-0.16A	KTA9-32S-0.16A
KTA7-25S-0.25A	KTA9-32S-0.25A
KTA7-25S-0.4A	KTA9-32S-0.40A
KTA7-25S-0.63A	KTA9-32S-0.63A
KTA7-25S-1A	KTA9-32S-1.0A
KTA7-25S-1.6A	KTA9-32S-1.6A
KTA7-25S-2.5A	KTA9-32S-2.5A
KTA7-25S-4A	KTA9-32S-4.0A
KTA7-25S-6.3A	KTA9-32S-6.3A
KTA7-25S-10A	KTA9-32S-10A
KTA7-25S-16A	KTA9-32S-16A
KTA7-25S-20A	KTA9-32S-20A
KTA7-25S-25A	KTA9-32S-25A
KTA7-32S-29A	KTA9-32S-29A
KTA7-32S-32A	KTA9-32S-32A

KTC7 High Inrush version	KTC9 High Inrush version
KTC7-25S-0.16A	KTC9-40H-0.16A
KTC7-25S-0.25A	KTC9-40H-0.25A
KTC7-25S-0.4A	KTC9-40H-0.40A
KTC7-25S-0.63A	KTC9-40H-0.63A
KTC7-25S-1A	KTC9-40H-1.0A
KTC7-25S-1.6A	KTC9-40H-1.6A
KTC7-25S-2.5A	KTC9-40H-2.5A
KTC7-25S-4A	KTC9-40H-4.0A
KTC7-25S-6.3A	KTC9-40H-6.3A
KTC7-25S-10A	KTC9-40H-10A
KTC7-25S-16A	KTC9-40H-16A
KTC7-25H-16A	-
KTC7-25H-20A	KTC9-40H-20A
-	KTC9-40H-25A

KTA7-25H/32H Existing	KTA9-40H New product
-	KTA9-40H-0.63A
-	KTA9-40H-1.0A
-	KTA9-40H-1.6A
KTA7-25H-2.5A	KTA9-40H-2.5A
KTA7-25H-4A	KTA9-40H-4.0A
KTA7-25H-6.3A	KTA9-40H-6.3A
KTA7-25H-10A	KTA9-40H-10A
KTA7-25H-16A	KTA9-40H-16A
KTA7-25H-20A	KTA9-40H-20A
KTA7-25H-25A	KTA9-40H-25A
KTA7-32H-29A	KTA9-40H-29A
KTA7-32H-32A	KTA9-40H-32A
-	KTA9-40H-36A
-	KTA9-40H-40A
KTV7-25H-1.6A	KTV9-40H-1.6A
KTV7-25H-2.5A	KTV9-40H-2.5A
KTV7-25H-4A	KTV9-40H-4.0A
KTV7-25H-6.3A	KTV9-40H-6.3A
KTV7-25H-10A	KTV9-40H-10A
KTV7-25H-16A	KTV9-40H-16A
KTV7-25H-20A	KTV9-40H-20A
KTV7-25H-25A	KTV9-40H-25A
KTV7-32H-29A	KTV9-40H-29A
KTV7-32H-32A	KTV9-40H-32A
-	KTV9-40H-36A
-	KTV9-40H-40A

KTB7 MCP version	KTB9 MCP version
KTB7-25S-0.16A	KTB9-40H-0.16A
KTB7-25S-0.25A	KTB9-40H-0.25A
KTB7-25S-0.40A	KTB9-40H-0.40A
KTB7-25S-0.63A	KTB9-40H-0.63A
KTB7-25S-1.0A	KTB9-40H-1.0A
KTB7-25S-1.6A	KTB9-40H-1.6A
KTB7-25S-2.5A	KTB9-40H-2.5A
KTB7-25H-2.5A	-
KTB7-25H-4A	KTB9-40H-4.0A
KTB7-25H-6.3A	KTB9-40H-6.3A
KTB7-25H-10A	KTB9-40H-10A
KTB7-25H-16A	KTB9-40H-16A
-	KTB9-40H-20A
KTB7-25H-25A	KTB9-40H-25A
KTB7-32H-32A	KTB9-40H-32A
-	KTB9-40H-36A
-	KTB9-40H-40A

Auxiliary Contacts

KT7	KT9	Functional options
KT7-PE1-01	KT9-PE1-11	–
KT7-PE1-02	#N/A	KT9-PA1-02
KT7-PE1-10	KT9-PE1-10	–
KT7-PE1-11	KT9-PE1-11	–
KT7-PE1-20	KT9-PE1-20	–
KT7-PEF1-S10/N01	KT9-PEF1-S10N01	–
KT7-PEF1-S10/N10	KT9-PEF1-S10N10	–
KT7-PA1-02	KT9-PA1-02	–
KT7-PA1-11	KT9-PA1-11	–
KT7-PA1-20	KT9-PA1-20	–
KT7-PAF1-M11	#N/A	KT9-PEF1-S10N01
KT7-PAF1-S01/M01	#N/A	–
KT7-PAF1-S01/M10	#N/A	KT9-PEF1-S01N10
KT7-PAF1-S10/M01	#N/A	–
KT7-PAF1-S10/M10	#N/A	KT9-PEF1-S10N10

Shunt Trip Release

KT7	KT9
KT7-AA-240V	KT9-AA-260V
KT7-AA-480V	KT9-AA-480V
KT7-AA-120V	KT9-AA-120V
KT7-AA-230V	KT9-AA-230V
KT7-AA-208V	#N/A
KT7-AA-24V	KT9-AA-24V
KT7-AA-28V	
KT7-AA-460V	KT9-AA-400V
KT7-AA-277V	KT9-AA-277V
KT7-AA-600V	#N/A
KT7-AA-24D	KT9-AA-24D

Undervoltage Release

KT7	KT9
KT7-UA-240V	KT9-UA-260V
KT7-UA-480V	KT9-UA-480V
KT7-UA-120V	KT9-UA-120V
KT7-UA-230V	KT9-UA-230V
KT7-UA-208V	#N/A
KT7-UA-24V	KT9-UA-24V
KT7-UA-28V	
KT7-UA-460V	KT9-UA-400V
KT7-UA-277V	#N/A
KT7-UA-600V	#N/A
KT7-UA-110V	KT9-UA-120V

Other Installation accessories

KT7	KT9
KT7-25-CA	KT9-CA
KT7-HTFCN	KT9-HTFCN
KT7-HTFCRY	KT9-HTFCRY
KT7-HTN	KT9-HTN
KT7-HTC	KT9-DNC
KT7-HTRY	KT9-HTRY
KT7-HT	KT9-HT
KT7-HTL	KT9-HTL
KT7-KN1	KT9-KN
KT7-KRY1	KT9-KRY
KT7-DS	KT9-M3
KT7-45-AS	KT9-N45
KT7-SHS	KT9-SHS
KT7-SB	KT9-SB
KT7-SY	KT9-SY
KT7-S1	KT9-S1
KT7-S2	KT9-S2
KBH2	KT9-KBH
–	KT7-HTS
KT7-25-TE1	KT9-40-TE

Busbars & Connecting modules

KT7	KT9
KT7-32-DB-45-2	KT9-40-DB-45-2
KT7-32-DB-45-3	KT9-40-DB-45-3
KT7-32-DB-45-4	KT9-40-DB-45-4
KT7-32-DB-45-5	KT9-40-DB-45-5
KT7-32-DB-54-2	KT9-40-DB-54-2
KT7-32-DB-54-3	KT9-40-DB-54-3
KT7-32-DB-54-4	KT9-40-DB-54-4
KT7-32-DB-54-5	KT9-40-DB-54-5
KT7-25-A2E	KT9-40-A2E
KT7-32-DBA	KT9-40-DBA
KT7-25-A3E	KT9-40-A3E
KT7-32-A3E	
KT7-25S-PEC23	KT9-32S-PEC23
KT7-25S-PEC23A	#N/A
KT7-25S-PEK12	KT9-32S-PEK12
KT7-25S-PKC23	KT9-32S-PNC23 + KT9-32S-PSC23
KT7-25S-PNC23	KT9-32S-PNC23
KT7-25S-PSC23	KT9-32S-PSC23
KT7-25H-PEC23	KT9-40H-PEC23
KT7-25H-PNC23	KT9-40H-PNC23
KT7-45H-PNC37	KT9-40H-PNC37








General data

Attribute			KT9-32S	KT9-40H	KT7-45H
Standards compliance	IEC		IEC/EN 60947-2, IEC/EN 60947-4-1		
	cULus		UL 60947-4-1, CSA C22.2, No. 60947-4-1		
Certifications	Regional		CCC, EAC, CE, IEC, cULus Listed		cULus Listed, CCC, EAC, CE
Rated Insulation Voltage Ui	IEC	[V]	690		
	UL/CSA	[V]	600		
Rated Impulse Withstand Voltage Uimp	Pollution degree		3		
	Main circuits Uimp /Overvoltage Category		6 kV/III, 8 kV (Disconnect)		
	Auxiliary circuits Uimp /Overvoltage Category		6 kV/III		
Rated Frequency		[Hz]	45-65		
Utilization Category	IEC 60947-2 (Circuit breaker)		A		
	IEC 60947-4-1 (Motor starter)		AC-3		
Life Span	Mechanical	[operations]	100,000	30,000	
	Electrical (Ie max.)	[operations]	100,000	30,000	
Switching Frequency		[operations/hours]	Max. 25		
Ambient Temperature	Storage	[°C (°F)]	-40...+85°C (-40-185°F)		
	Operation	[°C (°F)]	-25...+70°C (-13-158°F)		
Climatic resistance	Operating Humidity/Moisture heat (60068-2-3)		5...95% Non-condensing		
Site Altitude		[m]	To 2000 N.N. (6561 ft)		
Protection Class			IP2X from all directions		
Resistance to Shock, Transport (60068-2-27)	ON		15 G/11 ms		
	OFF		30 G/11 ms		
Resistance to Vibration, Operation (60068-2-6)			5 G		
Rated Thermal Current Ith	Up to 40 °C (104 °F) ambient temperature	[A]	0.1...32	0.63...40	6.3...45
	Up to 60 °C (140 °F) ambient temperature	[A]	0.1...32	0.63...40	6.3...45
Rated Supply Current Ie		[A]	0.1...32	0.63...40	6.3...45
Dependence on Temperature	40 °C (104 °F)	[A]	No reduction		
	50 °C (122 °F)	[A]	No reduction		
	60 °C (140 °F)	[A]	No reduction		
	70 °C (158 °F)	[A]	15% current reduction of the upper rated current Ie		
Overload Protection Characteristics			IEC 60947-4-1 Motor protection (except Cat. Nos. KTB9-40H, KTB7-45H)		
Ambient Temperature Compensation		[°C (°F)]	-25...+60 (-13...+140)		
Phase-loss Protection			Differential release		
Trip class			10 (except Cat. Nos. KTB9-40H, KTB7-45H) fixed setting		
Magnetic Release			Fixed setting		
Release current (±20%)	For KTA9, KTB9	[A]	14 x Ie max. ¹⁾		13 x Ie max
	For KTA9, KTB9 36A, 40A	[A]	12 x Ie max. ¹⁾		~
	For KTC9	[A]	18...22 x Ie max. ²⁾		
Total Power loss Pv	Circuit Breaker at rated load/operating temp.	[W]	4...11	4...14	7...22
Main Disconnect Switch Application			Yes, with accessories		
Application Conditions	KT_9-40H...36A, -40A: Suitable for continuous operation at 90% current rating at 480V only if used in a minimum enclosure size of 250 x 175 x 150 mm (10 x 7 x 6 in).				
	For utilization outside North America, assemblies (of products) shall comply to the IEC 61439-1 requirements.				
	KT9 manual starters are intended for use in closed areas without hazardous operating conditions such as dust or explosive or corrosive gases. Enclosures of appropriate manner need to be in place to protect devices in such environments.				

1) Ie max. = maximum values of setting ranges fixed magnetic setting for KTV9-40H; see ratings.

2) Ie max. = maximum values of setting ranges; see ratings.

MPCB Connecting Characteristics




Connection		No. of conductors	KTA9-32S	KT_9-40H	KT_7-45H
Power Terminals					
Terminal Type			Screw Clamp up to 16 A, M4	Screw Clamp greater than 16 A, M4	
Screwdriver			Pozidriv No.2/Blade No.3	Pozidriv No.2/Blade No.3	Pozidrive No. 2/Blade No. 3
Solid or stranded 	1 conductor	1...6 mm ²	1...6 mm ²	1.5...10 mm ²	2.5...25 mm ²
	2 conductor	1...2.5 mm ² 2.5...6 mm ²	1...2.5 mm ² 2.5...6 mm ²	1.5...4 mm ² 4...10 mm ²	2.5...25 mm ²
Flexible with ferrule (end sleeve) 	1 conductor	1...6 mm ²	1...6 mm ²	1.5...10 mm ²	2.5...25 mm ²
	2 conductor	1...2.5 mm ² 2.5...4 mm ²	1...2.5 mm ² 2.5...4 mm ²	1.5...4 mm ² 4...10 mm ²	2.5...25 mm ²
Finely stranded 	1 conductor	1.5...6 mm ²	1.5...6 mm ²	2.5...10 mm ²	16...25 mm ²
	2 conductor	1.5...4 mm ² 2.5...6 mm ²	1.5...4 mm ² 2.5...6 mm ²	2.5...6 mm ² 4...10 mm ²	16...25 mm ²
Cross section per UL/CSA solid, stranded 	1 conductor	No. 14...10 AWG	No. 14...10 AWG	No. 14...8 AWG	No.14...8
	2 conductor	No. 14...10 AWG	No. 14...10 AWG	No. 14...10 AWG No. 12...8 AWG	No.14...8
Stripping length		1 conductor	10 mm (0.39 in.)	10 mm (0.39 in.)	10 mm (0.39 in.)
Tightening torque		[Nm]/[lb-in.]	2...2.5 / 18...22	2...2.5/18...22	3...3.5 / 27...30

Approval Comparison








	KTA9-32S	KT_9-40H	KT_7-45H
Features and Approvals			
Max. Current I _e	32 A	32 A	45 A
Current Rating	0.1...32 A	0.63...40A	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)		✓ (KTV9)	✓
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	✓ (up to 25 A)	✓ (up to 25 A except KTV9)	✓
ATEX (IEC60079-14)	✓ (up to 25 A)	✓ (up to 25 A except KTV9)	✓
CCC	✓	✓	✓
Accessories			
External Rotary Operator	✓	✓	✓
Auxiliary Contacts	✓	✓	✓
Trip Indicator Contacts	✓	✓	✓


Auxiliary Contact Specifications – for KTA9-32S... and KT_9-40H devices

Attribute			Front-mounted Auxiliary Contacts Cat. Nos. KT9-PE1, -PEF1/ -PEF1-S10M10	Right Side-mounted Auxiliary Contacts Cat. No. KT9-PA1
Rated Thermal Current I_{th}	at 40°C (104°F) ambient temperature	[A]	5	10
	at 60°C (140°F) ambient temperature	[A]	4	6
Back-up Fuses gG, gL		[A]	10	10
General Use current		[A]	5	10
Rated insulation voltage U_i	IEC	[V]	250	690
	UL/CSA	[V]	240	600
Contact rating code designation (UL/CSA)		AC	B300	A600
		DC	R300	Q600
Rated Supply Current I_e	AC-15	24V [A]	4	6
		120V [A]	3	5
		240V [A]	1.5	3
		415V [A]	-	2
		690V [A]	-	1
	DC-13	24V [A]	1.2	2
		125V [A]	0.22	0.55
		250V [A]	0.11	0.27
		400V [A]	-	0.15
		500V [A]	-	0.13
Type of Terminals				
Recommended Screwdriver			Pozidrive No. 2/Blade No. 3	Pozidrive No. 2/Blade No. 3
Flexible with insulated ferrule		1 or 2 conductors	0.5...1.5 mm ² /No. 18...14 AWG	0.5...2.5 mm ² /No. 18...14 AWG
Flexible		1 or 2 conductors	0.5...1.5 mm ² /No. 18...14 AWG	0.75...2.5 mm ² /No. 18...14 AWG
Stranded per UL/CSA		1 or 2 conductors	0.5...1.5 mm ² /No. 18...14 AWG	0.75...2.5 mm ² /No. 18...14 AWG
Solid		1 or 2 conductors	0.5...1.5 mm ² /No. 18...14 AWG	0.5...2.5 mm ² /No. 18...14 AWG
Conductor steps			Max 2 conductor steps allowed	Max 2 conductor steps allowed
Tightening torque			1...1.2 N•m/8.9...10.6 lb•in	1...1.2 N•m/8.9...10.6 lb•in 1...1.2






Auxiliary Contact Specifications – for KT_7-45H... devices

Attribute			Front-mounted Auxiliary Contacts Cat. Nos. 140M-C-AFA..., 140M-C-AFAR...	Right Side-mounted Auxiliary Contacts Cat. Nos. 140M-C-ASA..., 140M-C-ASAR...
Rated Thermal Current I_{th}	at 40°C (104°F) ambient temperature	[A]	5	10
	at 60°C (140°F) ambient temperature	[A]	4	6
Back-up Fuses gG, gL		[A]	10	10
Contact rating code designation (UL/CSA)		AC	B300	A600
		DC	R300	Q600
Rated Supply Current I_e	AC-15	24V [A]	4	6
		120V [A]	3	5
		240V [A]	1.5	3
		415V [A]	-	2
		690V [A]	-	0.7
	DC-13	24V [A]	2	2
		120V [A]	0.5	0.5
		240V [A]	0.25	0.25
		415V [A]	-	0.15
Type of Terminals				
Recommended Screwdriver			Pozidriv No. 2/Blade No.3	Pozidriv No. 2/Blade No.3
Flexible with insulated ferrule 	1 conductor		0.5...1.5 mm ²	0.5...2.5 mm ²
	2 conductor		0.75...1.5 mm ²	0.75...2.5 mm ²
Stranded per UL/CSA 	1 or 2 conductor		0.75...1.5 mm ² /No. 18...14 AWG	0.75...2.5 mm ² /No. 18...14 AWG
Solid 	1 or 2 conductor		0.75...1.5 mm ² /No. 18...14 AWG	0.75...2.5 mm ² /No. 18...14 AWG
Tightening torque			1...1.2 N•m/8.9...10.6 lb•in	1...1.2 N•m/8.9...10.6 lb•in

Undervoltage and Shunt Trip Specifications—For KTA9-32S... and KT_9-40H... device

			Undervoltage Trip for Left-Side Mounting Cat. Number KT9-UA-*	Shunt Trip for Left-Side Mounting Cat. Number KT9-AA-*	
Actuating Voltage			Pull-in	0.85...1.1 x Us	0.7...1.1 x Us
			Drop-out	0.7...0.35 x Us	0.7...1.1 x Us
Rated AC Control Voltage	KT9-UA-24V	50 Hz	24	-	
		60 Hz	28	-	
	KT9-UA-120V	50 Hz	110	-	
		60 Hz	120	-	
	KT9-UA-230V	50 Hz	220...230	-	
		60 Hz	-	-	
	KT9-UA-260V	50 Hz	-	-	
		60 Hz	240...260	-	
	KT9-UA-400V	50 Hz	380...400	-	
		60 Hz	440...460	-	
	KT9-UA-480V	50 Hz	415	-	
		60 Hz	480	-	
	KT9-AA-24V	50 Hz	-	24	
		60 Hz	-	24...28	
	KT9-AA-120V	50 Hz	-	110	
		60 Hz	-	120	
	KT9-AA-230V	50 Hz	-	220...230	
		60 Hz	-	-	
	KT9-AA-260V	50 Hz	-	-	
		60 Hz	-	240...260	
	KT9-AA-277V	50 Hz	-	240	
		60 Hz	-	277	
	KT9-AA-400V	50 Hz	-	380...400	
		60 Hz	-	440...460	
	KT9-AA-480V	50 Hz	-	415	
		60 Hz	-	480	
	On-time			Continuous duty	Continuous duty
	Coil consumption			8.5/8	8.5/8
4/2				4/2	
Rated DC Control Voltage	KT9-AA-24D		-	24	
	On-time		-	Max 5 s	
	Coil consumption	Pick-up	-	50	
Type of Terminals					
Recommended screwdriver			Pozidrive No. 2/Blade No. 3	Pozidrive No. 2/Blade No. 3	
Flexible with insulated ferrule		1 or 2 conductor	0.5...2.5 mm ² / No. 18...14 AWG	0.5...2.5 mm ² / No. 18...14 AWG	
Flexible		1 or 2 conductor	0.75...2.5 mm ² / No. 18...14 AWG	0.75...2.5 mm ² / No. 18...14 AWG	
Stranded per UL/CSA		1 or 2 conductor	0.75...2.5 mm ² / No. 18...14 AWG	0.75...2.5 mm ² / No. 18...14 AWG	
Solid		1 or 2 conductor	0.5...2.5 mm ² / No. 18...14 AWG	0.5...2.5 mm ² / No. 18...14 AWG	
Conductor steps			Max 2 conductor steps allowed	Max 2 conductor steps allowed	
Tightening torque			1...1.2 N•m/8.9...10.6 lb•in	1...1.2 N•m/8.9...10.6 lb•in	

Undervoltage and Shunt Trip Specifications– For KT_7-45H... devices

Attribute				Undervoltage Trip for Left-Side Mounting Cat. Number KT7-UA-*	Shunt Trip for Left-Side Mounting Cat. Number KT7-AA-*
Actuating Voltage	Pick-up		[V]	0.85...1.1 x Us	0.7...1.1 x Us
	Drop-out		[V]	0.7...0.35 x Us	0.7...1.1 x Us
Rated AC Control Voltage	Min	50 Hz	[V AC]	21	21
		60 Hz	[V AC]	24	24
		60 Hz	[V AC]	600	600
	On-time			Continuous duty	Continuous duty
	Coil consumption	Pick-up		8.5/8	8.5/8
Hold-in			4/2	4/2	
Type of Terminals					
Recommended Screwdriver				Pozidrive No. 2/Blade No. 3	Pozidrive No. 2/Blade No. 3
Flexible with insulated ferrule 	1 conductor			0.5...2.5 mm2	0.5...2.5 mm2
	2 conductors			0.75...2.5 mm2	0.75...2.5 mm2
Stranded per UL/CSA 	1 or 2 conductors			0.75...2.5 mm2/No. 18...14 AWG	0.75...2.5 mm2/No. 18...14 AWG
Solid 	1 or 2 conductors			0.75...2.5 mm2/No. 18...14 AWG	0.75...2.5 mm2/No. 18...14 AWG
Conductor steps				1.2...1.5 N·m/10.6...13.3 lb·in	1.2...1.5 N·m/10.6...13.3 lb·in

Time-Current Characteristic

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.

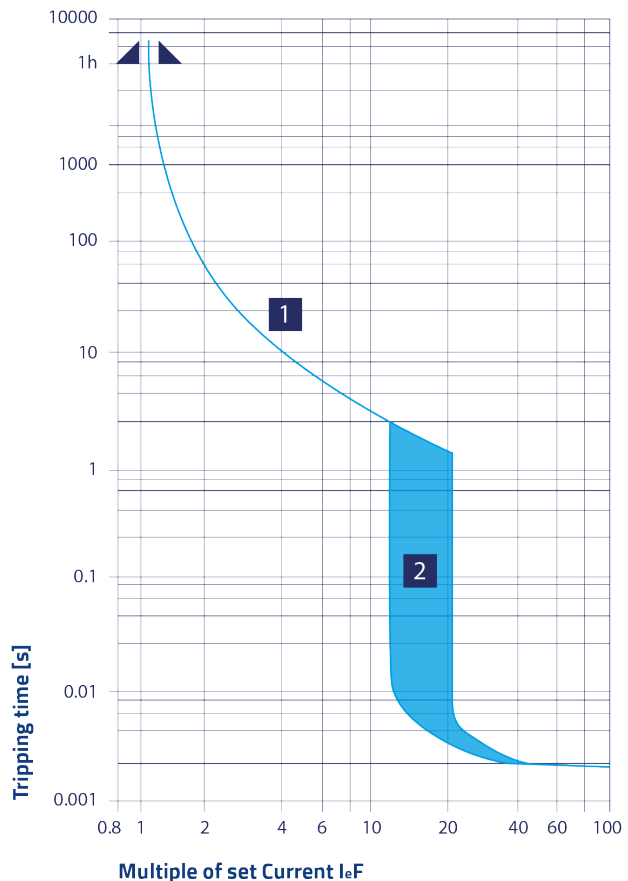
2. Magnetic Release Trip Current

The instantaneous magnetic trip has a fixed operating current setting. This corresponds to 13...14 times the maximum value of setting range (high inrush protection -20 x I_e maximum). At a lower overload setting the magnetic trip is correspondingly higher.

Current Setting I_{ef}

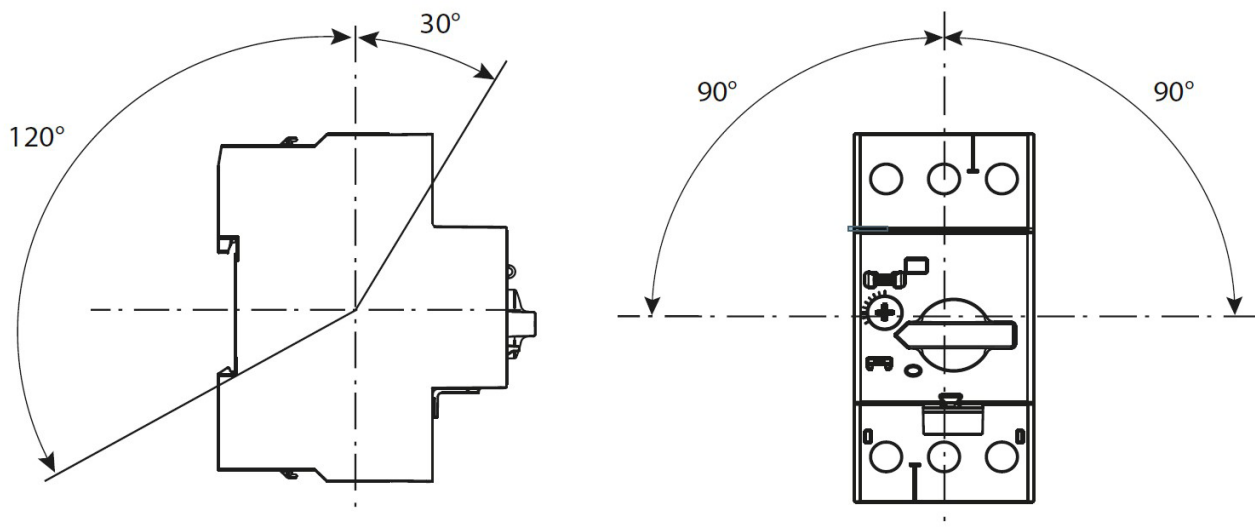
The overload trip corresponds to a thermal overload relay in a motor starter conforming to IEC 947-4-1. If a different value is prescribed (e.g., reduced I_e for cooling medium having a temperature higher than 40°C or a place of installation higher than 2000m above sea level), the setting current is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

KTA9 KTA7 Motor Protection (for KTV9, see ratings)

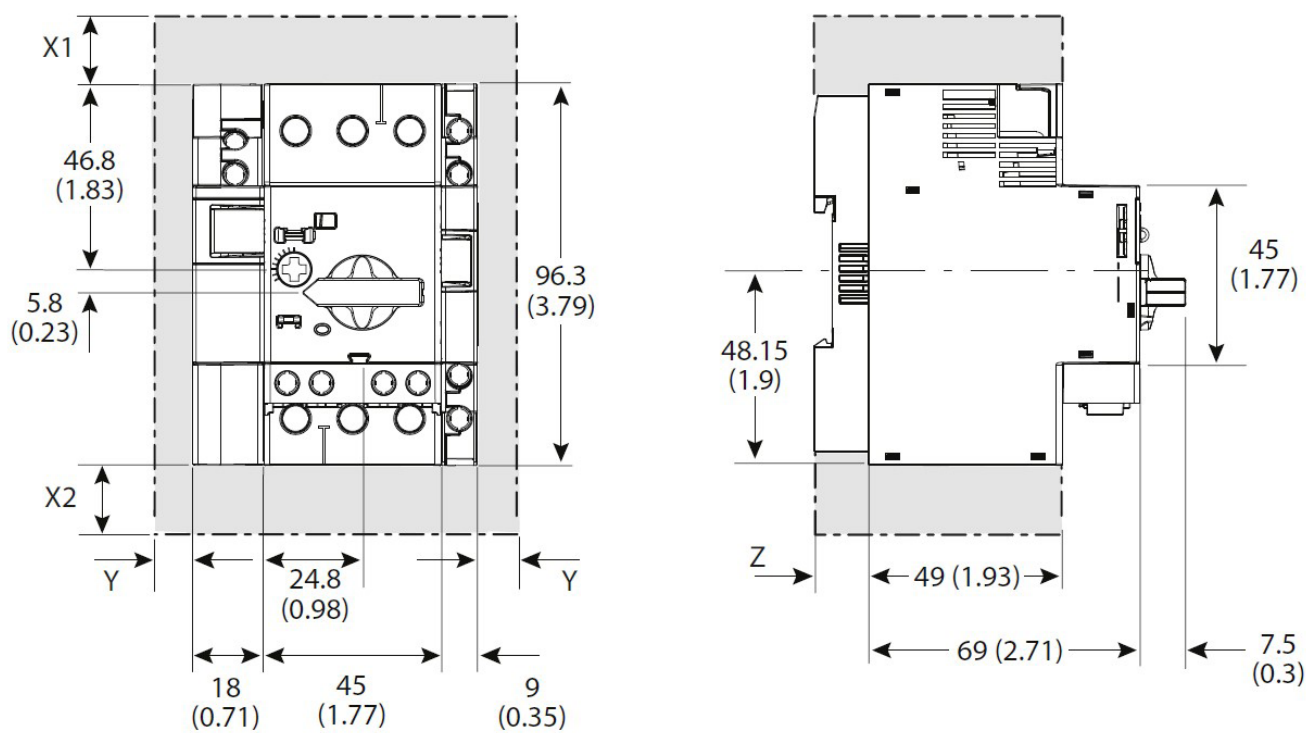


Approximate Dimensions

KT_9 Devices and Accessories – Mounting Orientation



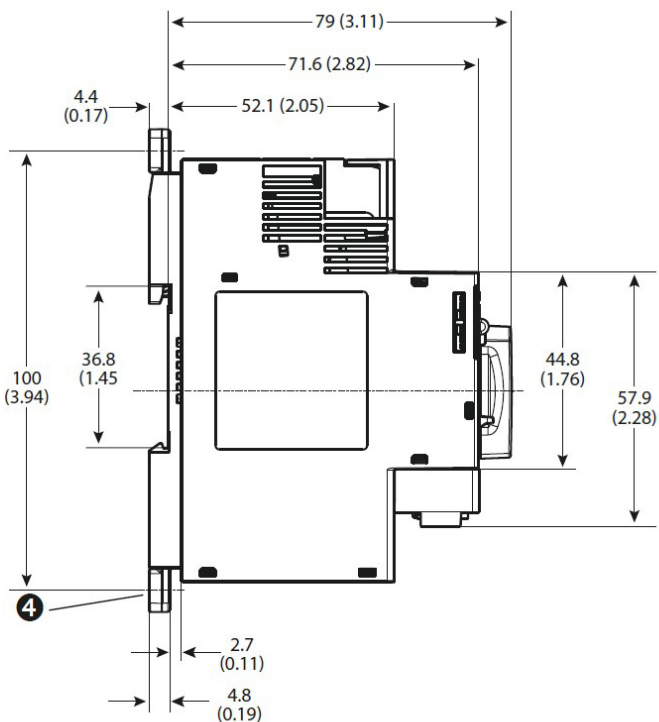
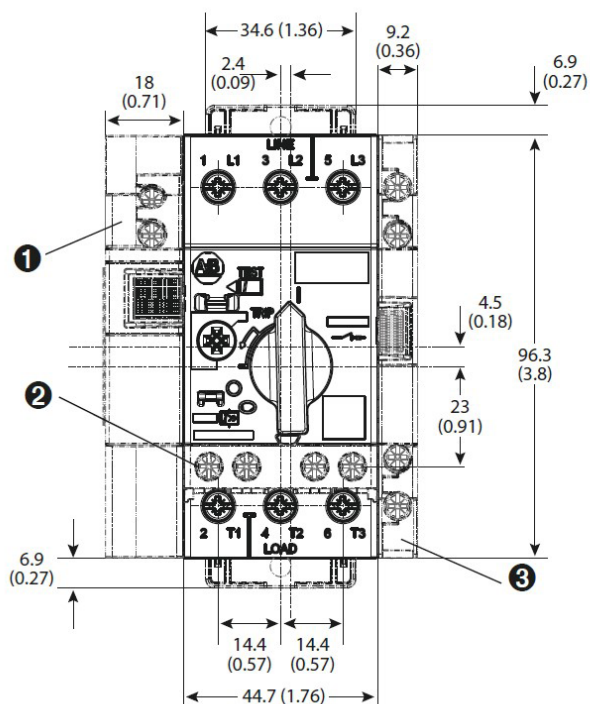
KT_9 Devices and Accessories – Mounting Orientation



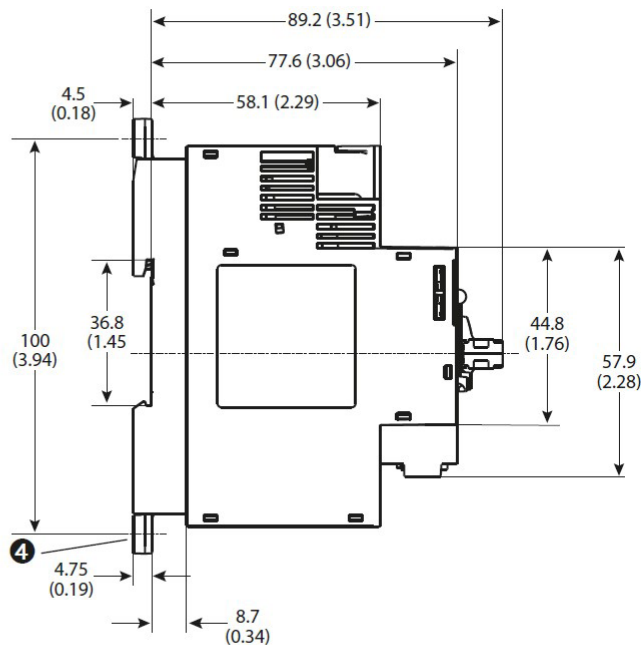
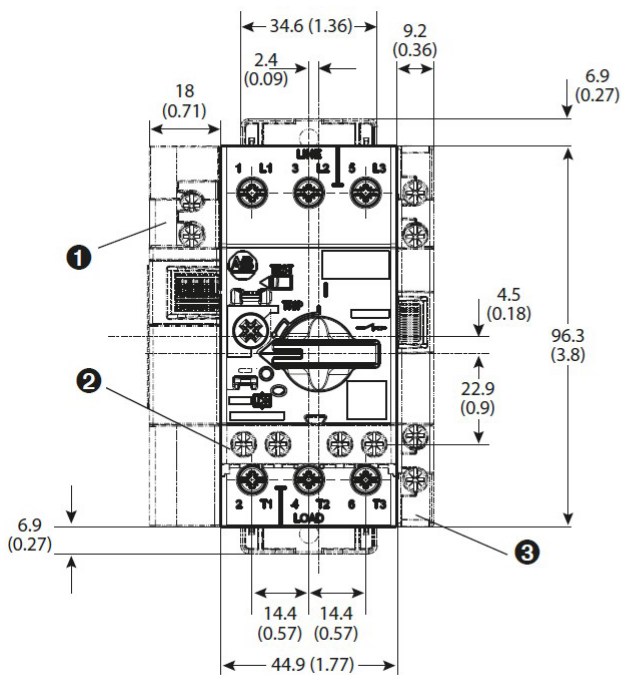
Frame Size	Voltage [V AC]	Minimum Distance to Grounded Parts or Walls [mm (in)]			Z
		X1	X2	Y	
KTA9-32S (C-Frame)	400	30 (1-3/16)	30 (1-3/16)	9 (23/64)	7.5 (19/64)
	500	30 (1-3/16)	30 (1-3/16)	9 (23/64)	
	690	50 (1-31/32)	50 (1-31/32)	30 (1-3/16)	
KT_9-40H (D-Frame)	400	30 (1-3/16)	30 (1-3/16)	9 (23/64)	13.5 (17/32)
	500	30 (1-3/16)	30 (1-3/16)	9 (23/64)	
	690	50 (1-31/32)	50 (1-31/32)	30 (1-3/16)	

1) A full size (8-1/2 x 11) set of "Maximum Cut-Off Current (Let-Thru Current)" and "Maximum Let-thru Energy (I2t)" curves for 400...415V, 500V and 690V can be downloaded from <http://www.sprecherschuh.com>.

**Motor Protection Circuit Breaker (C-Frame),
Cat. No. KTA9-32S...**

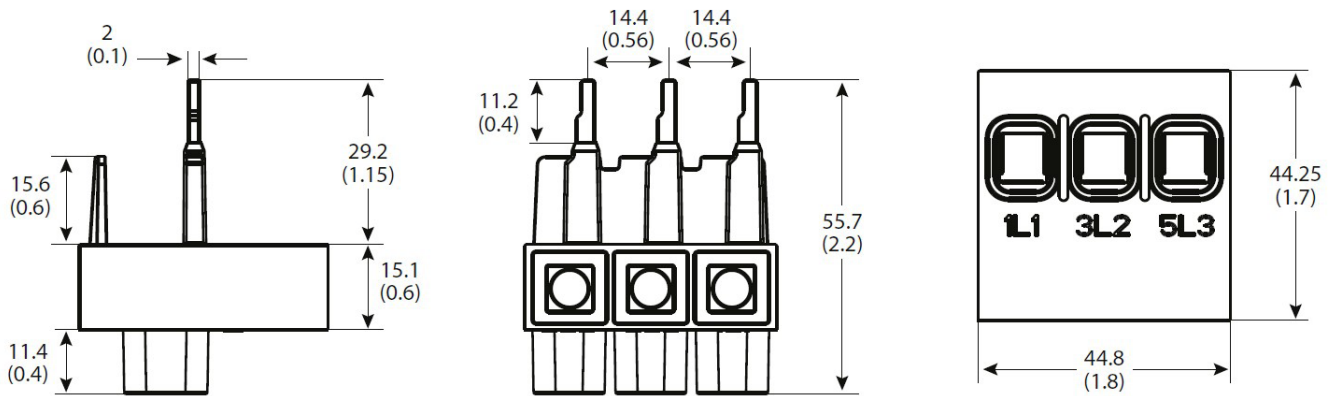


**Motor Protection Circuit Breaker (D-Frame),
Cat. No. KT_9-40H...**

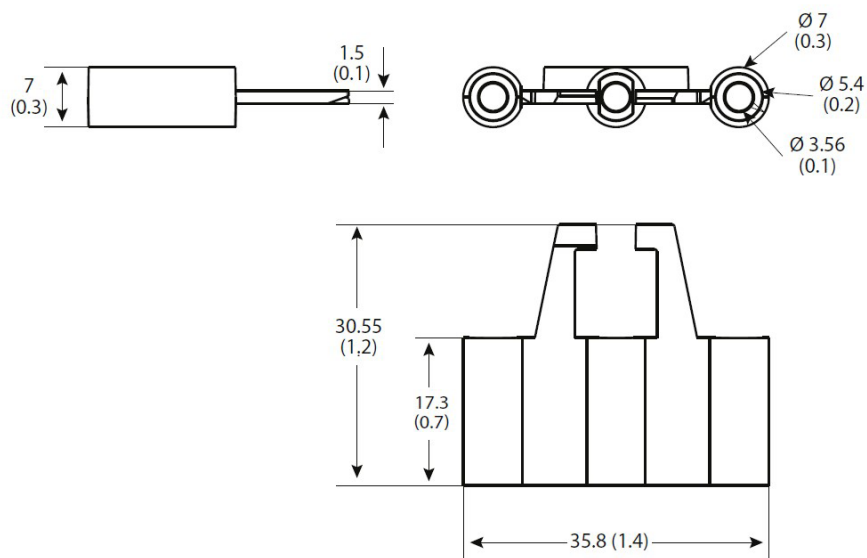


- 1) Undervoltage/shunt trip
- 2) Auxiliary contact (front mounted)
- 3) Auxiliary contact (side mounted)
- 4) Screw mounting adapter

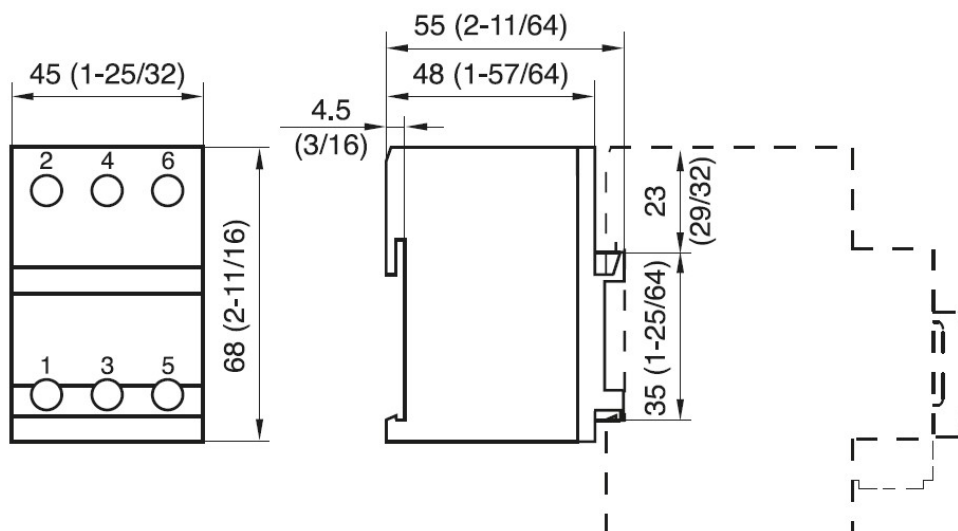
**Feeder Terminal for Compact Busbar,
Cat. No. KT9-40-A3E**



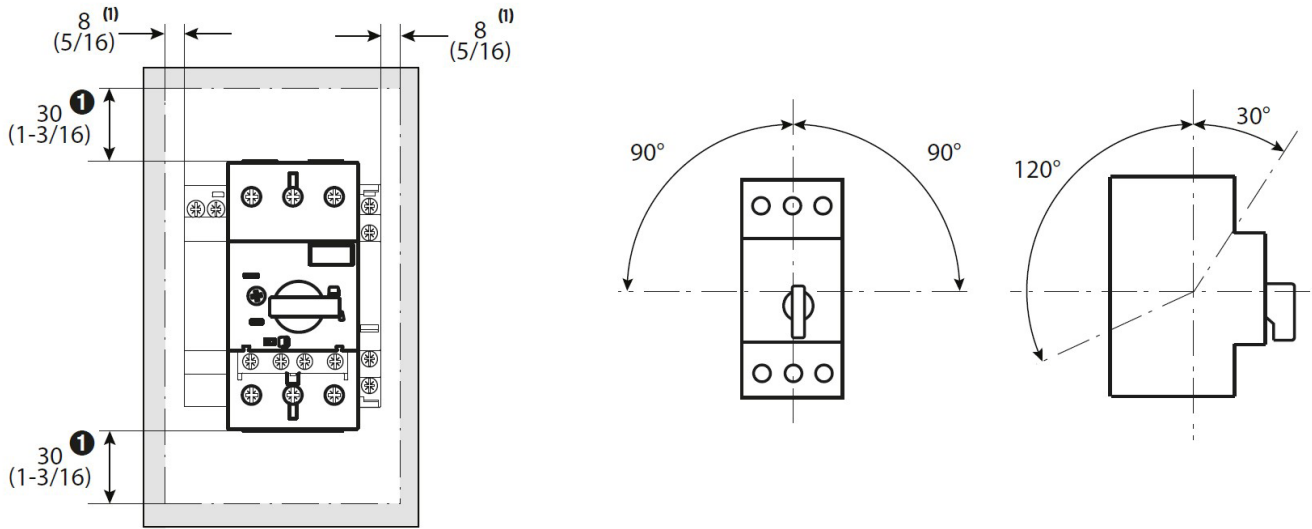
Terminal Cover, Cat. No. KT9-40-DBA



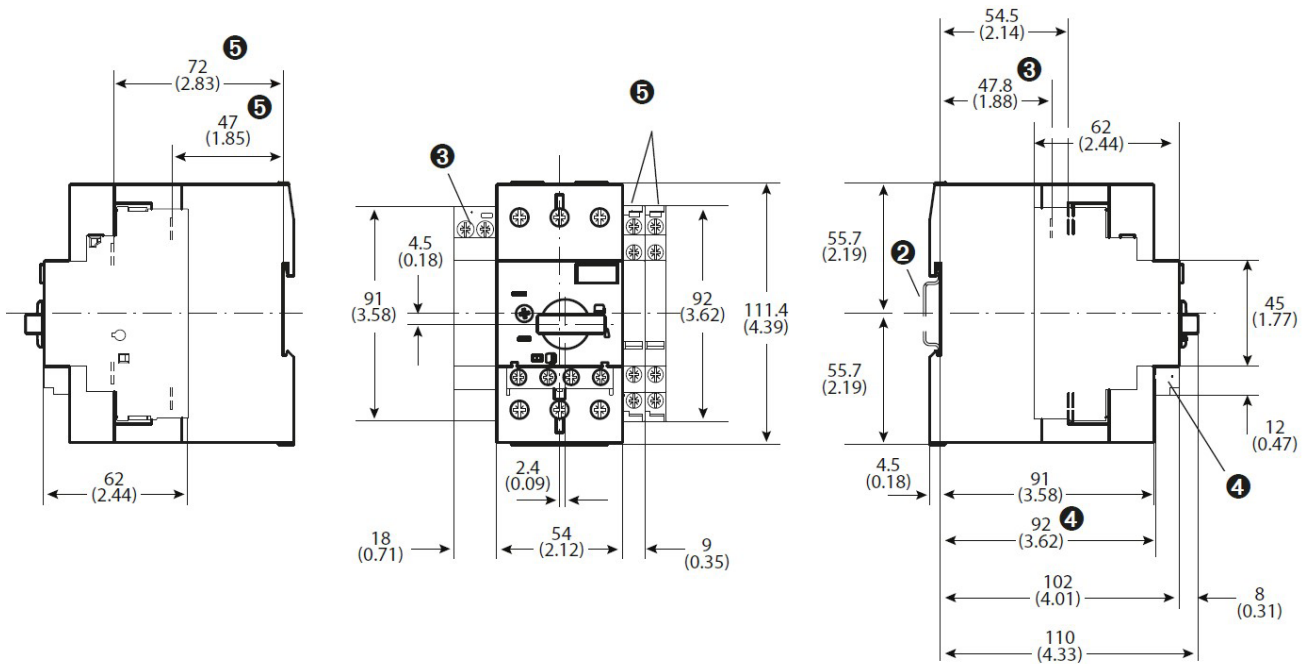
Supply Block, Cat. No. KT9-40-A2E



KT_7-45H Mounting Position / Safety Clearance



**Motor Protection Circuit Breaker (F-Frame),
Cat. No. Cat. No. KT_7-45H...**



- 1) Minimum distance to grounded parts or walls
- 2) Mounting on 35 mm DIN Rail
- 3) Undervoltage/shunt trip
- 4) Auxiliary contact (front mounted)
- 5) Auxiliary contact (side mounted) roltage/shunt trip



nhp.com.au
SALES 1300 NHP NHP
sales@nhp.com.au

nhpnz.co.nz
SALES 0800 NHP NHP
sales@nhp-nz.com

NHP Electrical Engineering Products

A.B.N. 84 004 304 812

© COPYRIGHT NHP 2022

38BCH 05/22