

Refer catalogue KT 7, SACS

NEW

Thermal and magnetic motor protection Standard range 0.1 to 25 Amps (90 x 45 x 69.5 mm)

Automatic
Type '2'
co-ordination



KTA 7-25S

Approx Motor kW @ 400/415 V	Thermal trip setting range [A]	Magnetic trip response current [A]	I _{cu} 400/415 volt [kA]	I _{cs} [kA]	Cat. No.
0.02	0.1...0.16	2.1	100	100	KTA 7-25S-0.16A
0.06	0.16...0.25	3.3	100	100	KTA 7-25S-0.25A
0.09	0.25...0.4	5.2	100	100	KTA 7-25S-0.4A
0.12...0.18	0.4...0.63	8.2	100	100	KTA 7-25S-0.63A
0.25	0.63...1.0	13	100	100	KTA 7-25S-1A
0.37...0.55	1.0...1.6	21	100	100	KTA 7-25S-1.6A
0.75	1.6...2.5	33	100	100	KTA 7-25S-2.5A
1.1...1.5	2.5...4.0	52	100	100	KTA 7-25S-4A
2.2	4.0...6.3	82	100	100	KTA 7-25S-6.3A
3.0...4.0	6.3...10	130	100	100	KTA 7-25S-10A
5.5... 7.5	10...16	208	50	50	KTA 7-25S-16A
7.5 ...10	14.5...20	260	15	15	KTA 7-25S-20A
11	18...25	325	15	15	KTA 7-25S-25A



KTA 7-25H

High performance range 1.6 to 25 Amps (90 x 45 x 79.5 mm)

0.75	1.6...2.5	33	100	100	KTA 7-25H-2.5A
1.1...1.5	2.5...4.0	52	100	100	KTA 7-25H-4A
2.2	4.0...6.3	82	100	100	KTA 7-25H-6.3A
3.0...4.0	6.3...10	130	100	100	KTA 7-25H-10A
5.5 ... 7.5	10...16	208	100	50	KTA 7-25H-16A
7.5 ...10	14.5...20	260	50	25	KTA 7-25H-20A
11	18...25	325	50	25	KTA 7-25H-25A



KTA 7-45H

High performance range 6.3 to 45 Amps (110 x 54 x 109.5 mm)

3.0...4.0	6.3...10	130	65	50	KTA 7-45H-10A
5.5 ... 7.5	10...16	208	65	50	KTA 7-45H-16A
7.5 ...10	14.5 ...20	260	65	50	KTA 7-45H-20A
7.5 ...10	18...25	325	65	50	KTA 7-45H-25A
15	23...32	416	65	50	KTA 7-45H-32A
18.5 ... 22	32...45	585	65	50	KTA 7-45H-45A

Notes: All KT 7 motor protection circuit breakers use common accessories.
240/415 V rated coils are suitable for use on 230/400 V in accordance with AS60038:2000.

KT 7 provides Automatic 'Type 2' co-ordination

Refer catalogue KT 7, SACS



KT 7 comes in two frame sizes



CA 7-43 and KTA 7-45 22 kW with type 2 co-ordination



Complete type '2' co-ordinated starter with connection links

The right breaker for all applications

The circuit breaker family consists of two basic frame sizes of 45 mm and 54 mm in three variations with different protection characteristics all covering currents up to 45 Amps.

- KTA 7 Motor protection circuit breaker
- KTB 7 Starter protection (magnetic only)
- KTC 7 Transformer & high inrush current motors

	Protection characteristic	
	Magnetic	Thermal
Motor KTA 7	13 x I _e	Yes
Starter KTB 7	13 x I _e	None
Transformer KTC 7	20 x I _e	Yes

Simplified assembly and stock

For the entire range, a common and complete array of accessories is available. Auxiliary contacts, trip contacts and voltage / under voltage release can be snapped on or built into the KT 7 devices without tools. The new circuit breakers follow consistently the ideas of the Advanced Control System (ACS). All components are designed for electrical and dimensional co-ordination which makes assembly extremely easy. Consistent 9 mm spacing simplifies planning and installation.

Tomorrow's technology today

A sophisticated construction and the latest technology of materials results in outstanding features and performance without the need for current limiters. High and effective current limiting and an extremely short drop out time produces an excellent short circuit breaking capacity. Combined with other ACS components, powerful load feeders are assembled in an economic way.

Type '2' co-ordination is automatic

Due to the high speed performance the circuit breakers are compatible electrically and mechanically with short circuit co-ordination Type '2' according to IEC 947-4. No oversizing of the contactor is required, therefore you save time in selection and planning with security in operation assured.

Clear visual and electrical signals

The rotary handle ensures a quick and secure recognition of the operating status. The jump mechanism has exactly defined operation modes Off, On and trip. Manipulation errors are almost impossible. To reset a trip contact, simply reset the circuit breaker. You will always see the real operating state of the load feeder represented. The various trip contacts allow optimal plant floor production by quickly detecting defective system parts. The unique front mounted trip contact saves valuable panel space. Also a red short circuit trip flag clearly shows the reason for trip.



OFF



ON



TRIPPED

Main features

Refer catalogue KT 7, SACS



Rotary door interlock extension handle



Shunt trip module

Undervoltage trip module



Padlockable handle



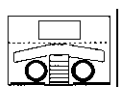
KT 7 - DS for 3 padlocks



Front mounted auxiliary contact



Compact busbar



KT7-25-S(H) 1... 6 mm



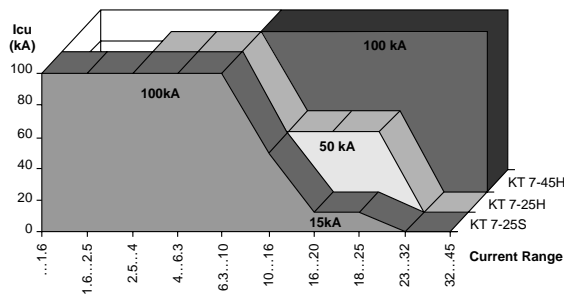
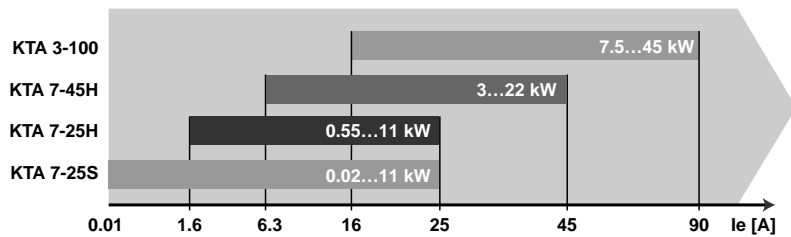
KT7-45-H 2.5... 50 mm

KT 7 has more advantages

- Standard and high breaking capacity up to 45 Amps
- No current limiters required
- Differential phase failure protection
- Magnetic only version for starter combinations with separate overload (eg CEP 7)
- Version for high inrush current loads or transformer switching
- Common accessories up to 45 Amps
- Rotary handle for all frame sizes
- Front and side mount auxiliary contacts
- Test trip lever
- Separate signalling of thermal and short circuit tripping

Highly flexible accessories

- Front mounted trip and signal contacts
- Side mounted shunt and undervoltage trip modules
- Compact busbars in different spacing
- Handle padlock accessory



Short circuit breaking capacity I_{cu}

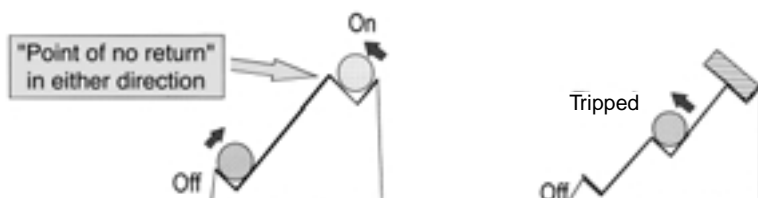
The rapid current limiting characteristic of KT 7 ensures a minimum breaking capacity of 50 kA over the range up to 45 Amps (100 Amps including the KTA 3-100).

Efficient termination to IEC 947

Reliability starts with good terminations. The terminals of the 25 Amp frame allow for up to 6 mm wire size while the 45 Amp frame size uses effective cage terminals with two separate wire compartments.

Reliable contacts with 'jump' system

The switching mechanism prevents 'teasing' of the contact system during manual operation and preserves the life of the contact system, (Important for motor starting).



Refer catalogue KT 7, SACS

Motor protection circuit breaker

Cat. No.	Rated operational current I_e [A]	Thermal release adjustment range [A]	Magnetic release operating current [A]	Switching of 3 phase AC motors, AC 21, AC 3			I_{cu}	I_{cs}
				3 phase [kW] (50 Hz)			400/415 V	
				240 V	400/415 V	690 V	[Ka]	[Ka]
Standard range 0.1 – 25 Amp (90 x 45 x 69.5 mm)								
KTA 7-25S-0.16A	0.16	0.1...0.16	2.1	-	0.02	-	100	100
KTA 7-25S-0.25A	0.25	0.16...0.25	3.3	-	0.06	-	100	100
KTA 7-25S-0.4A	0.4	0.25...0.4	5.2	-	0.09	-	100	100
KTA 7-25S-0.63A	0.63	0.4...0.63	8.2	0.06...0.09	0.12...0.18	0.25	100	100
KTA 7-25S-1A	1.0	0.63...1.0	13	0.12	0.25	0.37...0.55	100	100
KTA 7-25S-1.6A	1.6	1.0...1.6	21	0.18...0.25	0.37...0.55	0.75...1.1	100	100
KTA 7-25S-2.5A	2.5	1.6...2.5	33	0.37	0.75	1.5	100	100
KTA 7-25S-4A	4.0	2.5...4.0	52	0.55...0.75	1.1...1.5	2.2...3.0	100	100
KTA 7-25S-6.3A	6.3	4.0...6.3	82	1.1...1.5	2.2	4.0	100	100
KTA 7-25S-10A	10	6.3...10	130	2.2	3.0...4.0	5.5...7.5	100	100
KTA 7-25S-16A	16	10...16	208	3.0...4.0	5.5...7.5	11	50	50
KTA 7-25S-20A	20	14.5...20	260	4.0...5.5	7.5...10.0	15	15	15
KTA 7-25S-25A	25	18...25	325	-	11	18.5...22	15	15
High performance range 1.6 – 25 Amp (90 x 45 x 79.5 mm)								
KTA 7-25H-2.5A	2.5	1.6...2.5	33	0.37	0.75	1.5	100	100
KTA 7-25H-4A	4.0	2.5...4.0	52	0.55...0.75	1.1...1.5	2.2...3.0	100	100
KTA 7-25H-6.3A	6.3	4.0...6.3	82	1.1...1.5	2.2	3.0...4.0	100	100
KTA 7-25H-10A	10	6.3...10	130	2.2	3.0...4.0	5.5...7.5	100	100
KTA 7-25H-16A	16	10...16	208	3.0...4.0	5.5...7.5	11	100	50
KTA 7-25H-20A	20	14.5...20	260	5.5	7.5...10	15	50	25
KTA 7-25H-25A	25	18...25	325	-	11	18.5...22	50	25
High performance range 6.3 – 45 Amp (110 x 54 x 109.5 mm)								
KTA 7-45H-10A	10	6.3...10	130	1.5...3.0	3.0...4.0	5.5...7.5	65	50
KTA 7-45H-16A	16	10...16	208	3.7...4.0	5.5...7.5	11	65	50
KTA 7-45H-20A	20	14.5...20	260	4.0...5.5	7.5...10	15	65	50
KTA 7-45H-25A	25	18...25	325	5.5	7.5...10	15...22	65	50
KTA 7-45H-32A	32	23...32	416	7.5	15	22	65	50
KTA 7-45H-45A	45	32...45	585	11	18.5...22	30...37	65	50

Note: 240/415 V rated coils are suitable for use on 230/400 V in accordance with AS60038: 2000.



KTA 7-25S



KTA 7-25H



KTA 7-45H

Refer catalogue KT 7, SACS



Components for 22 kW 'type 2' co-ordinated starter

Time current characteristics

1. Thermal release trip current:

The adjustable inverse bimetal trip (with differential action) reliability protects motors against overloads. The curve shows the mean operating current at an ambient temperature of 20 °C starting from cold. Careful testing and setting ensures effective motor protection even in the case of single-phasing. Overload characteristics are also valid for transformer protection.

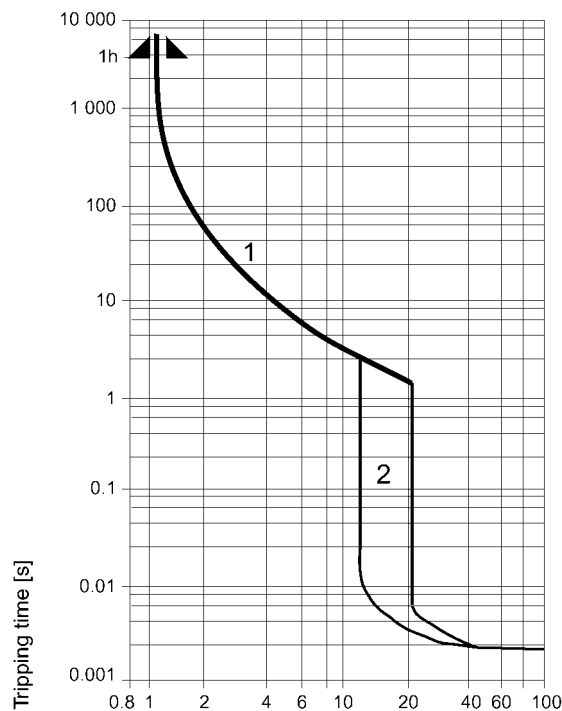
2. Magnetic release trip current:

The instantaneous magnetic trip has a fixed operating current setting. This corresponds to 13 times the highest setting of the thermal overload trip. (Transformer protection -20 x $I_{e \max}$.) At the upper thermal trip setting, this tripping current is 13 (20) times; at a lower setting it is correspondingly higher.

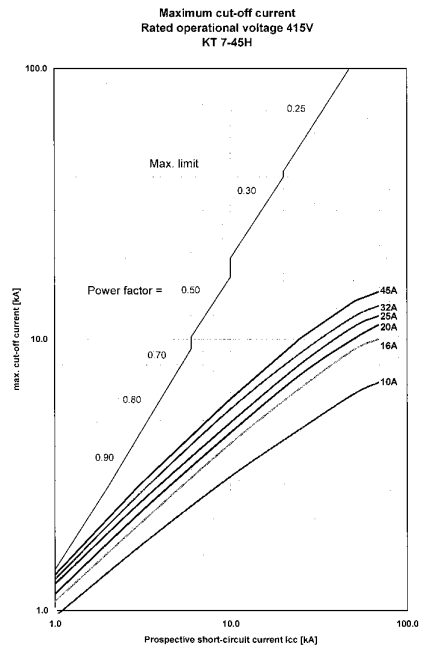
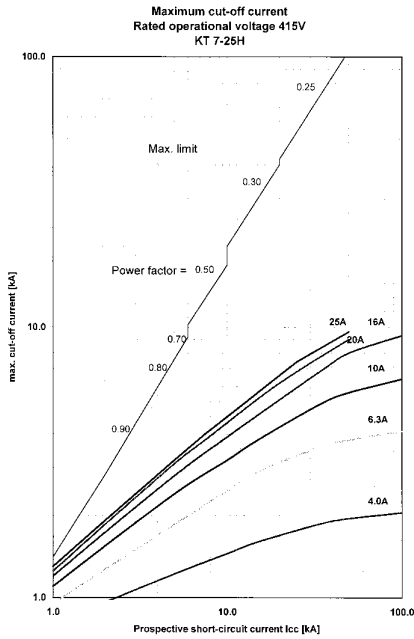
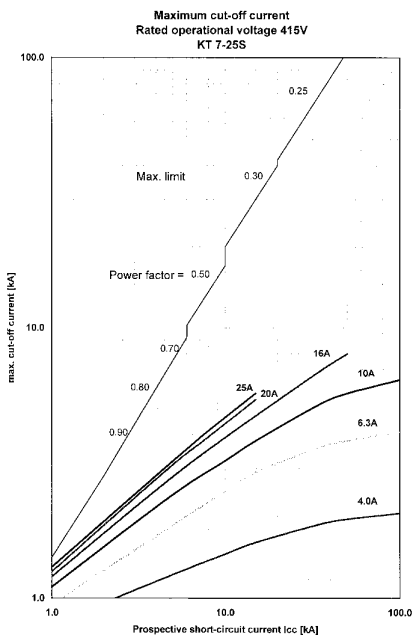
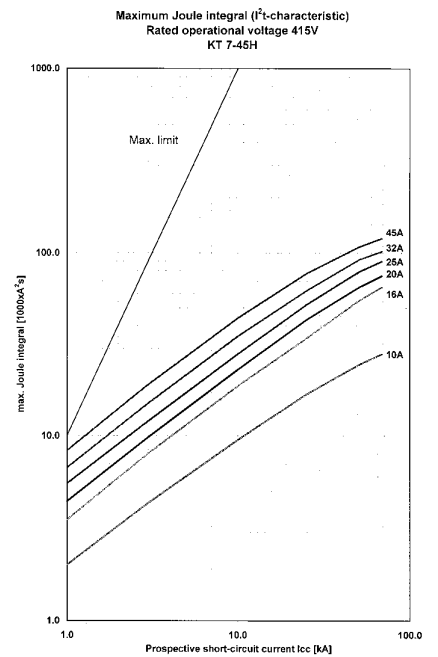
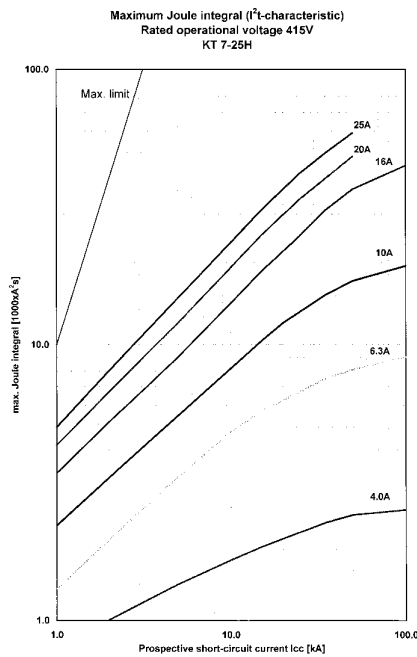
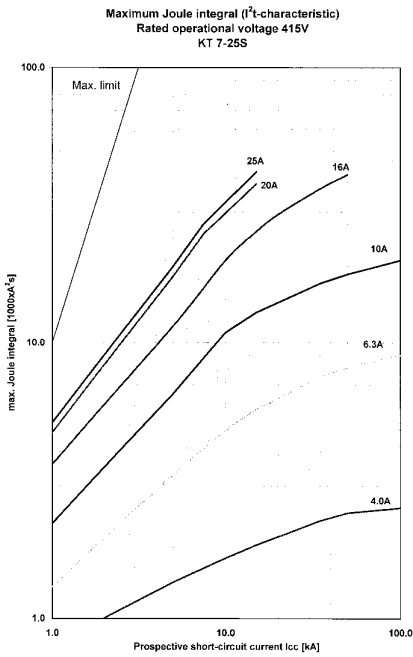
Current setting I_e^F :

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 (eg. reduced I_e for cooling medium having a temperature higher than 40 °C or a place of installation higher than 2000 m above sea level), the setting current is equal to the reduced rated current I_e of the motor.

Circuit Breaker KT 7 ¹⁾

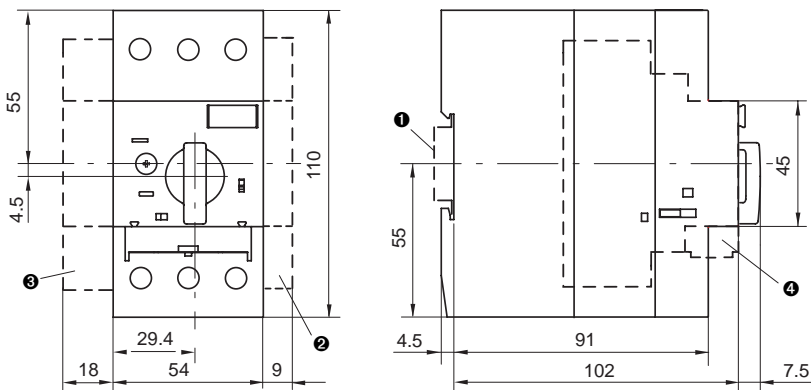
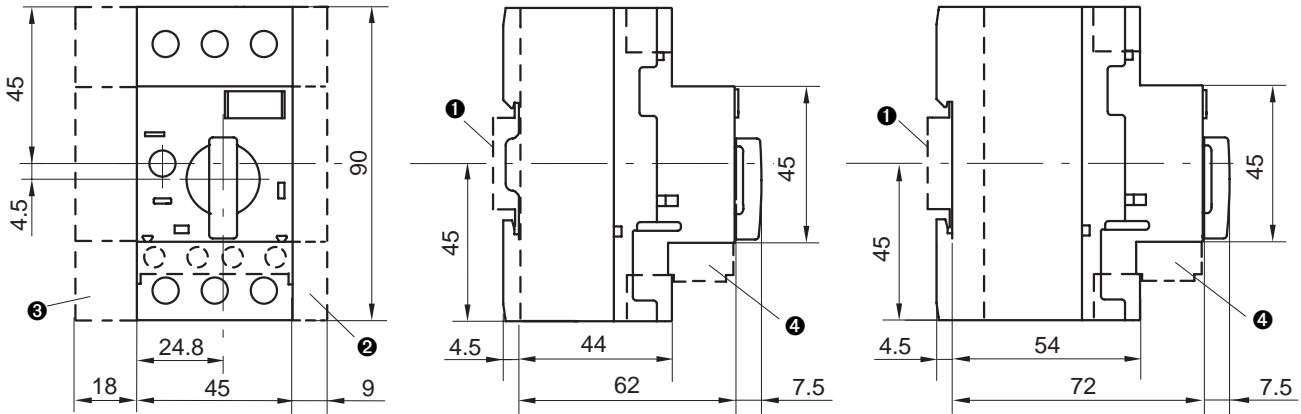


Note: ¹⁾ Typical mean trip characteristic for specific curves with tolerances - please inquire.



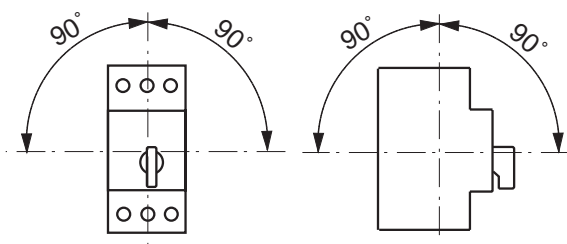
Refer catalogue KT 7, SACS

Dimensions in mm



- ❶ Mounting on DIN-rail EN 50 022-35
- ❷ Auxiliary contact (side mounted)
- ❸ Undervoltage trip or Shunt trip
- ❹ Auxiliary contact (front mounted)

Mounting position





KT 7 Circuit breakers

High speed protection and versatile in application

- Type '2' co-ordination without de-rating contactors
- No back-up fuses ¹⁾
- No current limiters
- Short circuit trip indication
- Rotary handle mechanism
- Differential motor protection (phase failure)
- Compact and modular
- Safe operation and handling

Three protection characteristics

The KT 7 circuit breakers consist of two basic frame sizes of 45mm and 54mm in three variations with different protection characteristics covering currents up to 45 Amps. The three circuit breaker types are:

KTA 7 Thermal magnetic protection

KTA 7s are motor protection circuit breakers with magnetic and thermal protection characteristics.

KTB 7 Magnetic starter protection

KTB 7s are starter protection circuit breakers which have magnetic only protection characteristics.

KTC 7 Transformer protection

KTC 7s are transformer and high inrush current circuit breakers with both magnetic and thermal protection characteristics.

The KT 7 circuit breakers are of a sophisticated construction utilising the latest technology in materials resulting in outstanding features and performance without the need for current limiters. High and effective current limiting and an extremely short interruption time produces an excellent short circuit breaking capacity. Combined with other ACS components, powerful load feeders and starters are assembled in an economical way. Type '2' co-ordinated motor starters (min 50 kA) are easily constructed without the need to de-rate contactors.

Amps	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4	6.3	10	16	20	25	32	45
KTA 7 Motor protection thermal and magnetic															
Standard performance 25S															
High performance 25H															
High performance 45H															
KTB 7 Starter protection magnetic only															
Standard performance 25S															
High performance 25H															
High performance 45H															
KTC 7 Transformer protection thermal and magnetic															
Standard performance 25S															
High performance 25H															
High performance 45H															

Note: 1) Providing prospective fault current does not exceed KT 7 I_{CU} rating.

KT 7 Circuit breakers

Tomorrow's technology, today's advantages



- Three different protection characteristics
- Standard and high breaking capacity up to 45 Amps
- No current limiters required
- Differential phase failure protection
- Magnetic only version for starter combinations
Eg. with separate CEP 7 overload
- Version for high inrush current loads or transformer switching
- Common accessories up to 45 Amps
- Rotary handles for all frame sizes
- Front and side mounted auxiliary contacts
- Test trip lever
- Separate signalling for thermal and short circuit tripping
- Visual indication of short circuit (flag) as standard



Open terminals facilitating large cable access saving wiring time

Large data labels on both sides with all necessary technical information

Large scale for accurate setting

Easy mounting as standard onto DIN rail

Test trip device for checking the trip mechanism

Unique front mounted trip/auxiliary contact with no increase of the overall dimensions saves up to 20% of valuable panel space (side mount contacts also available)

Touch safe terminals

Plate for marking system

Ergonomic handle providing clear status indication ON-OFF-Tripped

Short circuit indicator provides differentiation between short circuit and overload trip. Separate electrical signal also available

Rapid assembly auxiliary contacts are easily snapped on and without the need for tools

No oversizing of contactors for Type '2' co-ordination

KT 7 Circuit breakers Automatic Type '2' co-ordination ¹⁾

Features

- No calculations required
- No uncertainty about the fulfillment of Type '2' co-ordination
- Saves time in designing your controls



What is Type '2' co-ordination?

According to IEC 947-4-1, Type '2' co-ordination is achieved when these conditions are fulfilled:

- The contactor or the starter must not endanger persons or systems in the event of a short circuit
- The contactor or the starter must be suitable for further use
- No damage to the overload relay or other parts may occur with the exception of welding of the contactor or starter contacts provided that these can be easily separated without significant deformation (such as a screwdriver)

The benefits of Type '2' co-ordination

- Reliable protection for people and plant
- The starter is still fully operational after a short circuit
- The installation of the plant is back in operation quickly
- Minimised downtime and minimised loss of production
- Enhanced safety
- Improved reliability



Type '2' co-ordinated starter with KTA 7 circuit breaker and CA 7 contactor

KTA 7 and CA 4 contactor with KT 7 connecting module

Note: ¹⁾ Automatic Type '2' co-ordination up to 415 V AC.

KT 7 Circuit breakers Automatic Type '2' co-ordination (with no oversizing)



The new KT 7 circuit breakers achieve Type '2' co-ordination automatically at 415 V;

- Determine the rated motor current
- Select the type of KT 7 and CA 7 contactor according to the motor rated current

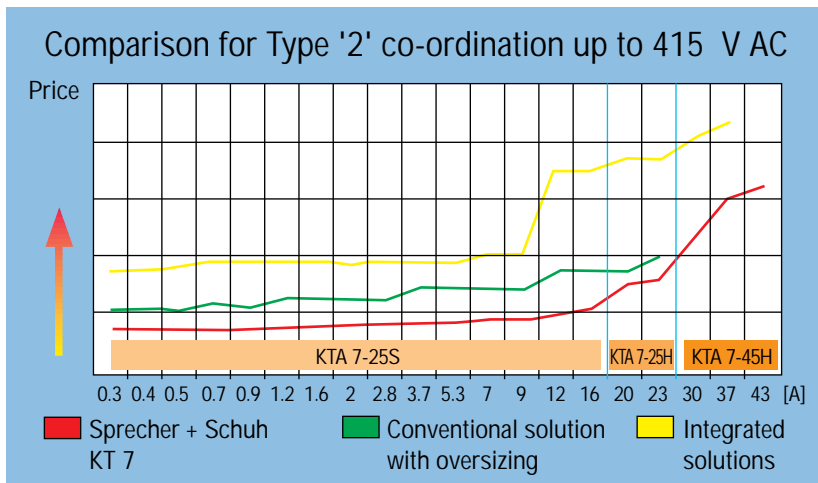
The fast opening contacts and the high current limiting qualities of the KT 7 make Type '2' co-ordination possible:

- Without current limiters
- With no oversizing of the contactors

The result is a slimmer, more compact starter with less wasted space and with a superior price/performance ratio.



Type '2' co-ordinated starter mounted on a KA 2-GS31 module (single DIN rail mounting)



Undervoltage / Shunt trip module

- Undervoltage
- Undervoltage trip
- Shunt trip



Front mounting trip auxiliary contacts

- 1 N/O trip + 1 N/O auxiliary
- 1 N/O trip + 1 N/C auxiliary

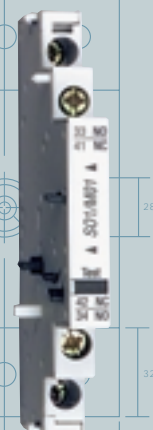
Front mounting auxiliary contacts

- 1 N/O + 1 N/C
- 2 N/O
- 1 N/O
- 1 N/C



Side mounting trip contacts

- 1 N/O trip + 1 N/O trip short circuit only
- 1 N/O trip + 1 N/C trip short circuit only
- 1 N/C trip + 1 N/O trip short circuit only
- 1 N/C trip + 1 N/C trip short circuit only
- 1 N/O trip short circuit only
- 1 N/C trip short circuit only



Side mounting auxiliary contacts

- 2 N/O
- 2 N/C
- 1 N/O + 1 N/C

KT 7 Circuit breakers

Clear information at a glance

The rotary handle ensures quick and secure recognition of the operating status. The various trip contacts allow optimal plant floor production by quickly detecting defective system parts. Manipulation errors are almost impossible. To reset a tripped circuit breaker simply turn the rotary handle from the trip position to the OFF position then back to the ON position.



Handle in the ON position



Handle in the OFF position



Handle in the tripped position

Short circuit indicator

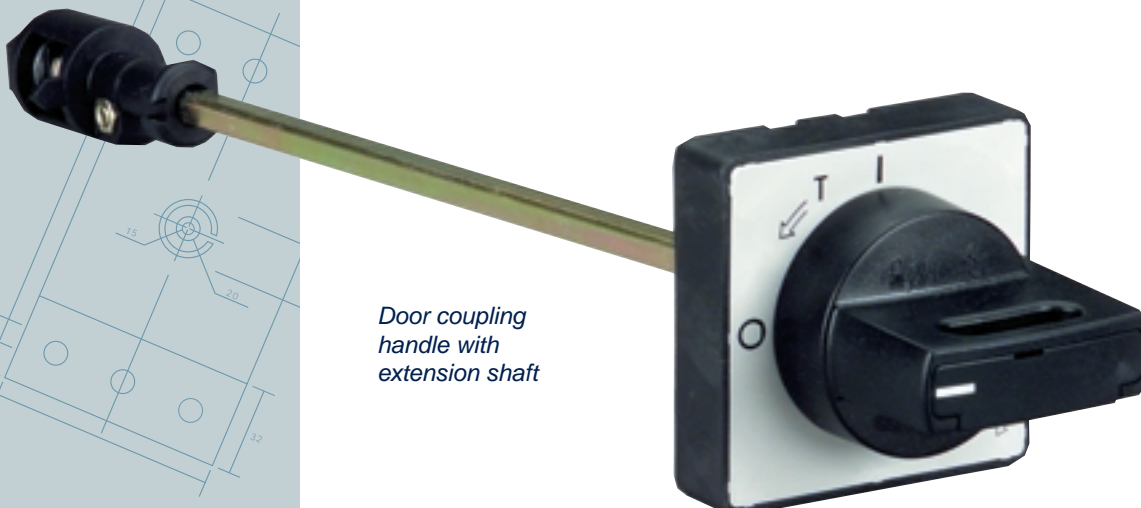
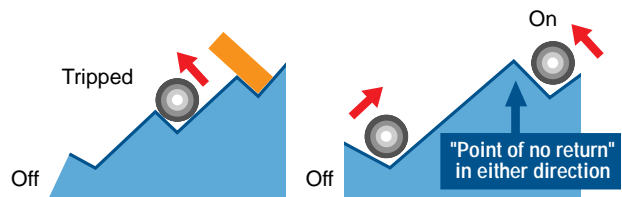
A red flag on the I>> window shows that a short circuit has occurred. This allows the immediate distinction between a short circuit and an overload trip, saving wasted time in troubleshooting. This added safety feature also gives a warning that the fault should be cleared before resetting.

An anti tamper cover can be used to prevent unauthorized change of the operational current setting.

- Clear current setting scale, level with the front to avoid unintentional changes.

'Jump' mechanism guarantees clear switching status

- The 'jump' mechanism ensures very fast closing or opening of the contacts
- The circuit breaker is either OFF or ON as the KT 7 is manipulation proof. (No 'teasing' of the contacts)



Door coupling handle with extension shaft

KT 7 Circuit breakers

Product selection for KTC 7

Transformer and high inrush motor protection



Two component starter using KTA 7 circuit breaker, CA 7 contactor and KT 7-25S-PEC23 connecting module

Transformer and high inrush motor protection

Cat. No.	Rated operational current I _e Amps	Thermal release adjustment range Amps	Magnetic release operating current Amps	Switching of 3 phase AC motors AC 21, AC 3 [kW] (50 Hz)		I _{cu} I _{cs} 415 V	
				240 V kW	415 V kW	[kA]	[kA]
Standard performance 0.1 - 16 Amp (90x45x69.5 mm)							
KTC 7-25S-0.16A	0.16	0.1...0.16	3.2	-	0.02	100	100
KTC 7-25S-0.25A	0.25	0.16...0.25	5.2	-	0.06	100	100
KTC 7-25S-0.4A	0.40	0.25...0.4	8.2	-	0.09	100	100
KTC 7-25S-0.63A	0.63	0.4...0.63	13	0.06/0.09	0.12/0.18	100	100
KTC 7-25S-1A	1.0	0.63...1.0	21	0.12	0.25	100	100
KTC 7-25S-1.6A	1.6	1.0...1.6	32	0.18/0.25	0.37/0.55	100	100
KTC 7-25S-2.5A	2.5	1.6...2.5	52	0.37	0.75	100	100
KTC 7-25S-4A	4.0	2.5...4.0	82	0.55/0.75	1.1/1.5	100	100
KTC 7-25S-6.3A	6.3	4.0...6.3	130	1.1/1.5	2.2	100	100
KTC 7-25S-10A	10	6.3...10	208	2.2	3.0/4.0	100	100
KTC 7-25S-16A	16	10...16	260	3.0/4.0	5.5/7.5	15	15
High performance range 10 - 20 Amp (90x45x79.5 mm)							
KTC 7-25H-16A	16	10...16	260	3.0/4.0	5.5/7.5	50	25
KTC 7-25H-20A	20	14.5...20	325	4.0/5.5	7.5/10	50	25
High performance range 18 - 32 Amp (110x54x109.5 mm)							
KTC 7-45H-25A	25	18...25	416	5.5/6.3	11	50	25
KTC 7-45H-32A	32	23...32	585	7.5	15	50	25

Application Note: For motors with high inrush currents or for use with transformer switching. The magnetic setting is approximately $20 \times I_e$.

KT 7 Circuit breakers

Technical information for KTC 7



IEC Performance data (Transformer protection KTC 7)

	I_e	KTC 7-25S										
		- 0.16 A	- 0.25 A	- 0.4 A	- 0.63 A	- 1.0 A	- 1.6 A	- 2.5 A	- 4.0 A	- 6.3 A	- 10 A	- 16 A
Switching of standard three-phase motors AC 2, AC 3												
230/240 V	[kW]	-	-	-	0.06/0.09	0.12	0.18/0.25	0.37	0.55/0.75	1.1/1.5	2.2	3.0/4.0
690 V	[kW]	-	-	-	0.25	0.37/0.55	0.75/1.1	1.8	2.2/3.0	4.0	5.5/7.5	11/13
Back-up fuses gG, gL, only if $I_{cc} > I_{cu}$ (◆ = no Back-up fuse required)												
230/240 V	[A]	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
400/415 V	[A]	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	80
690 V	[A]	◆	◆	◆	◆	◆	16	20	35	50	50	63
Ultimate short circuit breaking capacity I_{cu}												
230/240 V	[kA]	100	100	100	100	100	100	100	100	100	100	100
400/415 V	[kA]	100	100	100	100	100	100	100	100	100	100	15
690 V	[kA]	100	100	100	100	100	8	8	8	4	4	3
Rated service short circuit breaking capacity I_{cs}												
230/240 V	[kA]	100	100	100	100	100	100	100	100	100	100	100
400/415 V	[kA]	100	100	100	100	100	100	100	100	100	100	15
690 V	[kA]	100	100	100	100	100	8	8	8	4	4	3

	I_e	KTC 7-25H	
		- 16 A	- 20 A
Switching of standard three-phase motors AC 2, AC 3			
230/240 V	[kW]	3.0/4.0	4.0/5.5
690 V	[kW]	11/13	15/17
Back-up fuses gG, gL, only if $I_{cc} > I_{cu}$ (◆ = no Back-up fuse required)			
230/240 V	[A]	◆	◆
400/415 V	[A]	80	100
690 V	[A]	63	63
Ultimate short circuit breaking capacity I_{cu}			
230/240 V	[kA]	100	100
400/415 V	[kA]	50	50
690 V	[kA]	6	6
Rated service short circuit breaking capacity I_{cs}			
230/240 V	[kA]	100	100
400/415 V	[kA]	25	25
690 V	[kA]	4	4

	I_e	KTC 7-45H	
		- 25 A	- 32 A
Switching of standard three-phase motors AC 2, AC 3			
230/240 V	[kW]	5.5/6.3	7.5
690 V	[kW]	18.5/22	22/25
Back-up fuses gG, gL, only if $I_{cc} > I_{cu}$ (◆ = no Back-up fuse required)			
230/240 V	[A]	◆	◆
400/415 V	[A]	100	125
690 V	[A]	63	80
Ultimate short circuit breaking capacity I_{cu}			
230/240 V	[kA]	100	100
400/415 V	[kA]	50	50
690 V	[kA]	6	6
Rated service short circuit breaking capacity I_{cs}			
230/240 V	[kA]	100	100
400/415 V	[kA]	25	25
690 V	[kA]	6	6

General data

Specifications	KT 7-25S	KT 7-25H	KT 7-45H
Rated insulation voltage IEC, SEV, VDE 0660	690 V		
UL, CSA	600 V		
Rated impulse withstand voltage U_{imp} /pollution degree	6 kV/3		
Rated frequency	50/60 Hz, 50 Hz, 60 Hz		
Utilisation category: -IEC 947-2 (Circuit breaker) -IEC 947-4-1 (Motor starter)	A AC 3		
Life span mechanical operations	100,000		30,000
electrical (I_e max.) operations	100,000		30,000
Switching frequency operations	max. 25/h. (motor starts)		
Ambient temperature storage	- 40°C ...+ 80°C		
operation	- 25°C ...+ 60°C		
Resistance to climate change	IEC 68-2		
Site altitude	to 2000 m N.N.		
Protection class	IP 20, when wired		
Resistance to shock	30 g, 11 ms		underpreparation
Resistance to vibration	IEC 68-2		
Rated thermal current I_{th} IEC, SEV, VDE 0660 up to 60°C ambient temperature [A]	0.1...25	1.6...25	6.3...45
Overload protection Characteristics	IEC 947-4-1 Motor protection (except KTB 7-25S, KTB 7-25H, KTB 7-45H)		
Ambient temperature compensation	- 20°C...+ 60°C		
Phase-failure protection	yes differential release		
Trip class	10 (except KTB 7-25S, KTB 7-25H, KTB 7-45H)		
Magnetic trip Response current	fixed setting 13 x I_e max. (for KTA 7-25S, KTA 7-25H, KTA 7-45H, KTB 7-25S, KTB 7-25H, KTB 7-45H) 16...20 x I_e max. (for KTC 7-25S, KTC 7-25H, KTC 7-45H) I_e max. = maximum values of setting ranges		
Total power loss P_v Circuit breaker at rated load operating temperature [W]	6...8	6...8	9...16

KT 7 Circuit breakers

Technical information



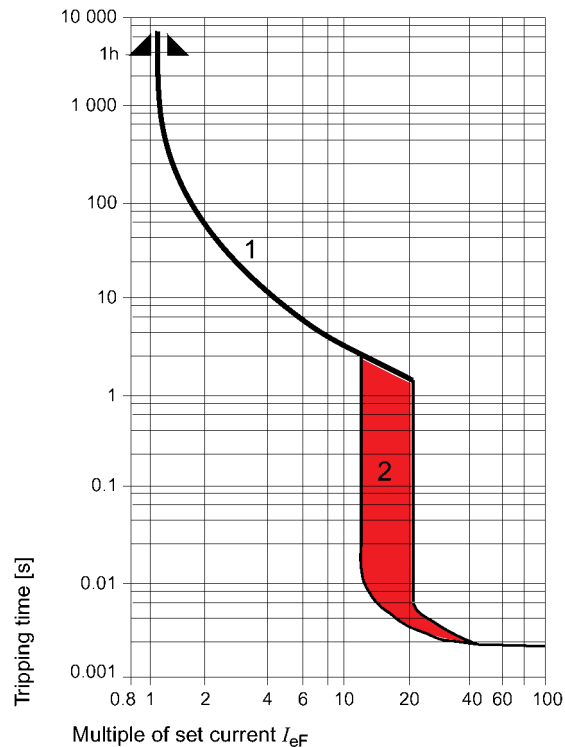
General data

Specifications	KT 7-25S	KT 7-25H	KT 7-45H
Conformity to standards	IEC 947 EN 60947 UL 508; CSA 22.2 Teil 14		
Approvals	CE, UL, CSA		
Terminal parts			
Type of terminals	Pozidriv No. 2 / Blade No. 3		Pozidriv No. 2 / Blade No. 4
Screwdriver	Pozidriv No. 2 / Blade No. 3		Pozidriv No. 2 / Blade No. 4
1.conductor [mm ²] / [AWG]	1...4 / No. 16...12		2.5...16 / No. 14...6
2.conductor [mm ²] / [AWG]	1...4 / No. 16...12		2.5...10 / No. 14...8
1.conductor [mm ²] / [AWG]	1...6 / No. 16...8		2.5...25 / No. 14...6
2.conductor [mm ²] / [AWG]	1...6 / No. 16...8		2.5...16 / No. 14...6
1.conductor [mm ²] / [AWG]	1.5...6 / No. 16...8		2.5...25 / No. 14...4
2.conductor [mm ²] / [AWG]	1.5...6 / No. 16...8		2.5...16 / No. 14...6
Tightening torque [Nm] / [lb-in]	1...2.5 / 8.9...22		1.5...3.5 / 13...31

KT 7 Circuit breakers Technical information

Time / current characteristics

Circuit breaker KT 7



1 Thermal release trip current:

The adjustable inverse bimetal trip reliability protects motors against overloads. The curve shows the mean operating current at an ambient temperature of 20°C starting from cold. Careful testing and setting ensures effective motor protection even in the case of single-phasing. Overload characteristics are 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 highest setting of the thermal overload trip. (Transformer protection -20 x I_e max.) At the upper thermal trip setting, this tripping current is 13 (20) times; at a lower setting it is correspondingly higher.

Current setting I_{eF} :

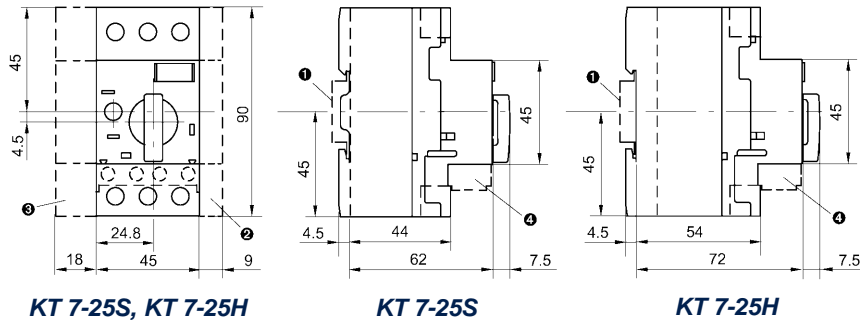
The overload trip corresponds to a thermal overload relay in a motor starter conforming to IEC 947-4-1. If a different value is prescribed (eg. reduced I_e for cooling medium having a temperature higher than 40°C or a place of installation higher than 2000 m above sea level), the setting current is equal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

KT 7 Circuit breakers

Technical information



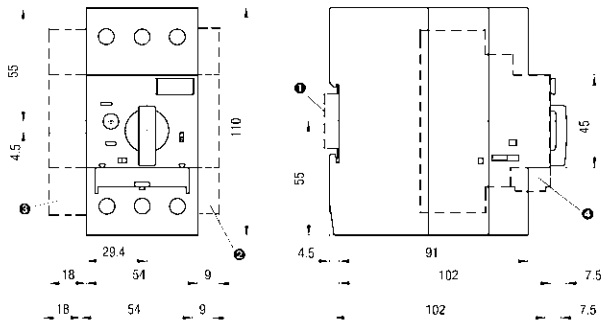
Dimensions (mm)



KT 7-25S, KT 7-25H

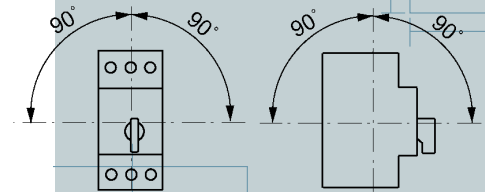
KT 7-25S

KT 7-25H

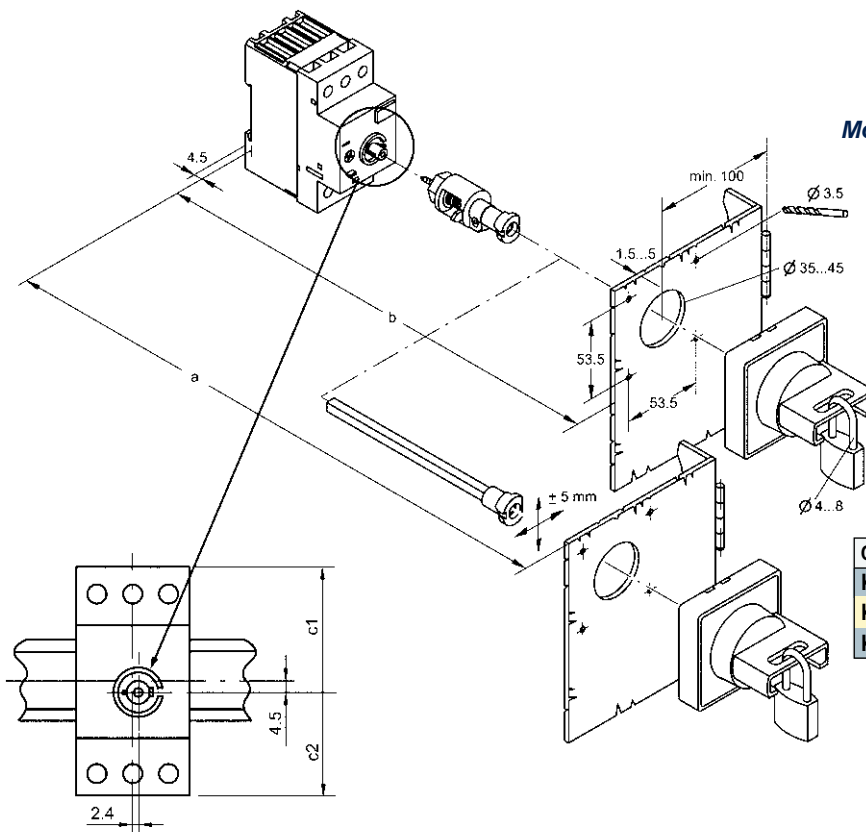


KT 7-45H

- ① Mounting on DIN rail EN 50 022-35
- ② Auxiliary contact (side mounted)
- ③ Undervoltage trip or shunt trip
- ④ Auxiliary contact (front mounted)



Mounting position KT 7-25S, KT 7-25H, KT 7-45H



KT 7...

Cat. No.	a	b	c1	c2
KTA 7-25S	117...338	105.5 ± 5	49.5	40.5
KTA 7-25H	126...347	114.5 ± 5	49.5	40.5
KTA 7-45H	148.6...369.6	137.1 ± 5	59.35	50.35