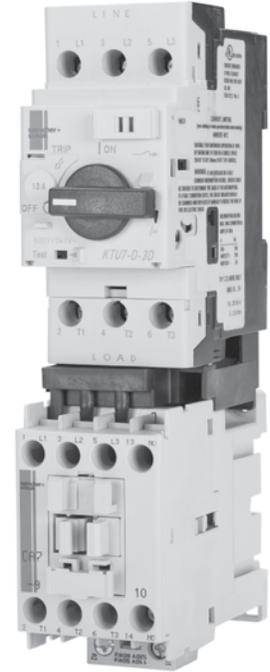


Series KTU7 UL489 Molded Case Circuit Breakers

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

Sprecher+Schuh's KTU7 series of UL Molded Case Circuit Breakers are UL489 and CE listed for global applications. The current limiting circuit breaker provides fixed short circuit and overcurrent protection and offers high interrupting ratings for 2- and 3-pole devices from 0.5 to 30A. These Circuit breakers are 100% rated up to 15A.

Accessories are intelligently designed to be field installed. The compact busbars and supply blocks reduce wiring errors and installation labor cost. Connection modules for the CA7 Contactors simplify wiring and can reduce the number of DIN rails required, compacting panel space even further.



Advantages...

- Small foot print saves panel space, just 45 x 102 x 85 mm, up to 50% smaller than traditional MCCBs.
- Interrupt rating of 65kA at 480Y/277V may allow higher overall panel short circuit rating
- Up to 6 times higher interrupting rating vs. traditional miniature circuit breakers.

Ideal Applications...

- Feeder Circuits for small cabinets, distribution panels, branch circuit protection, transformers and heaters
- Control circuits for control circuit transformers and power supplies
- Industrial Heating applications
- Air conditioning and refrigeration applications

Compare these advanced features



KTU7 Circuit Breaker, 2-Pole Fixed Thermal-Magnetic

Fixed Thermal Current Rating [A]	Magnetic Trip [A]	Interrupting Rating (60Hz) [KA]			Catalog Number	Price
		240V	480Y/277V	600Y/347V		
KTU7-D — High Interrupting Capacity – 2-Pole						
0.5	15...20xIn	100	100	50	KTU7-D-2D-0.5 ①	380
1.0	15...20xIn	100	100	50	KTU7-D-2D-1 ①	
2.0	15...20xIn	100	100	50	KTU7-D-2D-2 ①	
3.0	15...20xIn	100	100	50	KTU7-D-2D-3 ①	
4.0	15...20xIn	100	100	50	KTU7-D-2D-4 ①	
5.0	15...20xIn	100	100	50	KTU7-D-2D-5 ①	
6.0	15...20xIn	100	100	50	KTU7-D-2D-6 ①	
8.0	15...20xIn	100	100	50	KTU7-D-2D-8 ①	
10.0	15...20xIn	100	100	50	KTU7-D-2D-10 ①	
12.0	15...20xIn	65	65	25	KTU7-D-2D-12 ①	
15.0	15...20xIn	65	65	25	KTU7-D-2D-15 ①	
20.0	15...20xIn	65	65	25	KTU7-D-2D-20	
25.0	15...20xIn	65	65	25	KTU7-D-2D-25	
30.0	15...20xIn	65	65	25	KTU7-D-2D-30	
KTU7-D — High Interrupting Capacity – 3-Pole						
0.5	15...20xIn	100	100	50	KTU7-D-3D-0.5 ①	540
1.0	15...20xIn	100	100	50	KTU7-D-3D-1 ①	
2.0	15...20xIn	100	100	50	KTU7-D-3D-2 ①	
3.0	15...20xIn	100	100	50	KTU7-D-3D-3 ①	
4.0	15...20xIn	100	100	50	KTU7-D-3D-4 ①	
5.0	15...20xIn	100	100	50	KTU7-D-3D-5 ①	
6.0	15...20xIn	100	100	50	KTU7-D-3D-6 ①	
8.0	15...20xIn	100	100	50	KTU7-D-3D-8 ①	
10.0	15...20xIn	100	100	50	KTU7-D-3D-10 ①	
12.0	15...20xIn	65	65	25	KTU7-D-3D-12 ①	
15.0	15...20xIn	65	65	25	KTU7-D-3D-15 ①	
20.0	15...20xIn	65	65	25	KTU7-D-3D-20	
25.0	15...20xIn	65	65	25	KTU7-D-3D-25	
30.0	15...20xIn	65	65	25	KTU7-D-3D-30	

Description

The KTU7 is a fixed trip, thermal-magnetic UL489 Molded Case Circuit Breaker for non-motor applications.



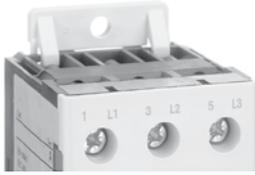
KTU7-D-2D-10



KTU7-D-3D-10

① Suitable for continuous operation at 100% of rating only if used in minimum enclosure space of 250 x 175 x 150 mm (10 x 7 x 6 in).

KT7 Accessories available for KTU7-D

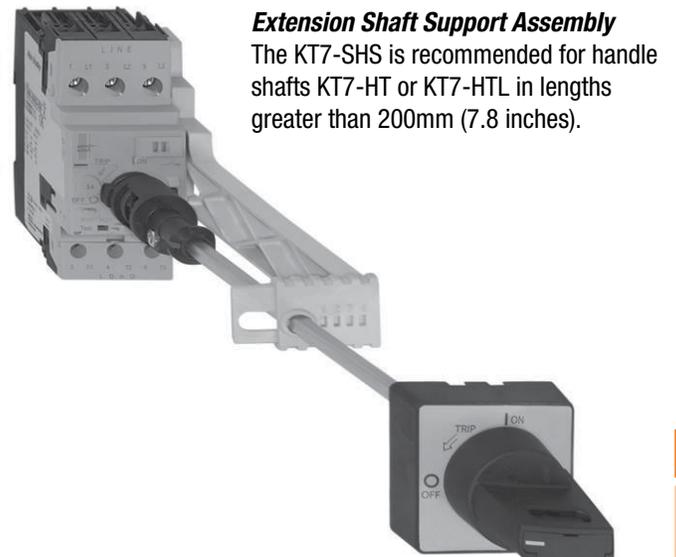
	<p>KT7-PE1 or KT7-PEF1 Front Mount Auxiliaries and Trip Contacts See page F10</p>		<p>KT7-KN1, KT7-KRY1 or KT7-DS Lockable Twist Knob & Locking Tag See page F16</p>
	<p>KT7-UA or KT7-AA Undervoltage Trips and Shunt Trips ❶ See page F14...F15</p>		<p>KT7-HTN or KT7-HTRY Door Coupling Handle ❷ See page F16</p>
	<p>KT7-HT/HTL & KT7-SHS Extension Shaft & Support See page F16</p>		<p>KT7-45-AS Screw Adaptor See page F16</p>



Remote Operation Application

The KTU7 3-Pole unit can be combined with CA7 using Connector Modules to achieve remote operation.

- For CA7-9...23 use KTU7-D-PEC23
- For CA7-9...43 use KTU7-D-PF



Extension Shaft Support Assembly

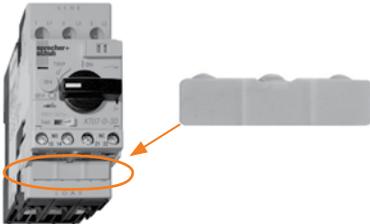
The KT7-SHS is recommended for handle shafts KT7-HT or KT7-HTL in lengths greater than 200mm (7.8 inches).

❶ Series B or later.
❷ Series E or later.

Connecting Modules (for connecting KTU7 to CA7 AC coil, or CA7 Electronic DC coil contactors)

Module	Description	For Connecting. . .	To Contactor. . .	Catalog Number	Price
	Connecting Modules <ul style="list-style-type: none"> • 25 Amp maximum • Provides electrical and mechanical interconnection of KTU7 and CA7 (with AC coils) or CA7-_E (with Electronic DC coils) • Mounts on one DIN rail 	KTU7-D	CA7-9..23	KTU7-D-PEC23 ❶	56
	Flexible Connecting Module <ul style="list-style-type: none"> • 32 Amp maximum • Provides electrical and mechanical interconnection of KTU7 and CA7 (with AC coils) or CA7-_E (with Electronic DC coils) • Mounts on two DIN rails 	KTU7-D	CA7-9..43	KTU7-D-PF ❶	56

Compact Busbar System for KTU7-D

Accessory	Description	For Use With	Catalog Number	Price
	Compact Busbar — 45 mm Spacing (Rated 64 A) <ul style="list-style-type: none"> • For use with front-mounted auxiliary contact Connects 2-KTU7s Connects 3-KTU7s Connects 4-KTU7s Connects 5-KTU7s (shown) 	KTU7-D-3D ❶	KTU7-D-DB-45-2 KTU7-D-DB-45-3 KTU7-D-DB-45-4 KTU7-D-DB-45-5	55 62 69 76
	Supply Block and Terminal <ul style="list-style-type: none"> • For power connection to Compact Busbar — 600V, KTU7-D. . .120A maximum • Top feed — overlaps commoning link • Meets requirements for terminal spacing from source • Compliant with UL489 Terminal Clearance standards 	KTU7-D-3D ❶	KTU7-D-A3E	57
	Load Terminal Cover <ul style="list-style-type: none"> • For covering load terminals in conjunction with the use of front mounted KT7-PE1 or -PEF1 auxiliaries • KT7-PEFC is required to comply with UL489 terminal clearance standards • The cover packaged in quantities of 10 (must order 10 for one package of 10) 	KTU7	KT7-PEFC	6.50

❶ For use with KTU7 3-pole Circuit Breakers only.

Application Rating Chart

KTU7	High Vault SCCR			Switching Lighting Rated		
	Combined with ❶	480Y/277 VAC (KA)	600Y/347 VAC (KA)	Fluorescent ❷	High-intensity Discharge ❸	HVAC Rated ❹
KTU7-D-2D-0.5	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-1	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-2	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-3	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-4	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-5	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-6	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-8	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-10	CA7-9...23	65	35	~	HID	HARC
KTU7-D-2D-12	CA7-9...23	65	25	~	HID	HARC
KTU7-D-2D-15	CA7-9...23	65	25	SWD	HID	HARC
KTU7-D-2D-20	CA7-9...23	65	25	SWD	HID	HARC
KTU7-D-2D-25	CA7-9...30	65	25	~	HID	HARC
KTU7-D-2D-30	CA7-9...30	65	25	~	~	HARC
KTU7-D-3D-0.5	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-1	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-2	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-3	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-4	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-5	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-6	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-8	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-10	CA7-9...23	65	35	~	HID	HARC
KTU7-D-3D-12	CA7-9...23	65	25	~	HID	HARC
KTU7-D-3D-15	CA7-9...23	65	25	~	HID	HARC
KTU7-D-3D-20	CA7-9...23	65	25	~	HID	HARC
KTU7-D-3D-25	CA7-9...30	65	25	~	HID	HARC
KTU7-D-3D-30	CA7-9...30	65	25	~	HID	HARC

IEC Performance Data

(CSA C22.2, UL 489, IEC / EN 60947-1, -2 in connection with a short-circuit protection device)

		KTU7-D- 2 pole & 3 pole													
		0.5A	1A	2A	3A	4A	5A	6A	8A	10A	12A	15A	20A	25A	30A
Rated Operational Current I_n	[A]	0.5	1	2	3	4	5	6	8	10	12	15	20	25	30
Fixed Thermal Trip I_t = I_n	[A]	0.5	1	2	3	4	5	6	8	10	12	15	20	25	30
Fixed Magnetic Trip I_m =	[A]	15...20 x I _n													

Ultimate Short Circuit Breaking Capacity (50 Hz) I_{cu}		230...240V	400...415V	525V	690V	[kA]	100	100	100	100	100	100	100	100	100	100
	[kA]	100	100	65	50	100	100	100	100	100	100	100	100	100	100	100
	[kA]	100	100	65	50	100	100	100	100	100	65	65	65	65	65	65
	[kA]	65	65	65	50	65	65	65	65	65	65	65	65	65	65	65
	[kA]	50	50	18	10	18	18	18	18	10	10	10	10	10	10	10

Rated Service Short Circuit Breaking Capacity (50 Hz) I_{cs}		230...240V	400...415V	525V	690V	[kA]	100	100	100	100	100	100	100	100	100	100
	[kA]	100	65	65	50	100	100	100	100	100	100	100	100	100	100	100
	[kA]	65	65	65	50	65	65	65	65	65	50	50	50	50	50	50
	[kA]	65	65	65	50	65	65	65	65	65	50	50	50	25	25	25
	[kA]	50	50	10	6	10	10	10	6	6	6	6	6	6	6	6

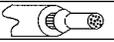
- ❶ KTU7 + CA7-9...23 contactor maybe combined with CEP7 overload. SCCR ratings remain unchanged.
- ❷ KTU7 circuit breaker intended to switch fluorescent lighting on a regular basis. Selection of sizes limited by UL489. Devices marked with "SWD".
- ❸ KTU7 Circuit Breakers intended to switch high-intensity discharge (ballast) lighting devices marked with "HID".
- ❹ Rated for use with heating, air conditioning, refrigeration. Devices marked with "HARC".

General Data

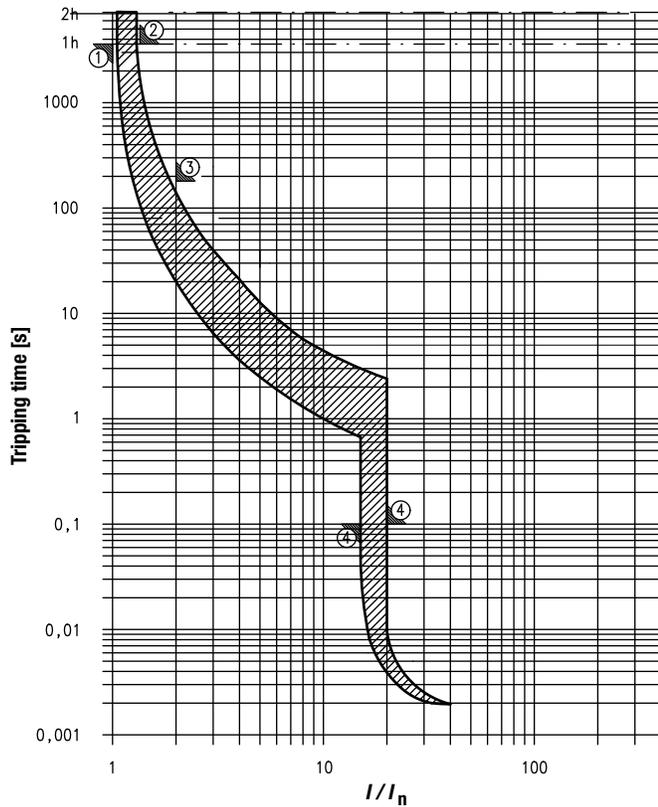
		KTU7-D
Number of Poles		2 and 3
Rated Insulation Voltage U_i		
IEC, / EN	[V]	600
UL, CSA	[V]	600
Ratings		HACR
Suitable for continuous operation at 100% of rating only if used in enclosure space for		0.5...15 A, enclosure space 250 x 175 x 150 mm (10 x 7 x 6 in)
Rated Impulse Withstand Voltage U_{imp}		
Pollution degree		3
Main circuits U_{imp} /Overvoltage Category		6 kV/III
Auxiliary circuits U_{imp} /Overvoltage Category		6 kV/III
Safe separation between main and auxiliary circuits		up to 400V
Rated Frequency [Hz]		50/60
Utilization Category		
• IEC 60947-2 (Circuit Breaker)		A
Life Span		
Mechanical	[operations]	100,000
Electrical (I_n max.)	[operations]	100,000
Switching Frequency [operations/h]		max. 25
Ambient Temperature		
Storage	[°C]	-40...+80
Operation	[°C]	-25...+60 (70 with 15% I_n current reduction)
Resistance to Climatic Change		
Moisture / Heat Resistance	(600068-2-30)	23 °C / 83 % relative humidity and 40 °C / 92 % relative humidity, 56 cycles
Dry Heat	(60086-2-2)	100 °C, relative humidity <50 %, 7 days
Moisture / Change Resistance	(60086-2-3)	40 °C, relative humidity 93 %, 56 days
Site Altitude [m]		to 2000 N.N.
Protection Class		IP2X, when wired
Overload Protection		
Phase-loss protection		No phase loss protection
Short circuit protection (Magnetic)		Fixed setting 10...20 x I_n
Main Disconnect Switch Application		Yes, with accessories
		For utilization outside North America, Assemblies (of products) shall comply to the IEC61439-1 requirements
Application Conditions		KTU7 circuit breakers 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.
Standards		UL489; CSA C22.2 No. 5; IEC / EN 60947-1, -2
Certifications		CE; cULus listed Circuit Breaker, File No. E334037 and E33916 (accessories)

Terminal Specifications

		KTU7-D
Terminal Parts		
Terminal Type		
Screwdriver		Pozidrive No. 2 / Blade No. 3
	1. conductor [mm²]/[AWG]	1...6/—
	2. conductor [mm²]/[AWG]	1...4/—
	1. conductor [mm²]/[AWG]	1...6/—
	2. conductor [mm²]/[AWG]	1...6/—
	1. conductor [mm²]/[AWG]	—/No. 18...10
	2. conductor [mm²]/[AWG]	—/No. 18...10
	1. conductor [mm²]/[AWG]	1...6/No. 18...10
	2. conductor [mm²]/[AWG]	1...6/No. 18...10
Tightening Torque		[N•m]/[lb•in] 2...2.5/18...22
Weight		[g] 395

		KTU7-D-A3E
Use 75 °C Cu wire only		
Rated Thermal Current I_{th}		[A] 64
	1. conductor [mm²]/[AWG]	2.5...25/14...4
	1. conductor [mm²]/[AWG]	2.5...25/14...4
	1. conductor [mm²]/[AWG]	2.5...25/14...4
	1. conductor [mm²]/[AWG]	2.5...25/14...4
Tightening Torque		[N•m]/[lb•in] 3...3.5/27...31

Time-Current Characteristic



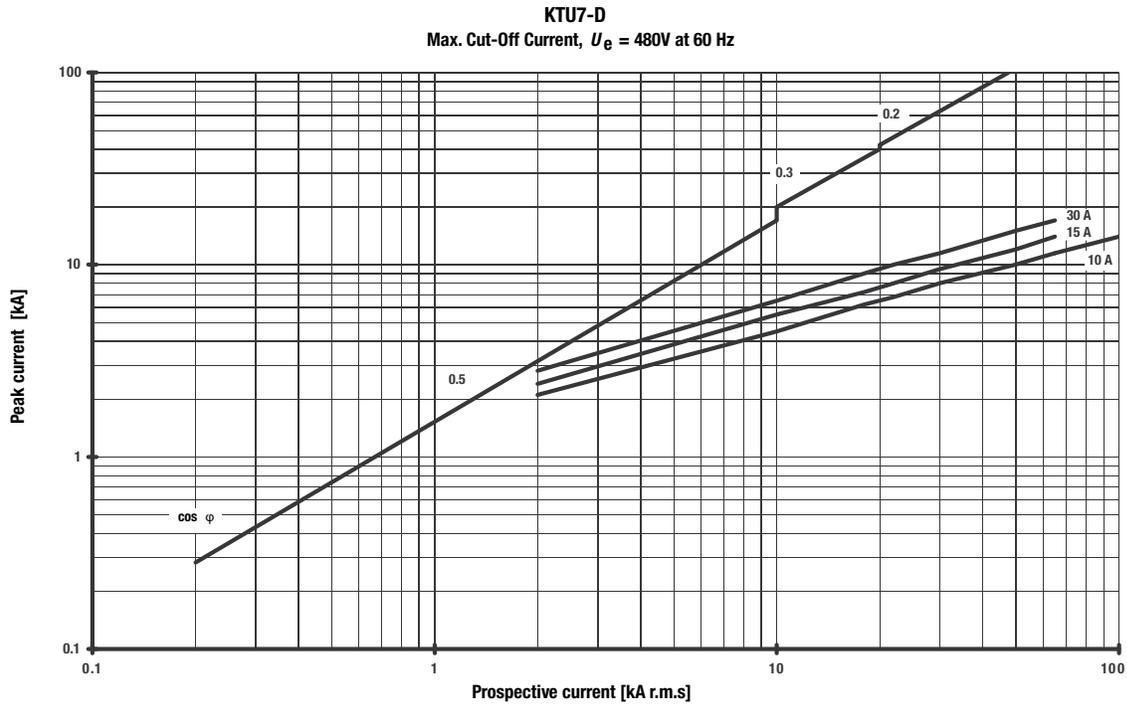
**Tripping characteristic
acc. to UL 489 and IEC 60947-2**

- ① conventional non-tripping current $I_{nt} = 1.0 I_n$
- ② conventional tripping current $I_t = 1.35 I_n : t = < 1h$
- ③ $2.0 I_n : t = 180s \text{ max.}$

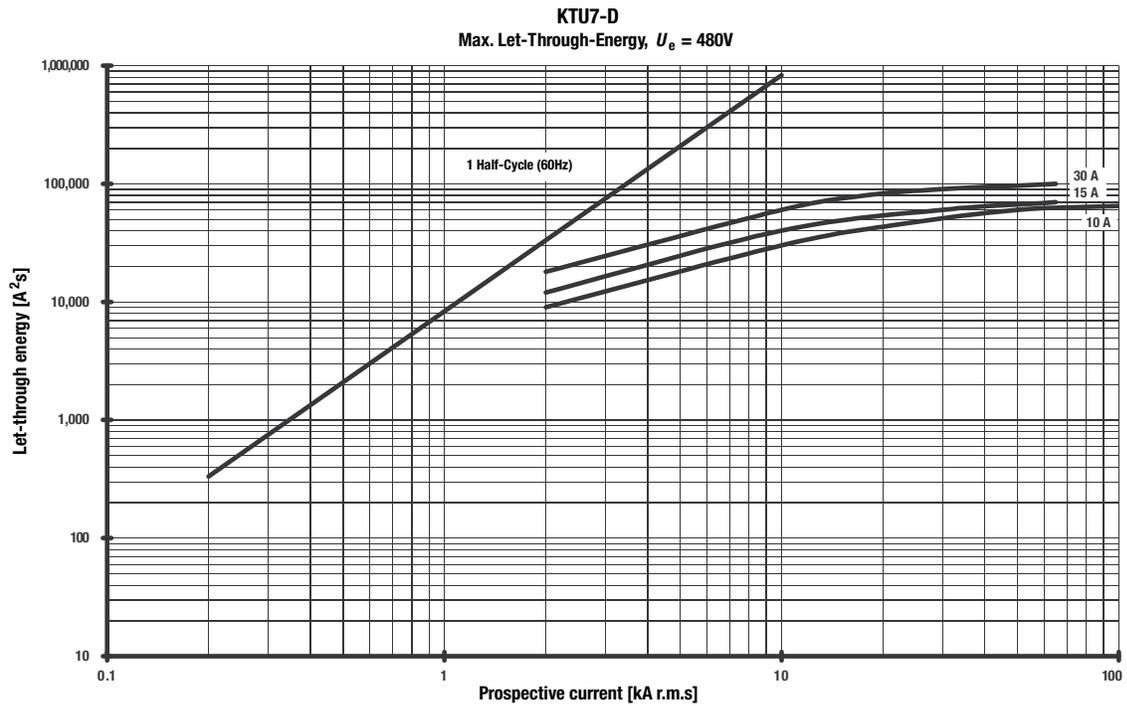
**Instantaneous tripping
acc. to UL 489 and IEC 60947-2**

- ④ Trip Curve : $15 \dots 20 I_n$

Maximum Cut-off (Let-Through) Current

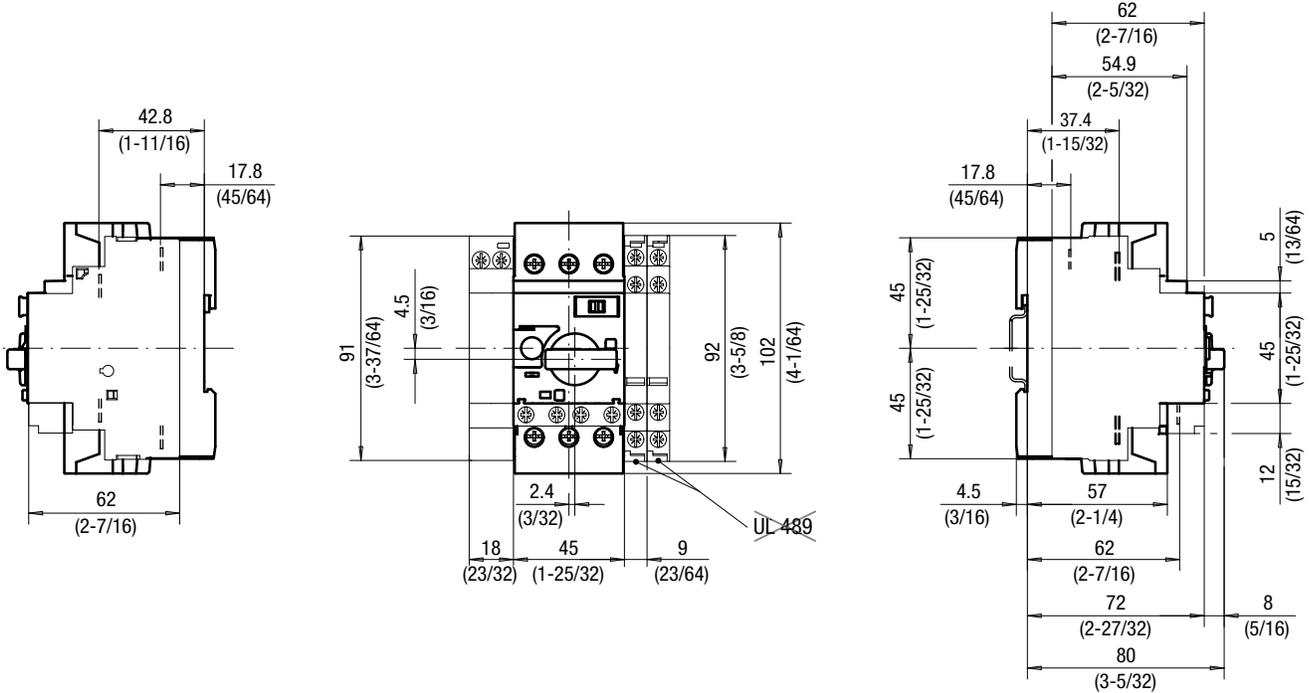


Maximum Let-Through Energy

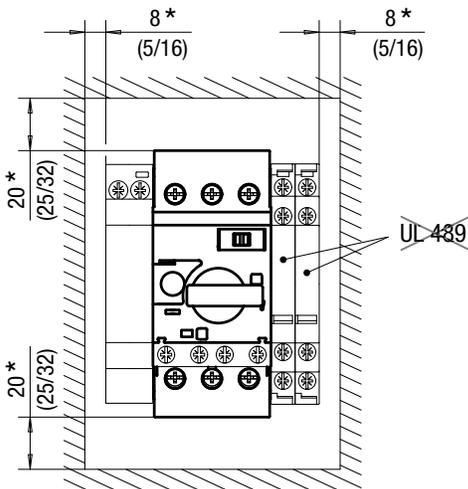


KTU7-D Dimensions

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



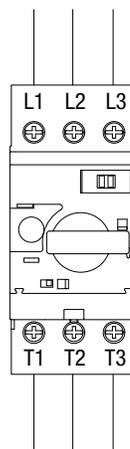
KTU7 Circuit Breaker Enclosure Requirements



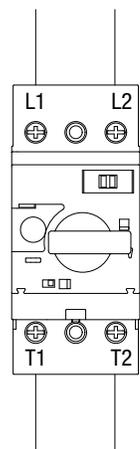
*) - Minimum distance to grounded parts or walls

KTU7 Wiring Diagram

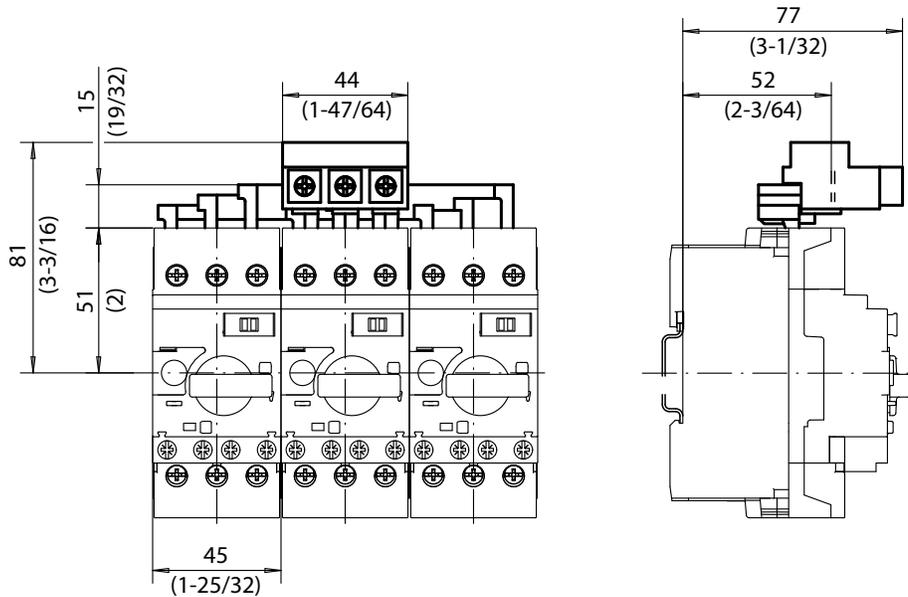
3-Phase
KTU7-D-3



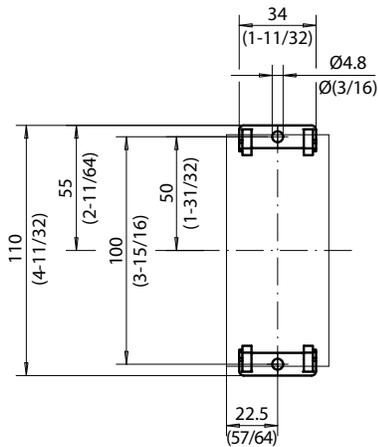
2-Phase
KTU7-D-2



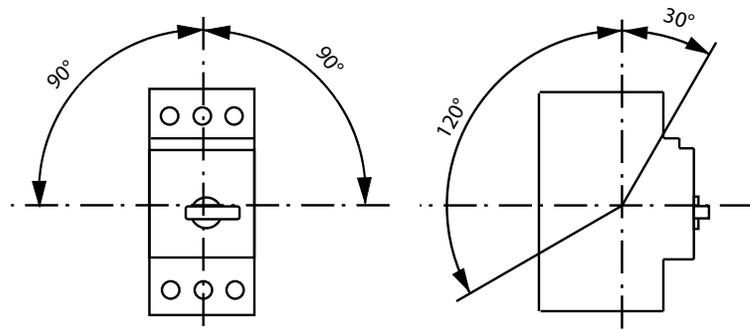
KTU7 with Busbar



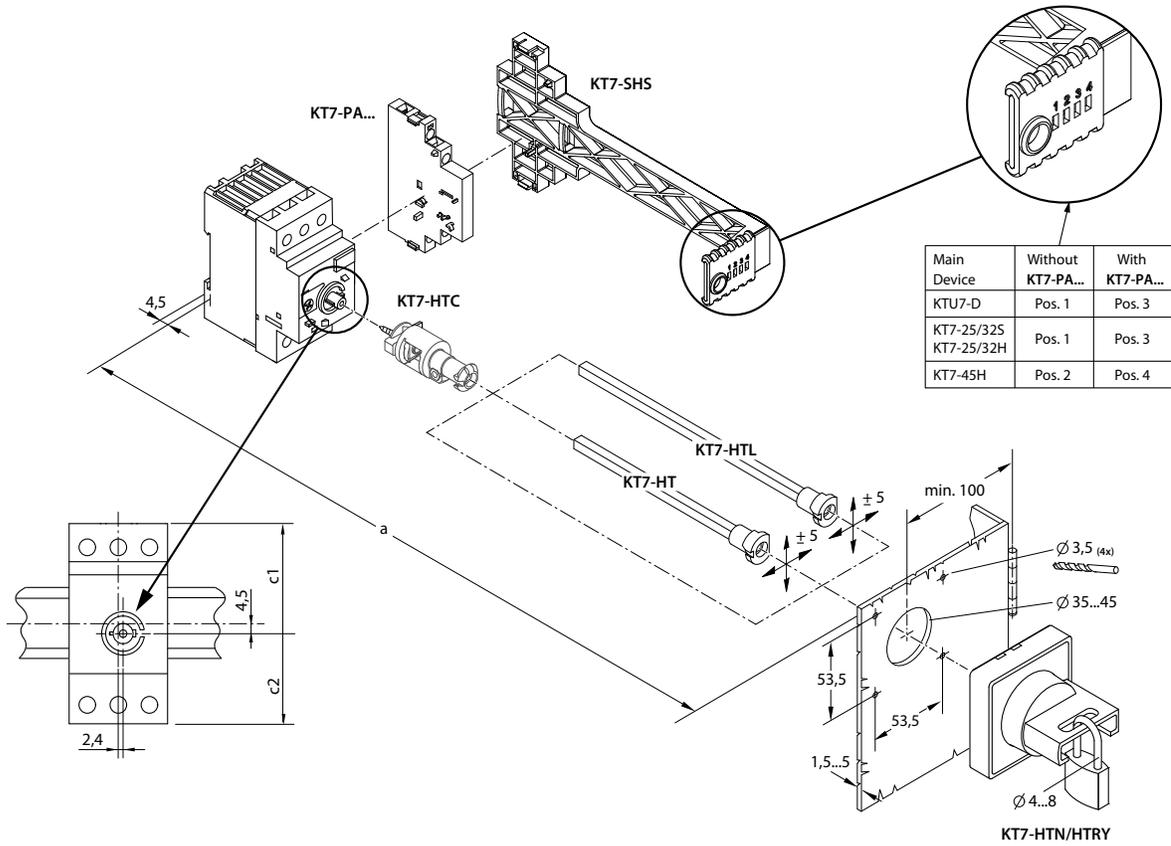
KTU7 with Screw Adaptor KT7-45-AS



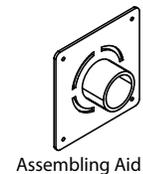
KTU7 Mounting Position



KT7 Handle Assembly with KT7-SHS Shaft Support



	a KT7-HT	a KT7-HTL	Use KT7-SHS when a >	c1	c2
KT7-25/32S	117...338	117...488	260	49.5	40.5
KT7-R25S	117...338	117...488	260	49.2	41.5
KT7-25/32H	127...348	127...497	270	49.5	40.5
KT7-45H	148.6...369.6	148.6...519	300	59.35	50.35
KTU7-D	127...348	127...497	270	55.5	46.5



KT7-SHS Shaft Support Dimensions

