Tmax

Molded case circuit breakers

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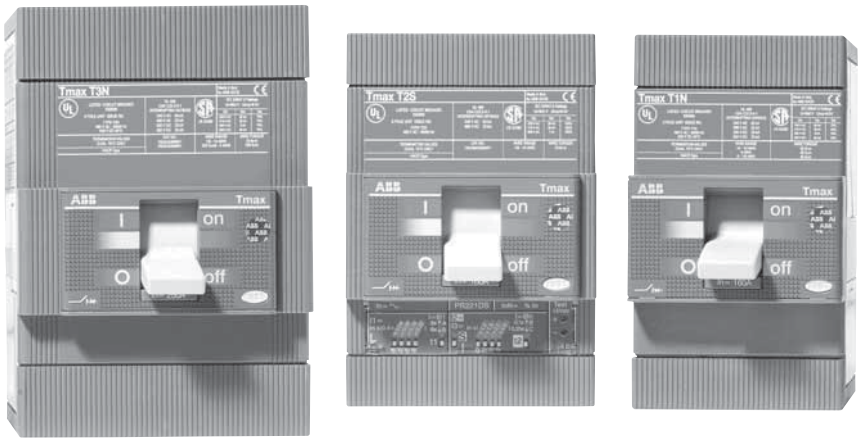

Introduction

ABB is once again demonstrating its commitment to new product development and its superiority in product performance. Never before has the industry seen such high performance, versatility and standardization in a range of molded case circuit breakers.

The ABB Tmax has been developed to complement the performance-proven Isomax line of circuit breakers. This new breaker, with a range up to 600A, has several very big features that go along with its very small size:

- Double insulation – this construction characteristic allows for the UL Listed field installation of internal accessories without exposure to the power poles.
- Positive operation – all molded case breakers from ABB ensure that the toggle indicates the precise position of the moving contacts. This guarantees safe and reliable signaling by the device.
- Installation – Tmax Series can be installed in panels and switchboards in either the horizontal or vertical planes while being fed from either end without any derating of their performance characteristics.
- Two ranges of accessories – in the pursuit of standardization, all Tmax internal and external accessories can be utilized across the entire range from 15A to 600A.
- Interrupt ratings at 480VAC up to 150kAIC.
- Compact size
- UL Listed and IEC rated for global application and acceptance.

The ABB Tmax has the performance and accessories to satisfy all industry requirements in the 600VAC to 600VDC ranges. A single pole molded case version is available for the first time.

Frame sizes — five basic sizes

The ABB Tmax series includes five basic frame sizes as well as the T1 single pole with the range rated from 15A to 600A at 480VAC. The various versions carry the following interrupting capacities:

- **B** Basic breaking capacity
- **N** Normal breaking capacity
- **S** Standard breaking capacity
- **H** High breaking capacity
- **L** Limiting capacity
- **V** Very high breaking capacity

Derived versions

- T2, T4 & T5 circuit breakers with LS/I electronic trip units
- Switch disconnectors in T1, T3, T4 and T5 frames
- Circuit breakers for motor circuit protection (MCPs)
- Circuit breakers for direct current

ABB Tmax versions

- Fixed: all models
- Plug-in: T2, T3, T4 and T5 UL
- UL File #E93565 (breakers and MCPs)
  #E116596 (Accessories)
  #E116595 (Molded case switches)

General information
Circuit breakers for power distribution
T1 – T3


T1


T2


T3

				Tmax T1 1P	Tmax T1	Tmax T2	Tmax T3
UL 489 CSA C22.2							
Frame size			A	100	100	100	225
Number of poles			Nr	1	3, 4	3, 4	3, 4
Rated voltage	AC (50-60 Hz)		V	277	600Y / 347V	480	600Y/347V
	DC		V		500		500
Interrupting ratings				**B**	**N**	**S H**	**N S**
	AC 240 V		kA		50 ②	65 100	50 65
	277 V		kA	18 ①			
	480 V		kA		22 ②	35 65	25 35
	600Y/347		kA		10		10 10
	600 V		kA				
	DC 250 V - 2 poles in series		kA		25		25 35
	500 V - 3 poles in series		kA		25		25 35
	500 V - 2 poles in series		kA				
	600 V - 3 poles in series		kA				
Trip units		TMF		■	■	■	■
		TMD/TMA					
		ELT				■	
		MA				■	■
Versions		MCCB		■	■	■	■
		MCS			■		■
		MCP				■	■
IEC 60947-2							
Rated uninterrupted current, Iu			A	160	160	160	250
Number of poles			Nr	1	3,4	3,4	3,4
Rated service voltage, Ue		AC (50-60 Hz)	V	240	690	690	690
		DC	V	125	500	500	500
Rated ultimate short circuit breaking capacity, Icu				**B**	**B C N**	**N S H L**	**N S**
	AC (50-60 Hz)	220/230 V	kA	25	25 40 50	65 85 100 120	50 85
		380/415 V	kA		16 25 36	36 50 70 85	36 50
		440 V	kA		10 15 22	30 45 55 75	25 40
		500 V	kA		8 10 15	25 30 36 50	20 30
		690 V	kA		3 4 6	6 7 8 10	5 8
	DC	250 V - 2 poles in series	kA		16 25 36	36 50 70 85	36 50
		250 V - 3 poles in series	kA		20 30 40	40 55 85 100	40 55
		500 V - 2 poles in series	kA				
		500 V - 3 poles in series	kA		16 25 36	36 50 70 85	36 50
		750 V - 3 poles in series	kA				
Trip units		TMF		■			
		TMD/TMA			■	■	■
		ELT				■	
		MF				■	
		MA				■	■
UL 489 CSA C22.2 and IEC 60947-2							
Dimensions		H	in/mm	5.12/130	5.12/130	5.12/130	5.9/150
		W 1p or 3p	in/mm	1/25.4	3/76	3.54/90	4.13/105
		W 4p	in/mm		4/102	4.72/120	5.51/140
		D	in/mm	2.76/70	2.76/70	2.76/70	2.76/70
Mechanical life			No. operations	25,000	25,000	25,000	25,000
			No. Hourly operations	240	240	240	240
			No. operations	8000	8000	8000	8000
			No. hourly operations	120	120	120	120
Weights (Fixed 3P)			Lbs.	1.06	2.34	2.86	5.45

① In15A = 10kA @ 277 VAC
② In15A = 35kA @ 240 VAC, 14 kA @ 480 VAC
TMF = Thermomagnetic trip unit with fixed thermal and magnetic threshold
TMD = Thermomagnetic trip unit with adjustable thermal threshold and fixed magnetic threshold.


T4


T5

				Tmax T4					Tmax T5				
UL 489 CSA C22.2													
Frame size			A	250					600				
Number of poles			Nr	3, 4					3, 4				
Rated voltage	AC (50-60 Hz)		V	600					600				
	DC		V	600					600				
Interrupting ratings				**N**	**S**	**H**	**L**	**V**	**N**	**S**	**H**	**L**	**V**
	AC 240 V		kA	65	100	150	200	200	65	100	150	200	200
	277 V		kA										
	480 V		kA	25	35	65	100	150	25	35	65	100	150
	600 V		kA	18	25	35	65	100	18	25	35	65	100
	DC 250 V - 2 poles in series		kA										
	500 V - 3 poles in series		kA										
	500 V - 2 poles in series		kA	25	35	50	65	100	25	35	50	65	100
	600 V - 3 poles in series		kA	16	25	35	50	65	16	25	35	50	65
Trip units		TMF				■							
		TMD/TMA				■					■		
		ELT				■					■		
		MA											
Versions		MCCB				■					■		
		MCS				■					■		
		MCP				■					■		
IEC 60947-2													
Rated uninterrupted current, Iu			A	250 - 320					400 - 630				
Number of poles			Nr	3, 4					3, 4				
Rated service voltage, Ue		AC (50-60 Hz)	V	690					690				
		DC	V	750					750				
Rated ultimate short circuit breaking capacity, Icu				**N**	**S**	**H**	**L**	**V**	**N**	**S**	**H**	**L**	**V**
	AC (50-60 Hz)	220/230 V	kA	70	85	100	200	300	70	85	100	200	300
		380/415 V	kA	36	50	70	120	200	36	50	70	120	200
		440 V	kA	30	40	65	100	180	30	40	65	100	180
		500 V	kA	25	30	50	85	150	25	30	50	85	150
		690 V	kA	20	25	40	70	80	20	25	40	70	80
	DC	250 V - 2 poles in series	kA	36	50	70	120	200	36	50	70	120	200
		250 V - 3 poles in series	kA										
		500 V - 2 poles in series	kA	25	36	50	70	100	25	36	50	70	100
		500 V - 3 poles in series	kA										
		750 V - 3 poles in series	kA	16	25	36	50	70	16	25	36	50	70
Trip units		TMF											
		TMD/TMA				■					■		
		ELT				■					■		
		MF											
		MA				■							
UL 489 CSA C22.2 and IEC 60947-2													
Dimensions		H	in/mm	8.07/205					8.07/205				
		W 1p or 3p	in/mm	4.13/105					5.51/140				
		W 4p	in/mm	5.51/140					7.24/184				
		D	in/mm	4.07/103.5					4.07/103.5				
Mechanical life			No. operations	20,000					20,000				
			No. Hourly operations	240					120				
			No. operations	8000 (250A)–6000 (320A)					7000 (400A)–5000 (630A)				
			No. hourly operations	120					60				
Weights (Fixed 3P)			Lbs.	6.18					8.55				

TMA = thermomagnetic trip unit with adjustable thermal and magnetic threshold
MF = Magnetic fixed trip unit
MA = Magnetic adjustable trip unit
ELT = Electronic trip unit

General information

Circuit breakers for specific applications in accordance with IEC 60947-2


T1


T2


T3

			Tmax T1 1P	Tmax T1	Tmax T2	Tmax T3
Circuit breakers for distribution AC-DC						
Rated uninterupted circuit		A	160	160	160	225
Number of poles		Nr	1	3, 4	3, 4	3, 4
Rated voltage	AC 50-60 Hz	V	240	690	690	690
		kA rms	**B**	**B C N**	**N S H L**	**N S**
	380/415 VAC	kA rms	25 ①	16 25 36	36 50 70 85	36 50
	440 VAC	kA rms		10 15 22	30 45 55 75	25 40
	690 VAC	kA rms		3 4 6	6 7 8 10	5 8
Ics/Icu @ 380/415 VAC %				100 100 50	100 100 100 75	75 50
Dimensions fixed version (3p)	H	in-mm	5.12 - 130	5.12 - 130	5.12 - 130	5.0 - 150
	W	in-mm	1 - 25.4	3 - 76	3.54 - 90	4.13 - 105
	D	in-mm	2.76 - 70	2.76 - 70	2.76 - 70	2.76 - 70
Circuit breakers for motor protection						
Iu		A			160	250
Poles					3	3
In		A			1 - 100	100 - 200
Ue		V			690	690
Trip unit	Adjustable magnetic only	(6 - 12xin)			■	■
	Electronic	PR221DS-I			■	
		PR222/MP (IEC 60947-4-1)				
		PR212/P-I				
		PR212/MP (IEC 60947-4-1)				
Switch-disconnectors						
Poles		Nr		3, 4		3, 4
Ith		A		160		250
Ue		V		690		690
Uimp		kV		8		8
Ui		V		800		800
Icm		kA		2.8		5.3
Icw (1s)		kA		2		3.6

15

① For In 16A and In 20A: Icu @ 220/230 VAC = 16 kA

General information

Circuit breakers for specific applications in accordance with IEC 60947-2

T4

T5

				Tmax T4					Tmax T5				
Circuit breakers for distribution AC-DC													
Rated uninterrupted current			A	250					400 - 630				
Number of poles			Nr	3, 4					3, 4				
Rated voltage	AC (50-60 Hz)		V	690					690				
Icu			kA rms	**N**	**S**	**H**	**L**	**V**	**N**	**S**	**H**	**L**	**V**
	380/415 VAC		kA rms	36	50	70	120	200	36	50	70	120	200
	440 VAC		kA	30	40	65	100	180	30	40	65	100	180
	480 V		kA	20	25	40	70	80	20	25	40	70	80
	690 VAC		kA	20	25	40	70	80	20	25	40	70	80
Ics/Icu @ 380/415 VAC				100	100	100	100	100	100	100	100	100	100
Dimensions fixed version (3p)													
	H		in-mm	8.07/205					8.07 - 205				
	W		in-mm	4.13/105					5.51/140				
	D		in-mm	4.07/103.5					4.07/103.5				
Circuit breakers for motor protection													
Iu			A	250					400				
Poles				3					3				
In				80 - 250					320 - 400				
Ue			V	690					690				
Trip unit	Adjustable magnetic only (6 - 12xin)			■									
	Electronic	PR221DS-I		■					■				
		PR222/MP (IEC 60947-4-1)		■					■				
		PR212P-I											
		PR212/MP (IEC 60947-4-1)											
Switch-disconnectors													
Poles			Nr	3/4					3/4				
Ith				250 - 320					400 - 630				
Ue			V	690					690				
Uimp			kV	8					8				
Ui			V	800					800				
Icm			kA	5.3					5.3				
Icw (1s)			kA	3.6					6				

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① For In 16A and In 20A: Icu @ 220/230 VAC = 16 kA

General information
Catalog number explanation

T3 S 080 T W - 4 xxx

Accessories (added in alpha-numeric order) ①
A = Auxiliary Switch
S_ = Shunt trip with voltage code
U_ = Undervoltage release with voltage code

Number of poles
-1 = 1 pole (T1 only)
-4 = 4 pole
None = 3 pole

Type connectors
W = None
L = Lugs included

Trip unit function
B = LS/I (AC only)
D = Molded Case Switch (MCS)
T = Thermal-magnetic – 10X Mag
M = Magnetic only (MCP)
E5 = Electronic MCP (AC only)
C = LSI (AC only)
E = LSIG (AC only)

Current rating
015 = 15A
080 = 80A
100 = 100A
225 = 225A
250 = 250A
400 = 400A

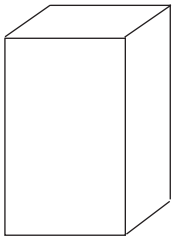
Interrupting rating class
B = Basic
N = Normal
S = Standard
H = High
L = Limiting
V = Very high

Frame size
T1 = 100A
T2 = 100A
T3 = 225A
T4 = 250A
T5 = 600A

① Consult ABB for factory installed accessories.

T1
100A, 600Y/347
Standard thermal-magnetic

T1



H x W x D
5.12" x 3.00" x 2.76"

General
The T1 breaker family ranges from 15 through 100 amperes. The T1 trip units are non-interchangeable and use the very latest technology in electromagnetic relays for overcurrent trip protection. Thermal overload protection is provided by heat sensitive bimetals. Short circuit protection for the breaker is accomplished using a precise magnetic coil. State of the art construction in contacts and arcing chambers aid in limiting damaging fault currents through the protected circuits.

Versions
The T1 frame is available in two versions:
- T = Thermal-magnetic, fixed
- D = Molded case switch

Performance levels
The T1 breaker has two performance levels available:
- B = 277V Single pole
- N = 600Y / 347V Three pole

Number of poles
The UL/CSA version of the T1 is available in single, three and four pole versions. IEC versions of the T1 are also available with the same dimensions up to 160 amperes.

Accessory mounting
The T1 frame is double insulated allowing for UL/CSA factory or field installation of internal accessories. No extra control cables are required for field installation. Shunt trips or UVR's mount in the left cavity and auxiliary contacts with bell alarm mount in the right cavity.

Reverse feeding
All versions of the T1 family are suitable for reverse feed applications.

Molded case switches
UL489 switches include no overcurrent protection except for a high instantaneous trip mechanism for self protection.

UL489 / CSA C22.2 Interrupting capacity (kA RMS)

Voltage	Continuous rating	B (1 pole)	N
240VAC	15 – 100A	—	50 ①
277VAC	15A 20 – 100A	10 18	— —
480VAC	15A 20 – 100A	— —	14 22
600Y/347VAC	15 – 100A	—	10
250VDC 2 pole series	15 – 100A	—	25
500VDC 3 pole series	15 – 100A	—	25

IEC-947 Interrupting capacity (kA RMS)

Voltage	Continuous rating	B (1 pole)	N
230V	15 – 100A	25	50
415V	15 – 100A	—	36
440V	15 – 100A	—	22
500V	15 – 100A	—	15
690V	15 – 100A	—	6
250VDC 2 pole series	15 – 100A	—	36
500VDC 3 pole series	15 – 100A	—	36

① In 15A 35kA @ 240VAC.

T1
100A, 600Y/347
Standard thermal-magnetic

T1N TMF

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 600Y/347VAC/500VDC catalog number	List price
T1N	14kA	15A	1000A	T1N015TL①	**$ 402**
	22kA	20A	1000A	T1N020TL	**402**
		25A	1000A	T1N025TL	**402**
		30A	1000A	T1N030TL	**402**
		40A	1000A	T1N040TL	**402**
		50A	1500A	T1N050TL	**402**
		60A	1500A	T1N060TL	**402**
		70A	1500A	T1N070TL	**479**
		80A	1500A	T1N080TL	**479**
		90A	1500A	T1N090TL	**479**
		100A	1500A	T1N100TL	**479**

T1B TMF — Single pole

Breaker	IC at 277VAC	Rating	Magnetic trip	1 pole, 277VAC catalog number	List price
T1B	10kA	15A	1000A	T1B015TL-1	**$ 230**
	18kA	20A	1000A	T1B020TL-1	**230**
		25A	1000A	T1B025TL-1	**230**
		30A	1000A	T1B030TL-1	**230**
		40A	1000A	T1B040TL-1	**230**
		50A	1500A	T1B050TL-1	**230**
		60A	1500A	T1B060TL-1	**230**
		70A	1500A	T1B070TL-1	**262**
		80A	1500A	T1B080TL-1	**262**
		90A	1500A	T1B090TL-1	**262**
		100A	1500A	T1B100TL-1	**262**

T1N-D — Molded case switch

Breaker	Interrupting capacity ②	Rating	Magnetic trip	480VAC/500VDC catalog number	List price
T1-D	240V, 50kA	100A	1000A	T1N100DL	**$ 431**

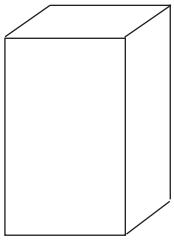
T1N TMF — 100% Rated standard thermal-magnetic

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole 600Y/347 500VDC catalog number	List price
T1N	14kA	15 ①	1000A	T1NQ015TL	**$ 442**
	22kA	20	1000A	T1NQ020TL	
		25	1000A	T1NQ025TL	
		30	1000A	T1NQ030TL	
		40	1000A	T1NQ040TL	
		50	1500A	T1NQ050TL	
		60	1500A	T1NQ060TL	
		70	1500A	T1NQ070TL	**527**
		80	1500A	T1NQ080TL	
		90	1500A	T1NQ090TL	
		100	1500A	T1NQ100TL	

① Rated 277/480Y for 15A.
② With fuse or MCCB protected circuit.

T2
100A, 480V
Thermal-magnetic/electronic

T2



H x W x D
5.12" x 3.54" x 2.76"

General
The T2 breaker family ranges from 10 through 100 amperes. The T2 trip units are non-interchangeable and use the very latest technology in electromagnetic relays for overcurrent trip protection as well as a version with microprocessor-based electronic trip unit. Thermal overload protection is provided by heat sensitive bimetals. State of the art construction in contacts and arcing chambers aid in limiting damaging fault currents through the protected circuits.

Versions
The T2 frame is available in four versions:
- T = Thermal-magnetic, fixed
- B = Adjustable LS/I electronic
- M = Magnetic only (MCP)
- E5 = Electronic instantaneous only (MCP)

Trip functions
These tripping functions are available:
- L = Long time
- S = Short time
- I - Instantaneous

Performance levels
The T2 breaker has two performance levels available:
- S = Standard
- H = High

Number of poles
The UL/CSA version of the T2 is available in three and four pole versions. IEC versions of the T2 are also available with the same dimensions up to 160 amperes.

Accessory mounting
The T2 frame is double insulated allowing for UL/CSA factory or field installation of internal accessories. No extra control cables are required for field installation. Shunt trips or UVR's mount in the left cavity and auxiliary contacts with bell alarm mount in the right cavity.

Reverse feeding
All versions of the T2 family are suitable for reverse feed applications.

UL489 / CSA C22.2 Interrupting capacity (kA RMS)

Voltage	Continuous rating	S	H
240VAC	15 – 100A	65	100
480VAC	15 – 100A	35	65

IEC-947 Interrupting capacity (kA RMS)

Voltage	Continuous rating	S	H
230V	15 – 100A	85	100
415V	15 – 100A	50	70
440V	15 – 100A	45	55
500V	15 – 100A	30	36
690V	15 – 100A	7	8
250VDC 2 pole series	15 – 100A	50	70
500VDC 3 pole series	15 – 100A	50	70

T2
100A, 480V
Thermal-magnetic/electronic

T2 — 100A TMF

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 480VAC catalog number	List price
T2S	35kA	15A	500A	T2S015TW	**$ 690**
		20A	500A	T2S020TW	**690**
		25A	500A	T2S025TW	**690**
		30A	500A	T2S030TW	**690**
		40A	500A	T2S040TW	**690**
		50A	500A	T2S050TW	**690**
		60A	600A	T2S060TW	**690**
		70A	700A	T2S070TW	**793**
		80A	800A	T2S080TW	**793**
		90A	900A	T2S090TW	**793**
		100A	1000A	T2S100TW	**793**

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 480VAC catalog number	List price
T2H	65kA	15A	500A	T2H015TW	**$ 942**
		20A	500A	T2H020TW	**942**
		25A	500A	T2H025TW	**942**
		30A	500A	T2H030TW	**942**
		40A	500A	T2H040TW	**942**
		50A	500A	T2H050TW	**942**
		60A	600A	T2H060TW	**942**
		70A	700A	T2H070TW	**1153**
		80A	800A	T2H080TW	**1153**
		90A	900A	T2H090TW	**1153**
		100A	1000A	T2H100TW	**1153**

T2 — 100A frame electronic trip unit (AC only)

Breaker	IC at 480VAC	Trip unit type	CT rating	3 pole, 480VAC catalog number	List price
T2S	35kA	PR221DS-LS/I	25A	T2S025BW	**$ 1240**
			60A	T2S060BW	**1240**
			100A	T2S100BW	**1343**
T2H	65kA	PR221DS-LS/I	25A	T2H025BW	**1492**
			60A	T2H060BW	**1492**
			100A	T2H100BW	**1703**

T2 — 100A frame magnetic only (MCP)

Breaker	IC at 480VAC	Trip unit type	Rating	Adjustment range	3 pole, 480VAC catalog number	List price
T2S	35kA	Mag only	20A	120 - 240	T2S020MW	**$ 598**
			50A	300 - 600	T2S050MW	**670**
			100A	600 – 1200	T2S100MW	**804**
T2H	65kA	Mag only	20A	120 - 240	T2H020MW	**673**
			50A	300 - 600	T2H050MW	**754**
			100A	600 – 1200	T2H100MW	**904**

T2 — 100A frame instantaneous only, electronic (MCP - AC only)

Breaker	IC at 480VAC	Trip unit type	Rating	Adjustment range	3 pole, 480VAC catalog number	List price
T2S	35kA	Instantaneous only	25A	25 - 250	T2S025E5W	**$ 656**
			60A	60 - 600	T2S060E5W	**656**
			100A	100 - 1000	T2S100E5W	**753**
T2H	65kA	Instantaneous only	25A	25 - 250	T2H025E5W	**895**
			60A	60 - 600	T2H060E5W	**895**
			100A	100 - 1000	T2H100E5W	**1095**

T2
100A, 480V, 100% rated
Thermal-magnetic/electronic

T2 – 100A TMF, 100% rated

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 480VAC catalog number	List price
T2S	35kA	15A	500A	T2SQ015TW	$ 760
		20A	500A	T2SQ020TW	
		25A	500A	T2SQ025TW	
		30A	500A	T2SQ030TW	
		40A	500A	T2SQ040TW	
		50A	500A	T2SQ050TW	
		60A	600A	T2SQ060TW	
		70A	700A	T2SQ070TW	872
		80A	800A	T2SQ080TW	
		90A	900A	T2SQ090TW	
		100A	1000A	T2SQ100TW	

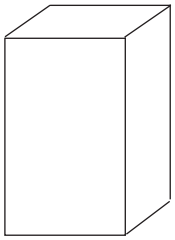
Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 480VAC catalog number	List price
T2H	65kA	15A	500A	T2HQ015TW	$ 1025
		20A	500A	T2HQ020TW	
		25A	500A	T2HQ025TW	
		30A	500A	T2HQ030TW	
		40A	500A	T2HQ040TW	
		50A	500A	T2HQ050TW	
		60A	600A	T2HQ060TW	
		70A	700A	T2HQ070TW	1268
		80A	800A	T2HQ080TW	
		90A	900A	T2HQ090TW	
		100A	1000A	T2HQ100TW	

T2 – 100A frame electronic trip unit (AC only)

Breaker	IC at 480VAC	Trip unit type	CT rating	3 pole, 480VAC catalog number	List price
T2S	35kA	PR221DS-LS/I	25A	T2SQ025BW	$ 1363
			60A	T2SQ060BW	
			100A	T2SQ100BW	1477
T2H	65kA	PR221DS-LS/I	25A	T2HQ025BW	1640
			60A	T2HQ060BW	
			100A	T2HQ100BW	1873

T3
600Y/347V
Thermal-magnetic

T3



H x W x D
5.9" x 4.13" x 2.76"

General
The T3 breaker family ranges from 60 through 225 amperes. The T3 trip units are non-interchangeable and use the very latest technology in electromagnetic relays for overcurrent trip protection. Thermal overload protection is provided by heat sensitive bimetals. Short circuit protection begins at 10 times the thermal rating of the breaker using a precise magnetic coil. State of the art construction in contacts and arcing chambers aid in limiting damaging fault currents through the protected circuits.

Versions
The T3 frame is available in three versions:
- T = Thermal-magnetic, fixed
- M = Magnetic only (MCP)
- D = Molded case switch

Performance levels
The T3 breaker has two performance levels available:
- N = Normal
- S = Standard

Number of poles
The UL/CSA version of the T3 is available in three and four pole versions. IEC versions of the T3 are also available with the same dimensions up to 250 amperes.

Accessory mounting
The T3 frame is double insulated allowing for UL/CSA factory or field installation of internal accessories. No extra control cables are required for field installation. Shunt trips or UVR's mount in the left cavity and auxiliary contacts with bell alarm mount in the right cavity.

Reverse feeding
All versions of the T3 family are suitable for reverse feed applications.

Molded case switches
UL489 switches include no overcurrent protection except for a high instantaneous trip mechanism for self protection.

UL489 / CSA C22.2 Interrupting capacity (kA RMS)

Voltage	Continuous rating	N	S
240VAC	60 – 225A	50	65
480VAC	60 – 225A	25	35
600Y/347VAC	60 – 225A	10	10
250VDC 2 pole series	60 – 225A	25	35
500VDC 3 pole series	60 – 225A	25	35

IEC-947 Interrupting capacity (kA RMS)

Voltage	Continuous rating	N	S
230V	60 – 225A	50	85
415V	60 – 225A	36	50
440V	60 – 225A	25	40
500V	60 – 225A	20	30
690V	60 – 225A	5	8
250VDC 2 pole series	60 – 225A	36	50
500VDC 3 pole series	60 – 225A	36	50

T3
225A, 600Y/347V
Thermal-magnetic trip units

T3 — 225A Frame TMF

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 480VAC/500VDC catalog number	List price
T3N	25kA	60A	600A	T3N060TW	**$ 615**
		70A	700A	T3N070TW	**740**
		80A	800A	T3N080TW	**740**
		90A	900A	T3N090TW	**740**
		100A	1000A	T3N100TW	**740**
		125A	1250A	T3N125TW	**1560**
		150A	1500A	T3N150TW	**1560**
		175A	1750A	T3N175TW	**1560**
		200A	2000A	T3N200TW	**1560**
		225A	2250A	T3N225TW	**1560**

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 480VAC/500VDC catalog number	List price
T3S	35kA	60A	600A	T3S060TW	**$ 790**
		70A	700A	T3S070TW	**970**
		80A	800A	T3S080TW	**970**
		90A	900A	T3S090TW	**970**
		100A	1000A	T3S100TW	**970**
		125A	1250A	T3S125TW	**2160**
		150A	1500A	T3S150TW	**2160**
		175A	1750A	T3S175TW	**2160**
		200A	2000A	T3S200TW	**2160**
		225A	2250A	T3S225TW	**2160**

T3 — 225A frame magnetic only, (MCP)

Breaker	IC at 480VAC	Trip unit type	Rating	Adjustment range	3 pole, 480VAC catalog number	List price
T3S	35kA	Mag only	100A	600 – 1200	T3S100MW	**$ 1074**
			125A	750 - 1500	T3S125MW	**1108**
			150A	900 - 1800	T3S150MW	**1299**
			200A	1200 - 2400	T3S200MW	**1382**

T3S-D — Molded case switch

Breaker	Interrupting ① capacity	Rating	Magnetic trip	3 pole, 480VAC/500VDC catalog number	List price
T3S-D	240V, 65kA	150A	1500A	T3S150DW	**$ 1078**
	480V, 35kA	225A	2250A	T3S225DW	**1515**

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① With fuse or MCCB protected circuit.

T3
225A, 600Y/347V, 100% rated
Thermal-magnetic trip units

T3 – 225A Frame TMF, 100% rated

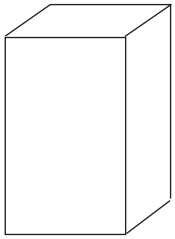
Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 600/347V VAC/500VDC catalog number	List price
T3N	25kA	60A	600A	T3NQ060TW	**$ 656**
		70A	700A	T3NQ070TW	**812**
		80A	800A	T3NQ080TW	
		90A	900A	T3NQ090TW	
		100A	1000A	T3NQ100TW	
		125A	1250A	T3NQ125TW	**1717**
		150A	1500A	T3NQ150TW	
		175A	1750A	T3NQ175TW	
		200A	2000A	T3NQ200TW	
		225A	2250A	T3NQ225TW	

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole, 600/347VVAC/500VDC catalog number	List price
T3S	35kA	60A	600A	T3SQ060TW	**$ 778**
		70A	700A	T3SQ070TW	**1065**
		80A	800A	T3SQ080TW	
		90A	900A	T3SQ090TW	
		100A	1000A	T3SQ100TW	
		125A	1250A	T3SQ125TW	**2399**
		150A	1500A	T3SQ150TW	
		175A	1750A	T3SQ175TW	
		200A	2000A	T3SQ200TW	
		225A	2250A	T3SQ225TW	

① With fuse or MCCB protected circuit.

T4
250A, 600V
Electronic and thermal magnetic trip units

T3



H x W x D
8.07" x 4.13" x 4.07"

General
The T4 breaker is a 250 amp frame with either a microprocessor based over current protective trip system or a thermal magnetic trip unit. As an electronic breaker, the T4 is available in 100A, 150A and 250A frames. The T4 is available as a thermal magnetic unit from 20A to 250A.

Versions
To meet all application requirements, the T4 is available in the following versions:
- T = Thermal-magnetic, fixed
- B = Selectable & adjustable LI or LS
- C = Adjustable LSI
- E = Adjustable LSIG
- D = Molded Case Switch
- E5 = Electronic instantaneous only (MCP)

Trip functions
These trip functions are available:
- L = Long time
- S = Short time
- I = Instantaneous
- G = Ground fault

Performance levels
Each version is also available in different maximum fault interrrupting levels:

- N = Normal
- S = Standard
- H = High
- L = Extra high
- V = Very high

Number of poles
The T4 is available as a 3 and 4 pole breaker. Estimate 4 pole pricing by adding 35% to the 3 pole price and contact your ABB sales person for details.

Accessory mounting
Internal accessories are UL/CSA approved for both factory and field installation. No extra control connectors are required for field connection. Shunt trips and UVRs mount in the left cavity and auxiliary contacts and bell alarms mount in the right cavity.

Reverse feeding
All versions of the T4 family are suitable for reverse feed applications.

UL489 / CSA C22.2 Interrupting capacity (kA RMS)

Voltage	N	S	H	L	V
240VAC	65	100	150	200	200
480VAC	25	35	65	100	150
600VAC	18	25	35	65	100
500VDC ①	25	35	50	65	100
600VDC ②	16	25	35	50	65

IEC-947 Interrupting capacity (kA RMS)

Voltage	N	S	H	L	V
230VAC	70	85	100	200	300
415VAC	36	50	70	120	200
440VAC	30	40	65	100	180
500VDC	25	30	50	85	150
690VDC	20	25	40	70	80

① 2 poles in series.
② 3 poles in series.

T4
250A, 600V
Electronic trip units (AC only)

100A Frame (40 - 100A adjustable range)

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T4N	25	PR221 LS/I PR222 LSI PR222 LSIG	T4N100BW T4N100CW T4N100EW	**$ 1903** **2540** **3330**
T4S	35	PR221 LS/I PR222 LSI PR222 LSIG	T4S100BW T4S100CW T4S100EW	**2370** **3164** **4148**
T4H	65	PR221 LS/I PR222 LSI PR222 LSIG	T4H100BW T4H100CW T4H100EW	**4498** **4845** **5877**
T4L	100	PR221 LS/I PR222 LSI PR222 LSIG	T4L100BW T4L100CW T4L100EW	**5954** **6063** **7091**
T4V	150	PR221 LS/I PR222 LSI PR222 LSIG	T4V100BW T4V100CW T4V100EW	**8555** **9213** **9957**

150A Frame (60 - 150A adjustable range)

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T4N	25	PR221 LS/I PR222 LSI PR222 LSIG	T4N150BW T4N150CW T4N150EW	**$ 2050** **2737** **3588**
T4S	35	PR221 LS/I PR222 LSI PR222 LSIG	T4S150BW T4S150CW T4S150EW	**2542** **3394** **4449**
T4H	65	PR221 LS/I PR222 LSI PR222 LSIG	T4H150BW T4H150CW T4H150EW	**4633** **5024** **6094**
T4L	100	PR221 LS/I PR222 LSI PR222 LSIG	T4L150BW T4L150CW T4L150EW	**6174** **6288** **7354**
T4V	150	PR221 LS/I PR222 LSI PR222 LSIG	T4V150BW T4V150CW T4V150EW	**8872** **9555** **10,326**

250A Frame (100 - 250A adjustable range)

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T4N	25	PR221 LS/I PR222 LSI PR222 LSIG	T4N250BW T4N250CW T4N250EW	**$ 2112** **2819** **3696**
T4S	35	PR221 LS/I PR222 LSI PR222 LSIG	T4S250BW T4S250CW T4S250EW	**2573** **3435** **4503**
T4H	65	PR221 LS/I PR222 LSI PR222 LSIG	T4H250BW T4H250CW T4H250EW	**4713** **5127** **6219**
T4L	100	PR221 LS/I PR222 LSI PR222 LSIG	T4L250BW T4L250CW T4L250EW	**6300** **6416** **7504**
T4V	150	PR221 LS/I PR222 LSI PR222 LSIG	T4V250BW T4V250CW T4V250EW	**9053** **9750** **10,537**

T4
250A, 600V
Thermal magnetic trip units

20A - 250A Frame

Breaker	IC at 480VAC kA	Rating	Magnetic trip	3 pole, 600VAC/600VDC Catalog number	List price
T4N	25	20A	500	T4N020TW	**$ 1517**
		30A	500	T4N030TW	**1517**
		40A	500	T4N040TW	**1517**
		50A	500	T4N050TW	**1517**
		80A	400-800	T4N080TW	**1547**
		100A	500-1000	T4N100TW	**1547**
		125A	625-1250	T4N125TW	**1667**
		150A	750-1500	T4N150TW	**1667**
		200A	1000-2000	T4N200TW	**1667**
		250A	1250-2500	T4N250TW	**1717**
T4S	35	20A	500	T4S020TW	**1887**
		30A	500	T4S030TW	**1887**
		40A	500	T4S040TW	**1887**
		50A	500	T4S050TW	**1887**
		80A	400-800	T4S080TW	**1927**
		100A	500-1000	T4S100TW	**1927**
		125A	625-1250	T4S125TW	**2067**
		150A	750-1500	T4S150TW	**2067**
		200A	1000-2000	T4S200TW	**2067**
		250A	1250-2500	T4S250TW	**2092**
T4H	65	20A	500	T4H020TW	**3617**
		30A	500	T4H030TW	**3617**
		40A	500	T4H040TW	**3617**
		50A	500	T4H050TW	**3617**
		80A	400-800	T4H080TW	**3657**
		100A	500-1000	T4H100TW	**3657**
		125A	625-1250	T4H125TW	**3767**
		150A	750-1500	T4H150TW	**3767**
		200A	1000-2000	T4H200TW	**3767**
		250A	1250-2500	T4H250TW	**3832**
T4L	100	20A	500	T4L020TW	**5915**
		30A	500	T4L030TW	**5915**
		40A	500	T4L040TW	**5915**
		50A	500	T4L050TW	**5915**
		80A	400-800	T4L080TW	**5965**
		100A	500-1000	T4L100TW	**5965**
		125A	625-1250	T4L125TW	**5995**
		150A	750-1500	T4L150TW	**5995**
		200A	1000-2000	T4L200TW	**5995**
		250A	1250-2500	T4L250TW	**6110**
T4V	150	20A	500	T4V020TW	**6780**
		30A	500	T4V030TW	**6780**
		40A	500	T4V040TW	**6780**
		50A	500	T4V050TW	**6780**
		80A	400-800	T4V080TW	**6817**
		100A	500-1000	T4V100TW	**6817**
		125A	625-1250	T4V125TW	**6847**
		150A	750-1500	T4V150TW	**6847**
		200A	1000-2000	T4V200TW	**6847**
		250A	1250-2500	T4V250TW	**6887**

Molded case switch

Type	Amps	Magnetic trip	3 Pole, 600V Catalog number	List price
T4H-D	250	3000	T4H250DW	**$ 2154**
T4L-D	250	3000	T4L250DW	**3419**
T4V-D	250	3000	T4V250DW	**3842**

T4
250A, 600V, 100% Rated
Electronic trip units (AC only)

100A Frame (40 - 100A adjustable range)

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T4N	25	PR221 LS/I PR222 LSI PR222 LSIG	T4NQ100BW T4NQ100CW T4NQ100EW	**$ 2124** **2835** **3716**
T4S	35	PR221 LS/I PR222 LSI PR222 LSIG	T4SQ100BW T4SQ100CW T4SQ100EW	**2645** **3531** **4629**
T4H	65	PR221 LS/I PR222 LSI PR222 LSIG	T4HQ100BW T4HQ100CW T4HQ100EW	**5020** **5383** **6530**
T4L	100	PR221 LS/I PR222 LSI PR222 LSIG	T4LQ100BW T4LQ100CW T4LQ100EW	**6616** **6737** **7879**
T4V	150	PR221 LS/I PR222 LSI PR222 LSIG	T4VQ100BW T4VQ100CW T4VQ100EW	**9506** **10,237** **11,063**

150A Frame (60 - 150A adjustable range)

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T4N	25	PR221 LS/I PR222 LSI PR222 LSIG	T4NQ150BW T4NQ150CW T4NQ150EW	**$ 2288** **3055** **4004**
T4S	35	PR221 LS/I PR222 LSI PR222 LSIG	T4SQ150BW T4SQ150CW T4SQ150EW	**2837** **3788** **4965**
T4H	65	PR221 LS/I PR222 LSI PR222 LSIG	T4HQ150BW T4HQ150CW T4HQ150EW	**5171** **5582** **6771**
T4L	100	PR221 LS/I PR222 LSI PR222 LSIG	T4LQ150BW T4LQ150CW T4LQ150EW	**6860** **6987** **8171**
T4V	150	PR221 LS/I PR222 LSI PR222 LSIG	T4VQ150BW T4VQ150CW T4VQ150EW	**9858** **10,616** **11,473**

250A Frame (100 - 250A adjustable range)

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T4N	25	PR221 LS/I PR222 LSI PR222 LSIG	T4NQ250BW T4NQ250CW T4NQ250EW	**$ 2357** **3146** **4125**
T4S	35	PR221 LS/I PR222 LSI PR222 LSIG	T4SQ250BW T4SQ250CW T4SQ250EW	**2872** **3834** **5025**
T4H	65	PR221 LS/I PR222 LSI PR222 LSIG	T4HQ250BW T4HQ250CW T4HQ250EW	**5260** **5697** **6910**
T4L	100	PR221 LS/I PR222 LSI PR222 LSIG	T4LQ250BW T4LQ250CW T4LQ250EW	**7000** **7129** **8338**
T4V	150	PR221 LS/I PR222 LSI PR222 LSIG	T4VQ250BW T4VQ250CW T4VQ250EW	**10,058** **10,833** **11,708**

30A - 250A Frame

Breaker	IC at 480 VAC kA	Rating	Magnetic trip	3 pole, 600VAC/600VDC Catalog number	List price
T4N	25	20A	500	T4NQ020TW	**$ 1673**
		30A	500	T4NQ030TW	**1673**
		40A	500	T4NQ040TW	**1673**
		50A	500	T4NQ050TW	**1673**
		80A	400-800	T4NQ080TW	**1706**
		100A	500-1000	T4NQ100TW	**1706**
		125A	625-1250	T4NQ125TW	**1839**
		150A	750-1500	T4NQ150TW	**1839**
		200A	1000-2000	T4NQ200TW	**1839**
		250A	1250-2500	T4NQ250TW	**1894**
T4S	35	20A	500	T4SQ020TW	**2081**
		30A	500	T4SQ030TW	**2081**
		40A	500	T4SQ040TW	**2081**
		50A	500	T4SQ050TW	**2081**
		80A	400-800	T4SQ080TW	**2125**
		100A	500-1000	T4SQ100TW	**2125**
		125A	625-1250	T4SQ125TW	**2280**
		150A	750-1500	T4SQ150TW	**2280**
		200A	1000-2000	T4SQ200TW	**2280**
		250A	1250-2500	T4SQ250TW	**2307**
T4H	65	20A	500	T4HQ020TW	**3990**
		30A	500	T4HQ030TW	**3990**
		40A	500	T4HQ040TW	**3990**
		50A	500	T4HQ050TW	**3990**
		80A	400-800	T4HQ080TW	**4034**
		100A	500-1000	T4HQ100TW	**4034**
		125A	625-1250	T4HQ125TW	**4155**
		150A	750-1500	T4HQ150TW	**4155**
		200A	1000-2000	T4HQ200TW	**4155**
		250A	1250-2500	T4HQ250TW	**4227**
T4L	100	20A	500	T4LQ020TW	**6524**
		30A	500	T4LQ030TW	**6524**
		40A	500	T4LQ040TW	**6524**
		50A	500	T4LQ050TW	**6524**
		80A	400-800	T4LQ080TW	**6579**
		100A	500-1000	T4LQ100TW	**6579**
		125A	625-1250	T4LQ125TW	**6612**
		150A	750-1500	T4LQ150TW	**6612**
		200A	1000-2000	T4LQ200TW	**6612**
		250A	1250-2500	T4LQ250TW	**6739**
T4V	100	20A	500	T4VQ020TW	**7478**
		30A	500	T4VQ030TW	**7478**
		40A	500	T4VQ040TW	**7478**
		50A	500	T4VQ050TW	**7478**
		80A	400-800	T4VQ080TW	**7519**
		100A	500-1000	T4VQ100TW	**7519**
		125A	625-1250	T4VQ125TW	**7552**
		150A	750-1500	T4VQ150TW	**7552**
		200A	1000-2000	T4VQ200TW	**7552**
		250A	1250-2500	T4VQ250TW	**7569**

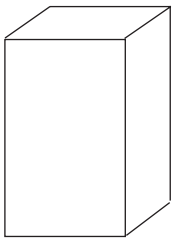
Magnetic-only MCPs

T4 - 250A Frame magnetic only (MCP - AC only)

Breaker	IC at 480VAC	Trip unit type	Rating	Adjustment range	3 pole, 600VAC Catalog number	List price
T4N	25kA	Instantaneous only	100A	100-1000	T4N100E5W	**$ 1808**
			150A	150-1500	T4N150E5W	**1948**
			250A	250-2500	T4N250E5W	**2006**
T4S	35kA	Instantaneous only	100A	100-1000	T4S100E5W	**2252**
			150A	150-1500	T4S150E5W	**2415**
			250A	250-2500	T4S250E5W	**2444**
T4H	65kA	Instantaneous only	100A	100-1000	T4H100E5W	**4273**
			150A	150-1500	T4H150E5W	**4401**
			250A	250-2500	T4H250E5W	**4477**
T4L	100kA	Instantaneous only	100A	100-1000	T4L100E5W	**5656**
			150A	150-1500	T4L150E5W	**5865**
			250A	250-2500	T4L250E5W	**5985**

T5
600A, 600V
Electronic and thermal magnetic trip units

T5



H x W x D
8.07" x 5.51" x 4.07"

General
The T5 breaker is a 600 amp frame with either a microprocessor based over current protective trip system or a thermal magnetic trip unit. As an electronic breaker, the T5 is available in 300A, 400A and 600A frames. The T5 is available as a thermal magnetic unit of 300A or 400A.

Versions
To meet all application requirements, the T5 is available in the following versions:
- T = Thermal-magnetic
- B = Selectable & adjustable LI or LS
- C = Adjustable LSI
- E = Adjustable LSIG
- D = Molded Case Switch
- E5 = Electronic instantaneous only (MCP)

Trip functions
These trip functions are available:
- L = Long time
- S = Short time
- I = Instantaneous
- G = Ground fault

Performance levels
Each version is also available in different maximum fault interrrupting levels:

- N = Normal
- S = Standard
- H = High
- L = Extra high
- V = Very high

Number of poles
The T5 is available as a 3 and 4 pole breaker. Estimate 4 pole pricing by adding 35% to the 3 pole price and contact your ABB sales person for details.

Accessory mounting
Internal accessories are UL/CSA approved for both factory and field installation. No extra control connectors are required for field connection. Shunt trips and UVRs mount in the left cavity and auxiliary contacts and bell alarms mount in the right cavity.

Reverse feeding
All versions of the T5 family are suitable for reverse feed applications.

UL489 / CSA C22.2 Interrupting capacity (kA RMS)

Voltage	N	S	H	L	V
240VAC	65	100	150	200	200
480VAC	25	35	65	100	150
600VAC	18	25	35	65	100
500VDC ①	25	35	50	65	100
600VDC ②	16	25	35	50	65

IEC-947 Interrupting capacity (kA RMS)

Voltage	N	S	H	L	V
230VAC	70	85	100	200	300
415VAC	36	50	70	120	200
440VAC	30	40	65	100	180
500VDC	25	30	50	85	150
690VDC	20	25	40	70	80

① 2 poles in series.
② 3 poles in series.

T5
600A, 600V
Electronic trip units (AC only)

300A Frame

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T5N	25	PR221 LS/I PR222 LSI PR222 LSIG	T5N300BW T5N300CW T5N300EW	**$ 3260** **3865** **4965**
T5S	35	PR221 LS/I PR222 LSI PR222 LSIG	T5S300BW T5S300CW T5S300EW	**3350** **3945** **5138**
T5H	65	PR221 LS/I PR222 LSI PR222 LSIG	T5H300BW T5H300CW T5H300EW	**5395** **5893** **7148**
T5L	100	PR221 LS/I PR222 LSI PR222 LSIG	T5L300BW T5L300CW T5L300EW	**6860** **7375** **8625**
T5V	150	PR221 LS/I PR222 LSI PR222 LSIG	T5V300BW T5V300CW T5V300EW	**10,406** **11,206** **12,111**

400A Frame

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T5N	25	PR221 LS/I PR222 LSI PR222 LSIG	T5N400BW T5N400CW T5N400EW	**$ 3260** **3865** **4965**
T5S	35	PR221 LS/I PR222 LSI PR222 LSIG	T5S400BW T5S400CW T5S400EW	**3350** **3945** **5138**
T5H	65	PR221 LS/I PR222 LSI PR222 LSIG	T5H400BW T5H400CW T5H400EW	**5395** **5893** **7148**
T5L	100	PR221 LS/I PR222 LSI PR222 LSIG	T5L400BW T5L400CW T5L400EW	**6860** **7375** **8625**
T5V	150	PR221 LS/I PR222 LSI PR222 LSIG	T5V400BW T5V400CW T5V400EW	**10,406** **11,206** **12,111**

600A Frame

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T5N	25	PR221 LS/I PR222 LSI PR222 LSIG	T5N600BW T5N600CW T5N600EW	**$ 5750** **6460** **8360**
T5S	35	PR221 LS/I PR222 LSI PR222 LSIG	T5S600BW T5S600CW T5S600EW	**5910** **6595** **8645**
T5H	65	PR221 LS/I PR222 LSI PR222 LSIG	T5H600BW T5H600CW T5H600EW	**8170** **8805** **10,890**
T5L	100	PR221 LS/I PR222 LSI PR222 LSIG	T5L600BW T5L600CW T5L600EW	**9860** **10,440** **12,630**
T5V	150	PR221 LS/I PR222 LSI PR222 LSIG	T5V600BW T5V600CW T5V600EW	**13,550** **14,375** **16,350**

T5
400A, 600V
Thermal magnetic trip units ①

300A - 400A Frames

Breaker	IC at 480VAC kA	Rating	Magnetic trip	3 pole, 600VAC/600VDC Catalog number	List price
T5N	25	300A 400A	1500-3000 2000-4000	T5N300TW T5N400TW	**$ 2612**
T5S	35	300A 400A	1500-3000 2000-4000	T5S300TW T5S400TW	**2880**
T5H	65	300A 400A	1500-3000 2000-4000	T5H300TW T5H400TW	**4950**
T5L	100	300A 400A	1500-3000 2000-4000	T5L300TW T5L400TW	**6400**
T5V	150	300A 400A	1500-3000 2000-4000	T5V300TW T5V400TW	**9873**

Molded case switch

Type	Amps	Magnetic trip	3 Pole, 600V Catalog number	List price
T5H-D	400	5000	T5H400DW	**$ 4585**
T5H-D	600	6000	T5H600DW	**6550**
T5L-D	600	6000	T5L600DW	**8350**
T5V-D	600	6000	T5V600DW	**11,575**

15

① 600A not available with thermal magnetic trip unit.

T5
400A, 600V, 100% Rated ①

Electronic trip units (AC only)

300A Frame

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T5N	25	PR221 LS/I PR222 LSI PR222 LSIG	T5NQ300BW T5NQ300CW T5NQ300EW	**$ 3628** **4302** **5526**
T5S	35	PR221 LS/I PR222 LSI PR222 LSIG	T5SQ300BW T5SQ300CW T5SQ300EW	**3729** **4391** **5719**
T5H	65	PR221 LS/I PR222 LSI PR222 LSIG	T5HQ300BW T5HQ300CW T5HQ300EW	**6005** **6559** **7956**
T5L	100	PR221 LS/I PR222 LSI PR222 LSIG	T5LQ300BW T5LQ300CW T5LQ300EW	**7635** **8208** **9600**
T5V	150	PR221 LS/I PR222 LSI PR222 LSIG	T5VQ300BW T5VQ300CW T5VQ300EW	**11,582** **12,473** **13,480**

400A Frame

Breaker	Ic at 480VAC kA	Trip Unit	3 Pole, 600V Catalog number	List price
T5N	25	PR221 LS/I PR222 LSI PR222 LSIG	T5NQ400BW T5NQ400CW T5NQ400EW	**$ 3628** **4302** **5526**
T5S	35	PR221 LS/I PR222 LSI PR222 LSIG	T5SQ400BW T5SQ400CW T5SQ400EW	**3729** **4391** **5719**
T5H	65	PR221 LS/I PR222 LSI PR222 LSIG	T5HQ400BW T5HQ400CW T5HQ400EW	**6005** **6559** **7956**
T5L	100	PR221 LS/I PR222 LSI PR222 LSIG	T5LQ400BW T5LQ400CW T5LQ400EW	**7635** **8208** **9600**
T5V	150	PR221 LS/I PR222 LSI PR222 LSIG	T5VQ400BW T5VQ400CW T5VQ400EW	**11,582** **12,473** **13,480**

Thermal magnetic trip units

300A - 400A Frames

Breaker	IC at 480VAC kA	Rating	Magnetic trip	3 pole, 600VAC/600VDC Catalog number	List price
T5N	25	300A 400A	1500-3000 2000-4000	T5NQ300TW T5NQ400TW	**$ 2888**
T5S	35	300A 400A	1500-3000 2000-4000	T5SQ300TW T5SQ400TW	**3185**
T5H	65	300A 400A	1500-3000 2000-4000	T5HQ300TW T5HQ400TW	**5475**
T5L	100	300A 400A	1500-3000 2000-4000	T5LQ300TW T5LQ400TW	**7078**
T5V	150	300A 400A	1500-3000 2000-4000	T5VQ300TW T5VQ400TW	**10,920**

① 600A not available in 100% rated frame.

T5
400A, 600V ①
Magnetic only, MCP

T5 - 400A Frame magnetic only (MCP - AC only)

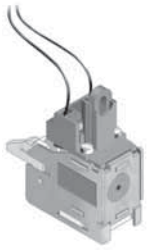
Breaker	IC at 480VAC	Trip unit type	Rating	Adjustment range	3 pole, 600VAC Catalog number	List price
T5N	25kA	Instantaneous only	300A 400A	300-3000 400-4000	T5N300E5W T5N400E5W	**$ 3097**
T5S	35kA	Instantaneous only	300A 400A	300-3000 400-4000	T5S300E5W T5S400E5W	**3183**
T5H	65kA	Instantaneous only	300A 400A	300-3000 400-4000	T5H300E5W T5H400E5W	**5125**
T5L	100kA	Instantaneous only	300A 400A	300-3000 400-4000	T5L300E5W T5L400E5W	**6517**

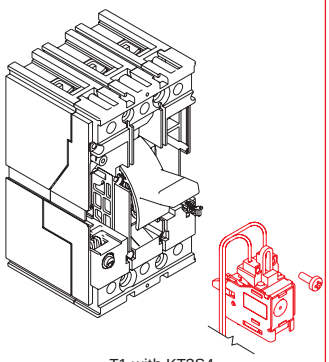
T5 - 600A Frame magnetic only (MCP - AC only)

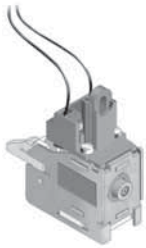
Breaker	IC at 480VAC	Trip unit type	Rating	Adjustment range	3 pole, 600VAC Catalog number	List price
T5N	25kA	Instantaneous only	600A	600-6000	T5N600E5W	**$ 5615**
T5S	35kA	Instantaneous only	600A	600-6000	T5S600E5W	**5770**
T5H	65kA	Instantaneous only	600A	600-6000	T5H600E5W	**7761**
T5L	100kA	Instantaneous only	600A	600-6000	T5L600E5W	**9370**

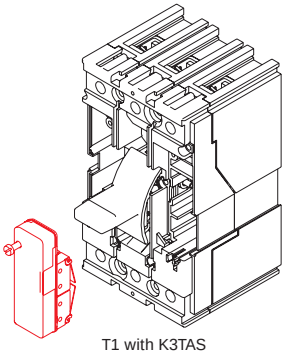
① 600A Not available with thermal magnetic trip unit.

Accessories
Electrical
T1 - T3


KT3S4


T1 with KT3S4


KT3U2


T1 with K3TAS


KT3M1

Shunt trips

Voltage	Factory installation: Catalog number suffix ①	Factory installation: List price adder	Field installation: Catalog number T1 – T3	Field installation: List price
480 – 500VAC	S1		KT3S1	
220/250VAC/DC	S2		KT3S2	
380 – 440VAC	S3		KT3S3	
110 – 125VAC/DC	S4	**$ 535**	KT3S4	**$ 490**
48 – 60VAC/DC	S7		KT3S7	
24 – 30VAC/DC	S8		KT3S8	
12VDC	S9		KT3S9	

For remote opening of circuit breaker and includes internal cut-off switch to protect solenoid. All shunt trips are left pole mounted and can not be used with undervoltage releases. All shunt trips are approved for use in ground fault systems.

Electrical specifications

Voltage	AC VA	DC Watts
24, 120, 240	50	50
48 - 60	60	60
480 - 500	55	—

Undervoltage releases

Voltage	Factory installation: Catalog number suffix ①	Factory installation: List price adder	Field installation: Catalog number T1 – T3	Field installation: List Price
480 – 500VAC	U1		KT3U1	
220 – 250VAC/DC	U2		KT3U2	
380 – 440VAC	U3		KT3U3	
110 – 125VAC/DC	U4	**$ 535**	KT3U4	**$ 490**
60VAC/DC	U5		KT3U5	
48VAC/DC	U7		KT3U7	
24 – 30VAC/DC	U8		KT3U8	

Will trip circuit breaker when connected voltage drops to 35 – 70% of undervoltage release voltage rating. Will allow circuit breaker to close (ON) when voltage is approximately 85% of rated voltage. All undervoltage releases are left pole mounted and can not be used with shunt trips.

Electrical specifications

Voltage	AC VA	DC Watts
24	1.5	1.5
48 - 60	1	1
120	2	2
220 - 250	2.5	2.5
480 - 500	4	—

Auxiliary contacts — T1 - T3

Contacts	Factory installation: Catalog number suffix	Factory installation: List price adder	Field installation: Catalog number	Field installation: List Price
1 Form C + 1 BA	A	**$ 433**	KT3AS	**$ 380**
3 Form C + 1 BA	A3	**770**	KT3AS3	**725**
T2 PR221DS 1 Form C + 1 BA	A	**433**	KT2AS-E	**380**
3 form C + 1 BA 24VDC	A3AU	**770**	KT3AS3-AU	**725**

Electrical operators

Voltage	Field installation: Catalog number	Field installation: List Price
48 – 60VAC/DC	KT3M1	**$ 850**
110 – 250VAC/DC	KT3M2	

Electrical specifications

Voltage range	Inrush power
85 - 110% rated voltage	2500VA / 1000W

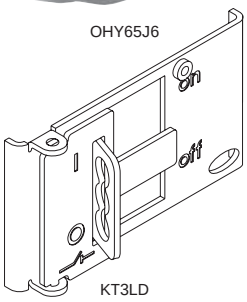
① For factory installation add suffix given to end of circuit breaker catalog number per accessory format.

Accessories
Mechanical
T1 - T3


KT3RH

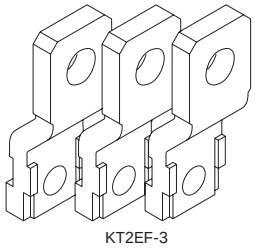
OHB65J6

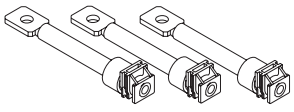
OHY65J6



KT3LD


KT3100-3


KT2EF-3


KT2R-3

Direct mount rotary operator handle

	Catalog number	List price
Direct mount rotary	KT3RH	**$ 146**

Variable depth rotary handles

Frame	Mechanism catalog number	List price	Shaft catalog number	List price	Handle catalog number	List price
NEMA 1, 3R, 12						
Tmax	KT3VD-M	**$ 72**	OXP6X430 ①	**$ 28**	OHY65J6 ① OHB65J6 ①	**$ 80**
NEMA 4, 4X						
Tmax	KT3VD-M	**72**	OXP6X430 ①	**28**	OHY80L6 ① OHB80L6 ①	**130**
NEMA 1						
Tmax	KT3VD-M	**72**	KT3VD-S	**35**	KT3VD-H	**87**

Locking device

	Catalog number	List price
Locking device, open/closed	KT3LD	**$ 35**
Locking device, open	KT3LDO	**35**

Lugs

For breakers	Amps	Wire size	Set of 3 catalog number	List price	Set of 4 catalog	List price number
Standard cable lugs						
T1	100	14AWG-1/0	Integral	—	Integral	—
T2	100	14AWG-1/0	KT2100-3	**$ 9**	KT2100-4	**$ 12**
T3	60	14AWG -2AWG	KT3060-3	**9**	KT3060-4	**12**
	100	14AWG -1/0	KT3100-3	**9**	KT3100-4	**12**
	150	2AWG-4/0	KT3150-3	**12**	KT3150-4	**18**
	225	4AWG-300kcmil	KT3225-3	**18**	KT3225-4	**24**

Standard cable lug kits with power controls taps

For breakers	Amps	Wire size	Set of 3 Catalog number	Set of 3 List price	Set of 4 Catalog number	Set of 4 List price
T3	100	14AWG - 1/0	KT3100-3C	**$ 16**	KT3100-4C	**$ 19**
	150	2AWG - 4/0	KT3150-3C	**16**	KT3150-4C	**19**
	225	4AWG - 350kcmil	KT3225-3C	**25**	KT3225-4C	**31**

Extended front terminals

For breakers	Amps	Set of 3 Catalog number	Set of 3 List price adder	Set of 4 Catalog number	Set of 4 List Price
T2	100	KT2EF-3	**$ 26**	KT2EF-4	**$ 35**
T3	225	KT3EF-3	**33**	KT3EF-4	**44**

Rear terminals

For breakers	Amps	Set of 3 Catalog number	Set of 3 List price adder	Set of 4 Catalog number	Set of 4 List Price
T2	100	KT2R-3	**$ 78**	KT2R-4	**$ 105**
T3	225	KT3R-3	**98**	KT3R-4	**131**

Distribution cable lug kit	Amps	Set of 3 Wire range	Set of 3 Catalog number	Set of 3 List Price
T3	225	(6) #14-6	KT3TN	**$ 125**

OHB 65 J 6

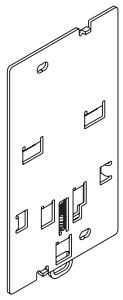
Color
B = Black
Y = Red/Yellow

Physical size (length in mm)

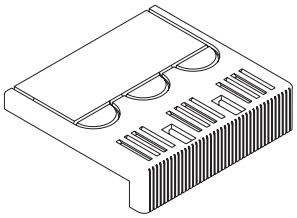
Shaft size (diameter in mm)

J = Type 1, 3R, 12
L = Type 1, 3R, 12, 4, 4X

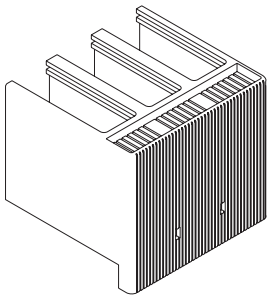
① Use Discount Schedule H6.



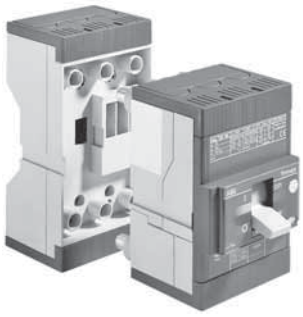
KT2DIN



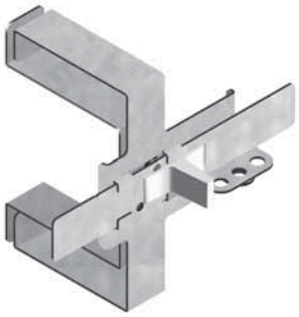
KT1LTC-3



KT1HTC-3



KT2PFF + KT2PMK (on back of breaker) + breaker



KT3MIF2

DIN Rail mounting kits — 35mm DIN ①

For breakers	Catalog number	List price
T1 / T2	KT2DIN	**$ 33**
T3	KT3DIN	**41**

Terminal covers for fixed breakers

Low Profile

For breakers	Low profile 3-pole		Low profile 4-pole	
	Catalog number	List price	Catalog number	List Price
T1	KT1LTC-3	**$ 35**	KT1LTC-4	**$ 47**
T2	KT2LTC-3	**40**	KT2LTC-4	**54**
T3	KT3LTC-3	**50**	KT3LTC-4	**68**

High Profile

For breakers	High profile 3-pole		High profile 4-pole	
	Catalog number	List price	Catalog number	List Price
T1	KT1HTC-3	**$ 37**	KT1HTC-4	**$ 50**
T2	KT2HTC-3	**43**	KT2HTC-4	**58**
T3	KT3HTC-3	**53**	KT3HTC-4	**72**

Kit consists of two pieces.

Plug-in kits for T2 and T3 ②

For breakers	Moving part		Fixed part	
	Catalog number	List price	Catalog number	List Price
T2 — 3-Pole	KT2PMK	**$ 171**	KT2PFF	**$ 238**
T3 — 3-Pole	KT3PMK	**190**	KT3PFF	**264**

Fixed parts accept the same cable and rear terminal kits as the circuit breakers.

Sliding bar interlock — front mounted

For breakers	For 2 breakers		For 3 breakers	
	Catalog number	List price	Catalog number	List Price
T1 – T3	KT3MIF2	**$ 625**	KT3MIF3	**$ 844**

Plug connectors

Item	3 Way	6 Way	12 Way	Catalog number	List price
Shunt trip or UVR	■			KT3PC-3	**$ 18**
1 form C + 1BA auxiliary contact		■		KT3PC-6	**21**
3 form C + 1BA auxiliary contact			■	KT3PC-12	**24**

Cable kits

Item	Catalog number	List price
2 Cables, 2M	KT3PC-2CK	**$ 18**
6 Cables, 2M	KT3PC-6CK	**24**
12 Cables, 2M	KT3PC-12CK	**30**

① For use with 15mm high DIN rail.
② Plug connectors and cable kit required when mounting accessories.

External accessories
Flange handle operators
T1 – T3

Flange handle — Cable linkage

Breaker	NEMA Type	Mechanism only	List price	Cable only	Cable length	List price	Handle only	List price
T1/T2	1,3R,12	KT2FPM	**$ 123**	K5C036	36” (91cm)	**$ 114**	K5FCH	**$ 213**
T1/T2	4,4X	KT2FPM		K5C048	48” (122cm)	**146**	K5FCH4	**243**
T3	1,3R,12	KT3FPM		K5C060	60” (152cm)	**160**	K5FCH	**213**
T3	4,4X	KT3FPM		K5C072	72” (183cm)	**175**	K5FCH4	**243**

Notes: For complete assembly; mechanism, cable and handle are required.
All cables mount onto the right side of the breaker.
Handle can be mounted on the right or left side.

Door hardware kits — T1 - T5 Cable operated

Item	Catalog number	List price
Door hardware kit, right hand, 2 point latch for enclosures less than 40 inches high	KDH2R	**$ 200**
Door hardware kit, right hand, 3 point latch for enclosures 40 inches high or greater	KDH3R	**225**

Enclosure depths

Minimum

Breaker	Depth (inches)
T1 - T3	8

Maximum

Maximum depth is determined by cable length.

Shunt trips (Standard)

Voltage	Factory installation		Field installation	
	Catalog number suffix ①	List price adder	Catalog number T4 – T5	List price
480 – 500VAC	S1		KT5S1	
220/250VAC/DC	S2		KT5S2	
380 – 440VAC	S3		KT5S3	
110 – 125VAC/DC	S4	**$ 535**	KT5S4	**$ 490**
48 – 60VAC/DC	S7		KT5S7	
24 VAC/DC	S8		KT5S8	
12VDC	S9		KT5S9	

Shunt trip (Permanent supply)

Voltage	Factory installation		Field installation	
	Catalog number suffix ①	List price adder	Catalog number T4 – T5	List price
110 – 120 VAC	SP4	**$ 535**	KT5SP4	**$ 490**
24 – 30 VAC/DC	SP8		KT5SP8	

Undervoltage release

Voltage	Factory installation		Field installation	
	Catalog number suffix ①	List price adder	Catalog number T4 – T5	List Price
480 – 500 VAC	U1		KT5U1	
220 – 250 VAC/DC	U2		KT5U2	
380 – 440 VAC	U3		KT5U3	
110 – 125 VAC/DC	U4	**$ 535**	KT5U4	**$ 490**
60 VAC/DC	U5		KT5U5	
48 VAC/DC	U7		KT5U7	
24 VAC/DC	U8		KT5U8	

Auxiliary contacts

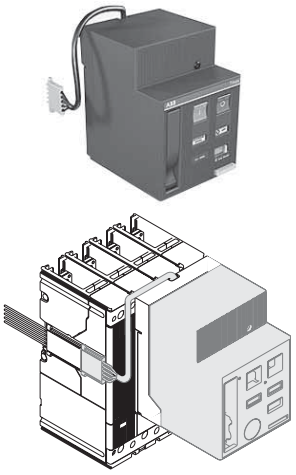
Contacts	Factory installation		Field installation	
	Catalog number suffix	List price adder	Catalog number	List Price
1 Form C + 1 BA, 250 VAC/VDC	A	**$ 433**	KT5AS	**$ 380**
3 Form C + 1 BA, 250 VAC/VDC	A3	**770**	KT5AS3	**725**
3 Form C + 1 BA, 24 VDC	A3AU	**770**	KT5AS3-AU	**725**

Stored energy motor operator

Voltage	Field installation	
	Catalog number	List Price
220 – 250 VAC/DC	KT5M2	**$ 2385**
110 – 125 VAC/DC	KT5M4	
48 – 60 VDC	KT5M7	
24 VDC	KT5M8	

Stored energy motor operator – Contact remote/manual operation

Contacts	Factory installation		Field installation	
	Catalog number suffix	List price adder	Catalog number	List Price
1 Form C	MA	**$ 265**	KT5MA	**$ 220**



KT5M2

Adapters ②

Item	6 Way	10 Way	12 Way	Catalog number	List price
1 Form C + 1BA	■			KT5ADP-6	**$ 24**
Shunt trip / UVR	■			KT5ADP-6	**24**
Stored energy motor operator		■		KT5ADP-10	**30**
Stored energy motor operator plus shunt trip/UVR		■		KT5ADP-10	**30**
3 Form C + 1BA			■	KT5ADP-12	**35**

① For factory installation add suffix given to end of circuit breaker catalog number per accessory format.
2 Required when mounting accessories on plug-in/drawout breakers

Accessories
Mechanical
T4 - T5

KT5RH

Direct mount rotary operator handle

Item	Catalog number	List Price
Direct mount rotary handle (for fixed and plug-in breakers) Direct mount rotary handle (for withdrawable breakers)	KT5RH KT5RHW	**$ 135**

Variable depth rotary handles

Item	Catalog number	List Price
Mechanism	KT5VD-M	**$ 65**
NEMA 1, 12, 3R Handle (Black)	OHB95J10 ①	**80**
NEMA 1, 12, 3R Handle (Grey)	OHG95J10 ①	**80**
NEMA 4, 4X Handle (Black)	OHB95L10 ①	**120**
NEMA 4, 4X Handle (Grey)	OHG95L10 ①	**120**
Shaft (148mm / 5.8 in)	OXP10X148 ①	**24**
Shaft (225mm / 8.9 in)	OXP10X225 ①	**26**
Shaft (500mm / 19.7 in)	OXP10X500 ①	**32**
NEMA 1 Handle, square profile Shaft (500mm/19.7in)	KT5VD-H KT5VD-S	**87**

Locking devices

	Catalog number	List price
Locking device	KT5FLD	**$ 40**
Locking device draw out	KT5FLDW	**55**

KT4PMK (on back of breaker)

KT4PFVR

Plug-in kits

Contacts	Breaker adapter kit		Plug-in base	
	Catalog number suffix	List price adder	Catalog number	List Price
T4, 3 pole with extended front terminal T4, 3 pole with rear horizontal terminal T4, 3 pole with rear vertical terminal	KT4PMK	**$ 250**	KT4PFEF KT4PFHR KT4PFVR	**$ 710** **766** **766**
T5, 3 pole with extended front terminal T5, 3 pole with rear horizontal terminal T5, 3 pole with rear vertical terminal	KT5PMK	**350**	KT5PFEF KT5PFHR KT5PFVR	**810** **866** **866**

KT4WMK (on back of breaker)

KT5WFVR

Draw-out kits

Contacts	Breaker adapter kit		Plug-in base	
	Catalog number suffix	List price adder	Catalog number	List price
T4, 3 pole with extended front terminal T4, 3 pole with rear horizontal terminal T4, 3 pole with rear vertical terminal	KT4WMK	**$ 290**	KT4WFEF KT4WFHR KT4WFVR	**$ 816** **1021** **1021**
T5, 3 pole with extended front terminal T5, 3 pole with rear horizontal terminal T5, 3 pole with rear vertical terminal	KT5WMK	**407**	KT5WFEF KT5WFHR KT5WFVR	**931** **1154** **1154**

Standard cable lugs

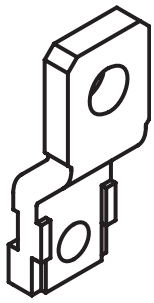
For breakers	Amps	Wire size	Set of 2 catalog number	List price	Set of 3 catalog number	List price	Set of 4 catalog number	List price
T4	100 250	14 AWG-1/0 6 AWG - 350 kcmil	KT4100-2 KT4250-2	**$ 6** **20**	KT4100-3 KT4250-3	**$ 9** **30**	KT4100-4 KT4250-4	**$ 12** **40**
T5	300 400	250kcmil - 500 kcmil (2) 3/0 - 250 kcmil	KT5300-2 KT5400-2	**30** **30**	KT5300-3 KT5400-3	**45** **45**	KT5300-4 KT5400-4	**60** **60**
T5	600	(2) 3/0 - 500 kcmil	KT5600-2	**TBD**	KT5600-3	**TBD**	KT5600-4	**TBD**

Standard cable lug kits with power control taps

For breakers	Amps	Wire size	Set of 2 catalog number	List price	Set of 3 catalog number	List price	Set of 4 catalog number	List price
T4	100 250	14 AWG-1/0 6 AWG - 350 kcmil	KT4100-2C KT4250-2C	**$ 10** **24**	KT4100-3C KT4250-3C	**$ 15** **36**	KT4100-4C KT4250-4C	**$ 20** **48**
T5	300 400	250 kcmil - 500 kcmil (2) 3/0 - 250 kcmil	KT5300-2C KT5400-2C	**34** **34**	KT5300-3C KT5400-3C	**51** **51**	KT5300-4C KT5400-4C	**68** **68**

① Use Discount schedule SH

Accessories
Mechanical
T4 - T5



KT4EF-_

Extended front terminals

Breaker	Amps	Set of three		Set of four	
		Catalog number suffix	List price adder	Catalog number	List Price
T4 T5	250 400	KT4EF-3 KT5EF-3	**$ 55** **115**	KT4EF-4 KT5EF-4	**$ 73** **155**

Rear terminals

Breaker	Amps	Set of three		Set of four	
		Catalog number suffix	List price adder	Catalog number	List Price
T4 T5	250 400	KT4R-3 KT5R-3	**$ 60** **122**	KT4R-4 KT5R-4	**$ 80** **163**

Distribution cable lug kit

Breaker	Amps	Wire range	Set of 3 catalog number	List price
T4 T5	250 400	(6) #14-6 (6) #14-1/0	KT4TN KT5TGD	**$ 125** **240**

KT4LTC-3

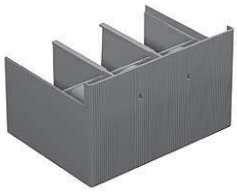
Terminal covers for fixed breakers

Low profile

For breakers	Low profile 3-pole		Low profile 4-pole	
	Catalog number	List price	Catalog number	List price
T4 T5	KT4LTC-3 KT5LTC-3	**$ 55** **60**	KT4LTC-4 KT5LTC-4	**$ 74** **81**

High profile

For breakers	High profile 3-pole		High profile 4-pole	
	Catalog number	List price	Catalog number	List price
T4 T5	KT4HTC-3 KT5HTC-3	**$ 58** **63**	KT4HTC-4 KT5HTC-4	**$ 78** **85**



KT4HTC-3

Mechanical interlock plate — complete assembly consists of one frame and one plate

Interlock frame	Catalog number	List price
Mechanical interlock horizontal frame Mechanical interlock vertical frame	KT5MIR-HB KT5MIR-VB	**$ 490** **588**

Plate type				Catalog number	List price
A	T4 (F-P-W)	+	T4 (F-P-W)	KT5MIR-PA	**$ 210**
B	T4 (F-P-W)	+	T5 400 (F-P-W) or T5 630 (F)	KT5MIR-PB	
C	T4 (F-P-W)	+	T5 630 (P-W)	KT5MIR-PC	
D	T5 400 (F-P-W) or T5 630 (F)	+	T5 400 (F-P-W) or 630 (F)	KT5MIR-PD	
E	T5 400 (F-P-W) or T5 630 (F)	+	T5 630 (P-W)	KT5MIR-PE	
F	T5 630 (P-W)	+	T5 630 (P-W)	KT5MIR-PF	

External accessories
Flange handle operators
T4 & T5

Flange handle — Cable linkage

Breaker	NEMA Type	Mechanism only	List price	Cable only	Cable length	List price	Handle only	List price
T4	1, 3R, 12	KT4FPM	**$ 148**	K5C036	36” (91cm)	**$ 114**	K5FCH	**$ 213**
T4	4, 4X	KT4FPM		K5C048	48” (122cm)	**146**	K5FCH4	**243**
T5	1, 3R, 12	KT5FPM	**193**	K5C060	60” (152cm)	**160**	K5FCH	**213**
T5	4, 4X	KT5FPM		K5C060	72” (183cm)	**175**	K5FCH4	**243**
–	–	–	–	K5C084	84” (213cm)	**204**	–	–
–	–	–	–	K5C096	96” (244cm)	**221**	–	–
–	–	–	–	K5C108	108” (274cm)	**238**	–	–
–	–	–	–	K5C120	120” (305cm)	**256**	–	–

Notes: For complete assembly; mechanism, cable and handle are required.
All cables mount onto the right side of the breaker.
Handle can be mounted on the right or left side.

Door hardware kits – T4 & T5 Cable operated

Item	Catalog number	List price
Door hardware kit, right hand, 2 point latch for enclosures less than 40 inches high	KDH2R	**$ 200**
Door hardware kit, right hand, 3 point latch for enclosures 40 inches high or greater	KDH3R	**225**

Enclosure depths

Minimum

Breaker	Depth (inches)
T4 & T5	8

Maximum

Maximum depth is determined by cable length.

Enclosures
Type 1 & 3R/12


T3E-1


T4E-3R12 ③

Enclosures (Price does not include circuit breaker; order as a separate item.) ④

NEMA designation	Breaker type	Enclosure maximum rating AL cables	Enclosure maximum rating CU cables	Approximate dimensions① H x W x D (inches)	Catalog number	List price
Type 1 ①	T1	100A	100A	15 x 8.5 x 4	T1E-1	**$ 267**
	T2	100A	100A	15 x 8.5 x 4	T2E-1	**267**
	T3	175A	225A	20 x 11 x 4	T3E-1	**315**
	T4	200A	250A	26 x 15 x 6.25	T4E-1 ②	**407**
	T5	325A	400A	26 x 15 x 6.25	T5E-1 ②	**435**
Type 3R/12③	T1	100A	100A	15 x 8.5 x 7	T1E-3R12	**407**
	T2	100A	100A	15 x 8.5 x 7	T2E-3R12	**407**
	T3	175A	225A	20 x 11 x 7	T3E-3R12	**527**
	T4	200A	250A	26 x 15 x 9	T4E-3R12	**767**
	T5	325A	400A	26 x 15 x 9	T5E-3R12	**625**

Neutral kits

Breaker type	Neutral cable capacity and wire range	Neutral kit catalog number	List price
T1 – T2	Neutral #14-1/0 Bonding Lug #14-1/0	T2NK125	**$ 140**
T3	Neutral #6-250 kcmil Bonding Lug #14-1/0	T3NK225	**150**
T4	Neutral #6-250 kcmil Bonding Lug #14-1/0 kcmil	T4NK250	**200**
T5	Neutral (2) #6-250 kcmil Bonding Lug #14-1/0 kcmil	T5NK400	**295**

NOTE: The list price adder for factory installation of an enclosed circuit breaker is 50% of the enclosure list price.

Description

Type 1

- General purpose indoor enclosure intended for use in normal environments to provide a degree of protection against contact with enclosed equipment.
- Sheet steel, surface mount.
- Breaker is front-operable and can be padlocked via a separately ordered padlock device.
- Available through 400A, 600VAC
- (SUSE) suitable for use as service equipment.

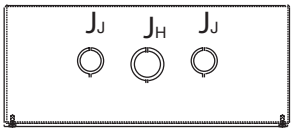
Type 3R/12

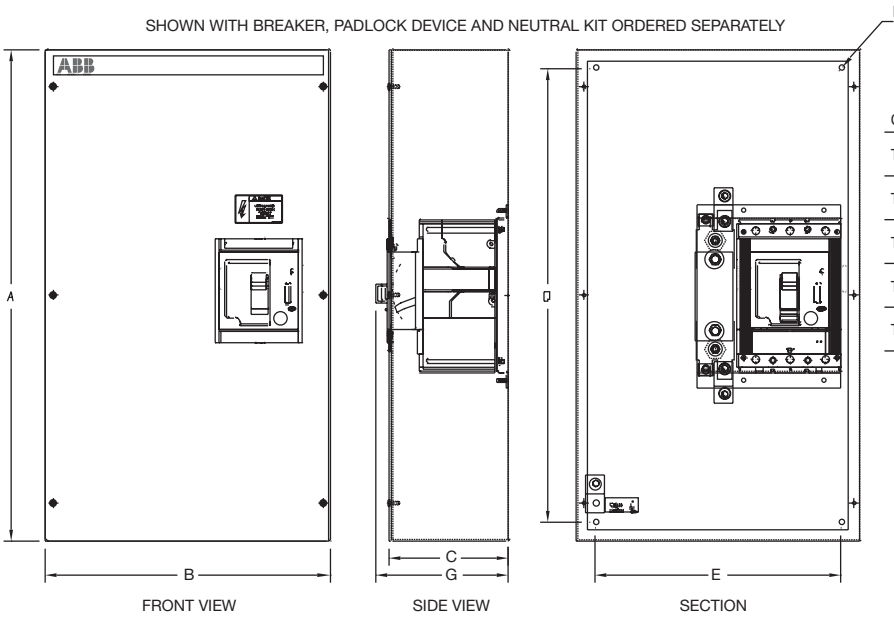
- Type 3R is intended for outdoor use providing protection against rain, sleet or snow.
- Type 12 is for use in indoor atmospheres to provide a degree of protection against circulating dust, lint, sawdust, falling dirt and dripping non-corrosive liquids.
- Surface-mounted, sheet steel enclosure.
- Breaker can be operated via **separately ordered** handle mechanism; door is interlocked with mechanism.
- Available through 400A, 600VAC.
- (SUSE) suitable for use as service equipment.

① Padlocking provision must be ordered separately.
② Must order KT5FLD (padlock device) separately.
③ Variable depth rotary handle must be ordered separately.
④ Consult ABB for breakers installed in enclosures.

Enclosures
Approximate dimensions, T1 – T5
NEMA 1, 3R & 12

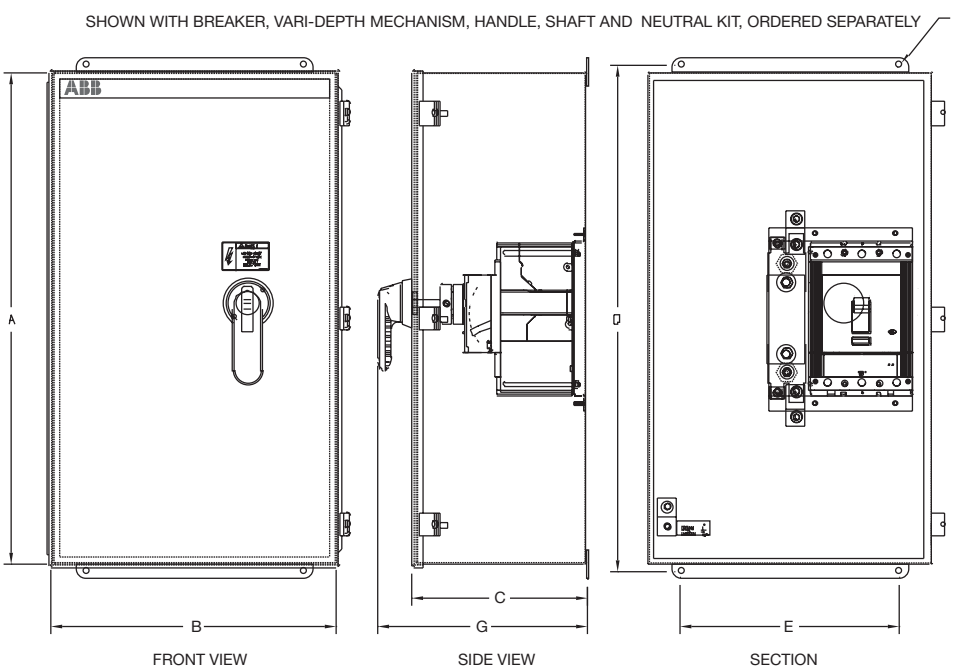
NEMA 1





Cat. #	A	B	C	D	E	F	G	H	J
T1E-1	15.00 *381*	8.50 *216*	4.00 *102*	13.00 *330*	6.50 *165*	0.281 *7*	4.93 *125*	1, 1-1/4 *25, 32*	3/4, 1 *19, 25*
T2E-1	15.00 *381*	8.50 *216*	4.00 *102*	13.00 *330*	6.50 *165*	0.281 *7*	4.93 *125*	1, 1-1/4 *25, 32*	3/4, 1 *19, 25*
T3E-1	20.00 *508*	11.00 *279*	4.00 *102*	18.00 *457*	9.00 *229*	0.281 *7*	4.93 *125*	1, 1-1/4 *25, 32*	3/4, 1 *19, 25*
T4E-1	26.00 *660*	15.00 *381*	6.25 *159*	24.00 *610*	13.00 *330*	0.281 *7*	7.01 *178*	1, 1-1/4 *25, 32*	3/4, 1 *19, 25*
T5E-1	26.00 *660*	15.00 *381*	6.25 *159*	24.00 *610*	13.00 *330*	0.281 *7*	7.01 *178*	1, 1-1/4 *25, 32*	3/4, 1 *19, 25*

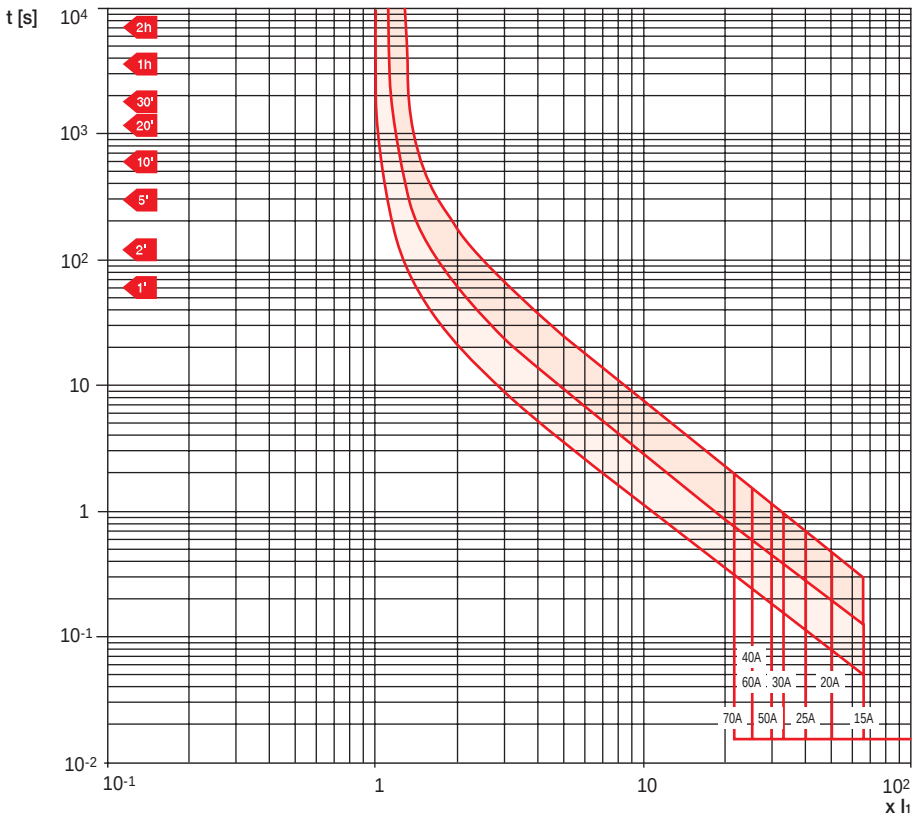
NEMA 3R, 12



Cat. #	A	B	C	D	E	F	G
T1E-3R12	15.00 *381*	8.50 *216*	7.00 *178*	15.75 *400*	5.00 *127*	0.313 *8*	9.06 *230*
T2E-3R12	15.00 *381*	8.50 *216*	7.00 *178*	15.75 *400*	5.00 *127*	0.313 *8*	9.06 *230*
T3E-3R12	20.00 *508*	11.00 *279*	7.00 *178*	20.75 *527*	7.50 *191*	0.313 *8*	9.06 *230*
T4E-3R12	26.00 *660*	15.00 *381*	9.00 *229*	26.75 *679*	11.50 *292*	0.313 *8*	11.06 *281*
T5E-3R12	26.00 *660*	15.00 *381*	9.00 *229*	26.75 *679*	11.50 *292*	0.313 *8*	11.06 *281*

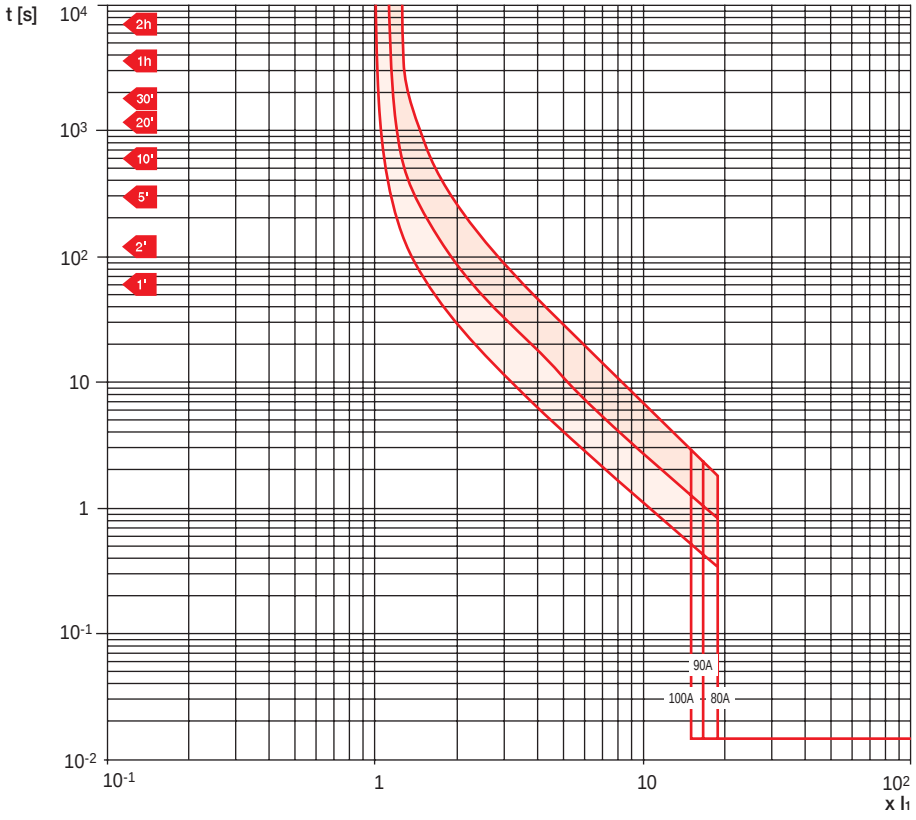
T1 100-T1 100 1P TMF

In = 15 ÷ 70 A



T1 100-T1 100 1P TMF

In = 80 ÷ 100 A

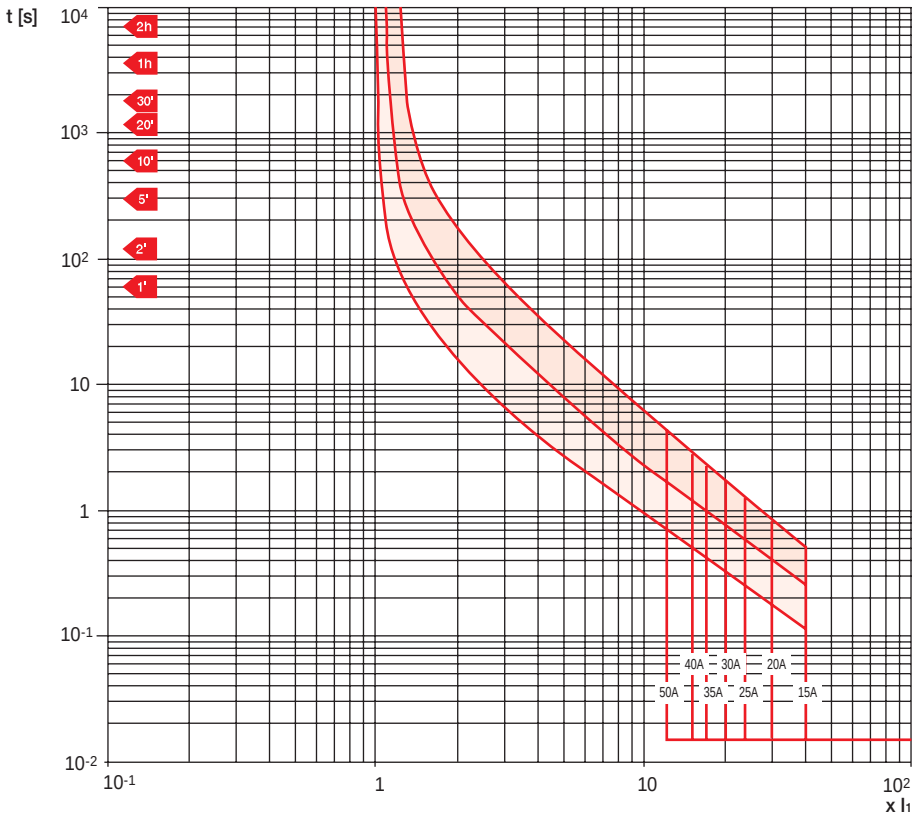


15

Trip curves for distribution
Circuit breakers w/thermagnetic trip units
Tmax T2

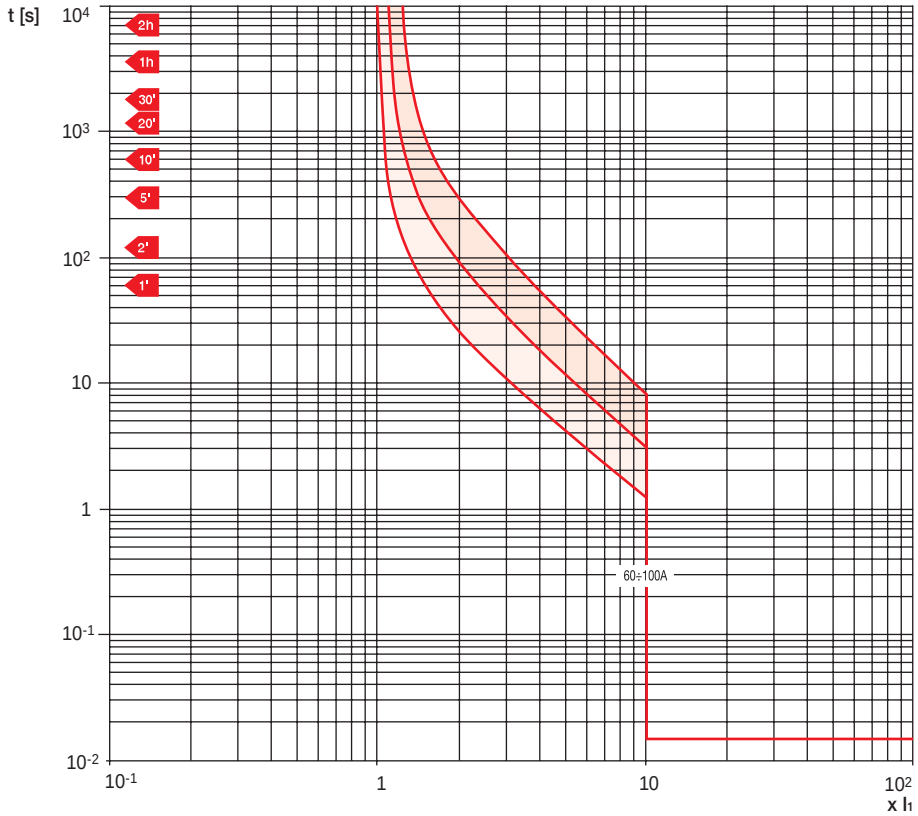
T2 100 TMF

In = 15 ÷ 50 A



T2 100 TMF

In = 60 ÷ 100 A



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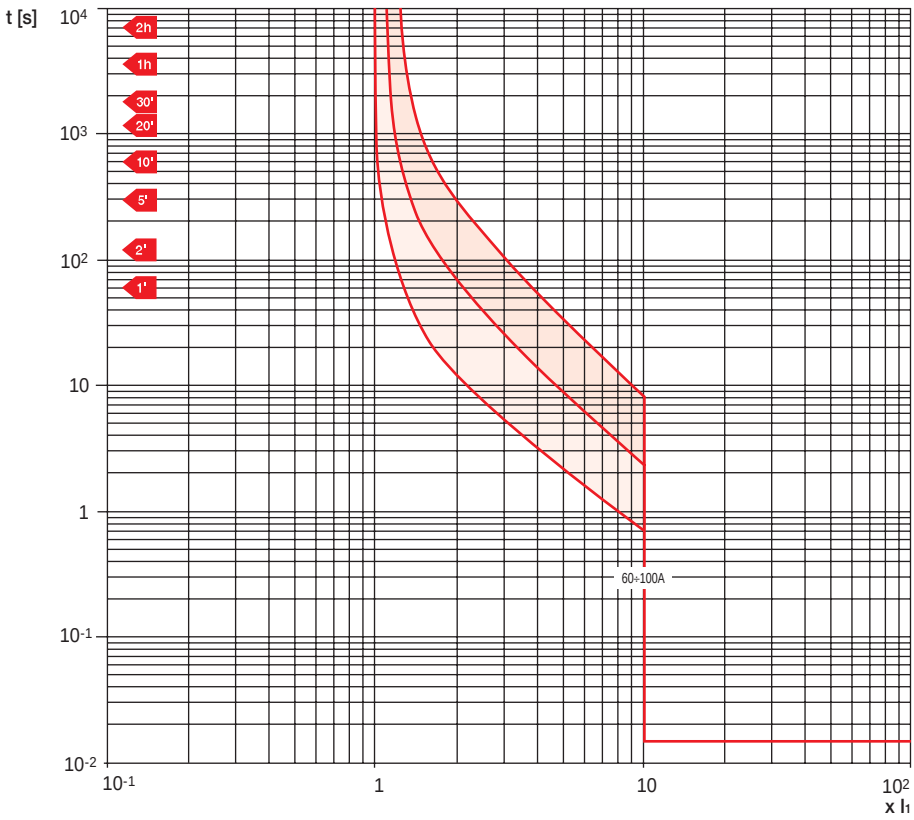
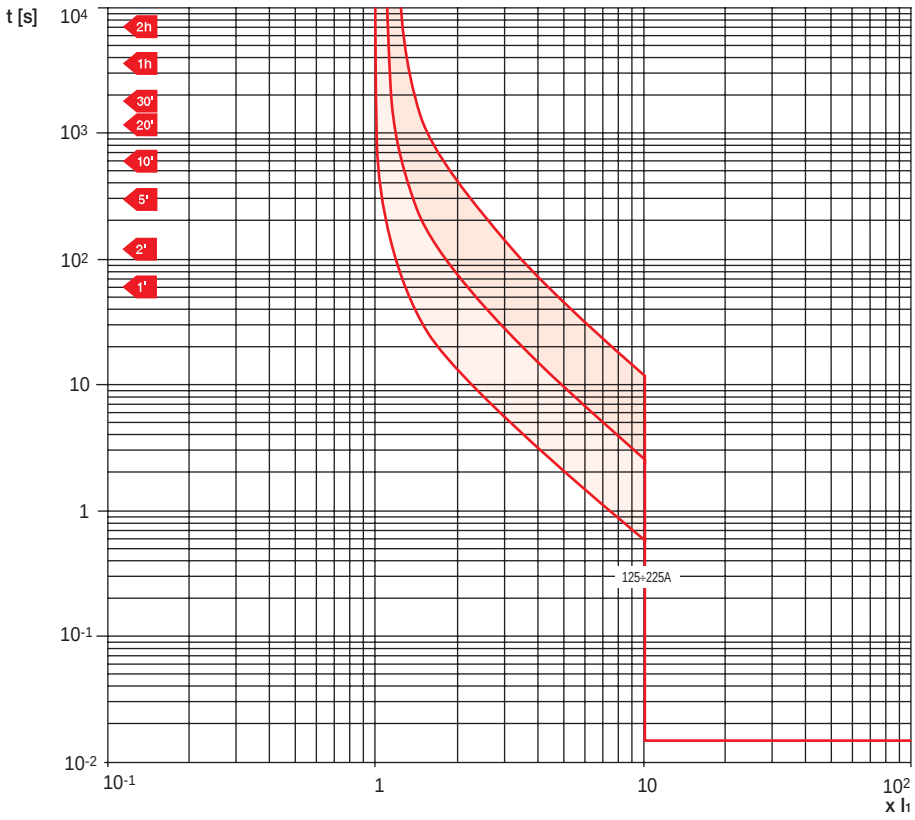
T3 225 TMF

In = 60 ÷ 100 A



T3 225 TMF

In = 125 ÷ 225 A

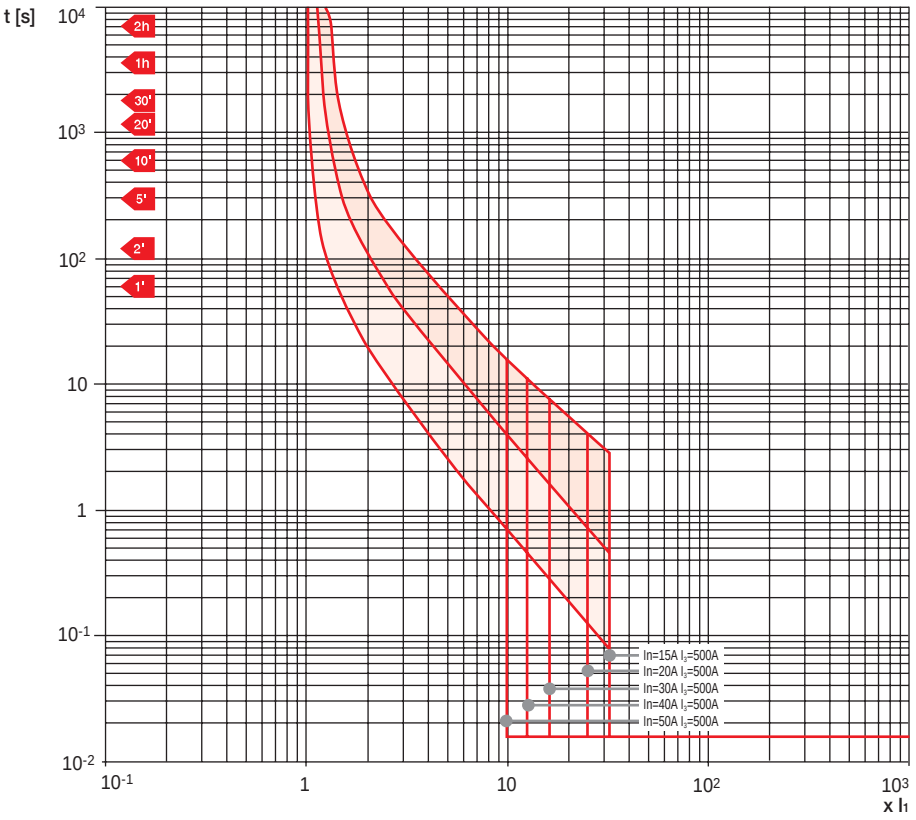


15

Trip curves for distribution
Circuit breakers w/thermagnetic trip units
Tmax T4

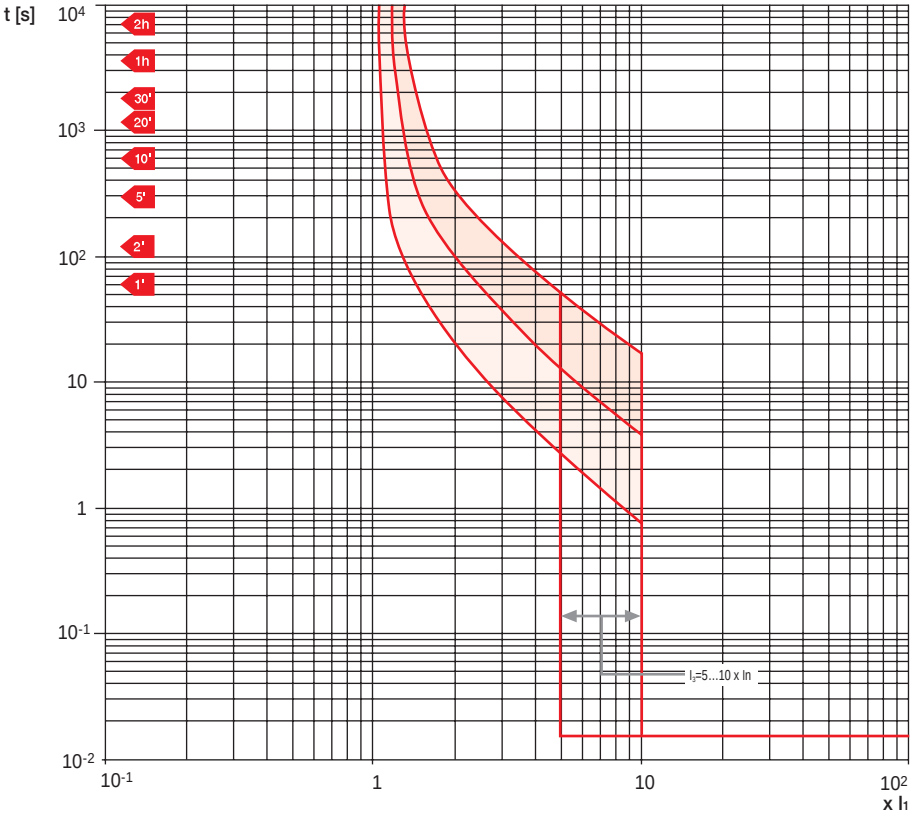
T4 250 TMF/TMD

In = 20 ÷ 50 A
In = 15, 20 TMF
In = 30, 40, 50 TMD



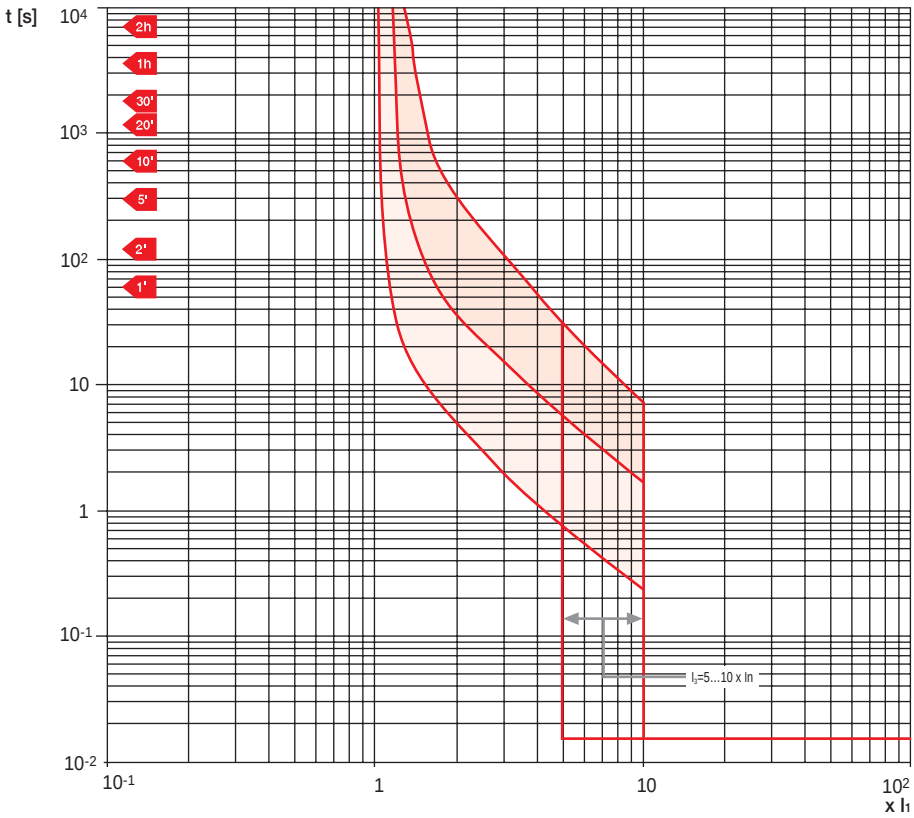
T4 250 TMA

In = 80 ÷ 250 A



T5 400 TMA

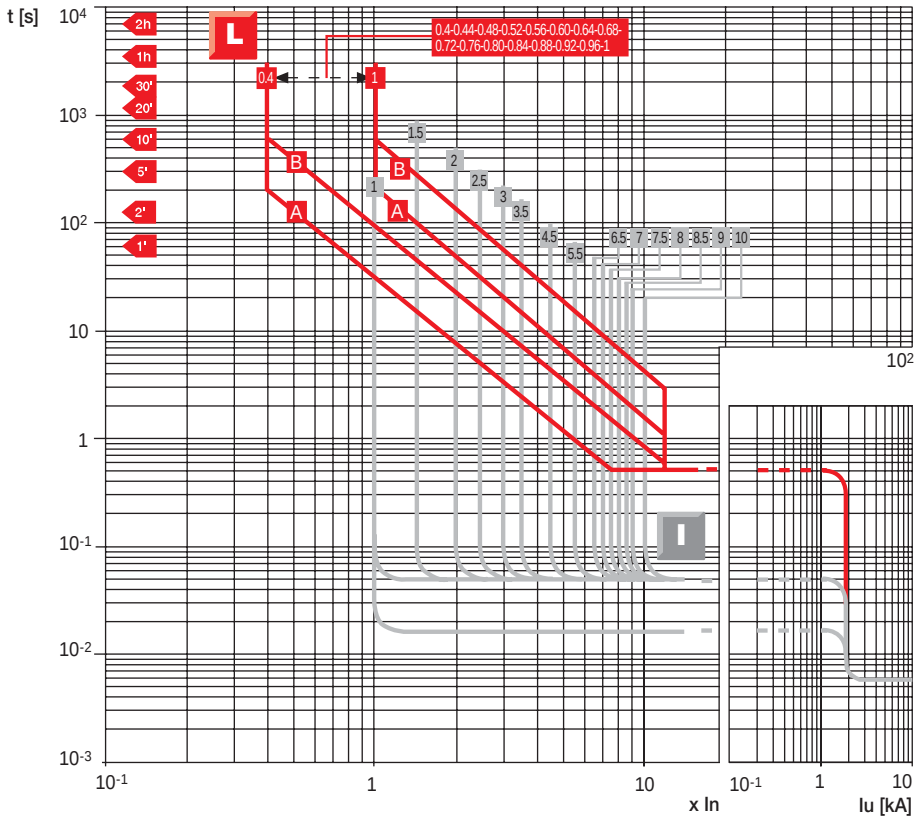
In = 300 ÷ 400 A



Trip curves for distribution
Circuit breakers w/electronic trip units
Tmax T2

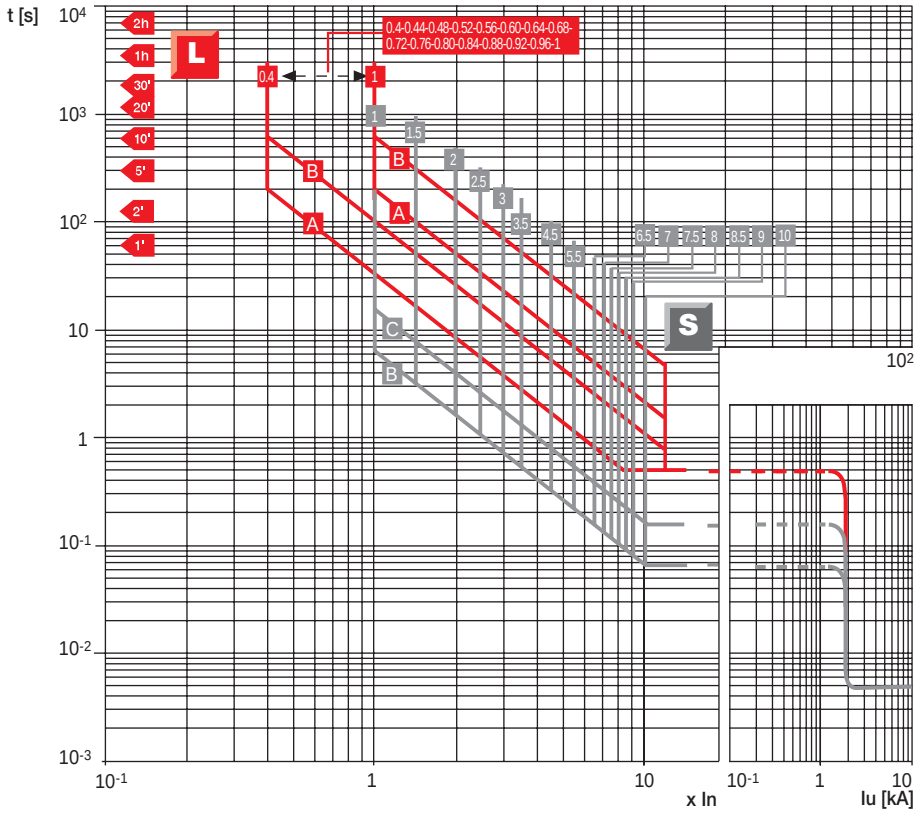
T2 100
PR221DS-LS

L-I Functions



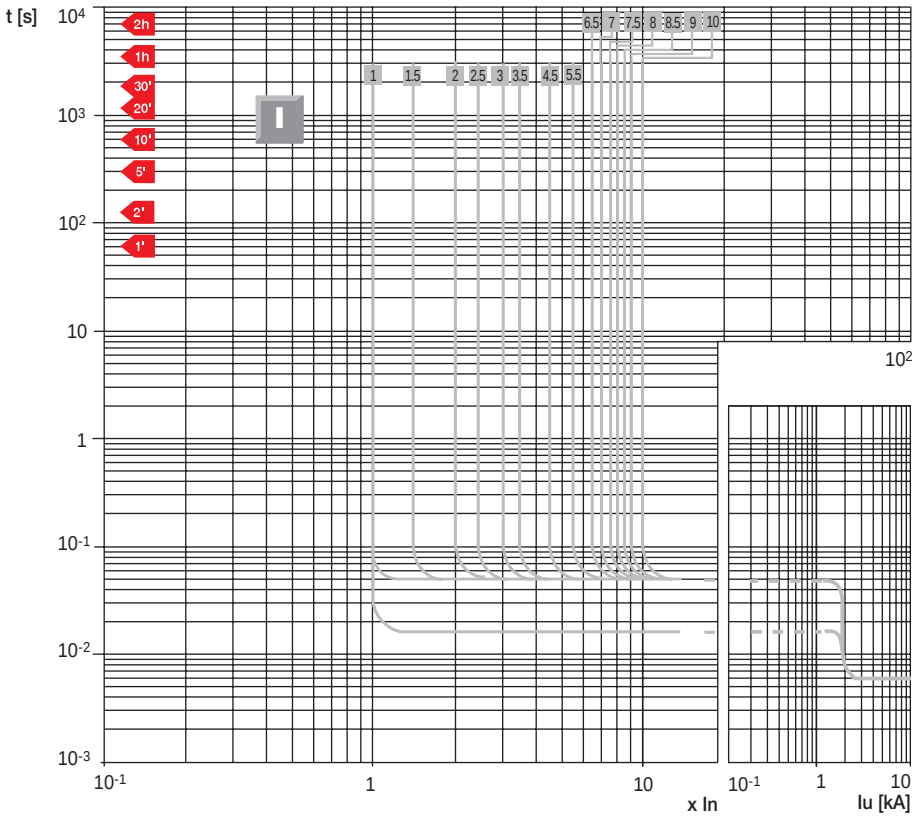
T2 100
PR221DS-LS

L-I Functions



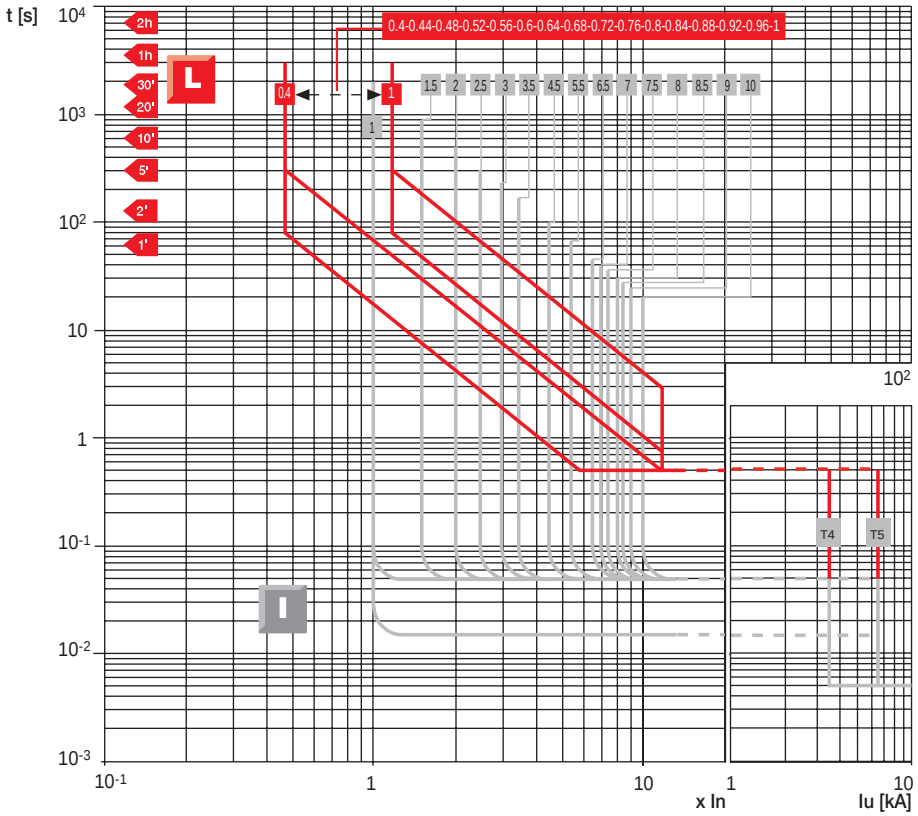
T2 100
PR221DS-I

I Function



T4 250 - T5 600
PR221DS

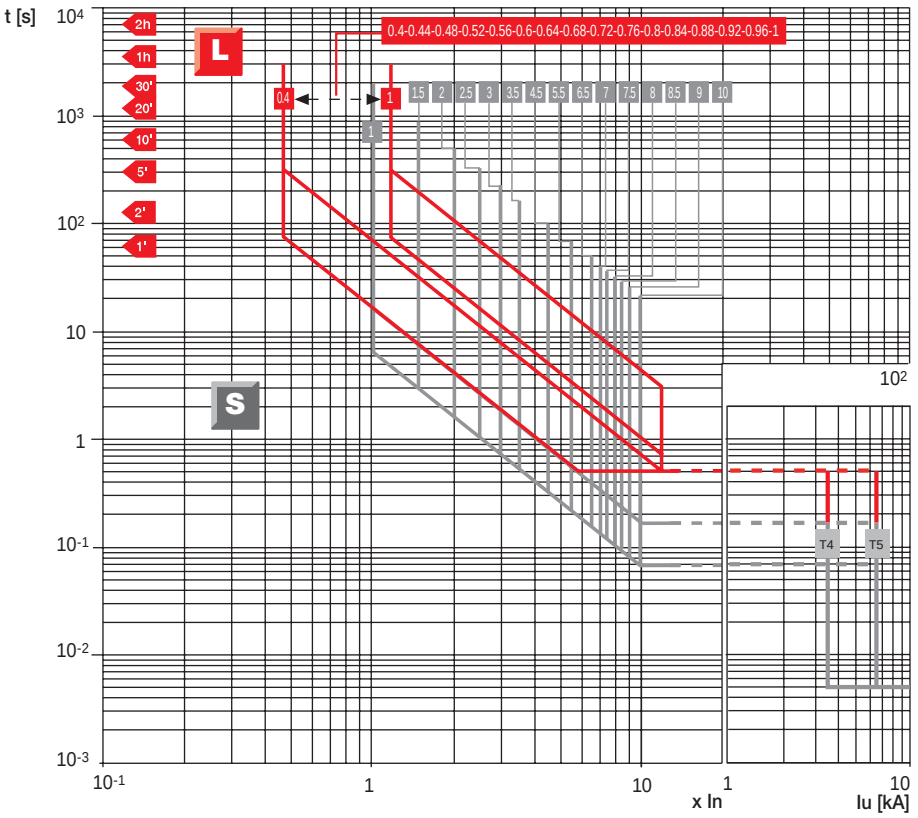
L-I Functions



Trip curves for distribution
Circuit breakers w/electronic trip units
Tmax T4 & T5

T4 250 - T5 600 PR221DS

L-S Functions



T4 250 - T5 600 PR222DS/P and PR222DS/PD

L-S-I Functions
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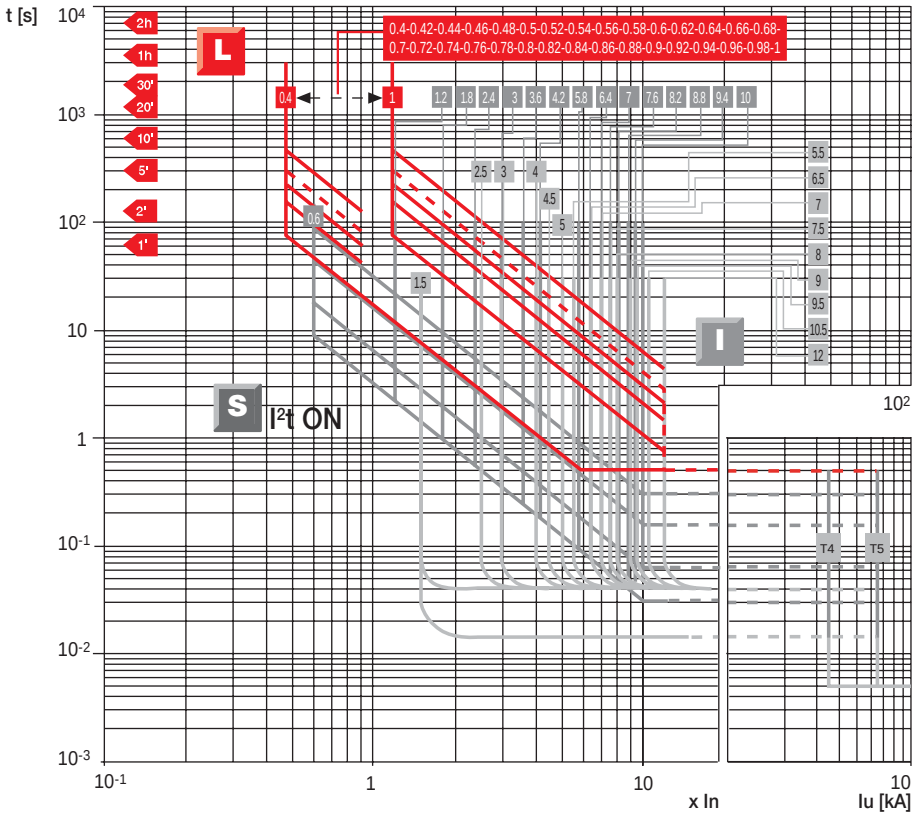
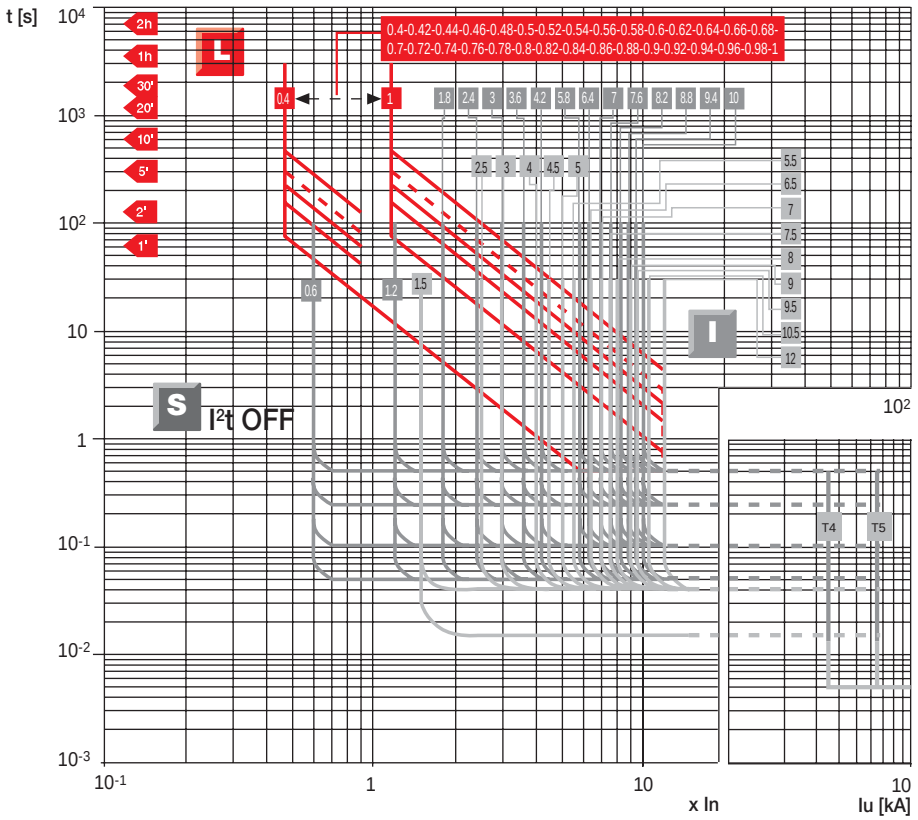


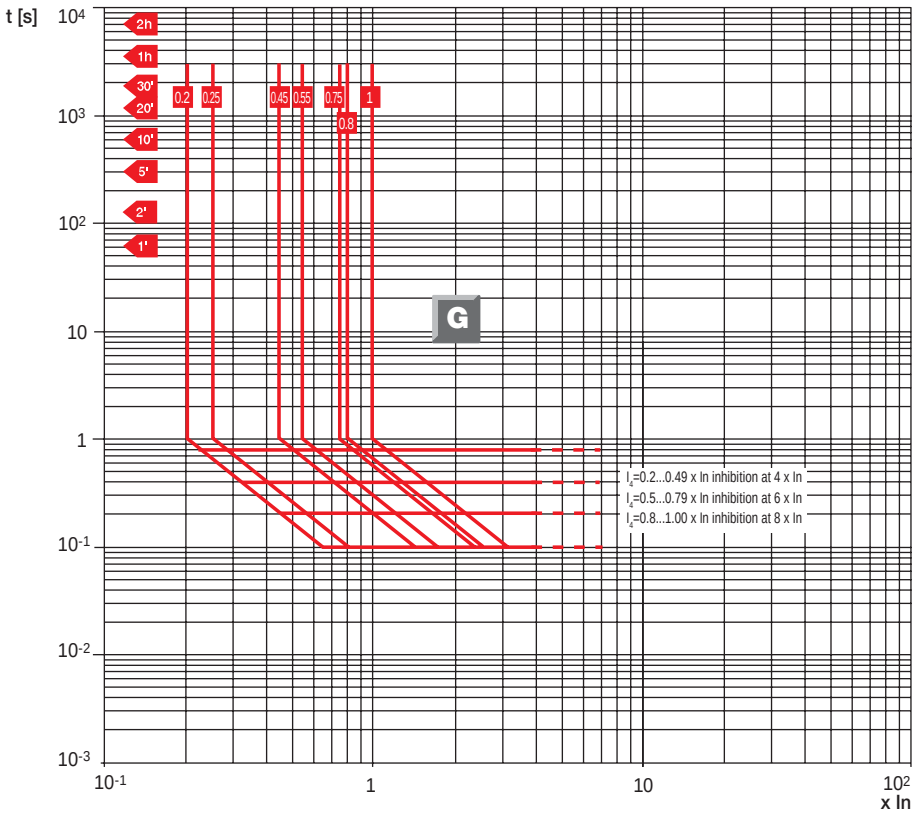
T4 250 - T5 600 PR222DS/P and PR222DS/PD

L-S-I Functions
(I^2t const = OFF)



T4 250 - T5 600 PR222DS/P and PR222DS/PD

G Function

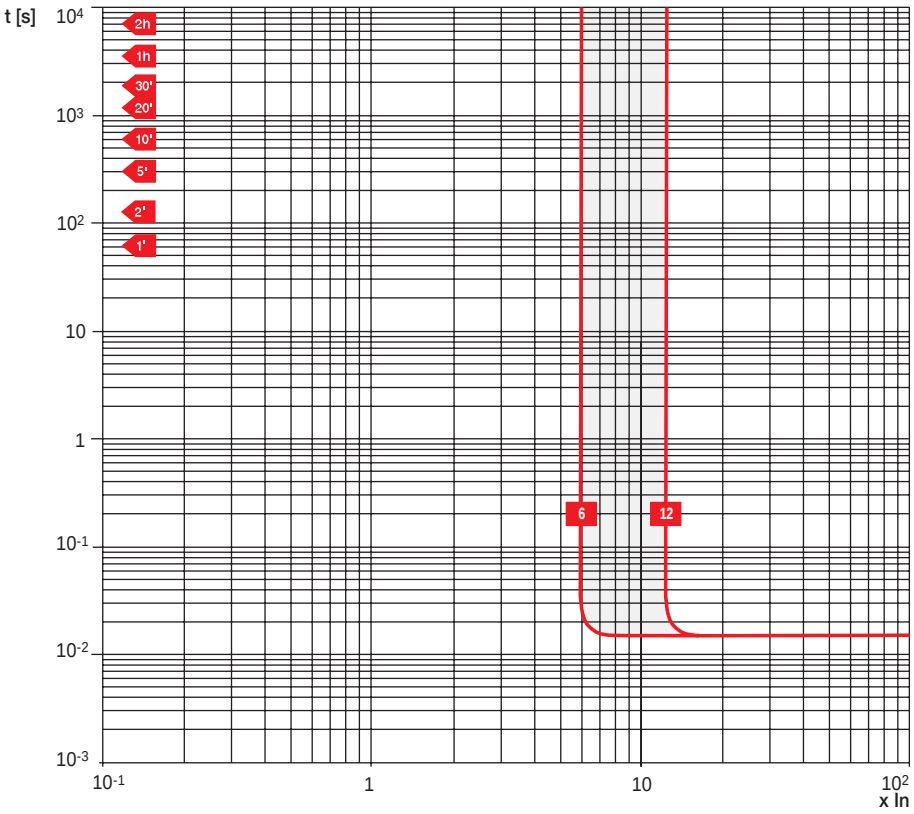


15

Trip curves for MCP
Circuit breakers w/magnetic only trip units
Tmax T2 & T3

T2-T3 100 MCP

Adjustable magnetic only trip unit
I_3 = 6...12 x In

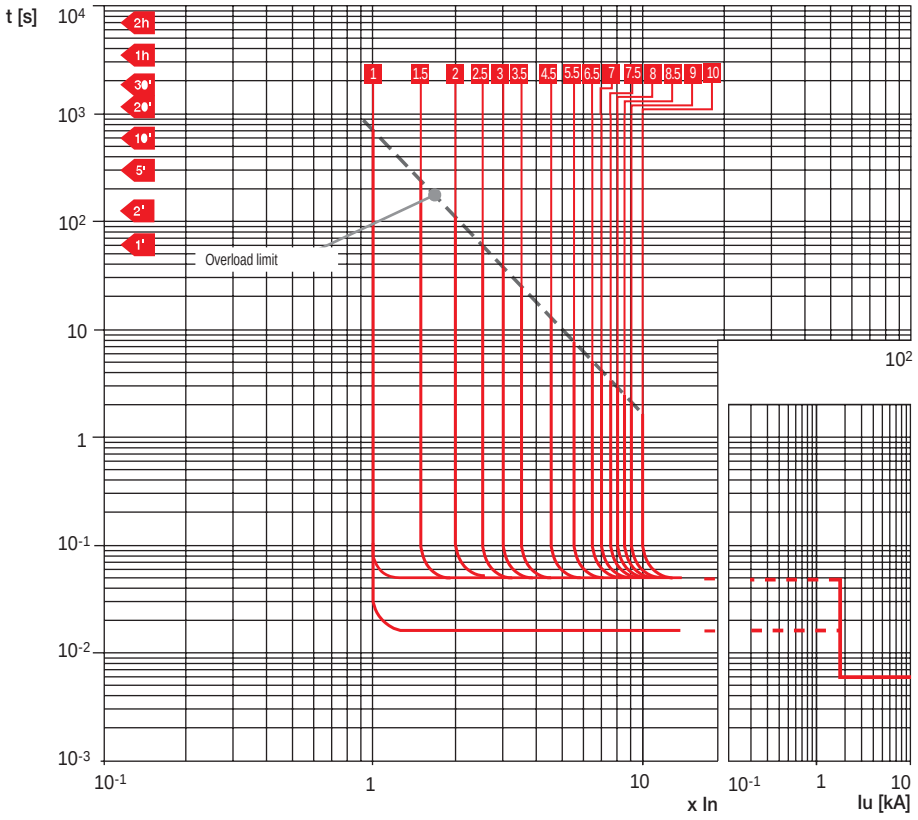


Trip curves for MCP

Circuit breakers w/PR221DS-I electronic trip unit
Tmax T2, T4 & T5

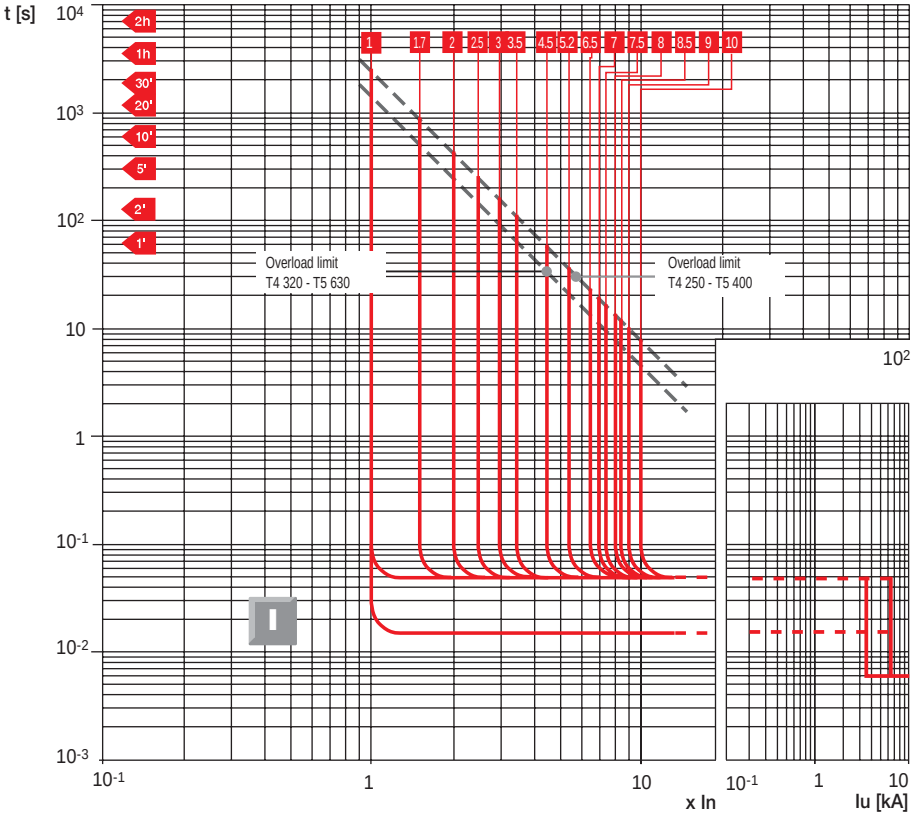
T2 100
PR221DS-I

I Function



T4 250 - T5 600
PR221DS-I

I Function

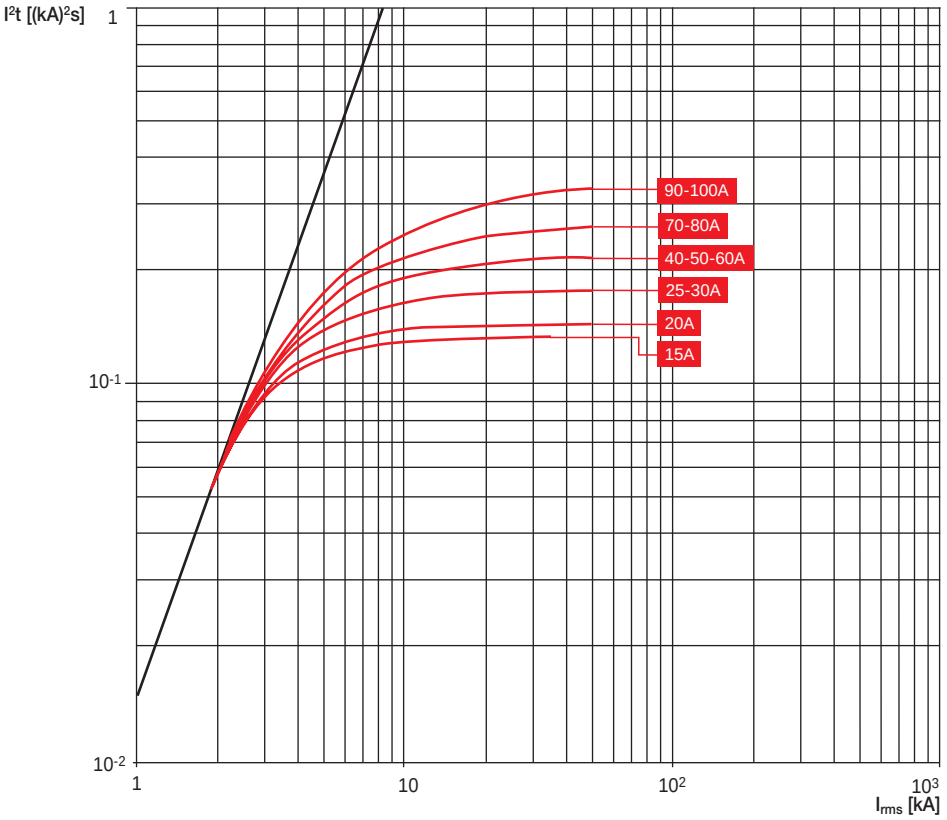


15

Specific let-through energy curves
Tmax T1 & T2, 240V

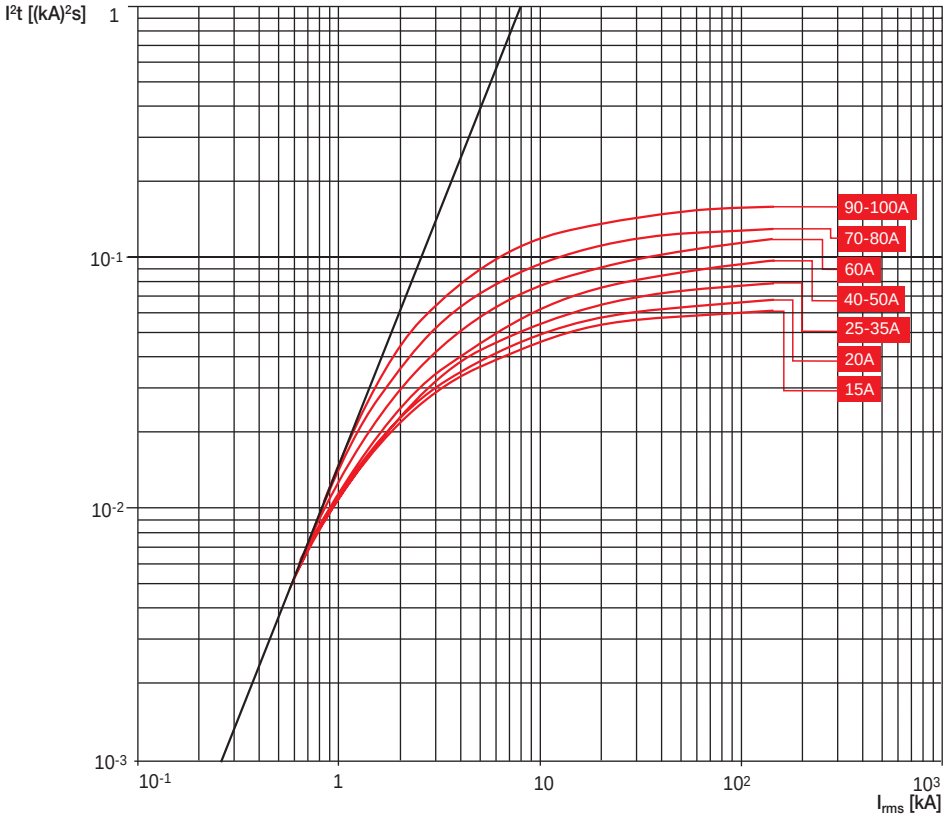
T1 100

240 V



T2 100

240 V

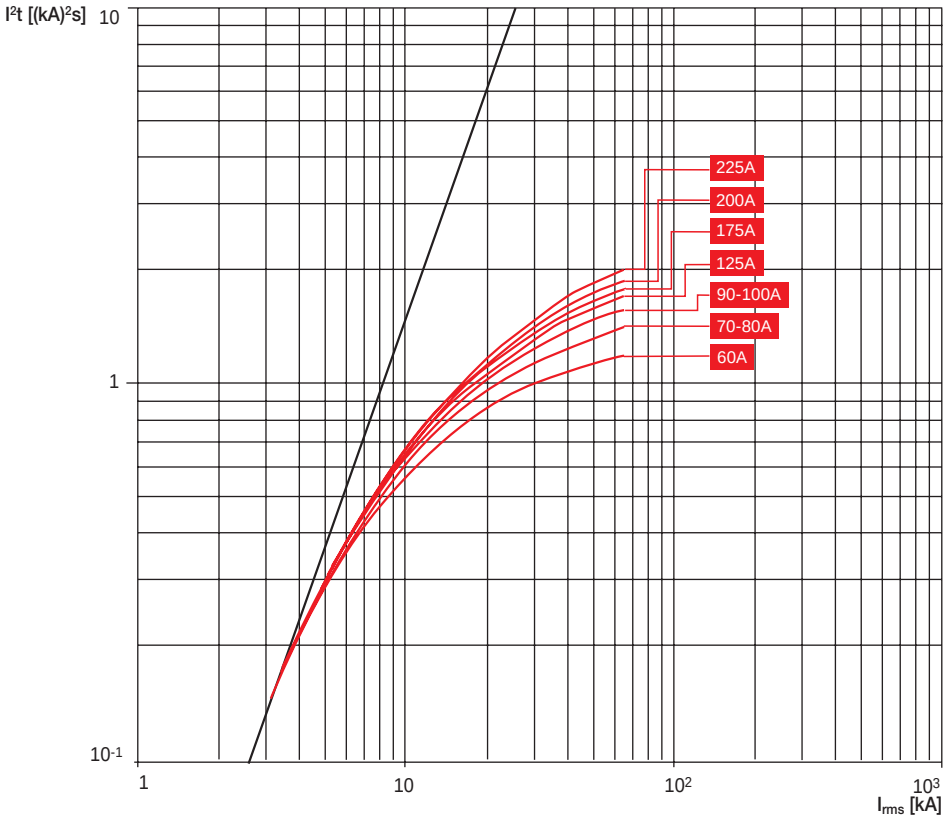


15

Specific let-through energy curves
Tmax T3 & T4, 240V

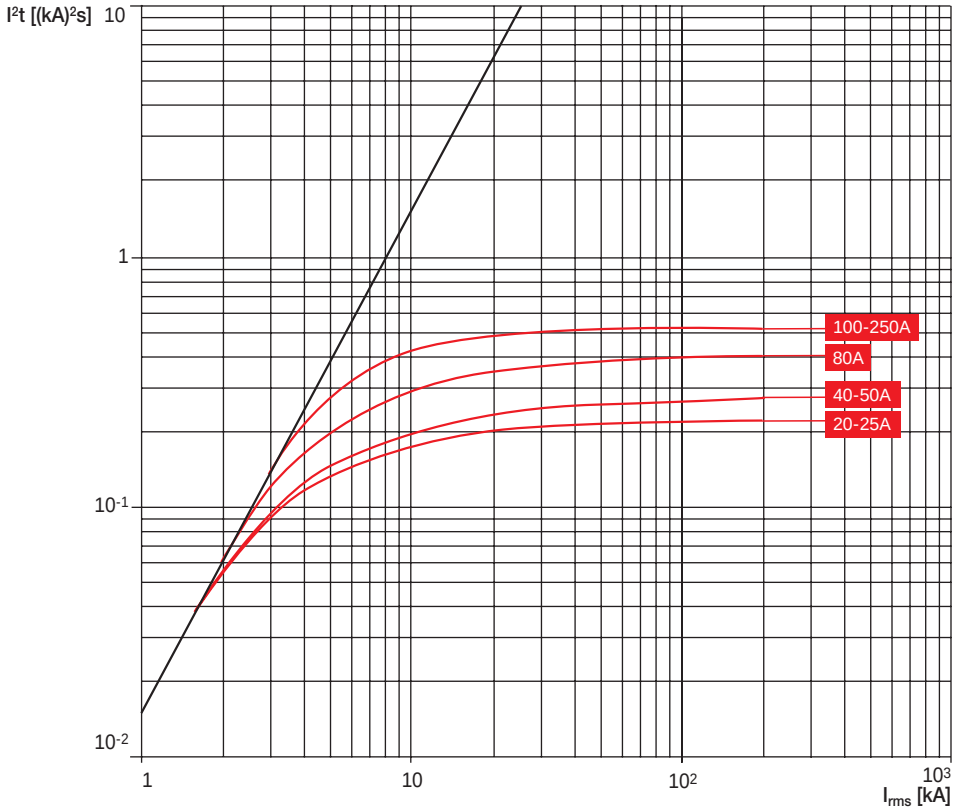
T3 225

240 V



T4 250

240 V



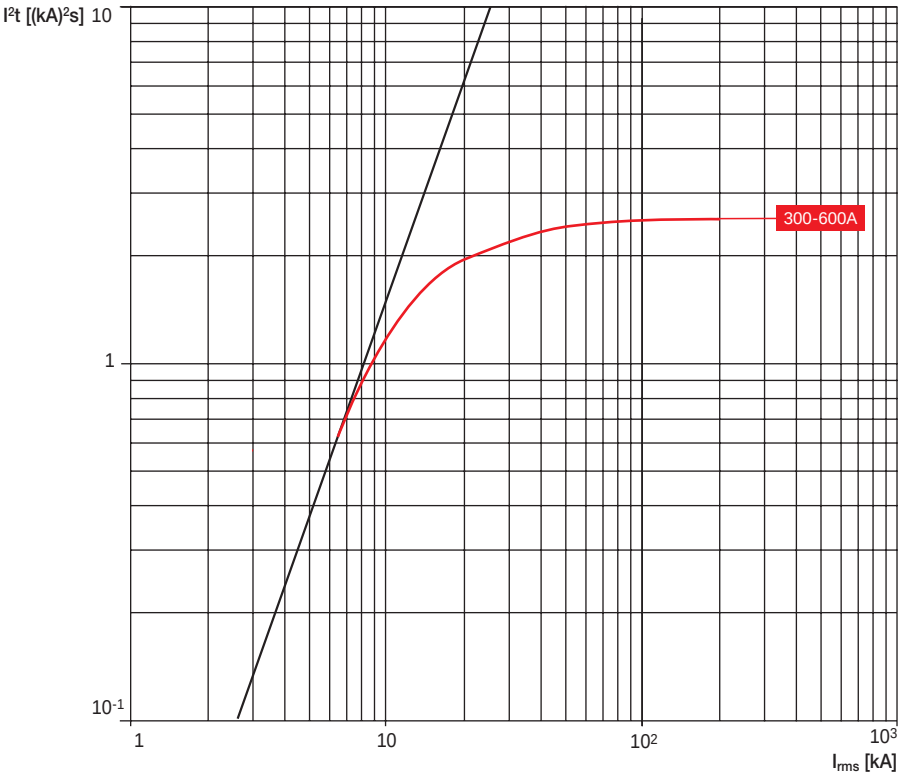
15

Specific let-through energy curves
Tmax T5, 240V

T5 600

240 V

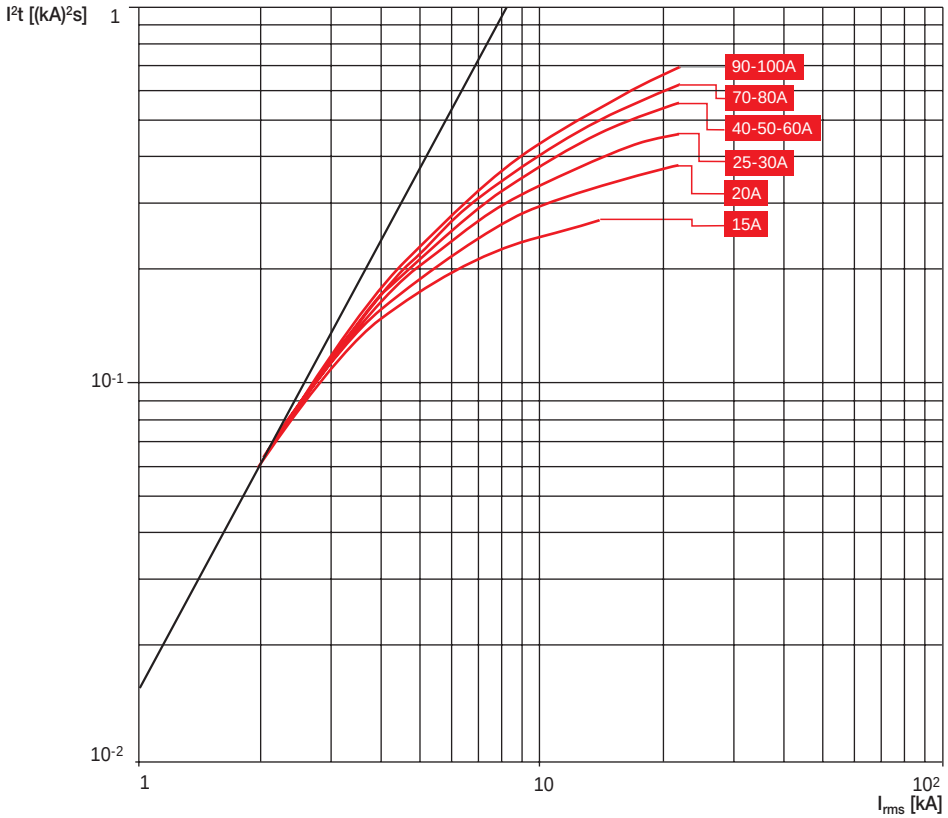
* Please ad ABB for 600 A availability



Specific let-through energy curves
Tmax T1 & T2, 480V

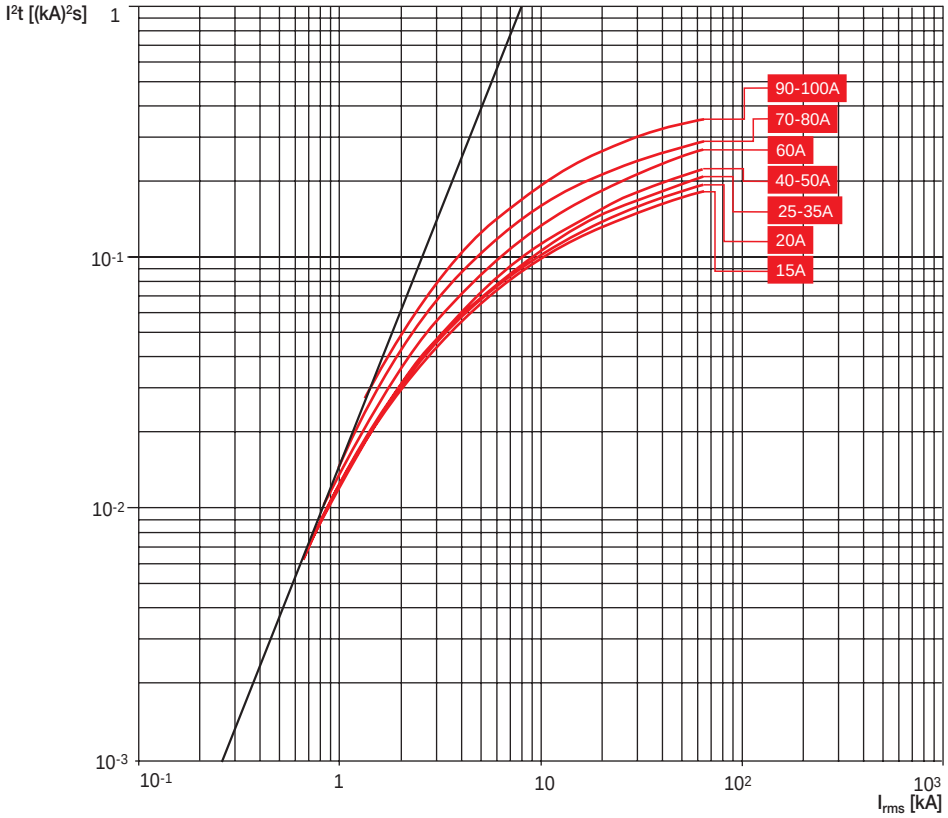
T1 100

480 V



T2 100

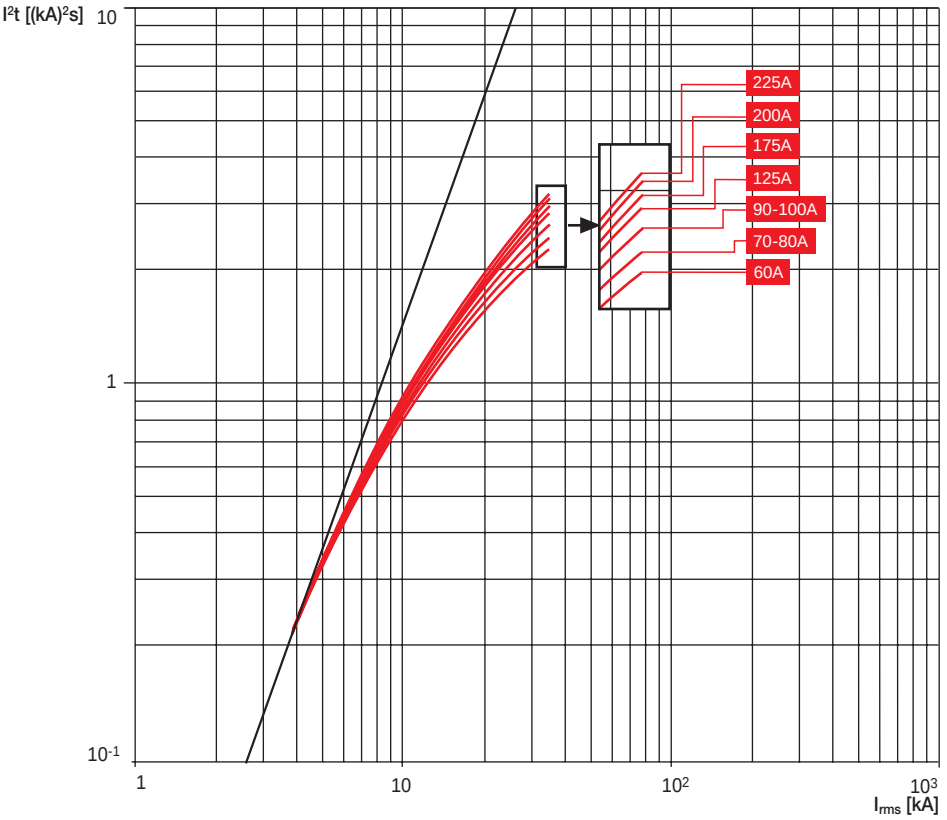
480 V



Specific let-through energy curves
Tmax T3 & T4, 480V

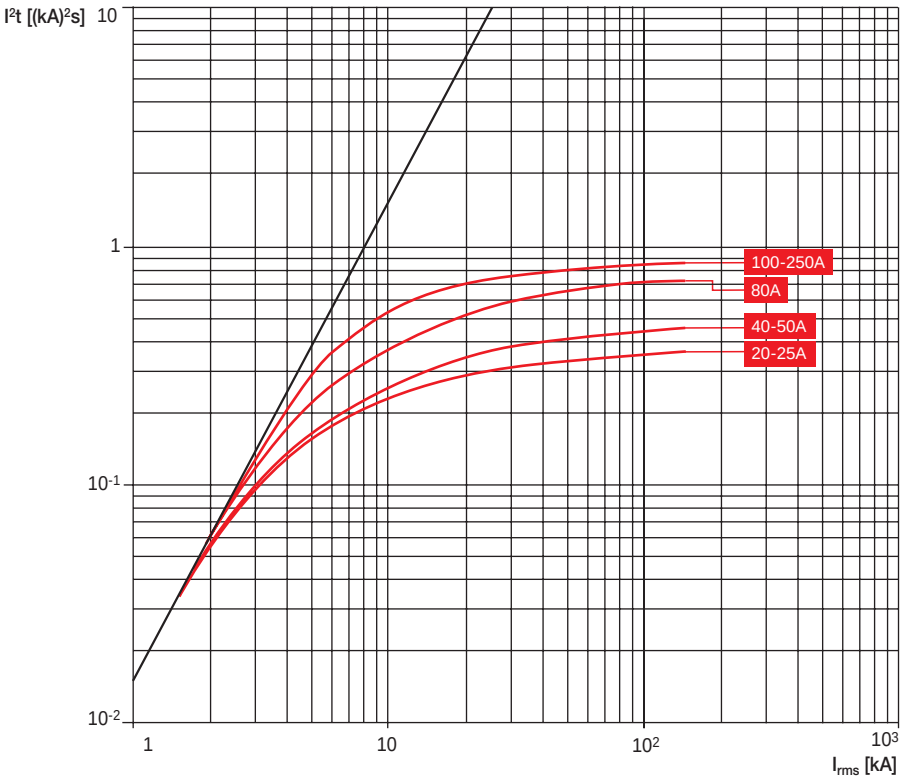
T3 225

480 V



T4 250

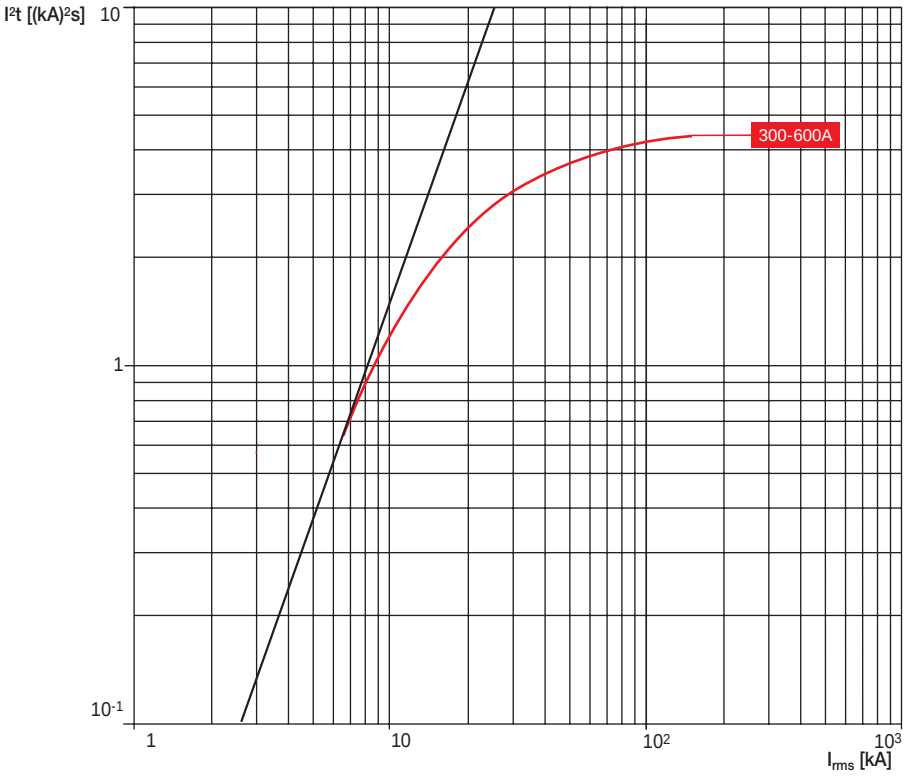
480 V



Specific let-through energy curves
Tmax T5, 480V

T5 600

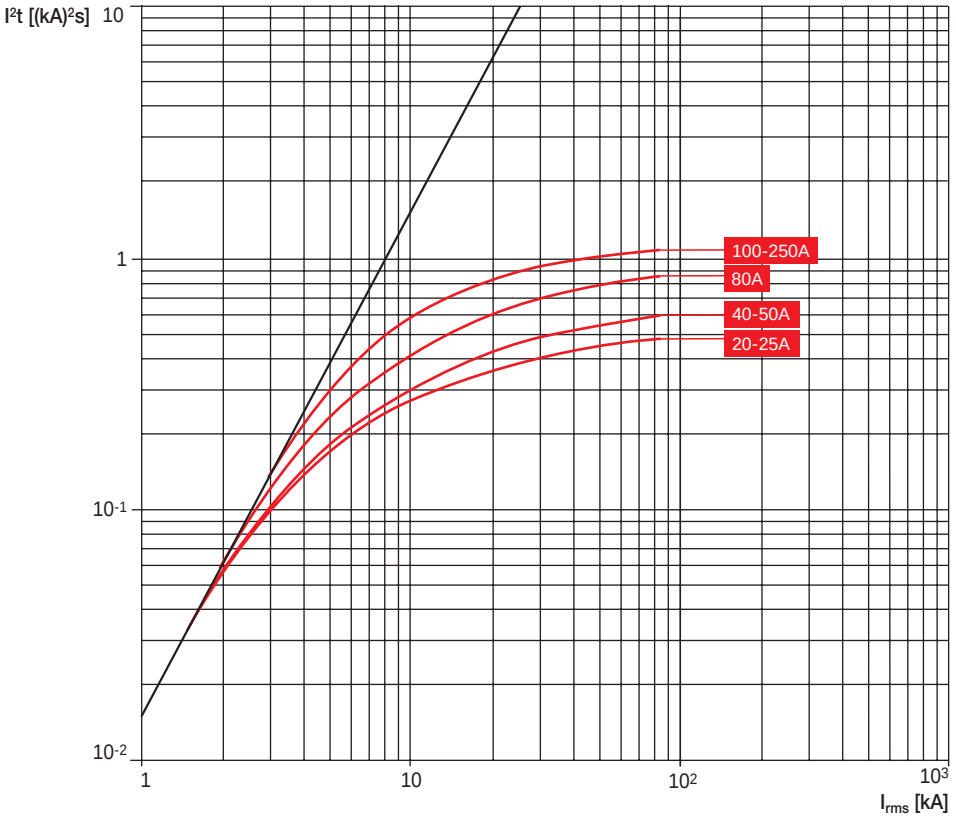
480 V



Specific let-through energy curves
Tmax T4 & T5, 600V

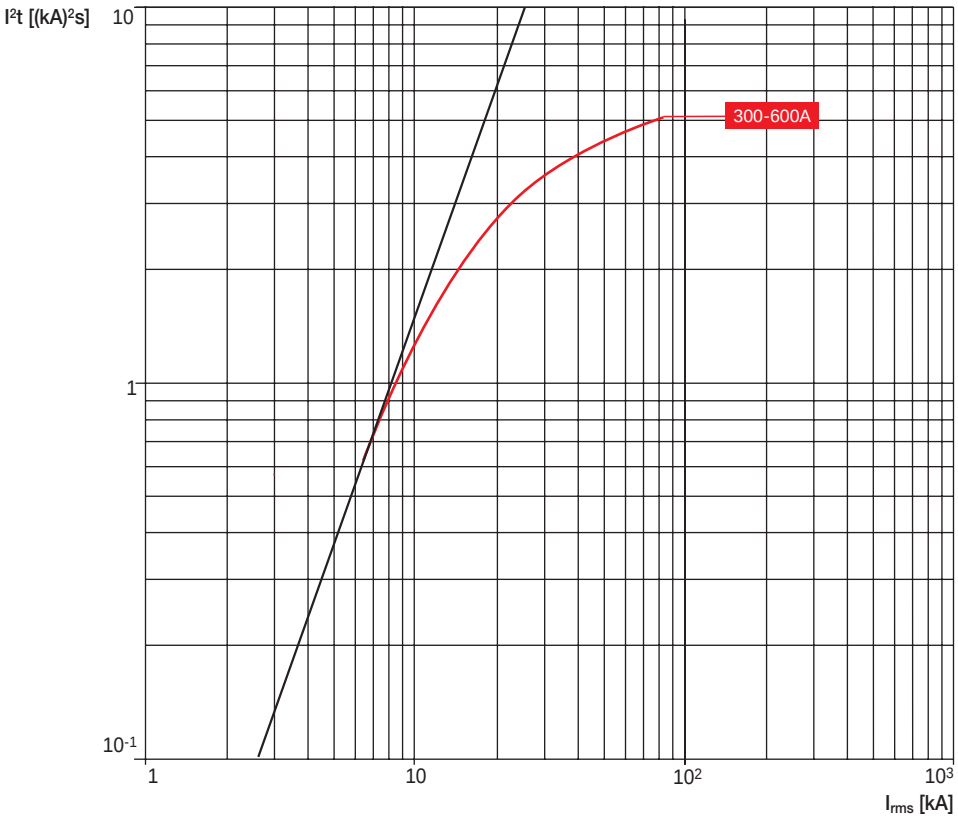
T4 250

600 V



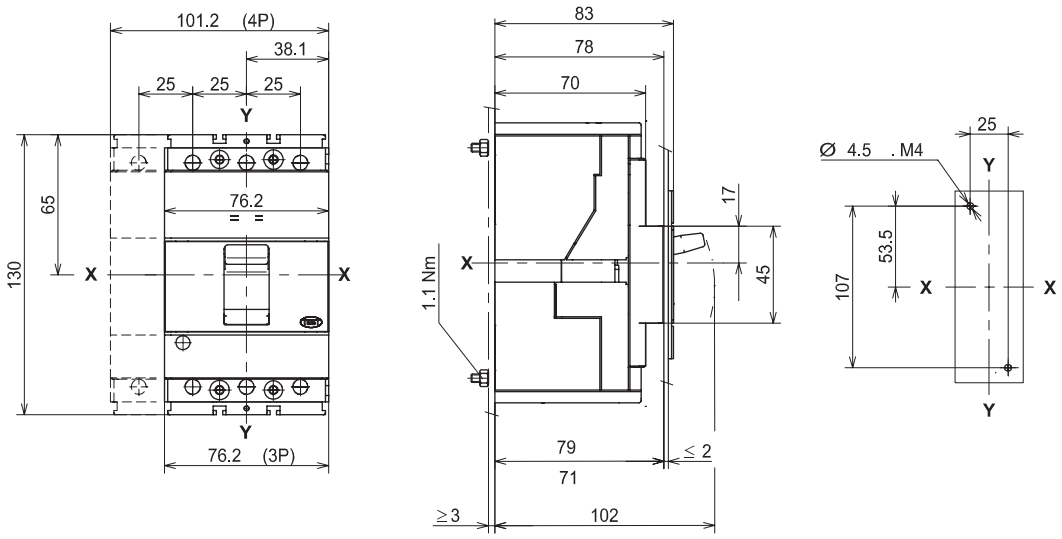
T5 600

600 V

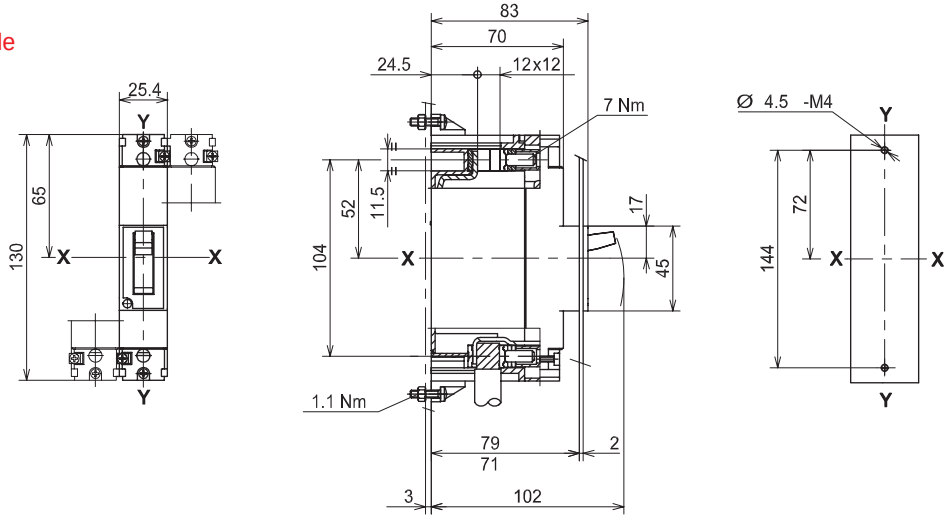


Approximate dimensions
T1 & T2

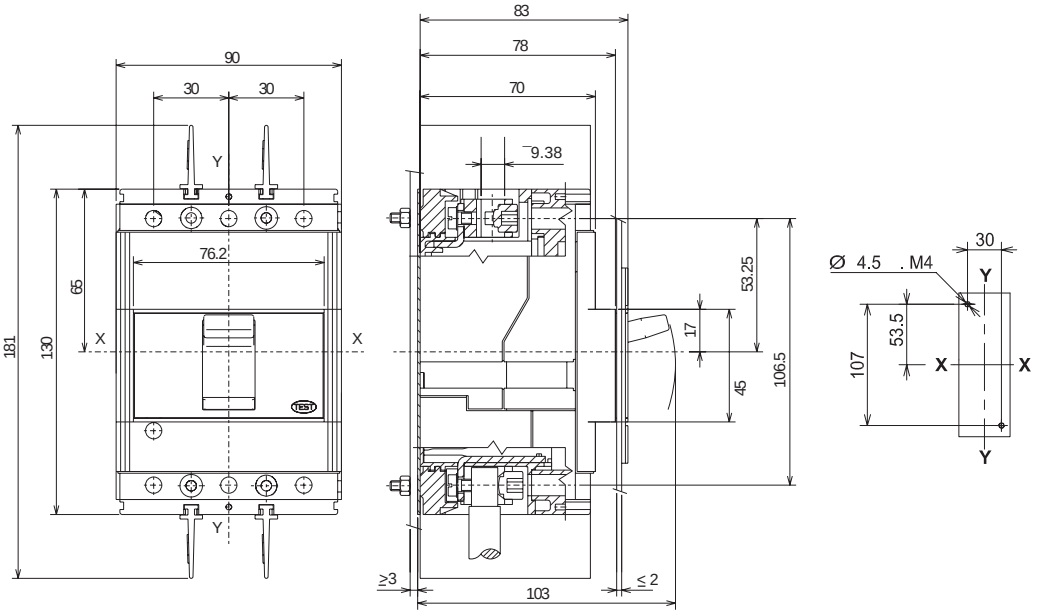
T1 — 3 pole



T1 — Single pole



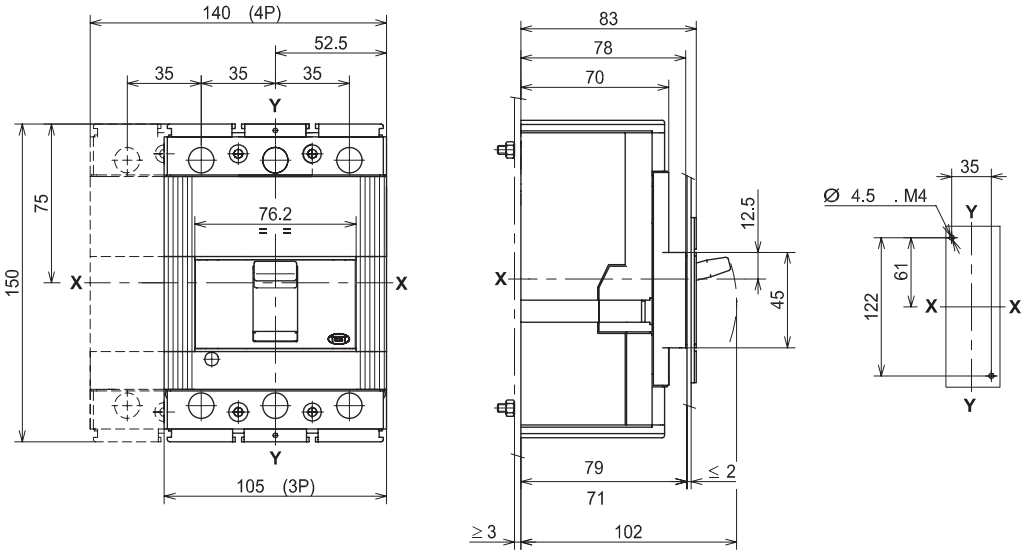
T2 — 2 & 3 pole



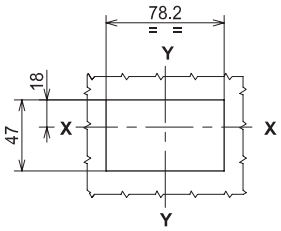
15

Approximate dimensions
T3

T3 — 2 & 3 pole



Door cut-out for Tmax without faceplate



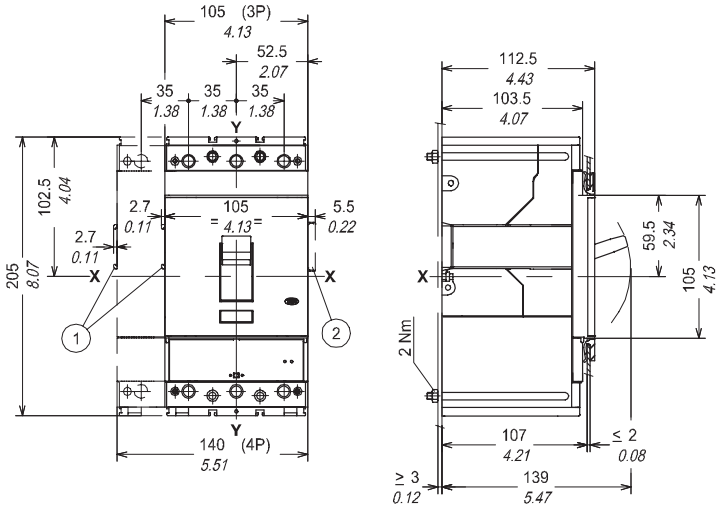
15

Fixed circuit breaker

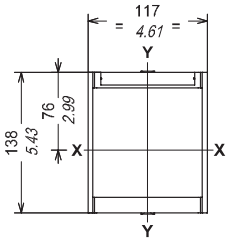
Caption

(1) Overall dimensions with cabled accessories mounted (SOR-C, UVR-C, RC221-222)

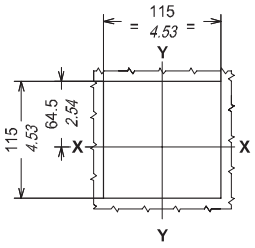
(2) Overall dimensions with cabled auxiliary contacts mounted (only 3Q 1SY)



Flange for compartment door

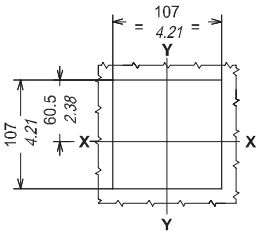


Drilling templates of the compartment door



3-4 POLES

With flange

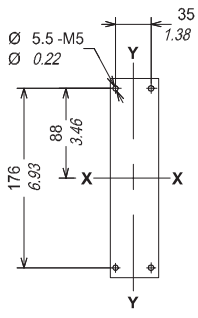


3-4 POLES

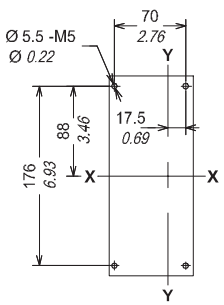
Without flange

Drilling templates for support sheet

For front terminals

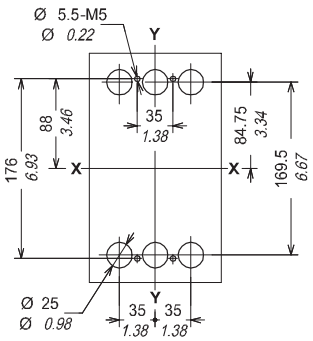


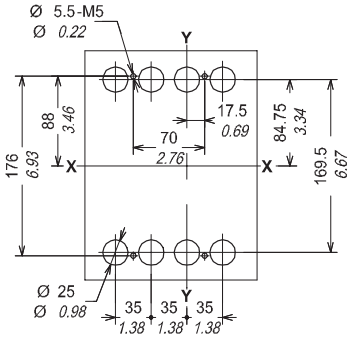
3 POLES



4 POLES

For rear terminals





Approximate dimensions
T5

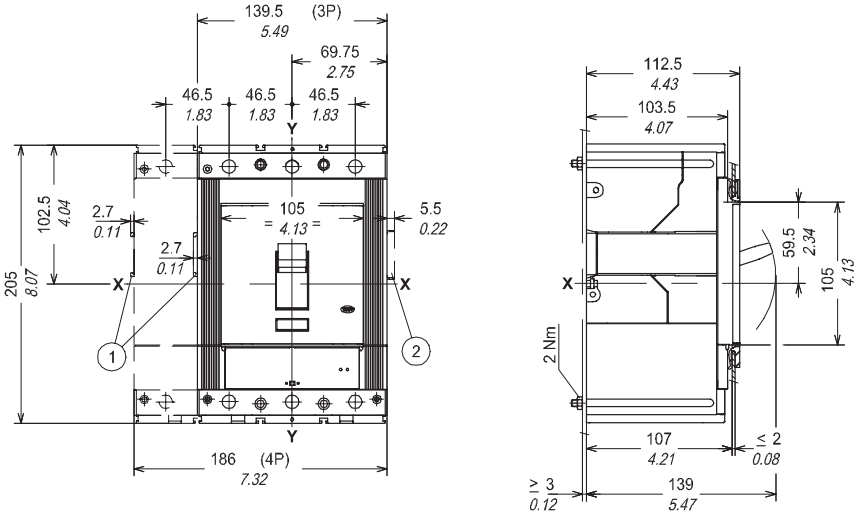
Fixed circuit breaker

Caption

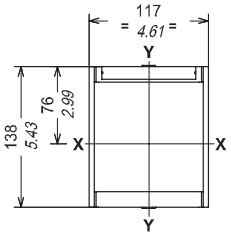
(1) Overall dimensions with cabled accessories mounted (SOR-C, UVR-C, RC221-222)

(2) Overall dimensions with cabled auxiliary contacts mounted (only 3Q 1SY)

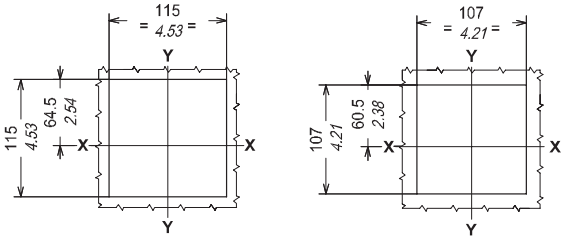
Fixing on sheet



Flange for compartment door



Drilling templates of the compartment door

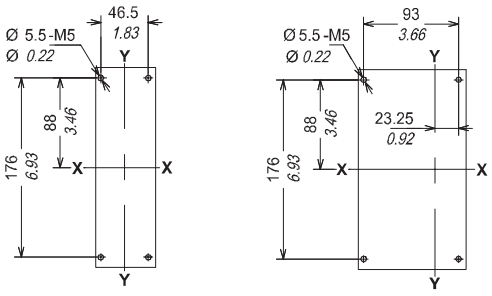


With flange (3-4 POLES)

Without flange (3-4 POLES)

Drilling templates for support sheet

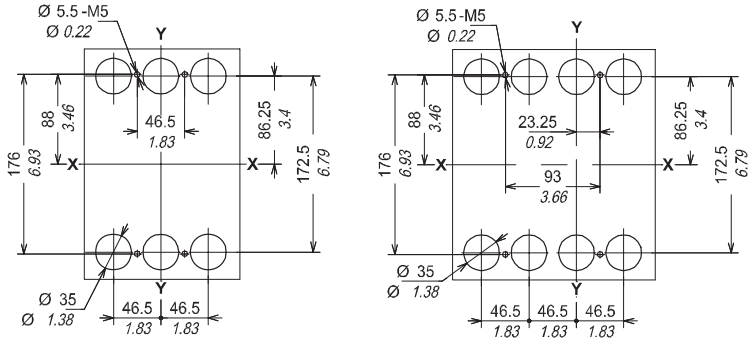
For front terminals



3 POLES

4 POLES

For rear terminals

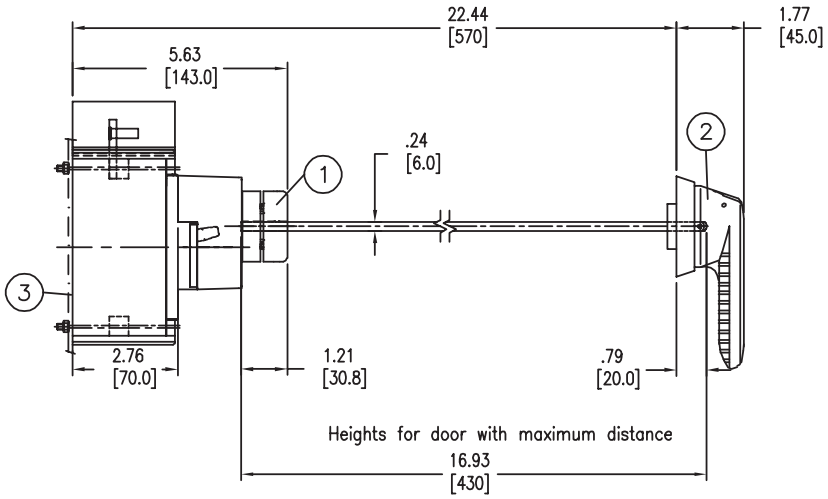


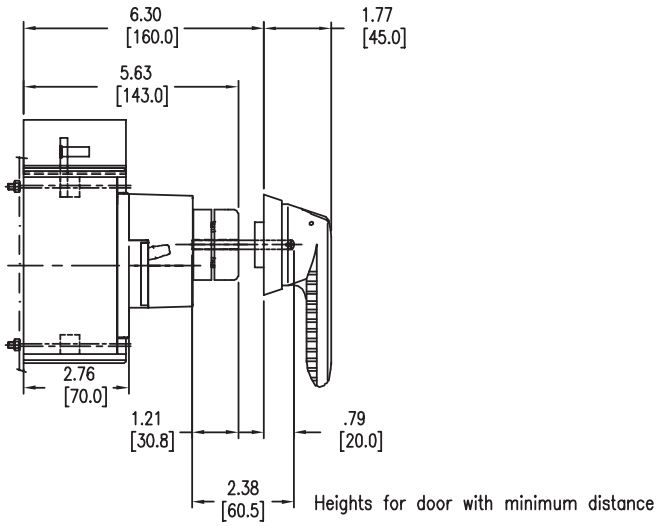
3 POLES

4 POLES

Approximate dimensions
T1 - T3 variable depth mechanism with OHB handle

Pistol handle operating mechanism on the compartment door

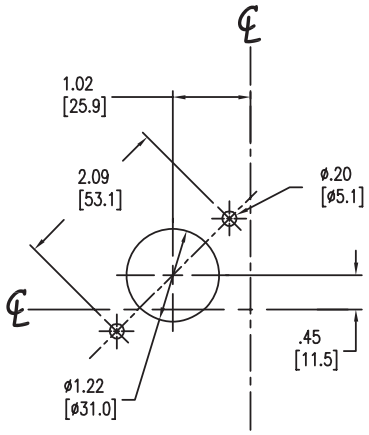




Caption

1. Transmission unit
2. Pistol handle operating mechanism on the compartment door
3. Insulating plate

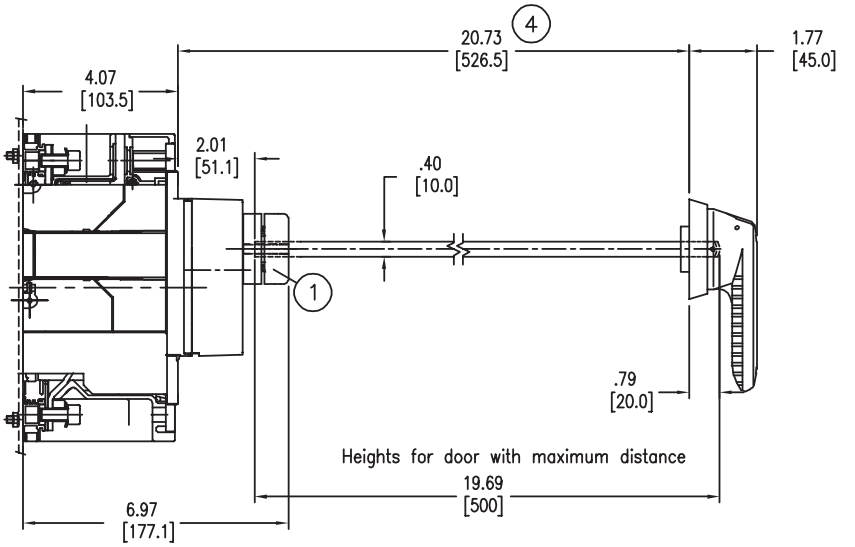
Drilling template of the compartment door

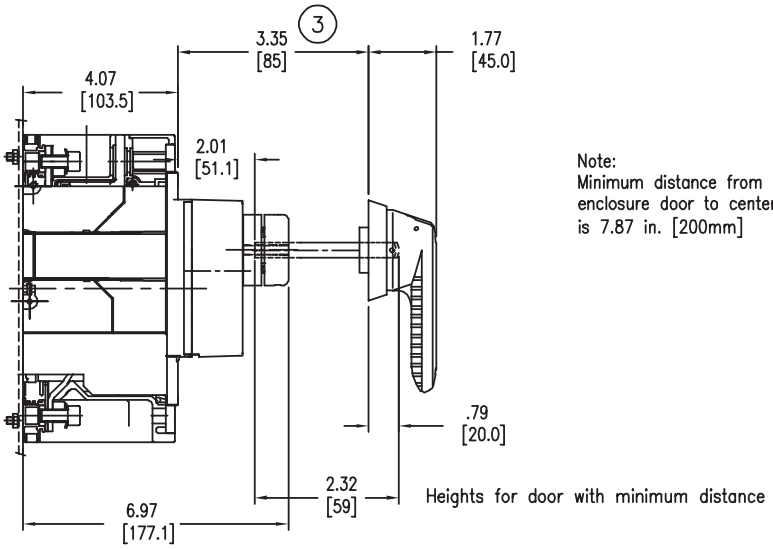


15

Approximate dimensions
T4 - T5 variable depth mechanism with OHB handle

Pistol handle operating mechanism on the compartment door



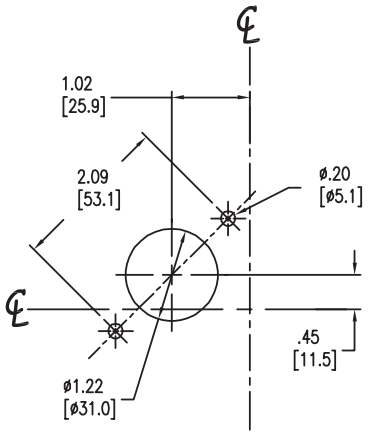


Note:
Minimum distance from hinge of enclosure door to center of shaft is 7.87 in. [200mm]

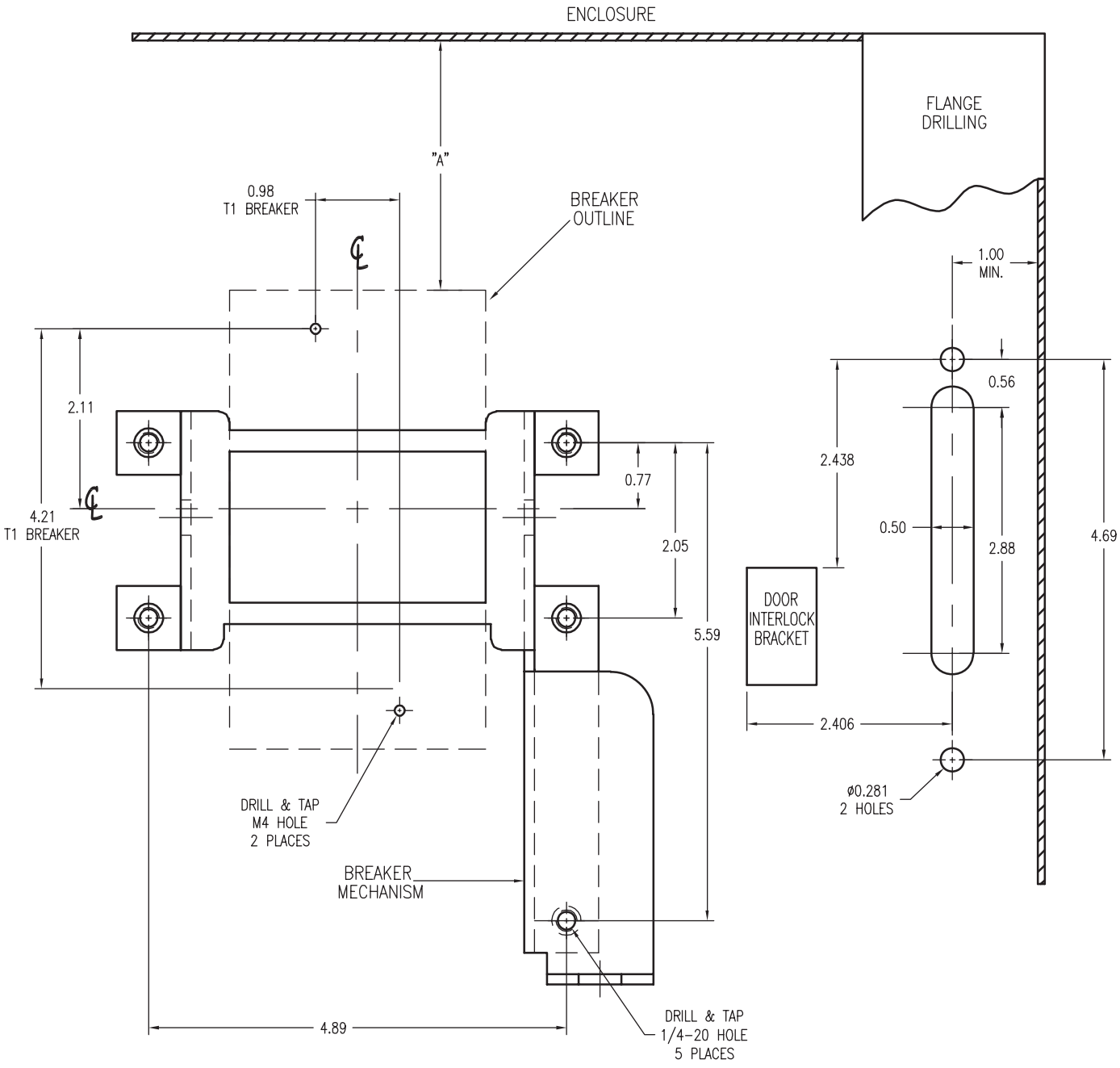
Caption

1. Transmission unit
2. Pistol handle operating mechanism on the compartment door
3. Minimum distance from the front door with accessory
4. Maximum distance from the front door with accessory

Drilling template of the compartment door

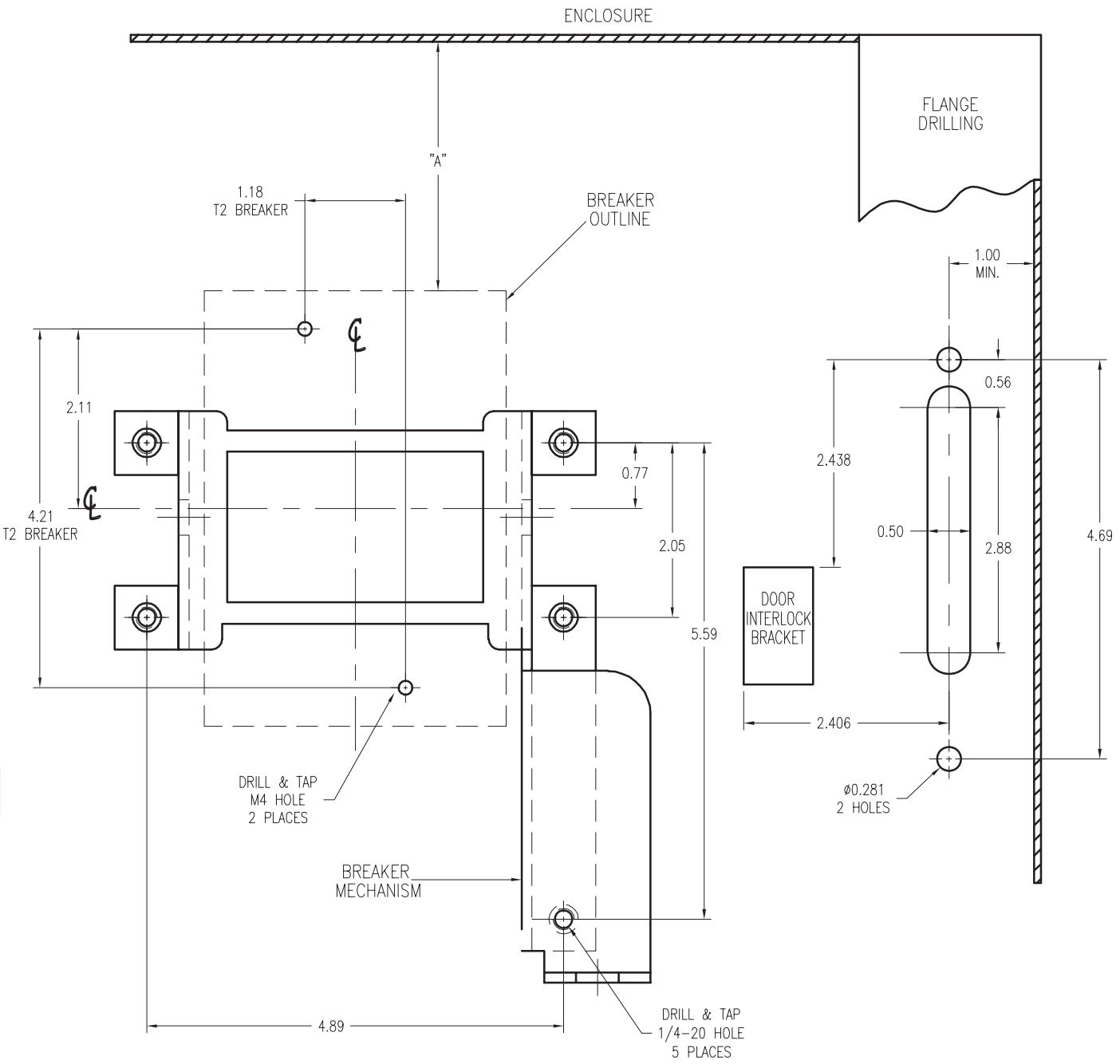


Approximate dimensions
T1 Flange handle, cable operated



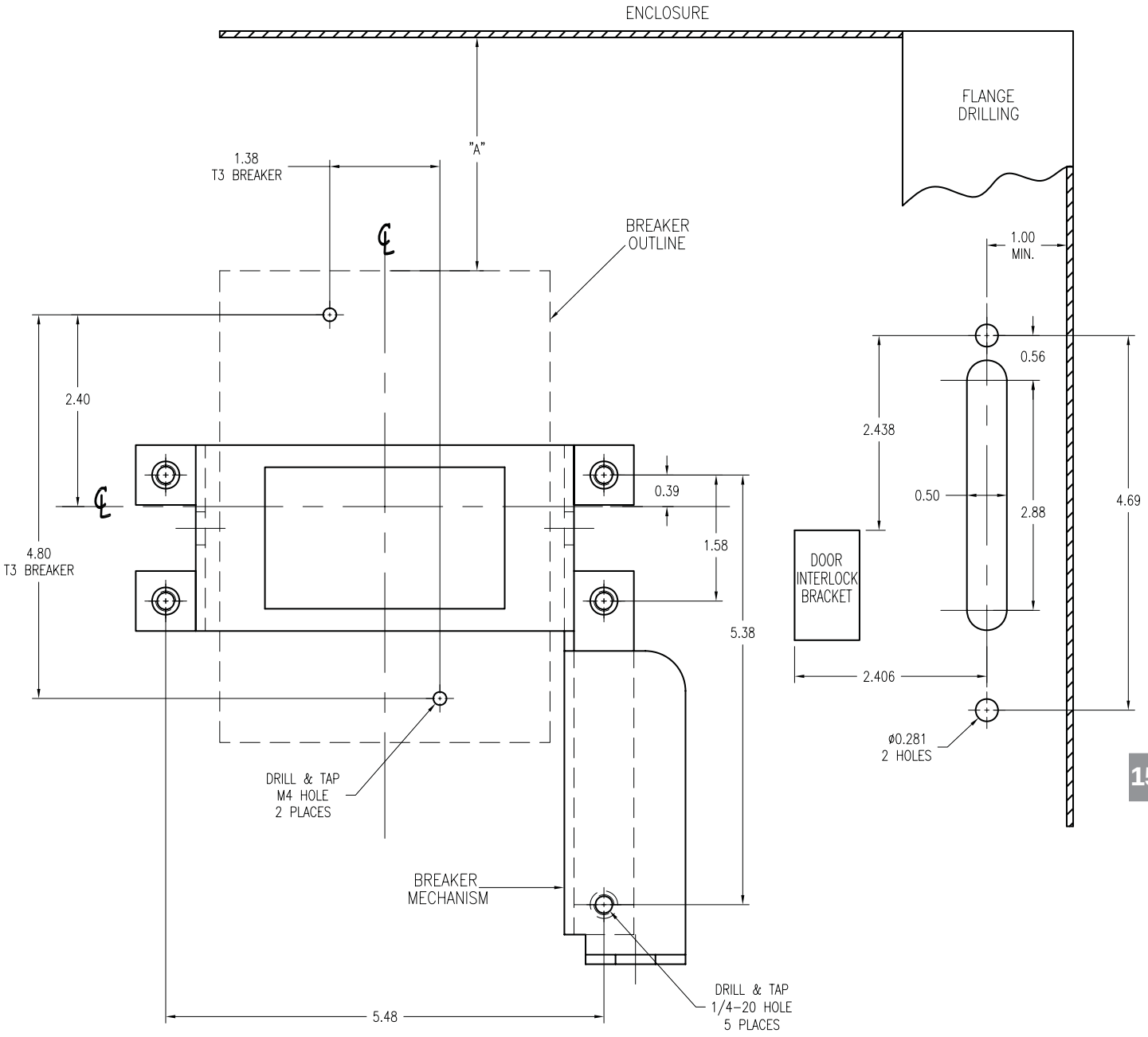
NOTES:
1. "A" DIM. IS THE WIRING BENDING SPACE AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
2. THE MINIMUM BEND READIUS OF THE CABLE IS 3 INCHES.

Approximate dimensions
T2 Flange handle, cable operated

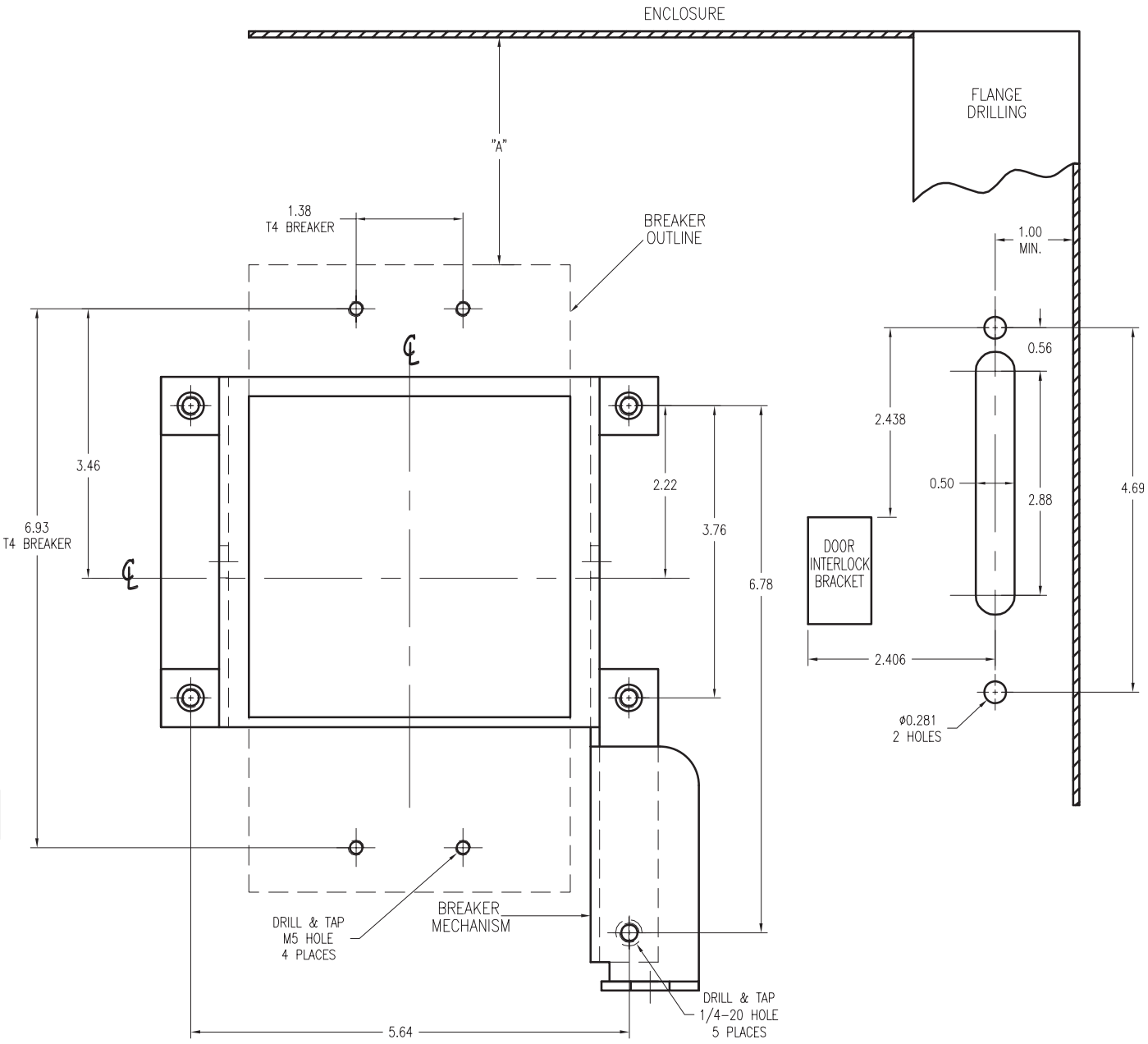


NOTES:
1. "A" DIM. IS THE WIRING BENDING SPACE AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
2. THE MINIMUM BEND READIUS OF THE CABLE IS 3 INCHES.

Approximate dimensions
T3 Flange handle, cable operated

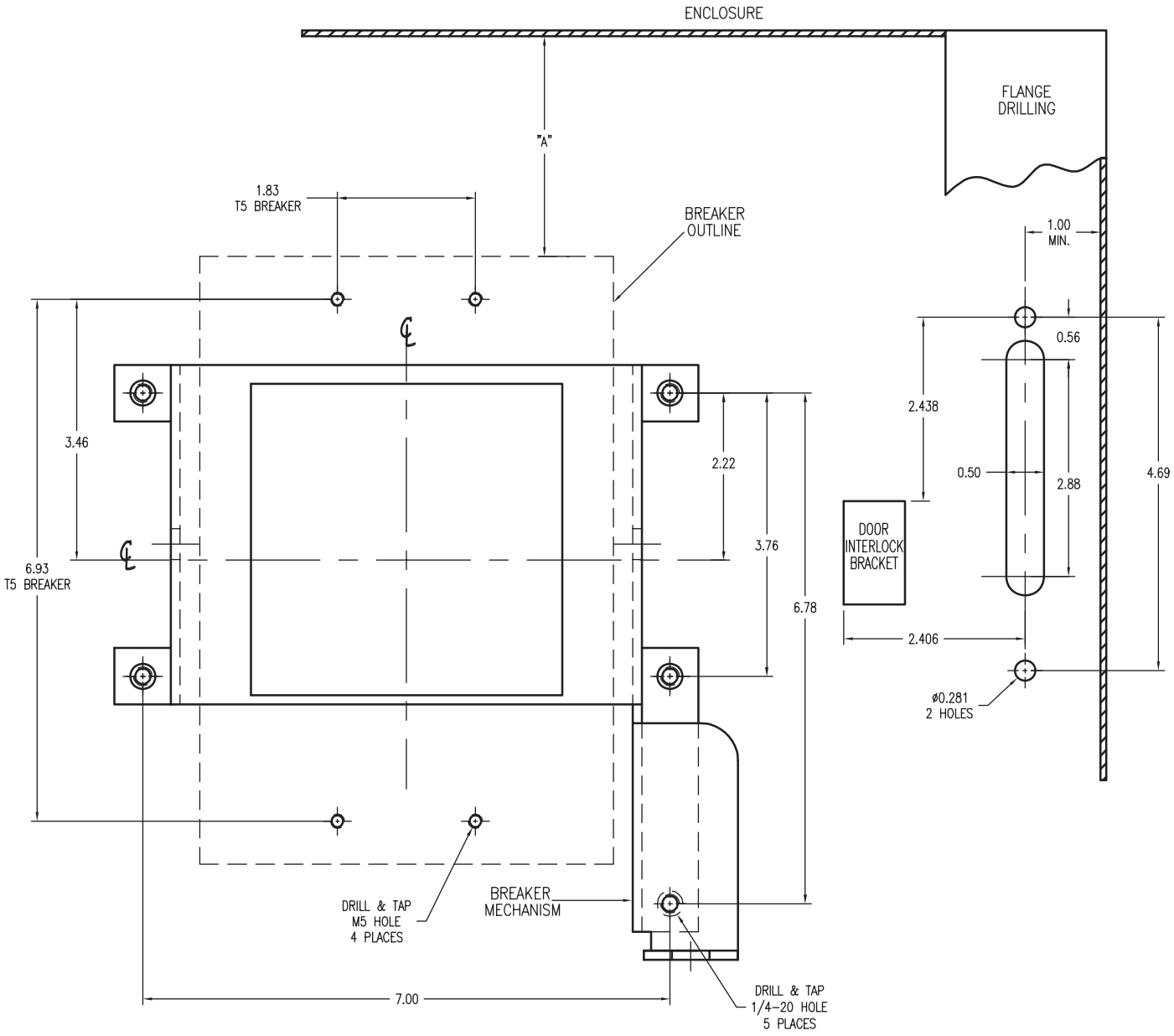


Approximate dimensions
T4 Flange handle, cable operated



NOTES:
1. "A" DIM. IS THE WIRING BENDING SPACE AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
2. THE MINIMUM BEND READIUS OF THE CABLE IS 3 INCHES.

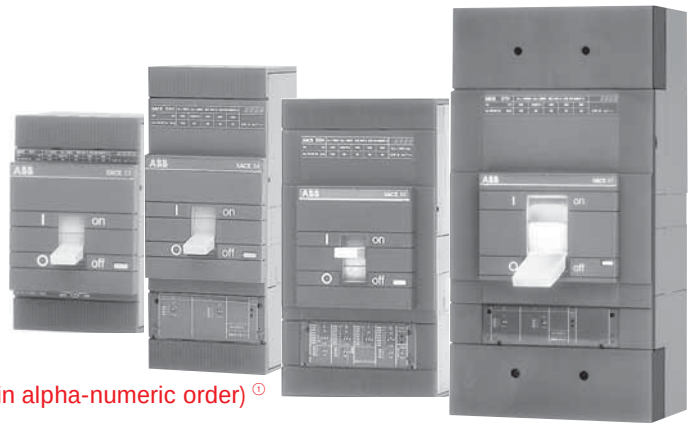
Approximate dimensions
T5 Flange handle, cable operated



NOTES:
1. "A" DIM. IS THE WIRING BENDING SPACE AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
2. THE MINIMUM BEND READIUS OF THE CABLE IS 3 INCHES.

Notes

Isomax
Molded case circuit breakers
S3 – S8



S4 N 250 B W - 2 xxx

Accessories (added in alpha-numeric order) ①
A = Auxiliary Switch
BA = Bell Alarm
BA3 = Bell Alarm (S6/S7 only)
S_ = Shunt trip with voltage code
U_ = Undervoltage release with voltage code

Number of poles
-2 = 2 pole
-4 = 4 pole
None = 3 pole

Type connectors
W = None

Trip unit function
B = LI
C = LSI
D = Molded Case Switch (MCS)
E = LSIG
T = Thermal-magnetic – 10X Mag
G = Thermal-magnetic – 2.5 - 3X Mag ②
F = LSIG/K
H = LSIG/D
J = LSIG/DT
K = LSIG/DTK
M = Magnetic only (MCP)

Current rating
015 = 15A
250 = 250A
400 = 400A
1200 = 1200A

Interrupting rating class
B = Basic (240VAC)
N = Normal
H = High
L = Extra High
BQ = Basic, 100% rated
NQ = Normal, 100% rated
HQ = High, 100% rated
LQ = Extra High, 100% rated
D = Special molded case switch

(No trip IEC)

Frame size
S3 = 150 / 225A
S4 = 250A
S5 = 400A
S6 = 600 / 800A
S7 = 1200A

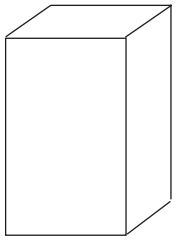
① Consult ABB for factory installed accessories.
② Consult ABB for availability.

15

S3
150/225A
Standard thermal-magnetic

S3B

S3N S3H S3L


H x W x D
6.70" x 4.13" x 4.07"

Standard S3 package includes complete circuit breaker and mounting hardware. Order cable lugs as a separate item, standard copper/ aluminum (Cu/Al) lugs are no charge when ordered with breaker.

General
The S3 breaker family ranges from 15 through 225 amperes. The S3 trip mechanisms are non-interchangeable and use sensitive electromagnetic relays for overcurrent trip protection. Heat sensitive bimetals are used for thermal overcurrent protection. Short circuit current protection begins at 10 times the thermal rating of the breaker and uses a magnetic coil principle.

Versions
To meet all application needs, the S3 is available in various versions:

T =Thermal-magnetic
Q =100% UL rated
D = Molded case switch
M = Magnetic only (MCP)
G = 3X Mag (100 - 225A 3-pole only)

Performance level
Each version is also available in different maximum fault interrupting levels

B = 240VAC
N = Normal
H = High
L = Extra high

Number of poles
In UL/CSA form, the S3 is available in two pole or three pole versions, both with the same dimensions. A four pole version is also available in UL/ IEC form. For price estimate, add 35% to list price of selected version three pole breaker, contact ABB Control for details.

Accessory mounting
Internal accessories are UL/CSA approved for both factory or field installation. Accessories require control cable connectors. Shunt trips or UVR's mount in the left cavity. Auxiliary or bell alarm switches mount in the right cavity.

Reverse feeding
All versions of the S3 family are suitable for reverse feed applications.

Molded case switches
UL489 switches include no overcurrent protection except for a high instantaneous trip mechanism for self protection. IEC type molded case switches with no trip protection are also available.

UL/CSA Interrupting capacity (kA RMS)
UL489 / CSA C22.2

Voltage	N	H	L
240VAC	65	100	150
480VAC	25	50	85①
600VAC	14	14	25
500VDC	35	50	65
600VDC	20	35	50

IEC-947 Interrupting capacity (kA RMS)

Voltage	N	H	L
230VAC	65	100	170
380/400/415VAC	35	65	85
440VAC	30	50	65
500VAC	25	40	50
690VAC	14	18	20
500VDC	35	50	65
750VDC	20	35	50

① 15-30A are 65kA at 480VAC

S3
150/225A
Standard thermal-magnetic

S3B

Breaker	IC at 240VAC	Rating	Magnetic trip	2 pole, 240VAC catalog number	List price	3 pole, 240VAC catalog number	List price
S3B	**150kA**	175A 200A 225A	1750A 2000A 2250A	S3B175TW-2 S3B200TW-2 S3B225TW-2	**$ 460**	S3B175TW S3B200TW S3B225TW	**$ 590**

S3N

Breaker	IC at 480VAC	Rating	Magnetic trip	2 pole, 600VAC/500VDC catalog number	List price	3 pole, 600VAC/DC catalog number	List price
S3N	**25kA**	15A 20A 25A 30A 35A 40A 50A 60A	500A 500A 500A 500A 500A 500A 500A 600A	S3N015TW-2 S3N020TW-2 S3N025TW-2 S3N030TW-2 S3N035TW-2 S3N040TW-2 S3N050TW-2 S3N060TW-2	**$ 316**	S3N015TW S3N020TW S3N025TW S3N030TW S3N035TW S3N040TW S3N050TW S3N060TW	**$ 413**
		70A 80A 90A 100A	700A 800A 900A 1000A	S3N070TW-2 S3N080TW-2 S3N090TW-2 S3N100TW-2	**407**	S3N070TW S3N080TW S3N090TW S3N100TW	**504**
		125A 150A 175A① 200A① 225A①	1250A 1500A 1750A 2000A 2250A	S3N125TW-2 S3N150TW-2 S3N175TW-2 S3N200TW-2 S3N225TW-2	**911**	S3N125TW S3N150TW S3N175TW S3N200TW S3N225TW	**1131**

S3H

Breaker	IC at 480VAC	Rating	Magnetic trip	2 pole, 600VAC/500VDC catalog number	List price	3 pole, 600VAC/DC catalog number	List price
S3H	**50kA**	15A 20A 25A 30A 35A 40A 50A 60A	500A 500A 500A 500A 500A 500A 500A 600A	S3H015TW-2 S3H020TW-2 S3H025TW-2 S3H030TW-2 S3H035TW-2 S3H040TW-2 S3H050TW-2 S3H060TW-2	**$ 527**	S3H015TW S3H020TW S3H025TW S3H030TW S3H035TW S3H040TW S3H050TW S3H060TW	**$ 619**
		70A 80A 90A 100A	700A 800A 900A 1000A	S3H070TW-2 S3H080TW-2 S3H090TW-2 S3H100TW-2	**617**	S3H070TW S3H080TW S3H090TW S3H100TW	**702**
		125A 150A 175A① 200A① 225A①	1250A 1500A 1750A 2000A 2250A	S3H125TW-2 S3H150TW-2 S3H175TW-2 S3H200TW-2 S3H225TW-2	**1376**	S3H125TW S3H150TW S3H175TW S3H200TW S3H225TW	**1586**

S3L

Breaker	IC at 480VAC	Rating	Magnetic trip	2 pole, 600VAC/500VDC catalog number	List price	3 pole, 600VAC/DC catalog number	List price
S3L	**65k**	15A 20A 25A 30A	500A 500A 500A 500A	S3L015TW-2 S3L020TW-2 S3L025TW-2 S3L030TW-2	**$ 634**	S3L015TW S3L020TW S3L025TW S3L030TW	**$ 824**
		35A 40A 50A 60A	500A 500A 500A 600A	S3L035TW-2 S3L040TW-2 S3L050TW-2 S3L060TW-2	**634**	S3L035TW S3L040TW S3L050TW S3L060TW	**824**
	85kA	70A 80A 90A 100A	700A 800A 900A 1000A	S3L070TW-2 S3L080TW-2 S3L090TW-2 S3L100TW-2	**816**	S3L070TW S3L080TW S3L090TW S3L100TW	**1010**
		125A 150A	1250A 1500A	S3L125TW-2 S3L150TW-2	**1818**	S3L125TW S3L150TW	**2260**
	65kA	175A① 200A① 225A①	1750A 2000A 2250A	S3L175TW-2 S3L200TW-2 S3L225TW-2	**1818**	S3L175TW S3L200TW S3L225TW	**2260**

① 480VAC maximum

S3
150/225A
100% UL rated

S3NQ

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole 600VAC/DC catalog number	List price
S3NQ	**25kA**	15A 20A 25A 30A 35A 40A 50A 60A	500A 500A 500A 500A 500A 500A 500A 600A	S3NQ015TW S3NQ020TW S3NQ025TW S3NQ030TW S3NQ035TW S3NQ040TW S3NQ050TW S3NQ060TW	**$ 459**
		70A 80A 90A 100A	700A 800A 900A 1000A	S3NQ070TW S3NQ080TW S3NQ090TW S3NQ100TW	**560**
		125A 150A 175A① 200A① 225A①	1250A 1500A 1750A 2000A 2250A	S3NQ125TW S3NQ150TW S3NQ175TW S3NQ200TW S3NQ225TW	**1257**

S3HQ

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole catalog number	List price
S3HQ	**50kA**	15A 20A 25A 30A 35A 40A 50A 60A	500A 500A 500A 500A 500A 500A 500A 600A	S3HQ015TW S3HQ020TW S3HQ025TW S3HQ030TW S3HQ035TW S3HQ040TW S3HQ050TW S3HQ060TW	**$ 688**
		70A 80A 90A 100A	700A 800A 900A 1000A	S3HQ070TW S3HQ080TW S3HQ090TW S3HQ100TW	**780**
		125A 150A 175A① 200A① 225A①	1250A 1500A 1750A 2000A 2250A	S3HQ125TW S3HQ150TW S3HQ175TW S3HQ200TW S3HQ225TW	**1762**

S3LQ

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole catalog number	List price
S3LQ	**65kA**	15A 20A 25A 30A	500A 500A 500A 500A	S3LQ015TW S3LQ020TW S3LQ025TW S3LQ030TW	**$ 916**
	85kA	35A 40A 50A 60A	500A 500A 500A 600A	S3LQ035TW S3LQ040TW S3LQ050TW S3LQ060TW	
		70A 80A 90A 100A	700A 800A 900A 1000A	S3LQ070TW S3LQ080TW S3LQ090TW S3LQ100TW	**1123**
		125A 150A 175A① 200A① 225A①	1250A 1500A 1750A 2000A 2250A	S3LQ125TW S3LQ150TW S3LQ175TW S3LQ200TW S3LQ225TW	**2511**

Note: When applied correctly, UL tested 100% equipment rated breakers may be applied at full rating rather than on the sizing rules of the NEC where breakers and cable are sized based on actual continuous load current divided by 80%. This 100% rating can save the user the cost of larger cable or bus bar. Please consult the NEC for details and other design factors needed for this application.

① 480VAC maximum

S3
150/225A, 600VAC

Magnetic only (MCP)

Magnetic only circuit breakers are instantaneous trip only devices which are Underwriters Laboratories Recognized. MCPs must be used with some other device that will provide overload protection.

Type	Interruption capacity	Amps	Magnetic trip	3 pole catalog number	List price
S3N	240VAC 35kA 480VAC 18kA 600VAC 10kA	3 5 10	12 – 36 20 – 60 40 – 120	S3N003MW S3N005MW S3N010MW	**$ 568**
	240VAC 35kA 480VAC 18kA 600VAC 10kA	25	100 – 300	S3N025MW	
	240VAC 75kA 480VAC 35kA 600VAC 14kA	50 100 125 150	200 – 600 400 – 1200 500 – 1500 600 – 1500	S3N050MW S3N100MW S3N125MW S3N150MW	**633** **763** **929** **929**

Type	Interruption capacity	Amps	Magnetic trip	3 pole catalog number	List price
S3L	240VAC 50kA 480VAC 25kA 600VAC 10kA	3 5 10	12 – 36 20 – 60 40 – 120	S3L003MW S3L005MW S3L010MW	**$ 710**
	240VAC 50kA 480VAC 25kA 600VAC 10kA	25	100 – 300	S3L025MW	
	240VAC 150kA 480VAC 85kA 600VAC 25kA	50 100 125 150	200 – 600 400 – 1200 500 – 1500 600 – 1500	S3L050MW S3L100MW S3L125MW S3L150MW	**710** **843** **1910** **1910**
	480VAC 65kA	200 ②	800 – 2400	S3L200MW	**1910**

Molded case switches

Type	Interruption capacity ③	Amps	Magnetic trip	3 pole catalog number	List price
S3B-D	240VAC 150KA	225	2250A	S3B225DW	**$ 410**
S3H-D	240VAC 100kA 480VAC 50kA 600VAC 14kA 500VDC 65kA 600VDC 50kA	150 225 ②	1500A 2250A	S3H150DW S3H225DW	**892** **1254**
Non-UL switches without overcurrent protection	Withstand rating				
	600VAC 6.5kA	100 160 250	none none none	S3D100W S3D160W S3D250W	**531** **892** **1393**

Connection options

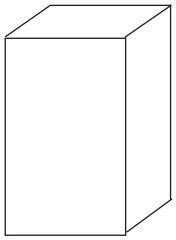
Type	Wire range	Amps①	Set of 2 catalog number	List price	Set of 3 catalog number	List price
CU/AL front lugs	14AWG – 2AWG	60	K3TA-2	**$ 4**	K3TA	**$ 6**
CU/AL front lugs	14AWG – 1/0	100	K4TB-2	**4**	K4TB	**6**
CU/ALfront lugs	2AWG – 4/0	150	K4TC-2	**4**	K4TC	**6**
CU/AL front lugs	4AWG – 300kcmil	225	K4TD-2	**10**	K4TD	**15**
					Set of 6 catalog number	
CU front lugs (saddle)	14AWG – 250kcmil	250	—	—	K4TES	**30**
CU rear lugs	6AWG – 250kcmil	250	—	—	K4TER	
Extended front bar	–	250	—	—	K4ET-250	**46**

① Suggested lugs for circuit breaker up to amps shown. Cable size and type determine maximum amperage.
② 480VAC maximum.
③ With fuse or MCCB protected circuit.

Discount schedule SM – S3 MCPs only
Discount schedule S3 – Circuit breakers
Discount schedule SA – Lugs

S4
250A, 600VAC
Electronic trip type

S4


H x W x D
10.0" x 4.13" x 4.07"

Standard S4 package includes complete circuit breaker and mounting hardware. Order cable lugs or other connection scheme as a separate item.

General
The S4 breaker family is a 250A frame utilizing a microprocessor based overcurrent protective trip system. In the 250A version, the trip unit is adjustable from 100A up to 250A without the addition of any parts or rating plugs. As standard, the S4 includes adjustable long time function for overload protection and adjustable instantaneous function for short circuit protection.

Versions
To meet all application needs, the S4 is available in various versions:

B = Adjustment LI
C = Adjustment LSI
E = Adjustment LSIG
Q = 100% UL rated
D = Molded case switch
M = Magnetic only (MCP)

Trip functions
These tripping functions are available:

L = Long time
S = Short time
I = Instantaneous
G = Ground fault

Performance level
Each version is also available in different maximum fault interrupting levels:

N = Normal
H = High
L = Extra high

Number of poles
In UL/CSA form, the S4 is available in two pole or three pole versions, both with the same dimensions. A four pole version is also available in UL/IEC form. For price estimate, add 35% to list price of selected version three pole breaker, contact ABB Control for details.

Accessory mounting
Internal accessories are UL/CSA approved for both factory or field installation. Accessories require control cable connectors. Shunt trips or UVR's mount in the left cavity. Auxiliary or bell alarm switches mount in the right cavity.

Reverse feeding
All versions of the S4 family are suitable for reverse feed applications.

Molded case switches
UL489 switches include no overcurrent protection except for a high instantaneous trip mechanism for self protection.

UL/CSA Interrupting capacity (kA RMS)
UL489 / CSA C22.2

Voltage	N	H	L
240VAC	65	150	200
480VAC	25	65	100
600VAC	18	22	35

IEC-947 Interrupting capacity (kA RMS)

Voltage	N	H	L
230VAC	65	150	200
380/400/415VAC	35	65	100
440VAC	30	50	80
500VAC	25	40	65
690VAC	18	22	30

S4
250A, 600VAC
Electronic trip type

The S4 breaker family uses two available microprocessor based internal trip units. The standard **PR211** trip unit includes adjustments for long time current pick-up and instantaneous current trip point.

The optional **PR212** trip unit includes adjustments for long time current pick-up/delay, short time pick-up/delay I^2t (on/off), instantaneous current trip point and further optional ground fault protection.

100A Frame (40 – 100A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	2 pole catalog number	List price	3 pole catalog number	List price
S4N	25kA	PR211 PR212 PR212	LI LSI LSIG	S4N100BW-2 S4N100CW-2 —	**$ 1073** **1679** —	S4N100BW S4N100CW S4N100EW	**$ 1347** **1913** **2813**
S4H	65kA	PR211 PR212 PR212	LI LSI LSIG	S4H100BW-2 S4H100CW-2 —	**2572** **3138** —	S4H100BW S4H100CW S4H100EW	**3030** **3596** **4496**
S4L	100kA	PR211 PR212 PR212	LI LSI LSIG	S4L100BW-2 S4L100CW-2 —	**3159** **3725** —	S4L100BW S4L100CW S4L100EW	**3950** **4516** **5416**

250A Frame (100 – 250A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	2 pole catalog number	List price	3 pole catalog number	List price
S4N	25kA	PR211 PR212 PR212	LI LSI LSIG	S4N250BW-2 S4N250CW-2 —	**$ 1073** **1679** —	S4N250BW S4N250CW S4N250EW	**$ 1347** **1913** **2813**
S4H	65kA	PR211 PR212 PR212	LI LSI LSIG	S4H250BW-2 S4H250CW-2 —	**2572** **3138** —	S4H250BW S4H250CW S4H250EW	**3030** **3596** **4496**
S4L	100kA	PR211 PR212 PR212	LI LSI LSIG	S4L250BW-2 S4L250CW-2 —	**3159** **3725** —	S4L250BW S4L250CW S4L250EW	**3950** **4516** **5416**

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I^2t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

Continuous amperage settings (long time adjustment) – PR211

Frame	Set points								
	0.4	0.5	0.6	0.7	0.8	0.9	0.95	1.0	Setting
100A	40	50	60	70	80	90	95	100	Amps
250A	100	125	150	175	200	225	237	250	Amps

S4
250A, 600 VAC
100% UL rated

When applied correctly, UL tested 100% equipment rated breakers may be applied at full rating rather than on the sizing rules of the NEC where breakers and cable are sized based on actual continuous load current divided by 80%. This 100% rating can save the user the cost of larger cable or bus bar. Please consult the NEC for details and other design factors needed for this application.

100A Frame (40 – 100A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole catalog number	List price
S4N	25kA	PR211 PR212 PR212	LI LSI LSIG	S4NQ100BW S4NQ100CW S4NQ100EW	**$ 1482** **2104** **3094**
S4H	65kA	PR211 PR212 PR212	LI LSI LSIG	S4HQ100BW S4HQ100CW S4HQ100EW	**3333** **3956** **4946**
S4L	100kA	PR211 PR212 PR212	LI LSI LSIG	S4LQ100BW S4LQ100CW S4LQ100EW	**4345** **4968** **5958**

250A Frame (100 – 250A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole catalog number	List price
S4N	25kA	PR211 PR212 PR212	LI LSI LSIG	S4NQ250BW S4NQ250CW S4NQ250EW	**$ 1482** **2104** **3094**
S4H	65kA	PR211 PR212 PR212	LI LSI LSIG	S4HQ250BW S4HQ250CW S4HQ250EW	**3333** **3956** **4946**
S4L	100kA	PR211 PR212 PR212	LI LSI LSIG	S4LQ250BW S4LQ250CW S4LQ250EW	**4345** **4968** **5958**

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I^2t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

S4
250A, 600VAC

Magnetic only (MCP)

All S4 magnetic only breakers utilize the electronic PR211 trip unit with an adjustable range of 1.5 to 12 times frame rating. Both two and three pole MCPs are 600VAC rated.

Type	Amps	Interruption capacity	Adjustment range	2 pole 600VAC catalog number	List price	3 pole 600VAC catalog number	List price
S4N	100 250	240VAC 65kA 480VAC 25kA 600VAC 18kA	150 – 1200A 375 – 3000A	S4N100MW-2 S4N250MW-2	**$ 1073**	S4N100MW S4N250MW	**$ 1347**
S4H	100 250	240VAC 150kA 480VAC 65kA 600VAC 22kA	150 – 1200A 375 – 3000A	S4H100MW-2 S4H250MW-2	**2572**	S4H100MW S4H250MW	**3030**
S4L	100 250	240VAC 200kA 480VAC 100kA 600VAC 35kA	150 – 1200A 375 – 3000A	S4L100MW-2 S4L250MW-2	**3159**	S4L100MW S4L250MW	**3950**

Molded case switch

Type	Interruption capacity ②	Amps	Magnetic trip	3 pole catalog number	List price
S4H-D	240VAC 150kA 480VAC 65kA 600VAC 22kA	250	3000A	S4H250DW	**$ 1215**

Neutral GF current transformer (required for 4 wire GF systems)

Amps	Catalog number	List price
100 250	K4NCT-100 K4NCT-250	**$ 250**

Connection options

Type	Wire range	Amps ①	Set of 2 catalog number	List price	Set of 3 catalog number	List price
CU/AL front lugs	14AWG – 1/0	100	K4TB-2	**$ 4**	K4TB	**$ 6**
CU/AL front lugs	2AWG – 4/0	150	K4TC-2	**4**	K4TC	**6**
CU/AL front lugs	4AWG – 300kcmil	225	K4TD-2	**10**	K4TD	**15**
CU/AL front lugs	6AWG – 350kcmil	250	K4TE-2	**20**	K4TE	**30**
					Set of 6 catalog number	
CU front lugs (saddle)	14AWG – 250kcmil	250	—	—	K4TES	**30**
CU rear lugs	6AWG – 250kcmil	250	—	—	K4TER	
Extended front bar	—	250	—	—	K4ET-250	**46**

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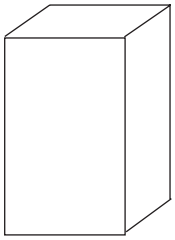
① Suggested lugs for a circuit breaker up to the amps shown. Cable size and type determine maximum amperage.
② With fuse or MCCB protected circuit.

S5
400A, 600V
Electronic and thermal-magnetic trip types

S5



H x W x D
10.0" x 5.51" x 4.07" (a)
13.62" x 5.51" x 4.07" (b)

Standard S5 package includes complete circuit breaker and mounting hardware. Order cable lugs or other connection scheme as a separate item.

(a) With K5TF cable lugs, breaker is 10.0" tall.
(b) With K5TG cable lugs, terminal covers are provided and breaker is 13.62" tall.

General
The S5 breaker family is a 400A frame utilizing a microprocessor-based overcurrent protective trip system. In the 400A version, the trip unit is adjustable from 160A up to 400A without the addition of any parts or rating plugs. As standard the S5 includes adjustable long time function for overload protection and adjustable instantaneous function for short circuit protection.

Versions
To meet all application needs, the S5 is available in various versions:

B = Adjustment LI
C = Adjustment LSI
E = Adjustment LSIG
Q = 100% UL rated
D = Molded case switch
M = Magnetic only (MCP)
T = Thermal magnetic
G = 2.5 Mag (3-pole only)

Trip functions
These tripping functions are available:

L = Long time
S = Short time
I = Instantaneous
G = Ground fault

Performance level
Each version is also available in different maximum fault interrupting levels

N = Normal
H = High
L = Extra high

Number of poles
In UL/CSA version, the S5 is available in two pole or three pole version, both with the same dimensions. A four pole version is also available in UL/IEC form. For price estimate, add 35% to list price of selected version three pole breaker, contact ABB Control for details.

Accessory mounting
Internal accessories are UL/CSA approved for both factory or field installation. Accessories require control cable connectors. Shunt trips or UVR's mount in the left cavity. Auxiliary or bell alarm switches mount in the right cavity.

Reverse feeding
All versions of the S5 family are suitable for reverse feed applications.

Molded case switches
UL489 switches include no overcurrent protection except for a high instantaneous trip mechanism for self protection.

UL/CSA Interrupting capacity (kA RMS)
UL489 / CSA C22.2

Voltage	N	H	L
240VAC	65	150	200
480VAC	35	65	100
600VAC	22	22	35
500VDC①	35	50	65
600VDC①	20	35	50

IEC-947 Interrupting capacity (kA RMS)

Voltage	N	H	L
230VAC	65	100	200
380/400/415VAC	35	65	100
440VAC	30	50	80
500VAC	25	40	65
690VAC	20	25	30

① Thermal magnetic only.

S5
400A, 600 VAC
Electronic and thermal-magnetic trip types

The S5 breaker family uses two available microprocessor based internal trip units. The standard **PR211** trip unit includes adjustments for long time current pick-up and instantaneous current trip point.

The optional **PR212** trip unit includes adjustments for long time current pick-up/delay, short time pick-up/delay, I^2t (on/off), instantaneous current trip point and further optional ground fault protection.

400A Frame (160 – 400A adjustable continuous range)

Breaker	IC at 480VAC	Trip	Adjustment	2 pole, 600VAC catalog number	List price	3 pole, 600VAC catalog number	List price
S5N	35kA	PR211 PR212 PR212	LI LSI LSIG	S5N400BW-2 S5N400CW-2 —	**$ 1798** **2464** —	S5N400BW S5N400CW S5N400EW	**$ 2151** **2817** **3717**
S5H	65kA	PR211 PR212 PR212	LI LSI LSIG	S5H400BW-2 S5H400CW-2 —	**3285** **3951** —	S5H400BW S5H400CW S5H400EW	**3654** **4320** **5220**
S5L	100kA	PR211 PR212 PR212	LI LSI LSIG	S5L400BW-2 S5L400CW-2 —	**3945** **4611** —	S5L400BW S5L400CW S5L400EW	**4733** **5399** **6299**

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I^2t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

Continuous amperage settings (long time adjustment) – PR211

Frame	Set points								
	0.4	0.5	0.6	0.7	0.8	0.9	0.95	1.0	Setting
400A	160	200	240	280	320	360	380	400	Amps

S5 thermal-magnetic breakers, for AC and DC applications

Breaker	IC at 500VDC	Rating	Magnetic trip	2 pole, 600VAC/500VDC catalog number	List price	3 pole, 600VAC/DC catalog number	List price
S5N	35kA	300A (210 – 300A) 400A (280 – 400A)	3000A 4000A	S5N300TW-2 S5N400TW-2	**$ 1798**	S5N300TW S5N400TW	**$ 2151**
S5H	50kA	300A (210 – 300A) 400A (280 – 400A)	3000A 4000A	S5H300TW-2 S5H400TW-2	**3285**	S5H300TW S5H400TW	**3654**
S5L	65kA	300A (210 – 300A) 400A (280 – 400A)	3000A 4000A	S5L300TW-2 S5L400TW-2	**3945**	S5L300TW S5L400TW	**4733**

S5
400A, 600 VAC
100% UL rated, electronic trip type

When applied correctly, UL tested 100% equipment rated breakers may be applied at full rating rather than on the sizing rules of the NEC where breakers and cable are sized based on actual continuous load current divided by 80%. This 100% rating can save the user the cost of larger cable or bus bar. Please consult the NEC for details and other design factors needed for this application.

400A Frame (160 – 400A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole, 600VAC catalog number	List price
S5N	35kA	PR211 PR212 PR212	LI LSI LSIG	S5NQ400BW S5NQ400CW S5NQ400EW	**$ 2366** **3099** **4089**
S5H	65kA	PR211 PR212 PR212	LI LSI LSIG	S5HQ400BW S5HQ400CW S5HQ400EW	**4019** **4752** **5742**
S5L	100kA	PR211 PR212 PR212	LI LSI LSIG	S5LQ400BW S5LQ400CW S5LQ400EW	**5206** **5939** **6929**

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I^2t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

S5
400A, 600VAC

Isomax MCCBs

Magnetic only (MCP)

All S5 magnetic only breakers utilize the electronic PR211 trip unit with an adjustable range of 1.5 to 12 times frame rating. Both two and three pole MCP's are 600VAC rated.

Type	Amps	Interruption capacity	Adjustment range	2 pole 600VAC catalog number	List price	3 pole 600VAC catalog number	List price
S5N	400	240 VAC 65kA 480VAC 35kA 600VAC 22kA	600 – 4800A	S5N400MW-2	**$ 1798**	S5N400MW	**$ 2151**
S5H	400	240VAC 150kA 480VAC 65kA 600VAC 22kA	600 – 4800A	S5H400MW-2	**3285**	S5H400MW	**3654**
S5L	400	240VAC 200kA 480VAC 100kA 600VAC 35kA	600 – 4800A	S5L400MW-2	**3945**	S5L400MW	**4733**

Molded case switch

Switch	Interruption capacity ③	Amps	Magnetic trip	3 pole catalog number	List price
S5H-D	240VAC 150kA 480VAC 65kA 600VAC 22kA 600VDC 50kA	400A	5000A	S5H400DW	**$ 1994**

Neutral GF current transformer (required for 4 wire GF systems)

Amps	Catalog number	List price
400	K5NCT-400	**$ 250**

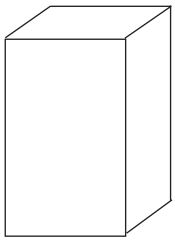
Connection options

Type	Wire range	Amps ②	Set of 2 catalog number	List price	Set of 3 catalog number	List price
CU/AL front lugs	250kcmil – 500kcmil	300	K5TF-2	**$ 30**	K5TF	**$ 45**
CU/AL front lugs	(2) 3/0 – 250kcmil	400	K5TG-2①		K5TG①	
					Set of 6 catalog number	
CU front lugs (saddle)	250kcmil – 500kcmil	400	—	—	K5TGS	**90**
CU rear lugs	250kcmil – 500kcmil	400	—	—	K5TGR	
Extended front bar	—	400	—	—	K5ET-400	**114**

① Including lug cover.
② Suggested lugs for a circuit breaker up to amps shown. Cable size and type determine maximum amperage.
③ With fuse or MCCB protected circuit.

S6
600A / 800A, 600V
Electronic and thermal-magnetic trip type

S6



H x W x D
10.55" x8.27" x 4.07" (a)
14.25" x 8.27" x 4.07" (b)

Standard S6 package includes complete circuit breaker and mounting hardware. Order cable lugs or other connection scheme as a separate item.

(a) With K6TH cable lugs breaker is 10.55" tall.
(b) With K6TJ cable lugs, terminal covers are provided and breaker is 14.25" tall.

General
The S6 breaker family is an 800A frame with a 600A and 800A version, both utilizing a microprocessor based overcurrent protective trip system. Both versions are adjustable from 40% to 100% of rating without the addition of any parts or rating plugs. As standard, the S6 includes adjustable long time function for overload protection and adjustable instantaneous function for short circuit protection.

Versions
To meet all application needs, the S6 is available in various versions:

B = Adjustment LI
C = Adjustment LSI
E = Adjustment LSIG
Q = 100% UL rated
D = Molded case switch
M = Magnetic only (MCP)
T = Thermal magnetic
G = 2.5 Mag (3-pole only)

Trip functions
These tripping functions are available:

L = Long time
S = Short time
I = Instantaneous
G = Ground fault

Performance level
Each version is also available in different maximum fault interrupting levels

N = Normal
H = High
L = Extra high

Number of poles
In UL/CSA version, the S6 is available as in two pole or three pole version, both with the same dimensions. A four pole version is also available in UL/IEC form. For price estimate, add 35% to list price of selected version three pole breaker, contact ABB Control for details.

Accessory mounting
Internal accessories are UL/CSA approved for both factory or field installation. Accessories require control cable connectors. Shunt trips or UVR's mount in the left cavity. Auxiliary or bell alarm switches mount in the right cavity.

Reverse feeding
All versions of the S6 family are suitable for reverse feed applications.

Molded case switches
UL489 switches include no overcurrent protection except for a high instantaneous trip mechanism for self protection. IEC type molded case switches with no trip protection are also available.

UL/CSA Interrupting capacity (kA RMS)
UL489 / CSA C22.2

Voltage	N	H	L
240VAC	65	150	200
480VAC	50	65	100
600VAC	25	35	42
500VDC①	35	50	65
600VDC①	20	25	50

IEC-947 Interrupting capacity (kA RMS)

Voltage	N	H	L
230VAC	65	100	200
380/400/415VAC	35	65	100
440VAC	30	50	80
500VAC	25	40	65
690VAC	20	25	35

Catalog Number number	Rating	Magnetic trip
S6N600GW	3 pole, 600 Amp thermal magnetic, Im=2.5 x Ith	1500A
S6N800GW	3 pole, 800 Amp thermal magnetic, Im=2.5 x Ith	2000A

① Thermal magnetic only.

S6
600A / 800A, 600 VAC
Electronic and thermal magnetic trip type

The S6 breaker family uses two available microprocessor based internal trip units. The standard **PR211** trip unit includes adjustments for long time current pick-up and instantaneous current trip point.

The optional **PR212** trip unit includes adjustments for long time current pick-up/ delay, short time pick-up/delay, I^2t (on/off), instantaneous current trip point and further optional ground fault protection.

600A Frame (240 – 600A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	2 pole, 600VAC catalog number	List price	3 pole, 600VAC catalog number	List price
S6N	50kA	PR211 PR212 PR212	LI LSI LSIG	S6N600BW-2 S6N600CW-2 —	**$ 2847** **4237** —	S6N600BW S6N600CW S6N600EW	**$ 3608** **4998** **6998**
S6H	65kA	PR211 PR212 PR212	LI LSI LSIG	S6H600BW-2 S6H600CW-2 —	**4275** **5665** —	S6H600BW S6H600CW S6H600EW	**5271** **6661** **8661**
S6L	100kA	PR211 PR212 PR212	LI LSI LSIG	S6L600BW-2 S6L600CW-2 —	**5481** **6871** —	S6L600BW S6L600CW S6L600EW	**6482** **7872** **8972**

800A Frame (320 – 800A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	2 pole, 600VAC catalog number	List price	3 pole, 600VAC catalog number	List price
S6N	50kA	PR211 PR212 PR212	LI LSI LSIG	S6N800BW-2 S6N800CW-2 —	**$ 3842** **5232** —	S6N800BW S6N800CW S6N800EW	**$ 4802** **6192** **8192**
S6H	65kA	PR211 PR212 PR212	LI LSI LSIG	S6H800BW-2 S6H800CW-2 —	**5275** **6665** —	S6H800BW S6H800CW S6H800EW	**6465** **7855** **9855**
S6L	100kA	PR211 PR212 PR212	LI LSI LSIG	S6L800BW-2 S6L800CW-2 —	**6476** **7866** —	S6L800BW S6L800CW S6L800EW	**7676** **9066** **11,066**

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I^2t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

Continuous amperage settings (long time adjustment) — PR211

Frame	Set points								
	0.4	0.5	0.6	0.7	0.8	0.9	0.95	1.0	Setting
600A	240	300	360	420	480	540	570	600	Amps
800A	320	400	480	560	640	720	760	800	Amps

S6 thermal-magnetic breakers, for AC and DC applications

Breaker	IC at 500VDC	Rating	Magnetic trip	2 pole, 600VAC /500DC catalog number	List price	3 pole, 600VAC/DC catalog number	List price
S6N	35kA	600A (420 – 600A) 800A (560 – 800A)	6000A 8000A	S6N600TW-2 S6N800TW-2	**$ 2847** **3842**	S6N600TW S6N800TW	**$ 3608** **4802**
S6H	50kA	600A (420 – 600A) 800A (560 – 800A)	6000A 8000A	S6H600TW-2 S6H800TW-2	**4275** **5275**	S6H600TW S6H800TW	**5271** **6465**
S6L	65kA	600A (420 – 600A) 800A (560 – 800A)	6000A 8000A	S6L600TW-2 S6L800TW-2	**5481** **6476**	S6L600TW S6L800TW	**6482** **7676**

S6
600A / 800A, 600 VAC
100% UL rated, electronic trip type

When applied correctly, UL tested 100% equipment rated breakers may be applied at full rating rather than on the sizing rules of the NEC where breakers and cable are sized based on actual continuous load current divided by 80%. This 100% rating can save the user the cost of larger cable or bus bar. Please consult the NEC for details and other design factors needed for this application.

600A Frame (240 – 600A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole 600VAC catalog number	List price
S6N	50kA	PR211 PR212 PR212	LI LSI LSIG	S6NQ600BW S6NQ600CW S6NQ600EW	**$ 3969** **5498** **7698**
S6H	65kA	PR211 PR212 PR212	LI LSI LSIG	S6HQ600BW S6HQ600CW S6HQ600EW	**5798** **7327** **9527**
S6L	100kA	PR211 PR212 PR212	LI LSI LSIG	S6LQ600BW S6LQ600CW S6LQ600EW	**7130** **8659** **9869**

800A Frame (320 – 800A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole 600VAC catalog number	List price
S6N	50kA	PR211 PR212 PR212	LI LSI LSIG	S6NQ800BW S6NQ800CW S6NQ800EW	**$ 5282** **6811** **9011**
S6H	65kA	PR211 PR212 PR212	LI LSI LSIG	S6HQ800BW S6HQ800CW S6HQ800EW	**7112** **8641** **10,841**
S6L	100kA	PR211 PR212 PR212	LI LSI LSIG	S6LQ800BW S6LQ800CW S6LQ800EW	**8444** **9973** **12,173**

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I^2t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

S6
600A / 800A

Magnetic only (MCP)

All S6 magnetic only breakers utilize the electronic PR211 trip unit with an adjustable range of 1.5 to 12 times frame rating. Both two and three pole MCPs are 600VAC rated.

Type	Amps	Interruption capacity		Adjustment range	2 pole 600VAC catalog number	List price	3 pole 600VAC catalog number	List price
S6N	600 800	240VAC 480VAC 600VAC	65kA 50kA 25kA	900 – 7200A 1200 – 9600A	S6N600MW-2 S6N800MW-2	**$ 2847** **3842**	S6N600MW S6N800MW	**$ 3608** **4802**
S6H	600 800	240VAC 480VAC 600VAC	150kA 65kA 35kA	900 – 7200A 1200 – 9600A	S6H600MW-2 S6H800MW-2	**4275** **5270**	S6H600MW S6H800MW	**5271** **6465**
S6L	600 800	240VAC 480VAC 600VAC	200kA 100kA 42kA	900 – 7200A 1200 – 9600A	S6L600MW-2 S6L800MW-2	**5481** **6476**	S6L600MW S6L800MW	**6482** **7676**

Molded case switches

Type	Interruption capacity ③		Amps	Magnetic trip	3 pole catalog number	List price
S6H-D	240VAC 480VAC 600VAC 600VDC	200kA 100kA 42kA 50kA	— 600 800 —	— 10,000A 10,000A —	— S6H600DW S6H800DW —	— **$ 3275** **4248** —
Non-UL, switches without overcurrent protection	Withstand rating		400 630 800	none none none	S6D400W S6D630W S6D800W	**3275** **3275** **4248**
	600VAC	15kA				

Neutral current transformer (required for 4 wire GF systems)

Amps	Catalog number	List price
600 800	K6NCT-600 K6NCT-800	**$ 250**

Connection options

Type	Wire range	Amps ②	Set of 2 catalog number	List price	Set of 3 catalog number	List price
CU/AL front lugs CU/AL front lugs	(2) 250kcmil – 500kcmil (3) 2/0 – 400kcmil	600 800	K6TH-2 K6TJ-2 ①	**$ 50** **90**	K6TH ① K6TJ ①	**$ 75** **135**
					Set of 6 catalog number	
CU rear lugs CU rear lugs	(2) 250kcmil – 350kcmil (3) 250 – 350kcmil	600 800	— —	— —	K6THR K6TJR	**150** **170**
Extended front bar Extended front bar	— —	600 800	— —	— —	K6ET-600 K6ET-800	**150** **170**

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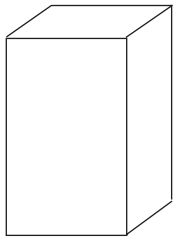
① Includes lug cover.
② Suggested lugs for a circuit breaker up to amps shown. Cable size and type determine maximum amperage.
③ With fuse or MCCB protected circuit.

S7
1200A, 600 VAC
Electronic trip type

S7



H x W x D
15.98" x 8.27" x 5.45"

Standard S7 package includes complete circuit breaker and mounting hardware. Order cable lugs or other connection scheme as a separate item.

General
The S7 breaker family is a 1200A frame utilizing a microprocessor based overcurrent protective trip system. In the 1200A version, the trip unit is adjustable from 480A up to 1200A without the addition of any parts or rating plugs. As standard, the S7 includes adjustable long time function for overload protection and adjustable instantaneous function for short circuit protection.

Versions
To meet all application needs, the S7 is available in various versions:

B = Adjustment LI
C = Adjustment LSI
E = Adjustment LSIG
Q = 100% UL rated
D = Molded case switch
M = Magnetic only (MCP)

Trip functions
These tripping functions are available:

L = Long time
S = Short time
I = Instantaneous
G = Ground fault

Performance level
Each version is also available in different maximum fault interrupting levels

H = High
L = Extra high (IEC only)

Number of poles
In UL/CSA version, the S7 is available as in two pole or three pole version, both with the same dimensions. A four pole version is also available in a UL/IEC form. For price estimate, add 35% to list price of selected three pole, contact ABB Control.

Accessory mounting
Internal accessories are UL/CSA approved for both factory or field installation. Accessories require control cable connectors. Shunt trips or UVR's mount in the left cavity. Auxiliary or bell alarm switches mount in the right cavity.

Reverse feeding
All versions of the S7 family are suitable for reverse feed applications.

Molded case switches
UL489 switches include no overcurrent protection except for a high instantaneous trip mechanism for self protection. IEC type molded case switches with no trip protection are also available.

UL/CSA Interrupting capacity (kA RMS)
UL489 / CSA C22.2

Voltage	H	
240VAC	100	
480VAC	65	
600VAC	50	

IEC-947 Interrupting capacity (kA RMS)

Voltage	H	L
230VAC	100	200
380/400/415VAC	65	100
440VAC	55	80
500VAC	45	70
690VAC	25	35

① Consult factory

S7
1200A, 600 VAC
Electronic trip type

The S7 breaker family uses two available microprocessor based internal trip units. The standard **PR211** trip unit includes adjustments for long time current pick-up and instantaneous current trip point.

The optional **PR212** trip unit includes adjustments for long time current pick-up/ delay, short time pick-up/delay, I^2t (on/off), instantaneous current trip point and further optional ground fault protection.

1000A Frame (400 – 1000A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	2 pole, 600VAC catalog number	List price	3 pole, 600VAC catalog number	List price
S7H	65kA	PR211 PR212 PR212	LI LSI LSIG	S7H1000BW-2 S7H1000CW-2 —	**$ 6959** **8039** —	S7H1000BW S7H1000CW S7H1000EW	**$ 7724** **8804** **10,604**

1200A Frame (480 – 1200A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	2 pole, 600VAC catalog number	List price	3 pole, 600VAC catalog number	List price
S7H	65kA	PR211 PR212 PR212	LI LSI LSIG	S7H1200BW-2 S7H1200CW-2 —	**$ 6959** **8039** —	S7H1200BW S7H1200CW S7H1200EW	**$ 7724** **8804** **10,604**

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I^2t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

Continuous amperage settings (long time adjustment) – PR211

Frame	Set points								
	0.4	0.5	0.6	0.7	0.8	0.9	0.95	1.0	Setting
1000A	400	500	600	700	800	900	950	1000	Amps
1200A	480	600	720	840	960	1080	1140	1200	Amps

① Consult factory.

S7
1200A, 600VAC
UL 100% rated

When applied correctly, UL tested 100% equipment rated breakers may be applied at full rating rather than on the sizing rules of the NEC where breakers and cable are sized based on actual continuous load current divided by 80%. This 100% rating can save the user the cost of larger cable or bus bar. Please consult the NEC for details and other design factors needed for this application.

1000A Frame (400 – 1000A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole catalog number	List price
S7H	65kA	PR211 PR212 PR212	LI LSI LSIG	S7HQ1000BW S7HQ1000CW S7HQ1000EW	**$ 8495** **9684** **11,664**

1200A Frame (480 – 1200A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole catalog number	List price
S7H	65kA	PR211 PR212 PR212	LI LSI LSIG	S7HQ1200BW S7HQ1200CW S7HQ1200EW	**$ 8495** **9684** **11,664**

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I²t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

① Consult factory.

Magnetic only (MCP)

All S7 magnetic only breakers utilize the electronic PR211 trip unit with an adjustable range of 1.5 to 12 times frame rating. Both two and three pole MCPs are 600VAC rated.

Type	Amps	Interruption capacity		Adjustment range	2 pole catalog number	List price	3 pole catalog number	List price
S7H	1000 1200	240VAC 480VAC 600VAC	100kA 65kA 50kA	1500 – 12,000A 1800 – 14,400A	S7H1000MW-2 S7H1200MW-2	**$ 6959**	S7H1000MW S7H1200MW	**$ 7724**

Molded case switches

Type	Interruption capacity ②		Amps	Magnetic trip	3 pole catalog number	List price
S7H-D	240VAC 480VAC 600VAC 600VDC	100kA 65kA 50kA 12kA	1000 1200	20,000A 20,000A	S7H1000DW S7H1200DW	**$ 7300**
Non-UL, switches without overcurrent protection	Withstand rating 600VAC	25kA	1000 1250	— —	S7D1000W S7D1250W	

Neutral current transformer (required for 4 wire GF systems)

Amps	Catalog number	List price
1000 1200	K7NCT-1000 K7NCT-1200	**$ 250**

Connection options

Type	Wire range	Amps ①	Set of 2 catalog number	List price	Set of 3 catalog number	List price
CU/AL front lugs	(4) 4/0 – 500kcmil	1200	K7TK-2	**$ 120**	K7TK	**$ 180**
Extended front bar	—	1200	—	—	Set of 6 catalog number K7ET-1250	**240**

15

① Suggested lugs for a circuit breaker up to amps shown. Cable size and type determine maximum amperage.
② With fuse or MCCB protected circuit.

S8
1600 / 2000 / 2500A
Insulated case circuit breaker

Description

- Insulated case type molded case circuit breaker with manually operated stored energy mechanism. Optional electric charging motor available
- Three cycle closing time for use in generator synchronizing applications.
- Electric spring charging mechanism rated for over 5,000 operations
- Three different frame ratings, 1600, 2000 and 2500 amperes. All are same compact physical size.
- Solid state trip units are available in four different configurations including adjustments for long time, short time, instantaneous and ground fault.
- Standard interrupting rating of 100kA at 480VAC.
- Short time withstand rating of 35kA at 600VAC for one second when breaker ordered with adjustable short time trip.
- Breaker includes charging handle for manual energizing of closing/opening springs
- Built-in ground fault (LSIG) for use with four-wire systems requires neutral GF sensor. Meets NEC ground fault requirements for service entrance applications.
- Internal accessories include electric charging motor, shunt trips, a combination auxiliary/bell alarm switch, and an undervoltage release.
- Breakers are suitable for use in reverse feed applications.
- Wide range of adjustments on trip settings, trip unit includes cover to prevent tampering.
- Front indicators for contact position.
- Uses convenient mounting pads for ease of installation in enclosures.
- Internal accessories are prewired to terminal block mounted on right side of breaker.
- Trip signal contact option indicates when breaker has tripped due to overcurrent.
- Canadian Standards Association certification under C22.2 No. 5 under File LR90467 for both breakers and internal accessories.
- In compliance with IEC947 including 690VAC. Breakers are labeled with both UL/CSA and IEC ratings.
- Breakers are Underwriters Laboratories listed under Standard UL 489 for molded case circuit breakers per File E93565, internal accessories are per File E116596.

S8 2500A

Catalog number information

S8V **16** **E** **W** **X** **X** **X** **X** **X** **X**

Frame size

Current rating
16 - 1600A
20 - 2000A
25 - 2500A

Trip
C - LSI
E - LSIG
M - I
D - Molded case switch

Connection scheme
W - Without connectors
R - Rear connectors, line & load
L - Cable terminals, line & load
D - Rear connectors, line side only
E - Rear connectors, load side only
S - Cable terminals, line side only
V - Cable terminals, load side only
H - Cable terminals, line side; rear connectors, load side
J - Rear connectors, line side; cable terminals, load side
M - K8TM lugs, line and load side

Closing coil
1 - 480VAC
2 - 240VAC
3 - 208VAC
4 - 120VAC
5 - 250VDC
6 - 125VDC
7 - 48VDC
8 - 24VAC/VDC
0 - None

Contacts
A - Aux switches
B - Trip Signal
P - Both
0 - None

Motor
2 - 240,208VAC/250VDC
4 - 120VAC/125VDC
7 - 48VDC
8 - 24 – 30 VAC/VDC
0 - None

Shunt trip
1 - 480VAC
2 - 240,208VAC/250VDC
3 - 24VAC/30VDC
4 - 120VAC/125VDC
7 - 48VAC/48VDC
8 - 24VDC
0 - None

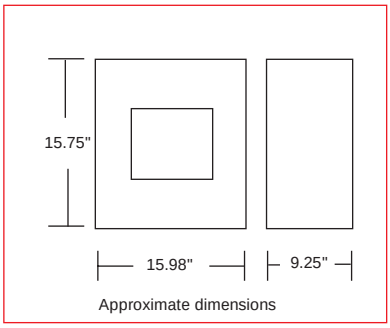
UV release
1 - 480VAC
2 - 240VAC
4 - 120VAC
5 - 250VDC
6 - 125VDC
7 - 48VDC
8 - 24VDC
0 - None

Accessories
D - Locking button device (open)
L - Key lock (open)
X - None

Breaker catalog numbers

The breaker catalog number must be completed. Please note that variations can affect price.

S8
1600 / 2000 / 2500A
Insulated case circuit breaker



Approximate dimensions

Description

Breaker is shipped complete with installed trip unit and accessories. Cable terminals or rear T connectors can be included if desired. For four-wire systems an external neutral ground fault sensor must be ordered separately.

Trip functions

L – Long time pick-up and delay
S – Short time pick-up and delay
I – Instantaneous trip
G – Ground fault pick-up and delay

3 pole, 600VAC maximum ①

Maximum continuous rating				1600A		2000A		2500A	
Breaker	IC at 480VAC	Trip type	Adjustment	Catalog number	List price	Catalog number	List price	Catalog number	List price
S8V	100kA	PR212	LSI	S8V16CW	**$ 12,540**	S8V20CW	**$ 14,427**	S8V25CW	**$ 21,561**
			LSIG	S8V16EW	**14,505**	S8V20EW	**16,561**	S8V25EW	**24,487**
			I	S8V16MW	**11,267**	S8V20MW	**12,988**	S8V25MW	**20,916**
			MCS	S8V16DW	**9620**	S8V20DW	**10,999**	S8V25DW	**16,267**

UL/CSA Interrupting capacity (kA RMS)

UL489 / CSA C22.2

Voltage	V
240VAC	125
480VAC	100
600VAC	85
600VDC ②	25

IEC-947 Interrupting capacity (kA RMS)

Voltage	V
230VAC	120
300/400/415VAC	120
440VAC	100
500VAC	70
690VAC	50

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.6-0.7-0.8-0.9-0.95-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (I^2t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4 x Frame rating A - B - C - D

Continuous amperage settings (long time adjustment)

Frame	Set points								
	0.4	0.5	0.6	0.7	0.8	0.9	0.95	1.0	Setting
1600A	640	800	960	1120	1280	1440	1520	1600	Amps
2000A	800	1000	1200	1400	1600	1800	1900	2000	Amps
2500A	1000	1250	1500	1750	2000	2250	2375	2500	Amps

UL 100% equipment rated circuit breakers

Circuit breakers and cable are sized per the National Electric Code on a basis of actual continuous load current divided by 80%. For example, a 360 ampere load should be connected by cable capable of handling 450 amperes (360A / 0.80 = 450A) and therefore be protected by a 450 ampere rated circuit breaker. Other factors may need to be considered when sizing breakers in special applications.

When applied correctly, UL-tested 100% equipment rated breakers may be applied at full rating, therefore saving the user the cost of larger cable or bus. Using the example above, the 360 ampere load could be used with cable capable of handling 360 amperes (360A / 1.00 = 360A) and only a 400 ampere rated circuit breaker (400A is next available size CB).

1600A, S8 Frame
100% rated

Catalog number	List price
S8VQ16CW	**$ 13,168**
S8VQ16EW	**15,231**

2000A, S8 Frame
100% rated

Catalog number	List price
S8VQ20CW	**$ 15,148**
S8VQ20EW	**17,390**

① Three pole breakers are listed and approved for use in two pole applications with center-pole not connected.
② Applies to MCS only.

S8
1600A, 2000A & 2500A
Accessories

Internal accessories
(Must be factory mounted for UL/CSA)

Item	Type	Factory installed catalog number suffix	List price
Closing coil	480VAC 240VAC 208VAC 120VAC 250VDC 125VDC 48VDC 24VAC/VDC	1 2 3 4 5 6 7 8	**$ 575**
Electric motor (inc. spring charged signal contact)	240,208VAC & 250VDC 120VAC/125VDC 48VDC 24 – 30VAC/VDC	2 4 7 8	**3217**
Shunt trip	480VAC 240,208VAC & 250VDC 24VAC/30VDC 120VAC/125VDC 48VAC/48VDC 24VDC	1 2 3 4 7 8	**518**
Undervoltage release	480VAC 240VAC 120VAC 250VDC 125VDC 48VDC 24VDC	1 2 4 5 6 7 8	**518**
Aux. contacts	2A/1B	A	**396**
Trip signal	1A/1B	B	**192**
Combo. aux. & trip contacts	2A/1B Aux & 1A/1B Trip	P	**588**
Padlockable button cover (open)	—	D	**144**
Key lock (open)	—	L	**155**

Connection accessories (includes sets of 3)

Item	Type	Catalog number	List price
Cable terminals			
1600A Max.	1/0 – 750kcmil (4)	K8TL	**$ 274**
2500A Max.	1/0 – 750kcmil (6)	K8TM	**315**
Rear T conn.	2500A Max.	K8RT2500	**855**

Neutral ground fault current transformer

Item	Type	Catalog number	List price
Ground Fault Neutral CT	1600A 2000A 2500A	K8NCT-1600 K8NCT-2000 K8NCT-2500	**$ 888**

Note: Neutral GF CT required for proper GF operation.

Door flange

Item	Catalog number	List price
Face plate	K8FP	**$ 25**

Closing coil
Required for closing breaker electrically, the coil voltage must be specified at the time of order entry.

Internal accessory ratings

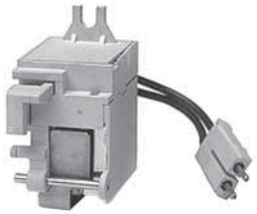
Accessory type	Voltage	Rating
Shunt trip	All	100VA/120Watts
Undervoltage releases	AC/DC	30VA (12 Watts/ 10VA (4 Watts)
Auxiliary contacts	240VAC 125VDC 250VDC	10A Max. 0.3A Max. 0.15A Max
Closing coil	AC/DC	30VA / 40VA

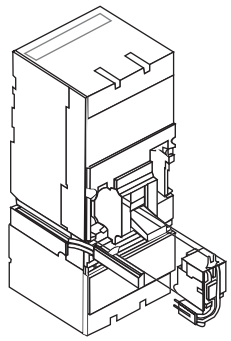
Stored energy electric motor operators

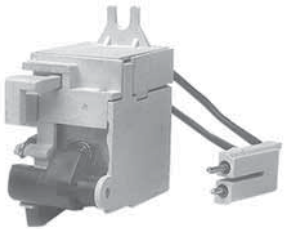
E.O.	Type	Inrush (VA)	Normal (watts)	Closing time	Opening time	Resetting time
MS8	Stored energy	1000	230	0.05s	0.035s	9.0s

Mechanical life of 10,000 cycles at 20 operations per hour.

Electrical accessories
Shunt trip, undervoltage release
S3 – S7


K5S1


S5 with K5S2


K5U1


K6C-SUP

Shunt trips

Voltage	Factory installation		Field installation		
	Catalog number suffix ①	List price adder	Catalog numbers S3 – S4 – S5	S6 – S7	List price
480VAC/250VDC	S1		K5S1	K7S1	
240VAC	S2		K5S2	K7S2	
120VAC/125VDC	S4	**$ 430**	K5S4	K7S4	**$ 415**
48VDC	S7		K5S7	K7S7	
24VAC/VDC	S8		K5S8	K7S8	
12VDC	S9		K5S9	K7S9	

Low power shunt trips

Voltage	Factory installation		Field installation		
	Catalog number suffix ①	List price adder	Catalog numbers S3 – S4 – S5	S6 – S7	List price
24VDC	SA	**$ 430**	K5SA	K7SA	**$ 415**
120VAC	SB		K5SB	K7SB	

For remote opening of circuit breaker and includes internal cut-off switch to protect solenoid. All shunt trips are left pole mounted and can not be used with UVRs. Except for 12VDC, all shunt trips are approved for use in GF systems. Shunt trips must be ordered with correct connector.

Shunt trip connectors (required)

Type circuit breaker	Voltage	Factory installation ①	Field kit catalog number S3 – S4 – S5 – S6	Field kit catalog number S7	List price
Fixed mounted	All	included	K6C-SU	K7C-SU	**$ 15**
Plug-in/Draw-out	All	included	K6C-SUP	K7C-SUP	

Electrical specifications – shunt trips (standard)

V	24, 120, 240, 480VAC ~ 50/60 Hz 12, 24, 48, 125, 250 VDC –
For S3-S5 P For S6-S7	100 VA~/120W– Instantaneous duty 150 VA~/150W–

Undervoltage releases

Voltage	Factory installation		Field installation		
	Catalog number suffix ①	List price adder	Catalog numbers S3 – S4 – S5	S6 – S7	List price
480VAC	U1		K5U1	K7U1	
240VAC	U2		K5U2	K7U2	
120VAC	U4		K5U4	K7U4	
24VAC	U3	**$ 430**	K5U3	K7U3	**$ 415**
250VDC	U5		K5U5	K7U5	
125VDC	U6		K5U6	K7U6	
48VDC	U7		K5U7	K7U7	
24VDC	U8		K5U8	K7U8	

Will trip CB when connected voltage drops to 35-70% of UVR voltage rating. Will allow CB to close (ON) when voltage is approximately 85% of rated voltage. All UVRs are left pole mounted and can not be used with shunt trips. UVRs must be ordered with correct connector.

Undervoltage release connectors (required)

Type circuit breaker	Voltage	Factory installation ①	Field kit catalog number S3 – S4 – S5 – S6	Field kit catalog number S7	List price
Fixed mounted	All	included	K6C-SU	K7C-SU	**$ 15**
Plug-in/Draw-out	All	included	K6C-SUP	K7C-SUP	

Electrical specifications – UVR & low power shunt trips

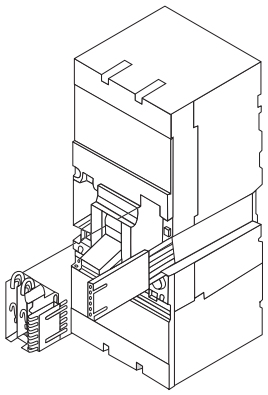
V	24, 120, 240, 480 VAC ~ 50/60 Hz 24, 48, 125, 250 VDC –
For S3-S5 P For S6-S7	6 VA~/3W– Continuous duty 10 VA~/4W–

① For factory installation add suffix given to end of circuit breaker catalog number per accessory format.

Electrical accessories
Auxiliary contacts
S3 – S7


K5AS


K6C-ABP


S5 with K6C-AB

Auxiliary contacts — S3 – S7

Contacts	Factory installation		Field installation		
	Catalog number suffix ①	List price adder	Catalog numbers S3 – S4 – S5	Catalog numbers S6 – S7	List price
2 Form Cs	A	**$ 275**	K5AS	K7AS	**$ 260**
1 BA & 1 C 1 B BA & 1A+1B	BA BA3	**365**	K5BA —	K7BA K7BA-3	**350**

The auxiliary contacts are accessory contacts for the indication of circuit breaker open-closed or tripped. Bell alarm contacts (B.A.) can be used to indicate circuit breaker tripping. All contacts are right pole mounted.

Auxiliary contact connectors (required) — S3 – S7

Type circuit breaker	Voltage	Factory installation①	Field kit catalog number S3 – S4 –- S5 – S6	Field kit catalog number S7	List price
Fixed mounted Plug-in/Draw-out	All All	included included	K6C-AB K6C-ABP	K7C-AB K7C-ABP	**$ 15**

Electrical specifications

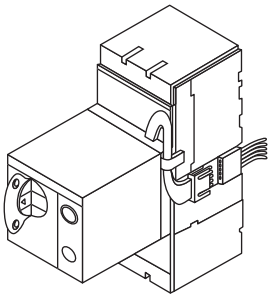
Voltage	Maximum contact amperage rating
125 VDC	0.3 A
250 VDC	0.15 A
250 VAC	6 A

N.O. = contact is open as circuit breaker is open
N.C. = contact is closed when circuit breaker is open
B.A. = will open/close only when circuit breaker trips

① For factory installation add suffix given to end of circuit breaker catalog number per accessory format.
② Not UL approved for field installation.

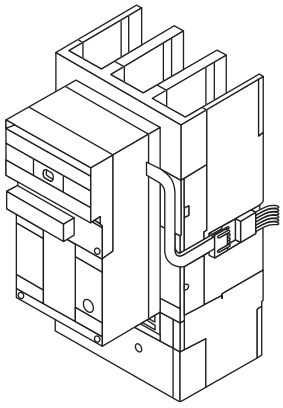
Electrical accessories
Motor operators, stored energy motor operators S3 – S7


K5M2


S4 with K5M2


K6C-M


K6M2


S7 with K7M4

Motor operator

Voltage	Catalog number S3 – S4 – S5	List price
240VAC/250VDC 120VAC/125VDC 48VDC 24VDC	K5M2 K5M4 K5M7 K5M8	**$ 678**

For remote control of circuit breaker opening and closing.
Complete with manual operating lever, padlock device and emergency opening push-button.
When ordering the connector always specify type and version of the circuit-breaker.
The following options are also available:
– key lock for open position
– key lock for open position of two or more circuit breakers (using the same key for groups of circuit breakers)

Motor operator connectors (required)

Type circuit breaker	Voltage	Field kit catalog number S3 – S4 – S5	List price
Fixed mounted Plug-in/Draw-out	All All	K6C-M K6C-MP	**$ 15**

Electrical specifications

V	120, 240VAC ~ 50/60 Hz 24, 48, 125, 250 VDC –
P inrush P normal Close time	500 VA~/500W– 350 VA~/500W– 0.1 s
Open time	0.1 s

Stored-energy motor operator

Voltage	Catalog number S6	Catalog number S7	List price
240VAC/250VDC 120VAC/125VDC 48VDC 24VDC	K6M2 K6M4 K6M7 K6M8	K7M2 K7M4 K7M7 K7M8	**$ 2407**

- Stored-energy motor operator with springs automatically pre-loaded by motor.
- Complete with shunt opening and closing release, and compartment door flange.
- When ordering the connector always specify type and version of the circuit-breaker.
- The following options are also available:
  – key lock for open position
  – key lock for open position of two or more circuit-breakers (using the same key for groups of circuit-breakers).

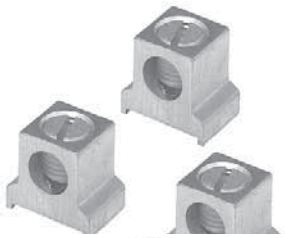
Stored-energy motor operator connectors (required)

Type circuit breaker	Voltage	Field kit catalog number S6	Field kit catalog number S7	List price
Fixed mounted Plug-in/Draw-out	All All	K6C-M K6C-MP	K7C-M K7C-MP	**$ 15**

Electrical specifications

V	120, 240 VAC ~ 50/60 Hz 24, 48, 125, 250 VDC –
P inrush P normal Close time	660 VA~/600W– 180 VA~/180W– 0.09 s
Open time	1.2 s
Reset time	2.0 s

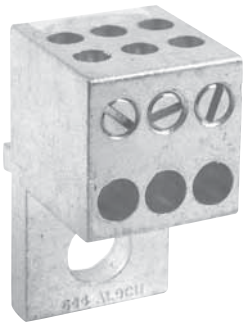
External accessories
Lugs and termination kits
S3 – S7


K4TB


K4ET-250


K4TES


K4TER


K4TN

Standard cable lug kits

For breakers	Amps①	Wire range	Set of 2 catalog number	List price	Set of 3 catalog number	List price
S3	60	14AWG – 2AWG	K3TA-2	**$ 4**	K3TA	**$ 6**
S3 – S4	100	14AWG – 1/0	K4TB-2	**4**	K4TB	**6**
S3 – S4	150	2AWG – 4/0	K4TC-2	**4**	K4TC	**6**
S3 – S4 – S5	225	4AWG – 300kcmil	K4TD-2	**10**	K4TD	**15**
S4	250	6AWG – 350kcmil	K4TE-2	**20**	K4TE	**30**
S5	300	250kcmil – 500kcmil	K5TF-2	**30**	K5TF	**45**
S5	400	(2) 3/0 – 250kcmil	K5TG-2②	**30**	K5TG②	**45**
S6	600	(2) 250kcmil – 500kcmil	K6TH-2	**50**	K6TH	**75**
S6	800	(3) 2/0 – 400kcmil	K6TJ-2②	**90**	K6TJ②	**135**
S7	1200	(4) 4/0 – 500kcmil	K7TK-2	**120**	K7TK	**180**

Standard cable lugs, for use on line and load side of circuit breaker. Suitable for use with Cu or Al. Special versions available with taps and screws for control wire connection. Note: S6 and S7 lugs are Al9Cu (90°C); all others Al7Cu (75°C).

Standard cable lug kits with control power taps

For breakers	Amps①	Wire range	Set of 2 catalog number	List price	Set of 3 catalog number	List price
S3 – S4	100	14AWG – 1/0	K4TB-2C	**$ 8**	K4TBC	**$ 12**
S3 – S4	150	2AWG – 4/0	K4TC-2C	**8**	K4TCC	**12**
S3 – S4 – S5	225	4AWG – 300kcmil	K4TD-2C	**14**	K4TDC	**21**
S4	250	6AWG – 350kcmil	K4TE-2C	**24**	K4TEC	**36**
S5	300	250kcmil – 500kcmil	K5TF-2C	**34**	K5TFC	**51**
S5	400	(2) 3/0 – 250kcmil	K5TG-2C②	**34**	K5TGC②	**51**
S6	600	(2) 250kcmil – 500kcmil	K6TH-2C	**54**	K6THC	**81**
S6	800	(3) 2/0 – 400kcmil	K6TJ-2C②	**94**	K6TJC②	**141**
S7	1200	(4) 4/0 – 500kcmil	K7TK-2C	**124**	K7TKC	**186**

Extended front termination kits

Suitable for use with	Maximum amps	Set of 6 catalog number	List price
S3 – S4	250	K4ET-250	**$ 46**
S5	400	K5ET-400	**114**
S6	630	K6ET-600	**150**
S6	800	K6ET-800	**170**
S7	1250	K7ET-1250	**240**

For adding onto standard circuit breaker front terminals, extending available connection area for user termination. Suitable for spaded cable or bus connection. S3 – S5 include terminal covers.

Saddle cable lug kits (Cu cable only)

Suitable for use with	Max amps	Wire range	Set of 6 catalog number	List price
S3 – S4	250	14AWG – 250kcmil	K4TES	**$ 30**
S5	400	250kcmil – 500kcmil	K5TGS	**90**

These special non-aluminum cable lugs are for use with copper cable. Lugs are intended for use with copper cable or where non-aluminum connectors are required (marine, salt or corrosive environments).

Rear cable lug kits (Cu cable only)

Suitable for use with	Max amps	Wire range	Set of 6 catalog number	List price
S3 – S4	250	6AWG – 250kcmil	K4TER	**$ 30**
S5	400	250kcmil – 500kcmil	K5TGR	**90**
S6	600	(2) 2/0 – 350kcmil	K6THR	**150**
S6	800	(3) 250kcmil – 350kcmil	K6TJR	**170**

For use where cable connection from the back-rear of the breaker is desired.

Distribution cable lug kit

Suitable for use with	Max amps	Wire range	Set of 3 catalog number	List price
S3 – S4	250	(6) #14 - 6	K4TN	**$ 125**
S5	400	(6) #14 - 1/0	K5TGD	**240**

① Suggested lugs for circuit breaker up to amps shown. Cable size and type determine maximum amperes.
② Includes required lug covers.

External accessories
Rotary and variable depth handle operators
S3– S7


K5RH


OHB65J10


OHB95J10


OHB125J10


K5VD-M, K5VD-S12, K5VD-H

Rotary handle operating mechanism

Frame	Catalog number	List price
S3 – S4 – S5	K5RH	**$ 108**
S6	K6RH	**124**
S7	K7RH	**145**

Mounts directly onto breaker. Includes door interlock to prevent CB door opening while CB is in ON position. Padlock provision included to padlock CB in open position. Can also be key locked with optional cylinder lock assembly. Door interlock bracket must be ordered separately, if required. See page 15.62.

Variable depth rotary handles

New pistol type 1, 3R, 12

Frame	Catalog number mechanism	List price	Shaft catalog number (length in inches)	List price	Handle catalog number (length in inches)	List price
S3–S4–S5	K5VD-M	**49**	OXP10X148 (5.8)	**$ 24 26 32**	OHB95J10 (3.7) OHG95J10 (3.7)	**80**
S6	K6VD-M	**80**	OXP10X225 (8.9) OXP10X500 (19.7)		OHB125J10 (4.9) OHG125J10 (4.9)	**90**
S7	K7VD-M	**80**			OHB175J10 (6.9) OHG175J10 (6.9)	**100**

Pistol type 4, 4X

Frame	Catalog number mechanism	List price	Shaft catalog number (length in inches)	List price	Handle catalog number (length in inches)	List price
S3–S4–S5	K5VD-M	**49**	OXP10X148 (5.8)	**$ 24 26 32**	OHB95L10 (3.7) OHG95L10 (3.7)	**120**
S6	K6VD-M	**80**	OXP10X225 (8.9) OXP10X500 (19.7)		OHB125L10 (4.9) OHG125L10 (4.9)	**130**
S7	K7VD-M	**80**			OHB175L10 (6.9) OHG175L10 (6.9)	**140**

Square type 1

S3–S4–S5	K5VD-M	**49**	K5VD-S12	**$ 24**	K5VD-H	$ **25**
S6	K6VD-M	**80**	K7VD-S20	**27**	K7VD-H	**28**
S7	K7VD-M	**80**			K7VD-H	**28**

NOTE: Complete assembly requires a mechanism, shaft and handle.

Variable depth shaft support

For frames	Catalog number	List price
S3 – S4 – S5	K5VD-LSS	**$ 25**

New pistol handle catalog number explanation

OHB 125 J 10

- 10 — Shaft size (diameter in mm)
- J — J = Type 1, 3R, 12; L = Type 1, 3R, 4, 4X, 12
- 125 — Physical size (length in mm)
- OHB — Color: B = black, G = gray, Y = yellow / red

External accessories
Flange handle operators
S3 – S6


K7FHD-HS12

Flange handle
Solid shaft linkage

Breaker	NEMA type	Complete handle kit	List price	Mechanism only	List price	Shaft only	Shaft length	List price	Handle only	List price
S3	1,3R,12	K3FHD-12S12 K3FHD-17S12 K3FHD-22S12	**240** **248** **255**	K3FHD-M	**128**	K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	**19** **27** **34**	K7FHD-HS12	**93**
	4, 4X	K3FHD-12S4 K3FHD-17S4 K3FHD-22S4	**280** **288** **295**			K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	**19** **27** **34**	K7FHD-HS4	**133**
S4	1,3R,12	K4FHD-12S12 K4FHD-17S12 K4FHD-22S12	**240** **248** **255**	K4FHD-M	**128**	K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	**19** **27** **34**	K7FHD-HS12	**93**
	4, 4X	K4FHD-12S4 K4FHD-17S4 K4FHD-22S4	**280** **288** **295**			K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	**19** **27** **34**	K7FHD-HS4	**133**
S5	1,3R,12	K5FHD-12S12 K5FHD-17S12 K5FHD-22S12	**240** **248** **255**	K5FHD-M	**128**	K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	**19** **27** **34**	K7FHD-HS12	**93**
	4, 4X	K5FHD-12S4 K5FHD-17S4 K5FHD-22S4	**280** **288** **295**			K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	**19** **27** **34**	K7FHD-HS4	**133**
S6	1,3R,12	K6FHD-12S12 K6FHD-17S12 K6FHD-22S12	**523** **531** **538**	K6FHD-M	**411**	K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	**19** **27** **34**	K7FHD-HS12	**93**
	4, 4X	K6FHD-12S4 K6FHD-17S4 K6FHD-22S4	**563** **571** **578**			K7FHD-S12 K7FHD-S17 K7FHD-S22	12 17 22.5	**19** **27** **34**	K7FHD-HS4	**133**

Available as complete kits including flange handle, shaft and breaker operating mechanism. Mechanism mounts directly onto breaker and shaft can be cut to the desired length for the breaker enclosure. Door is interlocked with the handle when the breaker is in the closed (ON) position; handles include interlock defeater for emergency override. Handle can be padlocked in the open (OFF) position. Can be field converted for left hand mounting.

Door hardware kits — Solid shaft linkage & cable operated

Item	Catalog number	List price
Door hardware kit, right hand, 2 point latch for enclosures less than 40 inches high	FH-DHK	**$ 150**
Roller for 3 point latch, add to FH-DHK	FH-3RL	**30**

Enclosure depths
Minimum

Breaker	Depth (inches)
S3 - S5	10
S6	11

Maximum

For maximum depth, add 4 inches to the shaft length

① Cable not included.

External accessories
Flange handle operators
S3 – S7

K7FCH

Flange handle
Cable linkage

Breaker	NEMA type	Mechanism only	List price	Cable only	Cable length	List price	Handle only	List price
S3-S4	1,3R,12	K4FPM	**110**	K5C036	36" (91cm)	**114**	K5FCH	**213**
				K5C048	48" (122cm)	**146**		
	4, 4X	K4FPM	**110**	K5C060	60" (152cm)	**160**	K5FCH4	**243**
				K5C072	72" (183cm)	**175**		
S5	1,3R,12	K5FPM	**128**	K5C084	84" (213cm)	**204**	K5FCH	**213**
				K5C096	96" (244cm)	**221**		
	4, 4X	K5FPM	**128**	K5C108	108" (274cm)	**238**	K5FCH4	**243**
				K5C120	120" (305cm)	**256**		
S6	1,3R,12	K6FPM	**220**	K7C048	48" (122cm)	**190**	K7FCH	**310**
	4, 4X	K6FPM	**220**	K7C060	60" (152cm)	**220**	K7FCH4	**415**
				K7C072	72" (183cm)	**256**		
S7	1,3R,12	K7FPM	**220**	K7C084	84" (213cm)	**270**	K7FCH	**310**
				K7C096	96" (244cm)	**320**		
	4, 4X	K7FPM	**220**	K7C120	120" (305cm)	**350**	K7FCH4	**415**

Notes: For complete assembly; mechanism, cable and handle are required.
All cables mount onto the right side of the breaker.
Handle can be mounted on the right or left side.

Door hardware kits — S3 - S7 Cable operated

Item	Catalog number	List price
Door hardware kit, right hand, 2 point latch for enclosures less than 40 inches high	KDH2R	**$ 200**
Door hardware kit, right hand, 3 point latch for enclosures 40 inches high or greater	KDH3R	**225**

Enclosure depths
Minimum

Breaker	Depth (inches)
S3 - S6	8
S7	10

Maximum
Maximum depth is determined by cable length.

External accessories
S3 – S7

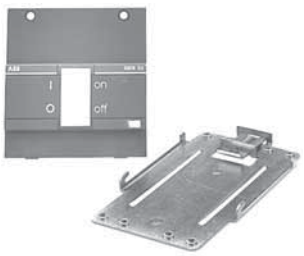
K5LD


K7KL


K6LC


K6LCH


K6LC-S



K3DMB

Front locking device

Item	Catalog number	List price
S3 – S4 – S5	K5LD	$ **14**
S6	K6LD	**16**
S7	K7LD	**20**
S3 – S4 – S5	K5LDW ①	**14**
S6	K6LDW ①	**16**
S7	K7LDW ①	**20**

Mounts directly onto front of CB. Includes padlock device for locking CB in open position. Can be used as a manual handle block, with padlock or with optional key lock accessory. Optional door interlock kit that will prevent CB door from opening while CB is in the closed (ON) position.

Door interlock bracket

Item	Catalog number S3 – S7	List price
Bracket	K7DB	**$ 5**

Key locks

Accessory	Keys	Catalog number		List price
		S3 – S4 – S5	S6 – S7	
Electric operator	different	K5KL-EO	K7KL-EO	**$ 25**
	same	K5KL-EO-2	K7KL-EO-2	
Rotary HM & locking device	different	K7KL	K7KL	
	same	K7KL-2	K7KL-2	

Keyed cylinder locks are available for mounting onto Isomax electric operators, rotary handle mechanisms and front locking devices. Key locks can be for one individual circuit breaker (different keys in each order) or for two circuit breakers using the same key.

Terminal covers for fixed circuit breakers

Frame	Low profile catalog number	List price	High profile catalog number	List price
S3 – S4	K4LC	**8**	K4LCH	**$ 16**
S5	K5LC	**12**	K5LCH	**24**
S6	K6LC	**18**	K6LCH	**32**
S7	K7LC	**40**	—	**–**

Both high and low types are available for fixed circuit-breakers. Covers provide IP40 degree of protection for fixed mounted circuit breakers. Lug covers are required and included as standard with S5 **400A** and S6 **800A** cable lug kits. Covers up to S6 can be sealed with lug cover seal shown in next section.

Terminal cover seals

Suitable for use with breakers	Used with LC covers	List price
S3 – S4 – S5 – S6	K6LC-S	**$ 5**

These screws prevent the terminal covers from being removed.

DIN rail mounting kits

Suitable for use with breakers	Catalog number	List price
S3	K3DMB	**$ 24**
S4	K4DMB	**26**
S5	K5DMB	**38**

Kit consists of mounting bracket to fix S3-S5 breakers onto **75mm DIN rail (EN 50023 rail)** and includes 45mm high front face plate to match up with miniature circuit breakers and manual motor starters. S1 breaker mounts on 35mm DIN rail.

Mechanical interlock plate

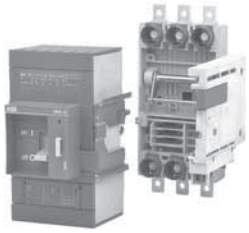
Frame	Horizontal catalog number	List price	Vertical catalog number	List price
S3	K3MI-H	**$ 570**	K3MI-V	**$ 570**
S4	K4MI-H	**570**	K4MI-V	**570**
S5	K5MI-H	**590**	K5MI-V	**590**
S6	K6MI-H	**620**	K6MI-V	**620**
S7	K7MI-H	**630**	K7MI-V	**630**

Provides for mounting of two similar breakers on a single mounting plate. CBs are interlocked via a “walking beam” type interlock, preventing breakers from being ON or closed at the same type. Both breakers can be OFF or tripped. MIP is available in two versions, one with breakers mounted horizontally and then also a version for vertical mounting of breakers.

① Required for drawout breakers.

Accessories
S3 – S7
IEC

K4RC



Rear plug-in & drawout circuit breakers

K7TUT

Rear connected stud kits①

For breakers	Max. amps	Set of 6 catalog number	List price
S3 – S4	250	K4RC	**$ 87**
S5	400	K5RC	**225**
S6	800	K6RC	**280**
S7	1200	K7RC	**340**

Provides means to connect breakers directly onto rear bus bars.

Rear plug-in and draw-out circuit breakers

Isomax breakers are available in both rear plug-in and complete draw-out configurations. Plug-in breakers can be rear bus, front bus or front cable connected and are available up to the S5 400A size. The draw-out configuration uses a unique racking system and is available for all breakers from S3 through S7.

Plug-in (3 pole)①

	Separate kits fixed and movable						Complete plug-in kits Includes both fixed and movable portion			
	Movable kit		Fixed base kit							
Frame	Movable	List price	Front bus	List price	Rear conn.	List price	Front bus	List price	Rear conn.	List price
S3	K4PMK	**203**	K3PFF	**190**	K3PFR	**230**	K3PF	**393**	K3PR	$ **433**
S4	K4PMK	**203**	K4PFF	**203**	K4PFR	**243**	K4PF	**406**	K4PR	**446**
S5	K5PMK	**238**	K5PFF	**278**	K5PFR	**278**	K5PF	**516**	K5PR	**516**

Draw-out (3 pole) ①③

	Separate kits fixed and movable						Complete draw-out kits Includes both fixed and movable portion			
	Movable kit		Fixed base kit							
Frame	Movable	List price	Front bus	List price	Rear conn.	List price	Front bus	List price	Rear conn.	List price
S3	K4WMK	**$ 203**	K3WFF	**$ 230**	K3WFR	**$ 270**	K3WF	**$ 433**	K3WR	**$ 473**
S4	K4WMK	**203**	K4WFF	**283**	K4WFR	**323**	K4WF	**486**	K4WR	**526**
S5	K5WMK	**278**	K5WFF	**318**	K5WFR	**318**	K5WF	**596**	K5WR	**596**
S6 Horiz	K6WMK	**523**	K6WFF	**1346**	K6WFR-H	**1346**	K6WF	**1869**	K6WR-H	**1869**
S6 Vert	K6WMK	**523**	K6WFF	**1346**	K6WFR-V	**1346**	K6WF	**1869**	K6WR-V	**1869**
S7 Horiz	K7WMK	**821**	K7WFF	**2111**	K7WFR-H	**2111**	K7WF	**2932**	K7WR-H	**2932**
S7 Vert	K7WMK	**821**	K7WFF	**2111**	K7WFR-V	**2111**	K7WF	**2932**	K7WR-V	**2932**

Movable kit = parts needed to modify standard CB to movable type.
Fixed base kit = fix mount onto panel.
Ext Fr bus = fixed base with line and load side extended front bus connectors. (FF)
Rear Conn. = fixed base with line and load side rear bus connectors. (FR)
Complete kit = includes all parts required for plug-in or draw-out connection; does not include CB.
Plug-in = open breaker can be physically removed from fixed base without disconnecting cable or bus from fixed base. (P)
Draw-out = also known as withdrawable, breaker can be removed from fixed base via a through the door crank. Includes ON, TEST and OFF position. (W)

Four pole versions (plug-in and/or draw-out)

Take the above list prices times 1.35 for four (4) pole versions and add "-4" to the end of the catalog number.

Draw-out crank

Isomax frames	Catalog number	List price
S3 – S7	K7WCR	**$ 20**

Cable termination kits (3 pole only)①

Compression type cable lug kit used to modify extended front bus connectors for direct cable connection.

Frame	Set of 6	List price
S3	K4FCT	**$ 72**
S4	K4FCT	**72**
S5	K5FCT	**86**

Hand-held test kit (for all electronic trip types)

Isomax frames	Catalog number	List price
S4 – S5 – S6 – S7	K7TUT	**$ 210**

Isomax hand-held test kit is used to both test and exercise microprocessor trip units in breakers S4 through S7. Unit includes test forks that insert into the test plugs on all Isomax microprocessor trip units. Tester generates 15VDC signal that performs diagnostic on electronic trip functions and will confirm test by tripping the CB. Will not test S3 nor any molded case switch versions.

① IEC ratings only.
② Front cable connection.
③ Requires front locking device to prevent drawout while breaker is closed.

Enclosures
Type 1 & 3R/12

Description

Type 1
- General purpose indoor enclosure intended for use in normal environments to provide a degree of protection against contact with enclosed equipment.
- Sheet steel, surface mount.
- Breaker is front-operable and can be padlocked via front hasp.
- Available through 2500A, 600VAC
- UL Listed for use as service entrance equipment (SUSE), per UL file E116374.

Type 3R/12
- Type 3R is intended for outdoor use providing protection against rain, sleet or snow.
- Type 12 is for use in indoor atmospheres to provide a degree of protection against circulating dust, lint, sawdust, falling dirt and dripping non-corrosive liquids.
- Surface-mounted, sheet steel enclosure.
- Breaker can be operated via **separately ordered** handle mechanism; door is interlocked with mechanism.
- Available through 2500A, 600VAC.
- UL Listed for use as service entrance equipment (SUSE), per UL file E116374.

Type 7/9
- Cast from copper-free aluminum (max. 0.025 copper content)
- Stainless steel shotblasted or sandblasted natural finish
- Standard conduit openings in top and bottom
- Breaker is operated from front handle and can be padlocked
- NEC Class I Groups D, Div. 1 & 2
  NEC Class II Groups E, F & G, Div 1 & 2
  NEC Class III
- External machined flange joint design
- Integral cast mounting feet
- Machined flange for ease of hinge installation
- Ground lug
- Cast mounting pan bosses
- All enclosures suitable for drilling & tapping
- UL panel listed per UL File # E183868

Enclosures
Type 1 & 3R/12


S3E-1


S4E-3R12 ③

Enclosures (Price does not include circuit breaker; order as a separate item.) ④

NEMA designation	Breaker type	Enclosure maximum rating AL cables	Enclosure maximum rating CU cables	Approximate dimensions① H x W x D (inches)	Catalog number	List price
Type 1	S3	150A	225A	22 x 12 x 4.5	S3E-1	**235**
	S4	225A	250A	30 x 17.5 x 4.5	S4E-1	**305**
	S5	400A	400A	30 x 17.5 x 4.5	S5E-1	**305**
	S6	800A	800A	44 x 22 x 6	S6E-1	**685**
	S7	1000A	1200A	44 x 22 x 6	S7E-1	**685**
	S8	2500A	2500A	88 x 36 x 24	S8ES250-1	**5285**
Type 3R/12③	S1	100A	100A	14 x 10 x 8.8	S1E-3R12	**305**
	S2 ②	125A	125A	16 x 11 x 8	S2E-3R12	**305**
	S3	150A	225A	22 x 12 x 9	S3E-3R12	**395**
	S4	225A	250A	30 x 17.5 x 9	S4E-3R12	**575**
	S5	400A	400A	30 x 17.5 x 9	S5E-3R12	**575**
	S6	800A	800A	44 x 22 x 11	S6E-3R12	**905**
	S7	1000A	1200A	44 x 22 x 11	S7E-3R12	**905**
	S8	2500A	2500A	88 x 36 x 24	S8ES250-3R12	**5285**

Neutral kits

Breaker type	Neutral cable capacity and wire range	Neutral kit catalog number	List price
S3	Neutral #6-250 kcmil Bonding Lug #14-1/0	S3NK225	**135**
S4	Neutral #6-250 kcmil Bonding Lug #14-1/0 kcmil	S4NK250	**155**
S5	Neutral (2) #6-250 kcmil Bonding Lug #14-1/0 kcmil	S5NK400	**260**
S6	Neutral (2) #2-600 kcmil Bonding Lug #6-250 kcmil	S6NK800	**350**
S7	Neutral (4) #2-600 kcmil Bonding Lug #6-250 kcmil	S7NK1200	**535**
S8	Neutral (6) #1/0-750 kcmil Bonding Lug (2) #2-600 kcmil	—	included

NOTE: The list price adder for factory installation of an enclosed circuit breaker is 50% of the enclosure list price.

① Enclosures may not meet size requirement for UL 100% rated breakers.
② Not UL approved.
③ Variable depth rotary handle must be ordered separately (S1 - S7).
④ Consult ABB for breakers installed in enclosures.

Enclosures
Type 7/9

S5N400BW7

Explosion-proof enclosures
(Price does not include circuit breaker; order as a separate item for factory assembly.)

NEMA designation	Breaker type	Enclosure max. rating	Approximate dimensions H x W x D (inches)	Catalog number suffix	List price adder
Type 7/9	S3	Cu only 100A	17 x 10 x 8.65	7	**$ 2100**
	S3	Cu only 225A	22.5 x 11.5 x 8.77	7	**2850**
	S4	Cu only 250A	25 x 18 x 9.92	7	**4700**
	S5	Cu only 400A	30 x 17 x 9.25	7	**6600**
	S6	Cu only 600A	35 x 17 x 11	7	**8600**
	S6	Cu only 800A	41 x 17 x 11	7	**10,450**
	S7	Cu only 1200A	51 x 17 x 13	7	**22,450**

To order a breaker in an explosion-proof enclosure, add the suffix "7" to the end of the catalog number and add the list price adder to the list price of the breaker.

Example: **S5N400BW7**
S5N400BW breaker ..... $ 2151
Explosion proof enclosure 6600
Total ..... $ 8751

Additional options

NEMA 4XStainless steel boltsCaptive boltsDrain

NEMA designation	Breaker type	Enclosure max. rating	Cat. no. adder	List price adder	Cat. no. adder	List price adder	Cat. no. adder	List price adder	Cat. no. adder	List price adder
Type 7/9	S3	Cu only 100A	-X	**$ 130**	-S	**$ 20**	-B	**$ 145**	-D	
	S3	Cu only 225A	-X	**145**	-S	**25**	-B	**170**	-D	
	S4	Cu only 250A	-X	**145**	-S	**45**	-B	**355**	-D	
	S5	Cu only 400A	-X	**175**	-S	**60**	-B	**415**	-D	**$ 110**
	S6	Cu only 600A	-X	**250**	-S	**60**	-B	**465**	-D	
	S6	Cu only 800A	-X	**315**	-S	**60**	-B	**535**	-D	
	S7	Cu only 1200A	-X	**430**	-S	**80**	-B	**600**	-D	

To add additional options, simply add the suffix to the end of the catalog number.

Example: **S5N400BW7XSD**
S5N400BW breaker ..... $ 2151
Explosion proof enclosure 6600
NEMA 4X 175
Stainless steel bolts 60
Drain 110
Total ..... $ 9096

Catalog number information — Type 7/9

S4 N 250 B W 7 - 2 xxx

Frame size
S3 = 150 / 225A
S4 = 250A
S5 = 400A
S6 = 600 / 800A
S7 = 1200A

Interrupting rating class
B = Basic (240VAC)
N = Normal
H = High
L = Extra high
D = Special molded case switch

Current rating
015 = 15A
250 = 250A
400 = 400A
600 = 600A
800 = 800A
1200 = 1200A

Trip unit function
B = LI
C = LSI
D = Molded case switch (MCS)
E = LSIG
T = Thermal-magnetic
F = LSIG/K
H = LSIG/D
J = LSIG/DT
K = LSIG/DTK
M = Magnetic only (MCP)

Accessories (added in alpha-numeric order)
A = Auxiliary switch
B = Captive bolts
BA = Bell alarm
BA3 = Bell alarm (S6/S7 only)
D = Breather/drain
H = Fixed rotary handle mounted on CB
S_ = Shunt trip with voltage code
S = Stainless steel bolts
U_ = Undervoltage release with voltage code
X = NEMA 7/9/4X

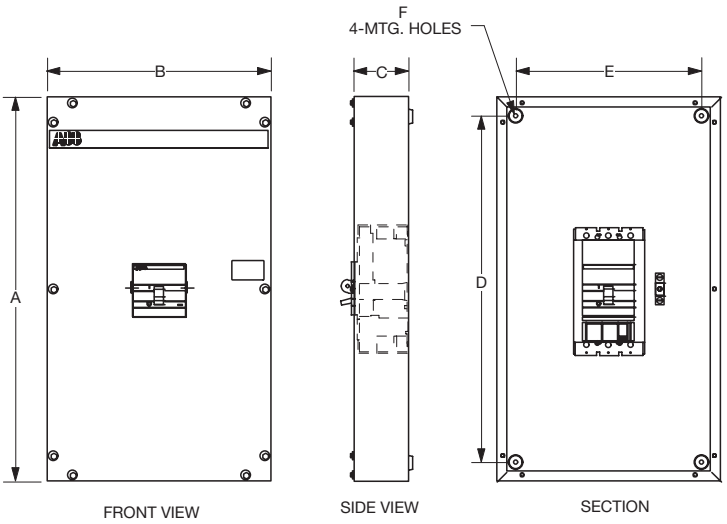
Number of poles
-2 = 2 pole
-4 = 4 pole
None = 3 pole

NEMA enclosure 7/9

Type connectors
W = None **L** = Lugs

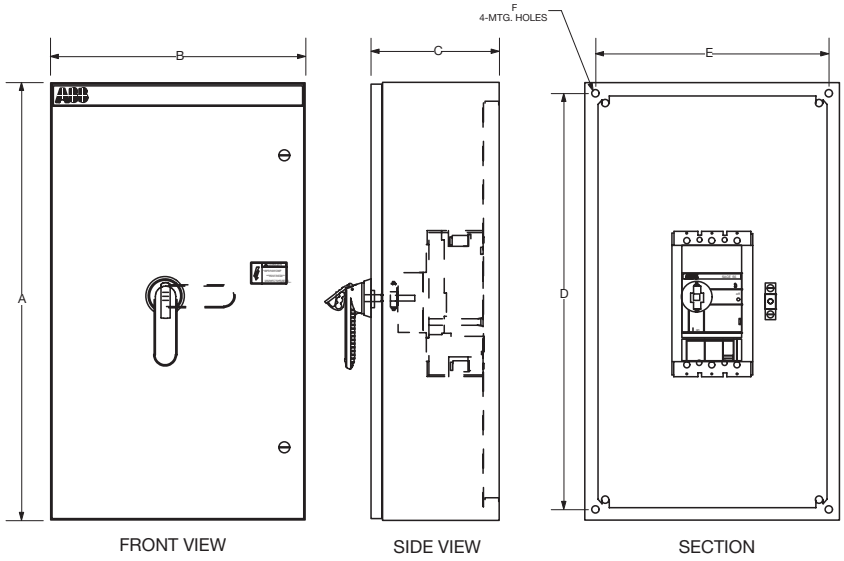
Enclosures
Approximate dimensions
S3 – S7, NEMA 1, 3R & 12

NEMA 1



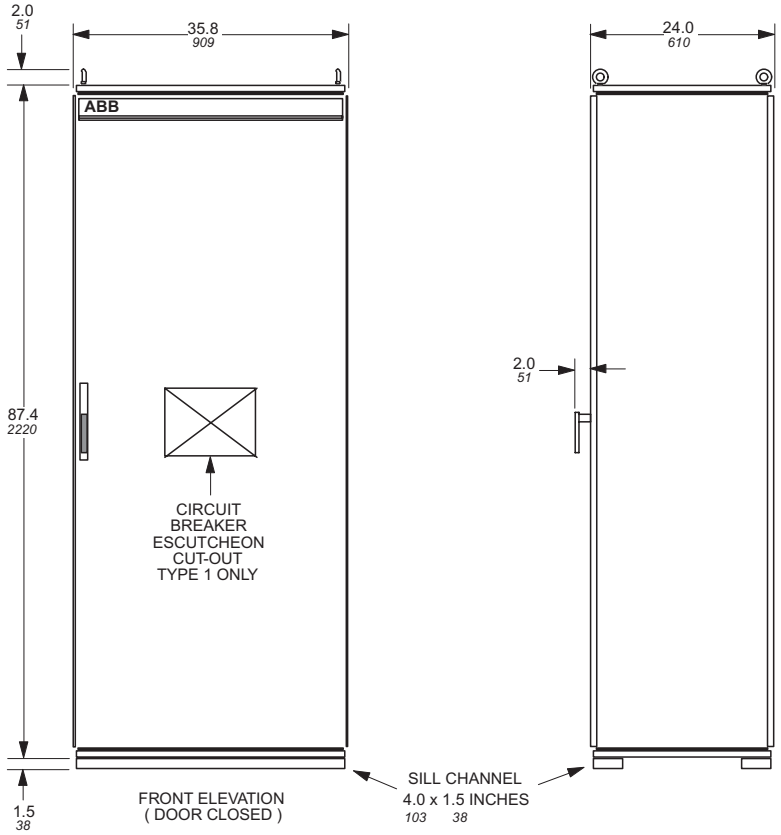
Cat. #	A	B	C	D	E	F
S3E-1	22.0 *559.0*	12.0 *305.0*	4.25 *108.0*	19.0 *482.0*	9.0 *229.0*	0.312 *7.93*
S4E-1	30.0 *762.0*	17.5 *444.5*	4.25 *108.0*	27.0 *686.0*	14.5 *368.5*	0.312 *7.93*
S5E-1	30.0 *762.0*	17.5 *444.5*	4.25 *108.0*	27.0 *686.0*	14.5 *368.5*	0.312 *7.93*
S6E-1	44.0 *1118.0*	22.0 *559.0*	5.75 *146.0*	41.0 *1041.5*	19.0 *483.0*	0.312 *7.93*
S7E-1	44.0 *1118.0*	22.0 *559.0*	5.75 *146.0*	41.0 *1041.5*	19.0 *483.0*	0.312 *7.93*

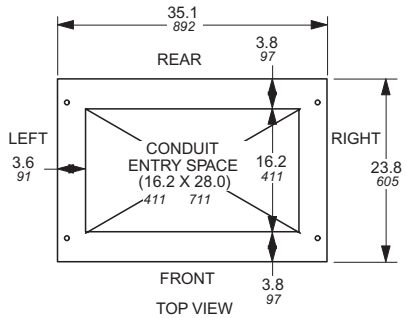
NEMA 3R, 12



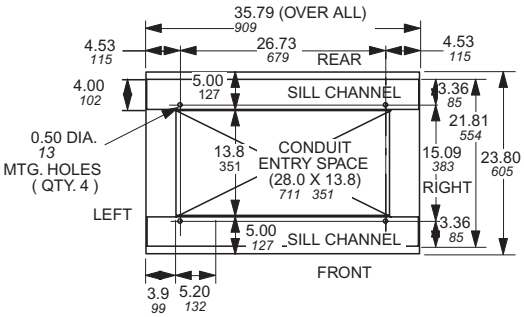
Cat. #	A	B	C	D	E	F
S3E-3R12	22.0 *559.0*	12.0 *305.0*	8.8 *224.0*	20.5 *520.5*	10.5 *267.0*	0.50 *13.7*
S4E-3R12	30.0 *762.0*	17.5 *444.5*	8.8 *224.0*	28.5 *724.0*	16.0 *406.5*	0.50 *13.7*
S5E-3R12	30.0 *762.0*	17.5 *444.5*	8.8 *224.0*	28.5 *724.0*	16.0 *406.5*	0.50 *13.7*
S6E-3R12	44.0 *1118.0*	22.0 *559.0*	10.8 *274.5*	42.5 *1080.0*	20.5 *521.0*	0.50 *13.7*
S7E-3R12	44.0 *1118.0*	22.0 *559.0*	10.8 *274.5*	42.5 *1080.0*	20.5 *521.0*	0.50 *13.7*

Enclosures
Approximate dimensions
S8, NEMA 1, 3R & 12





TOP VIEW
ENCLOSURE ROOF
(SOLID REMOVABLE ROOF PANEL)

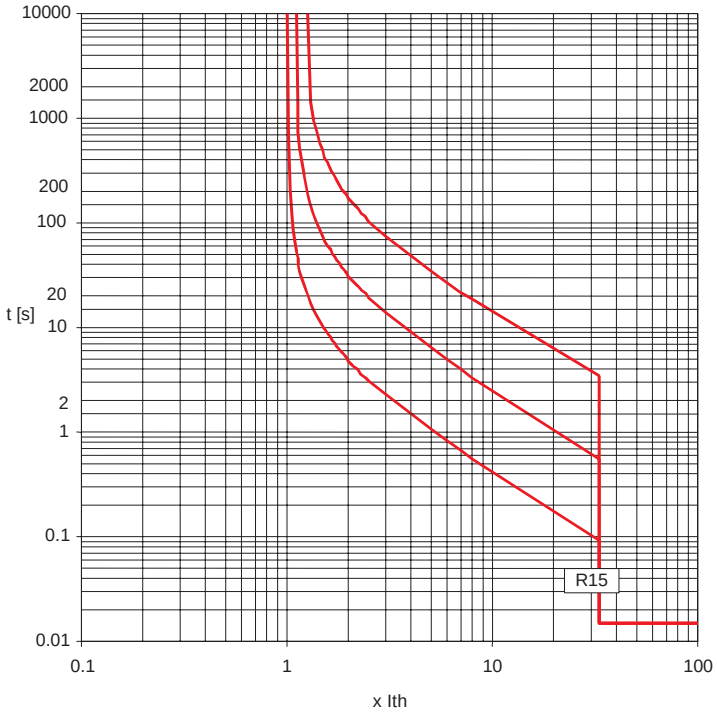


BOTTOM VIEW
ENCLOSURE FLOOR
(SOLID NON-MOVABLE FLOOR PANEL)

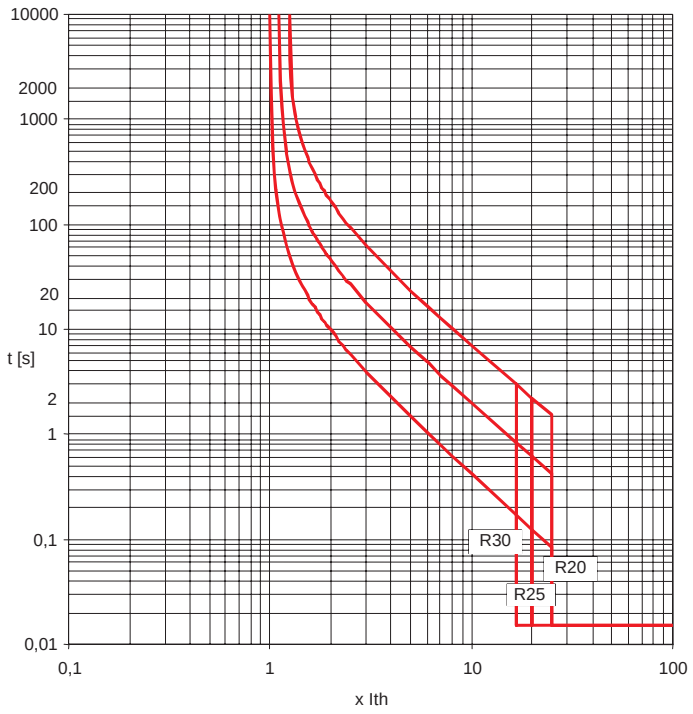
15

Protective releases
Thermal-magnetic overcurrent release
Time-current curves, S3

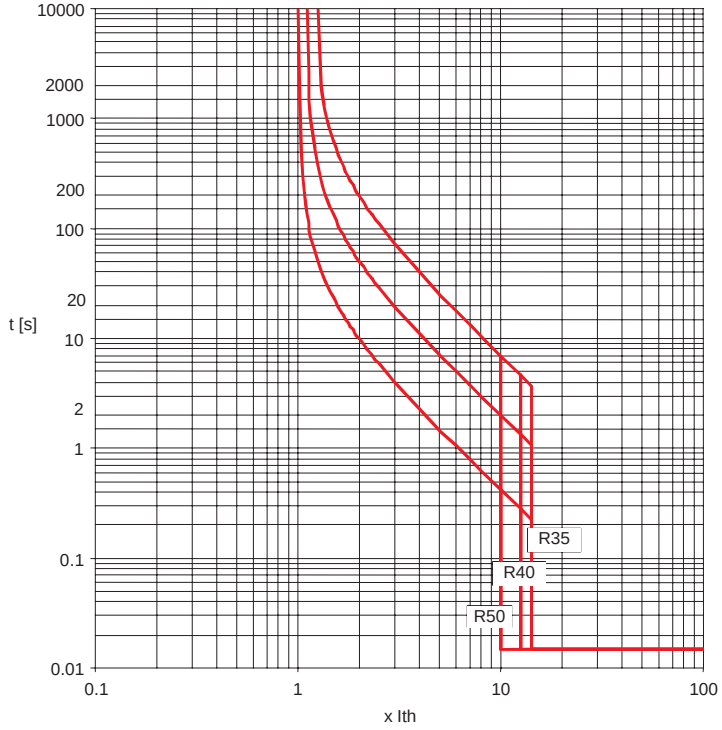
S3, R15



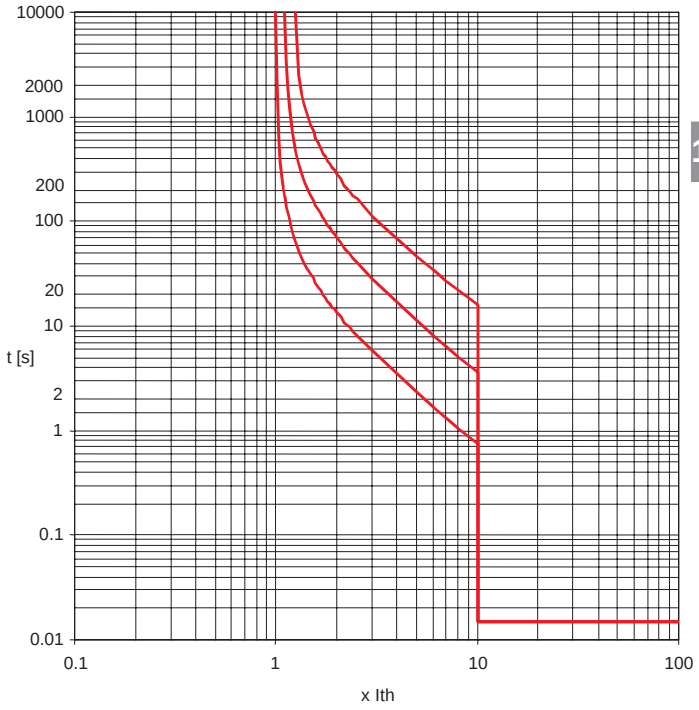
S3, R20-R30



S3, R35-R50



S3, R50-R100



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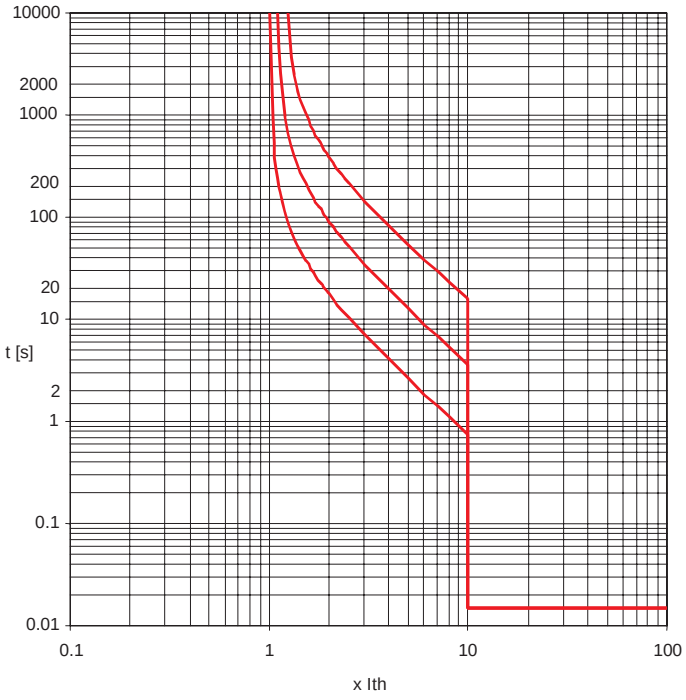
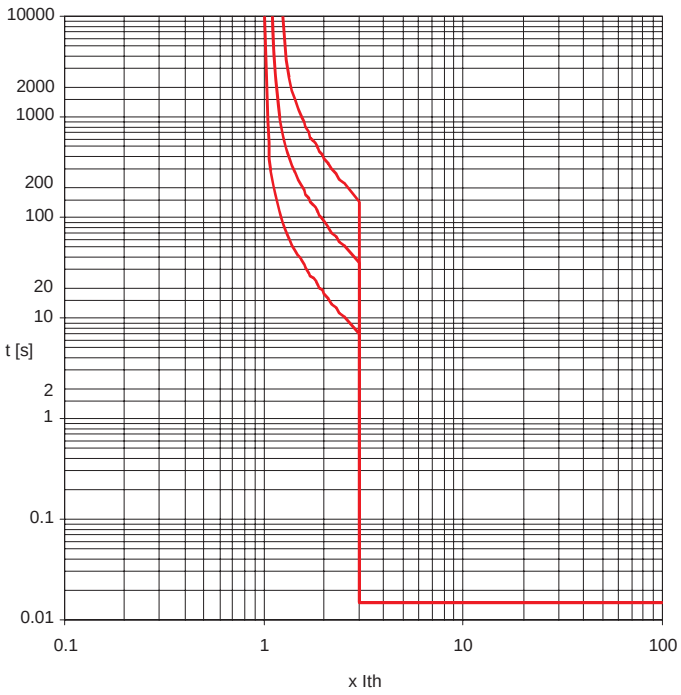
① Direct current may shift tripping characteristic. Consult ABB.

Protective releases
Thermal-magnetic overcurrent release
Time-current curves, S3

S3, R125-R225 – 10X Im



S3, R150-R225 – 3X Im



S5 400 TMD

In = 300 - 400 A
I_3 = 2.5 In

Consult factory

S5 400 TMD

In = 300 - 400 A
I_3 = 5 ÷ 10 In

Consult factory

Trip curves for distribution

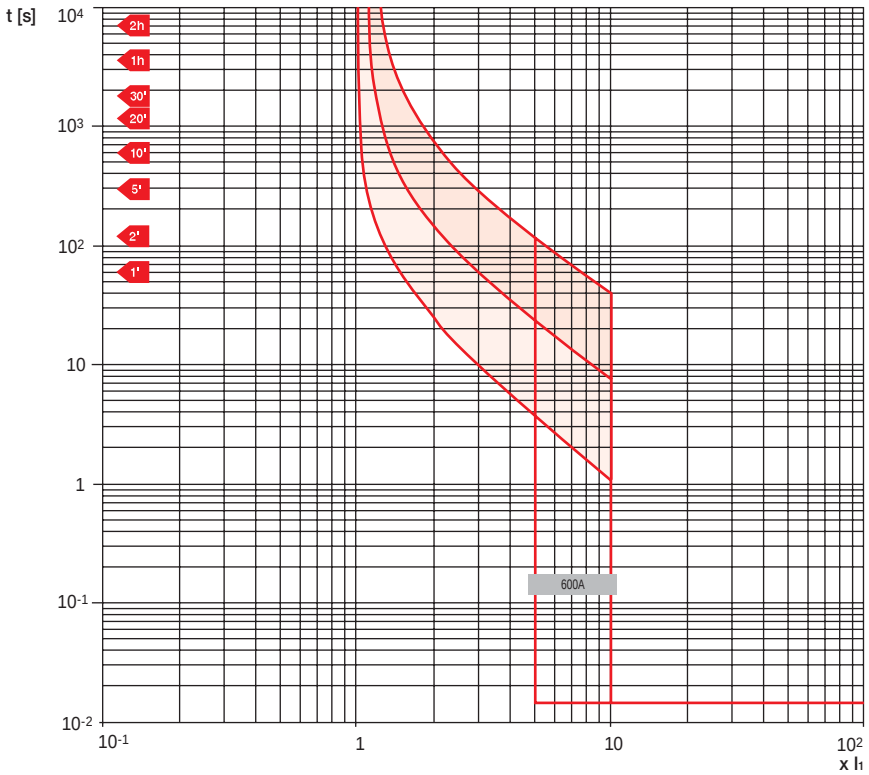
Circuit breakers w/thermomagnetic trip units

Isomax S6

S6 600 TMD

In = 800 A

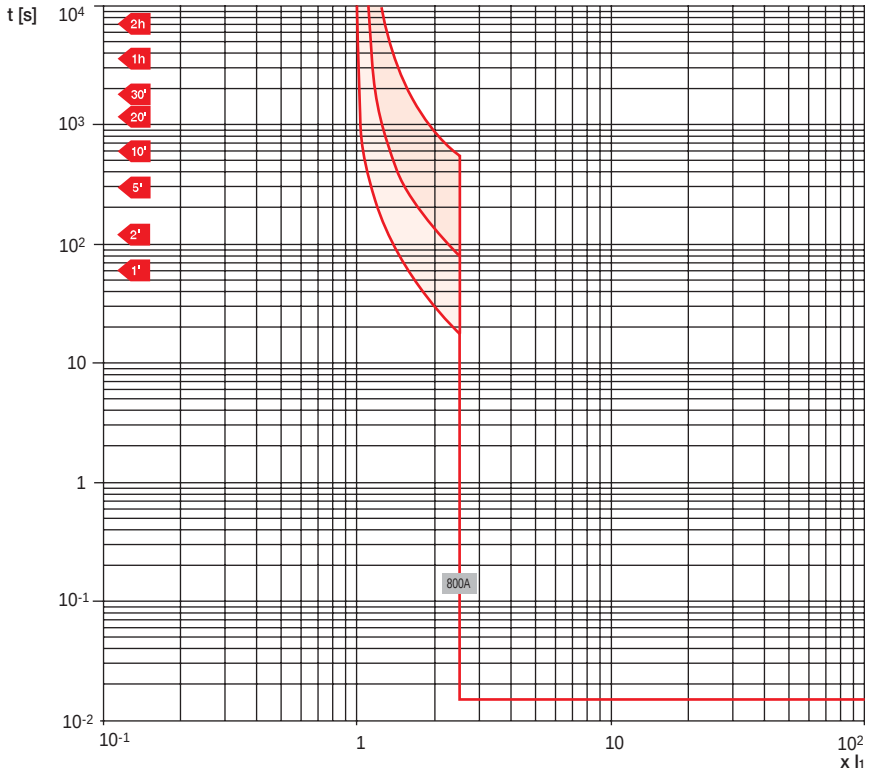
I_3 = 5 ÷ 10 In



S6 800 TMD

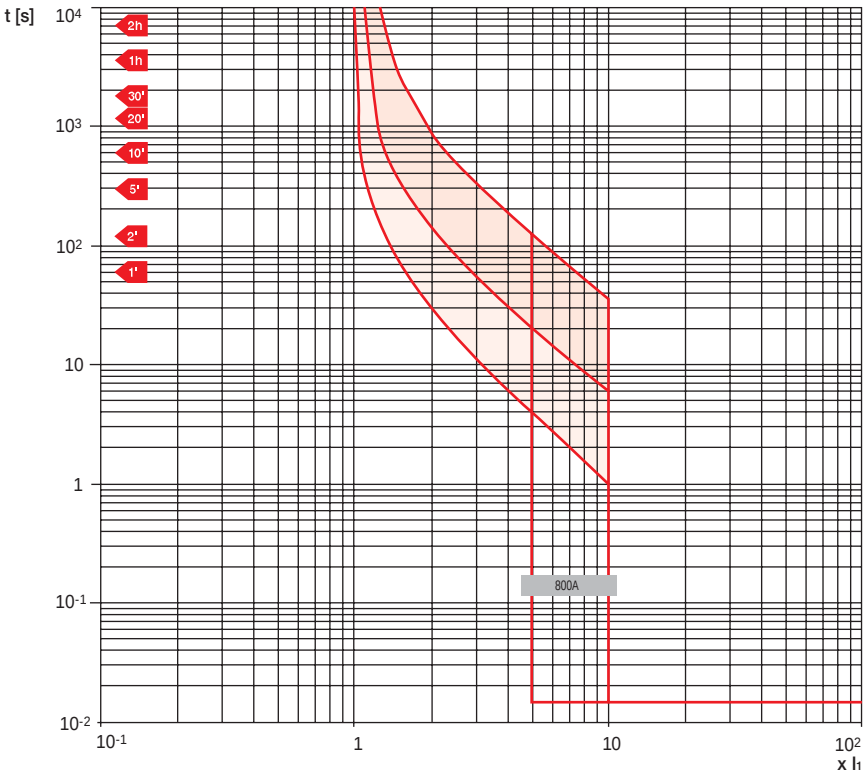
In = 800 A

I_3 = 2.5 In



S6 800 TMD

In = 800 A
I_3 = 5 ÷ 10 In



Protective releases
Microprocessor trip release
S4, S5, S6, S7, S8

Microprocessor based overcurrent relays for alternating current for S4, S5, S6 and S7 circuit-breakers

The microprocessor based overcurrent relays (actual RMS) for Isomax S circuit-breakers offer a wide range of current and trip time settings.

They are available in two versions:

PR211/P with overcurrent protection «L» and instant short circuit protection «I». Available with functions «L», «I», or «L+I». L function includes adjustable long-time pick-up and long-time delay.

PR212/P with overcurrent protection «L», selective short circuit protection «S», instant short circuit protection «I» and ground fault protection «G». Available with functions «L+S+I» or «L+S+I+G». Functions «S», «I» and «G» can be excluded manually by means of the trip current threshold selector (OFF position). In its most complete configuration, i.e. with functions «L+S+I+G», the PR212/P relay can be combined, on request, with the following units:

PR212/D — dialog unit

Essential for two-way communication with electrical plant management systems. When the unit is present, it is possible to choose between the manually set parameters (LOC), and the parameters set by the electrical plant control system (REM) by means of the appropriate selector. The dialog unit must be supplied with an auxiliary voltage of 24 V d.c.

The following information is made available through the dialog unit on the field bus:

- protection parameters
- current values of phases, neutral and ground
- circuit-breaker state
- number of operations of circuit-breaker
- interrupted currents
- state of the overcurrent relay with indication of:
  - normal operation
  - pre-alarm (0.9 x I1)
  - overcurrent function «L»
  - trip function «S»
  - trip function «I»
  - trip function «G».

It is possible to provide and/or modify the protection parameters and the circuit-breaker opening/closing controls. In the event of a serial communication error, the overcurrent relay operates in accordance with the last parameters set and in any event always in accordance with the manually programmed setting. The same occurs in the event of a dialog unit fault, and in the absence of auxiliary supply.

The dialog unit is external for circuit breakers S4 and S5 and is located inside the relay box for circuit breakers S6 and S7.

The external dialog unit is connected by means of a cable for supply and communication with the PR212/P protection relay.

The standard version of the dialog interface has the following specifications:

- hardware: EIA RS485 serial transmission line
- communication protocol: ABB Modbus
- transmission speed: 150 – 19200 baud (bit/s).

PR212/K — signalling unit

Can be connected directly to the PR212/P protection relay and provides contacts for the protection unit trip and alarm signals: pre-alarm, overcurrent function «L», trip functions «S», «I» and «G», trip by relay and internal communication error with PR212/P.

PR212/T — actuator unit

Can be installed only if the dialog unit is present, and by means of suitable relays, controls the opening and closing of the circuit-breaker. In order that opening and closing can be actuated, the circuit-breaker must be equipped with a motor operator (direct-acting for S4 and S5; stored energy type for S6 and S7).

Note

The K and T units are always external.

Other important features of the microprocessor based relays are as follows:

- protection of neutral with programmable automatic adjustment, executed by the manufacturer, to 50% (standard) or 100% (on request) of the current value selected for the phases. The optional version has no code in this catalog;
- reliable operation also when one phase only is live;
- individual and simultaneous adjustment on the three phases and neutral;
- no need for auxiliary supply;
- trip specifications not affected by the ambient temperature;
- consistency of specifications and reliability including in contaminated environments;
- signalling of tripped relay (available for all versions) by means of voltage-free contact for 24 V d.c. or a.c. circuits maximum 3 W.

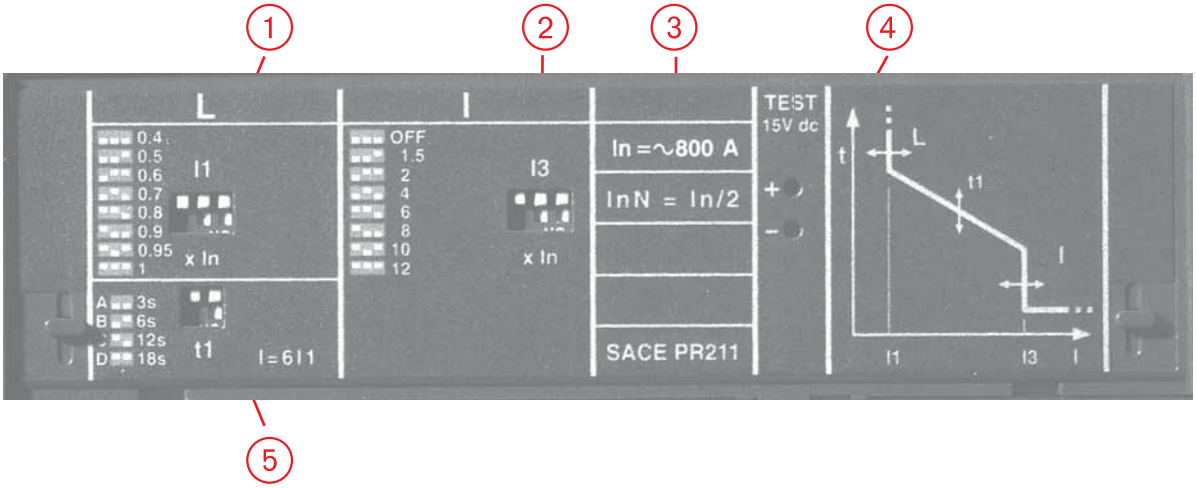
Circuit-breaker rated current change according to ambient temperature. The tripping characteristics of Isomax S4 – S8 with electronic trip units are unaffected by ambient temperatures from -25°C to +70°C.

Protective releases
Microprocessor based overcurrent relays, PR211 for S4, S5, S6 & S7 breakers

Protective functions and set values

Protection against	Trip	Symbol	Set values (manual adjustment in steps)
Overload	Long delay	L	I1 = 0.4-0.5-0.6-0.7-0.8-0.9-0.95-1 x In t1 = 4 curves A,B,C,D
Short-circuit	Instantaneous adjustment	I	I3 = 1.5-2-4-6-8-10-12 x In

PR211



Key

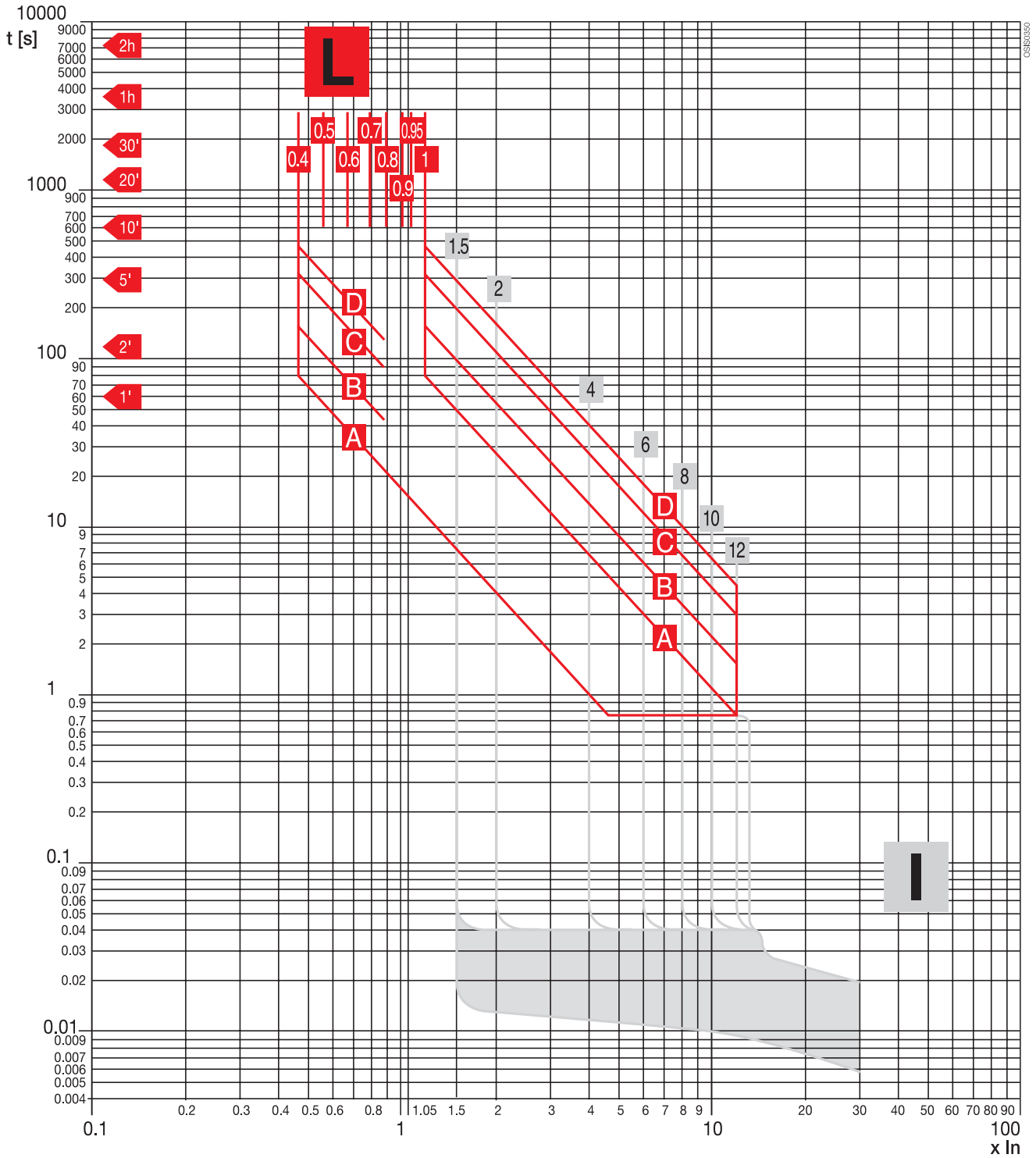
1 Dip-switch for function L setting (I1)
2 Dip-switch for function I setting (I3)
3 Rated current of current transformers
4 15 V d.c. input for release functioning check
5 Function L trip time setting dip switch (T1)

Rated and setting currents

Circuit-breaker		Current transformer	Functions	
	Iu-A	In-A	L (I1) A (0.4 – 1 x In)	I (I3) A (1.5 – 12 x In)
S4	250	100	40 – 100	150 – 1200
		250	100 – 250	375 – 3000
S5	400	300	120 – 300	450 – 3600
		400	160 – 400	600 – 4800
S6	600/800	600	240 – 600	900 – 7200
		800	320 – 800	1200 – 9600
S7	1200	1000	400 – 1000	1000 – 12,000
		1200	480 – 1200	1800 – 14,400

Protective releases
Microprocessor based overcurrent relays, PR211
Time-current curves, S4 – S7

Function L - I



Key

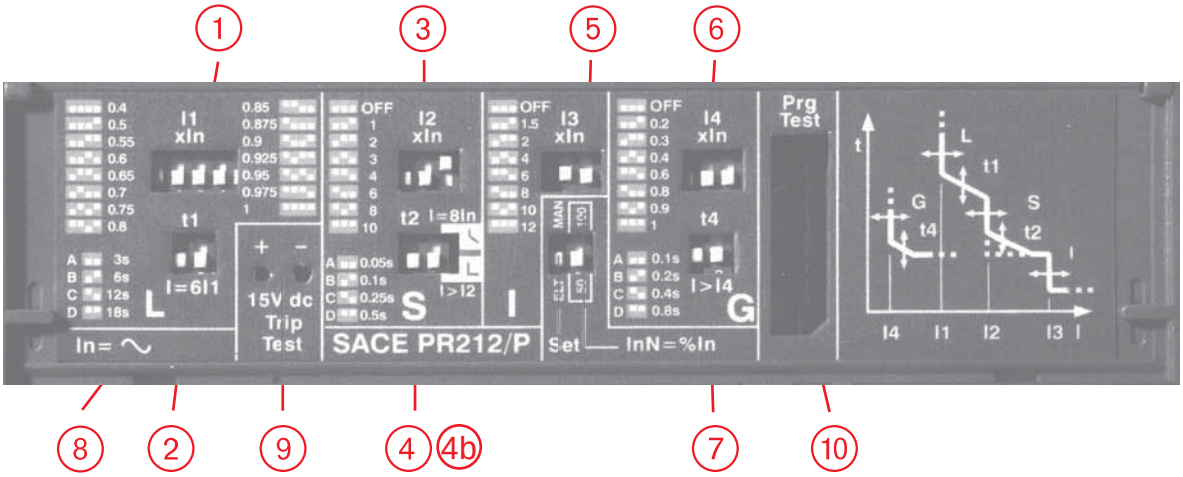
In = Rated current of current transformers
t = Tripping time

Protective releases
Microprocessor based overcurrent relays, PR212
Protection functions and set values, S4 – S8

Protection functions and set values

Protection against	Overload	Short-circuit	Short circuit	Earth fault
Trip	Long delay	Inverse or definite short delay	Instantaneous adjustable	Inverse short delay
Symbol	L	S	I	G ①
Set values (manual adjustment in steps	I1 = 0.4-0.5-0.55-0.6-0.65-0.7-0.75 0.8-0.85-0.875-0.9-0.925-0.95-0.975-1 x In t1 = 4 curves A – D	I2 = 1-2-3-4-6-8-10 OFF x In t2 = 4 curves A – D	I3 = 1.5-2-4-6-8-10-12	I4 = 0.2-0.3-0.4-0.7-0.8-0.9-1 t4 = 4 curves A – D
Set values (electronic adjustment)	I1 = 0.4 - 1 x In t1 = 3 - 18s	I2 = 1 … 10 OFF x In t2 = 0.05 – 0.5	I3 = 1.5-12 OFF x In	I4 = 0.2 – 1 OFF x In t4 = 0.1 – 0.8s

PR212



Key

1 Function L setting dip-switch (I1)
2 Function L trip time setting dip-switch (t1)
3 Function S setting dip-switch (I2)
4 Function S trip time setting dip-switch (t2)
4b Fixed/variable trip time selection dip-switch
5 Function I setting dip-switch (I3)
6 Function G setting dip-switch (I4)
7 Function G trip time setting dip-switch (t4)
8 Rated current of current transformers
9 15 V d.c. input for release functioning check
10 Socket for connecting SACE PR010/T test unit

15

① S8 it = 0.2 - 0.4

Protective releases
Rated and setting currents, PR212
S4 – S8

Rated and setting currents

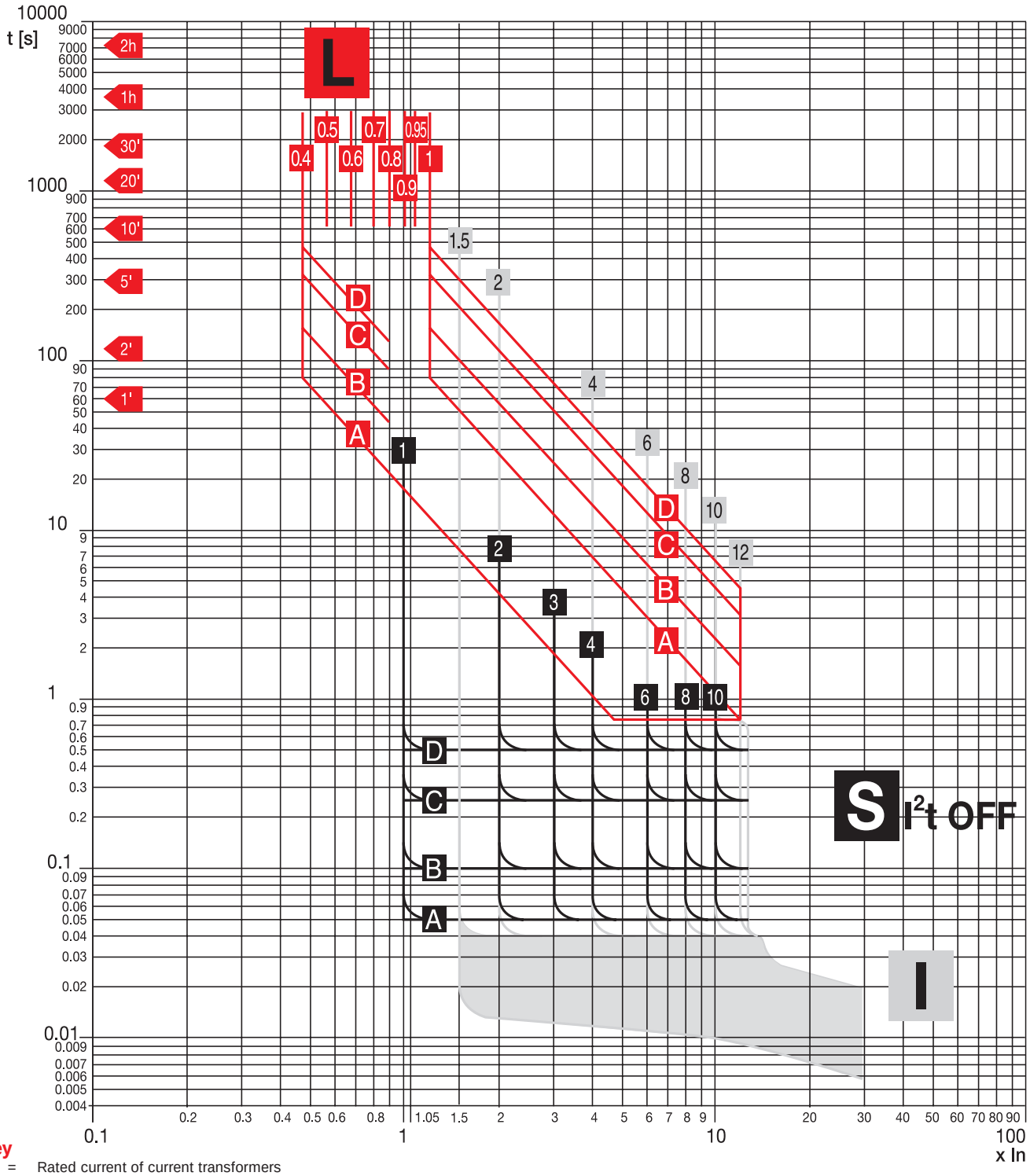
Circuit breaker		Current transformer	Functions			
Iu		In-A	L(I1) A (0.4 – 1.0 x In)	S (I1) A (1 – 10 x In)	I (I3) A (1.5 – 12 x In)	G (I4) A (0.2 – 1 x In) / S8 (0.2 – 0.4)
S4	250	100	40 – 100	100 – .1000	150 – 1200	20 – 100
		250	100 – 250	250 – .2500	375 – 3000	50 – 250
S5	400	300	120 – 300	300 – .3000	450 – 3600	60 – 300
		400	160 – 400	400 – .4000	600 – 4800	80 – 400
S6	600	600	240 – 600	600 – .6000	900 – 7200	120 – 600
	800	800	320 – 800	800 – .8000	1200 – 9600	160 – 800
S7	1200	1000	400 – 1000	1000 – .10,000	1500 – 12,000	200 – 1000
		1200	480 – 1200	1200 – .12,000	1800 – 14,400	240 – 1200
		1600	640 – 1600	1600 – .16,000	2400 – 19,200	320 – 640
S8	1600 – 2500	2000	800 – 2000	2000 – .20,000	3000 – 24,000	400 – 800
		2500	1000 – 2500	2500 – .25,000	3750 – 30,000	500 – 1000

Key

Iu = Rated uninterrupted current of circuit-breaker
In = Rated current of current transformers
I1 = Current setting value for relay overload protection
I2 = Current setting value for relay short-circuit selective protection
I3 = Current setting value for relay instantaneous short-circuit protection
I4 = Current setting value for earth fault protection

Protective releases
Microprocessor based overcurrent relays, PR212
Time-current curves, S4 – S8

Function L - S - I

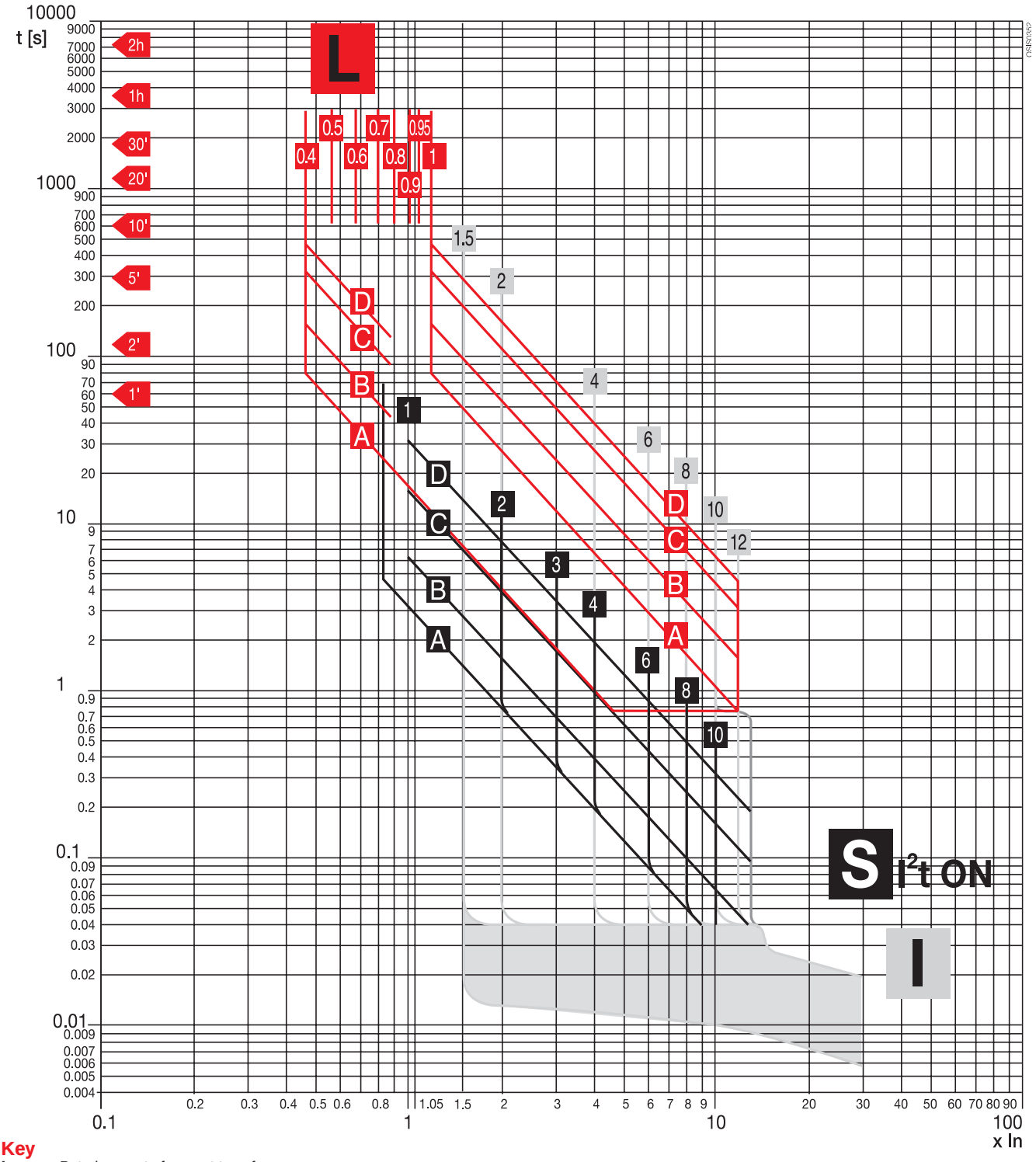


Key

In = Rated current of current transformers
t = Tripping time

Protective releases
Microprocessor based overcurrent relays, PR212
Time-current curves, S4 – S8

Function L - S - I

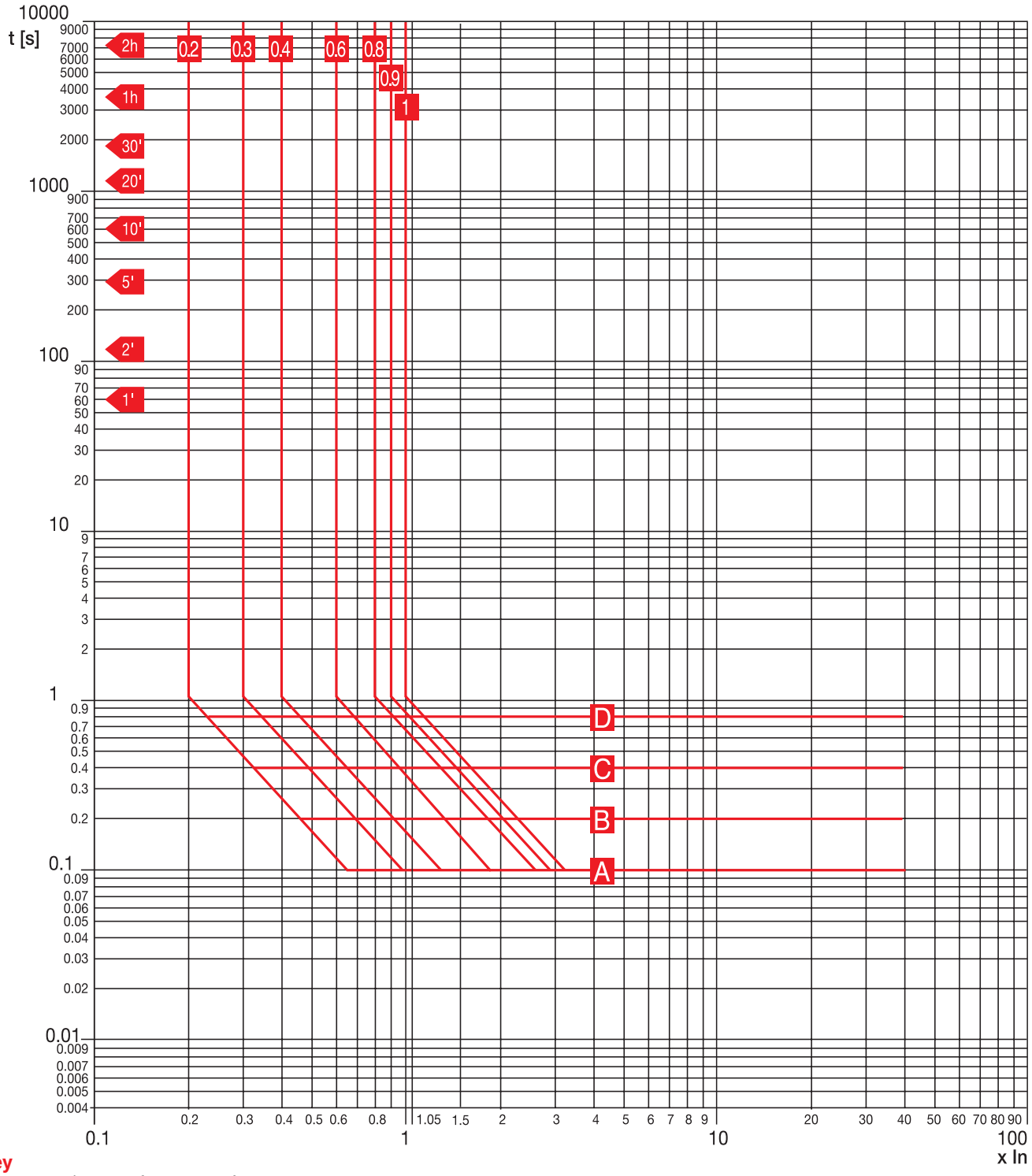


Key

In = Rated current of current transformers
t = Tripping time

Protective releases
Microprocessor based overcurrent relays, PR212
Time-current curves, S4 – S8

Function G[1]



Key

In = Rated current of current transformers
t = Tripping time

[1] S8 maximum setting is 0.4 per NEC guidelines.

Motor horsepower ratings
Magnetic trip
1/2HP @ 575V to 100HP @ 575V

Horsepower per NEC 430-50				Motor full	Isomax	MCP	Approximate trip setting % of MFLA						
208V	230V	460V	575V	Load amps	Type	Rating	1.5X	2X	4X	6X	8X	10X	12X
					Magnetic trip		%	%	%	%	%	%	%
			1/2	0.9	S3	3	—	—	1300	2000	2700	3400	4000
		1/2		1.1	S3	3	—	—	1100	1600	2200	3700	3300
			3/4	1.3	S3	3	—	—	900	1400	1800	2300	2800
		3/4		1.6	S3	3	—	—	800	1100	1500	1900	2300
			1	1.7	S3	3	—	—	700	1100	1400	1800	2100
		1		2.1	S3	5	—	—	1000	1400	1900	2400	2900
	1/2			2.2	S3	5	—	—	900	1400	1800	2300	2700
1/2			1 1/2	2.4	S3	5	—	—	800	1300	1700	2100	2500
			2	2.7	S3	5	—	—	700	1100	1500	1900	2200
		1 1/2		3	S3	5	—	—	700	1000	1300	1700	2000
	3/4			3.2	S3	5	—	—	600	900	1300	1600	1900
		2		3.4	S3	5	—	—	600	900	1200	1500	1800
3/4				3.5	S3	10	—	—	1100	1700	2300	2900	3400
			3	3.9	S3	10	—	—	1000	1500	2100	2600	3100
	1			4.2	S3	10	—	—	1000	1400	1900	2400	2900
1				4.6	S3	10	—	—	900	1300	1700	2200	2600
		3		4.8	S3	10	—	—	800	1300	1700	2100	2500
	1 1/2			6	S3	10	—	—	700	1000	1300	1700	2000
			5	6.1	S3	10	—	—	700	1000	1300	1600	2000
1 1/2				6.6	S3	10	—	—	600	900	1200	1500	1800
	2			6.8	S3	10	—	—	600	900	1200	1500	1800
				7.5	S3	25	—	—	1300	2000	2700	3300	4000
2		5		7.6	S3	25	—	—	1300	2000	2600	3300	3900
			7 1/2	9	S3	25	—	—	1100	1700	2200	2800	3300
	3			9.6	S3	25	—	—	1000	1600	2100	2600	3100
3				10.6	S3	25	—	—	900	1400	1900	2400	2800
		7 1/2	10	11	S3	25	—	—	900	1400	1800	2300	2700
		10		14	S3	25	—	—	700	1000	1400	1800	2100
	5			15.2	S3	25	—	—	700	1000	1300	1600	2000
5				16.7	S3	25	—	—	600	900	1200	1500	1800
			15	17	S3	25	—	—	600	900	1200	1500	1800
		15		21	S3	50	—	—	1000	1400	1900	2400	2800
	7 1/2		20	22	S3	50	—	—	900	1400	1800	2300	2700
7 1/2				24.2	S3	50	—	—	800	1200	1700	2100	2500
		20	25	27	S3	50	—	—	700	1100	1500	1900	2200
	10			28	S3	50	—	—	700	1100	1400	1800	2100
10				30.8	S3	50	—	—	600	1000	1300	1600	1900
			30	32	S3	50	—	—	600	900	1300	1600	1900
		25		34	S3	50	—	—	600	900	1200	1500	1800
		30		40	S3	100	—	—	1000	1500	2000	2500	3000
			40	41	S3	100	—	—	1000	1500	2000	2400	2900
	15			42	S3	100	—	—	1000	1400	1900	2400	2900
15				46.2	S3	100	—	—	900	1300	1700	2200	2600
		40	50	52	S3	100	—	—	800	1200	1500	1200	2300
	20			54	S3	100	—	—	700	1100	1500	1900	2200
20				59.4	S3	100	—	—	700	1000	1300	1700	2000
			60	62	S3	100	—	—	600	100	1300	1600	1900
		50		65	S3	100	—	—	600	900	1200	1500	1800
	25			68	S3	100	—	—	600	900	1200	1500	1800
25				74.8	S3	150	—	—	800	1200	1600	2000	—
		60	75	77	S3	150	—	—	800	1200	1600	1900	—
	30			80	S3	150	—	—	800	1100	1500	1900	—
30				88	S3	150	—	—	700	1000	1400	1700	—
		75		96	S3	150	—	—	600	900	1300	1600	—
			100	99	S3	150	—	—	600	900	1200	1500	—

Motor horsepower ratings
Electronic trip
40HP @ 230V to 500HP @ 460V

Horsepower per NEC 430-50				Motor full	Isomax	MCP	Approximate trip setting % of MFLA						
208V	230V	460V	575V	Load amps	Type	Rating	1.5X	2X	4X	6X	8X	10X	12X
					Electronic trip		%	%	%	%	%	%	%
	40			104	S4	250	350	500	1000	1400	1900	2400	2900
40				114	S4	250	350	450	900	1300	1800	2200	2600
		100		124	S4	250	300	400	800	1200	1600	2000	2400
			125	125	S4	250	300	400	800	1200	1600	2000	2400
	50			130	S4	250	300	400	800	1200	1500	1900	2300
50				143	S4	250	250	350	700	1000	1400	1700	2100
			150	144	S4	250	250	350	700	1000	1400	1700	2100
	60			154	S4	250	250	300	600	1000	1300	1600	1900
		125		156	S4	250	250	300	600	1000	1300	1600	1900
60				169	S4	250	200	300	600	900	1200	1500	1800
		150		180	S5	400	350	450	900	1300	1800	2200	2700
	75			192	S5	400	300	400	800	1300	1700	2100	2500
75				211	S5	400	300	400	800	1100	1500	1900	2300
		200		240	S5	400	250	350	700	1000	1300	1700	2000
			250	242	S5	400	250	350	700	1000	1300	1700	2000
	100			248	S5	400	250	300	600	1000	1300	1600	1900
100				273	S6	600	350	450	900	1300	1800	2200	2600
			300	289	S6	600	300	400	800	1200	1700	2100	2500
		250		302	S6	600	300	400	800	1200	1600	2000	2400
	125			312	S6	600	300	400	800	1200	1500	1900	2300
			350	336	S6	600	250	350	700	1100	1400	1800	2100
125				343	S6	600	250	350	700	1100	1400	1700	2100
	150			360	S6	600	250	350	700	1000	1300	1700	2000
		300		361	S6	600	250	350	700	1000	1300	1700	2000
			400	362	S6	600	250	300	600	900	1300	1600	1900
150				396	S6	600	250	300	600	900	1200	1500	1800
			450	412	S6	800	300	400	800	1200	1600	1900	2300
		350		414	S6	800	300	400	800	1200	1600	1900	2300
			500	472	S6	800	250	350	700	1000	1400	1700	2000
		400		477	S6	800	250	350	700	1000	1300	1700	2000
	200			480	S6	800	250	350	700	1000	1300	1700	2000
		450		515	S6	800	250	300	600	900	1200	1600	1900
200				528	S6	800	250	300	600	900	1200	1500	1800
		500		590	S7	1000	250	350	700	1000	1400	1700	2000

Notes