



Technical catalogue | January 2013

# SACE Tmax. T Generation

Low voltage moulded-case  
circuit-breakers up to 1600 A

# Circuit-breakers for power distribution

## Electrical characteristics

2

		Tmax T1 1P	Tmax T1				Tmax T2			
Rated uninterrupted current	[A]	160	160				160			
Poles	[No.]	1	3/4				3/4			
Rated service voltage, <b>Ue</b>	(AC) 50-60 Hz [V]	240	690				690			
	(DC) [V]	125	500				500			
Rated impulse withstand voltage, <b>Uimp</b>	[kV]	8	8				8			
Rated insulation voltage, <b>Ui</b>	[V]	500	800				800			
Test voltage at industrial frequency for 1 min.	[V]	3000	3000				3000			
Rated ultimate short-circuit breaking capacity, <b>Icu</b>		<b>B</b>	<b>B</b>	<b>C</b>	<b>N</b>	<b>N</b>	<b>S</b>	<b>H</b>	<b>L</b>	
(AC) 50-60 Hz 220/230 V	[kA]	25*	25	40	50	65	85	100	120	
(AC) 50-60 Hz 380/400/415 V	[kA]	-	16	25	36	36	50	70	85	
(AC) 50-60 Hz 440 V	[kA]	-	10	15	22	30	45	55	75	
(AC) 50-60 Hz 500 V	[kA]	-	8	10	15	25	30	36	50	
(AC) 50-60 Hz 690 V	[kA]	-	3	4	6	6	7	8	10	
(DC) 250 V - 2 poles in series	[kA]	25 (at 125 V)	16	25	36	36	50	70	85	
(DC) 250 V - 3 poles in series	[kA]	-	20	30	40	40	55	85	100	
(DC) 500 V - 2 poles in series	[kA]	-	-	-	-	-	-	-	-	
(DC) 500 V - 3 poles in series	[kA]	-	-	-	-	-	-	-	-	
(DC) 750 V - 3 poles in series	[kA]	-	16	25	36	36	50	70	85	
Rated service short-circuit breaking capacity, <b>Ics</b>										
(AC) 50-60 Hz 220/230 V	[%Icu]	75%	100%	75%	75%	100%	100%	100%	100%	
(AC) 50-60 Hz 380/400/415 V	[%Icu]	-	100%	100%	75%	100%	100%	100%	75% (70 kA)	
(AC) 50-60 Hz 440 V	[%Icu]	-	100%	75%	50%	100%	100%	100%	75%	
(AC) 50-60 Hz 500 V	[%Icu]	-	100%	75%	50%	100%	100%	100%	75%	
(AC) 50-60 Hz 690 V	[%Icu]	-	100%	75%	50%	100%	100%	100%	75%	
Rated short-circuit making capacity, <b>Icm</b>										
(AC) 50-60 Hz 220/230 V	[kA]	52.5	52.5	84	105	143	187	220	264	
(AC) 50-60 Hz 380/400/415 V	[kA]	-	32	52.5	75.6	75.6	105	154	187	
(AC) 50-60 Hz 440 V	[kA]	-	17	30	46.2	63	94.5	121	165	
(AC) 50-60 Hz 500 V	[kA]	-	13.6	17	30	52.5	63	75.6	105	
(AC) 50-60 Hz 690 V	[kA]	-	4.3	5.9	9.2	9.2	11.9	13.6	17	
Opening time (415 V)	[ms]	7	7	6	5	3	3	3	3	
Utilisation category (IEC 60947-2)		A	A				A			
Reference Standard		IEC 60947-2	IEC 60947-2				IEC 60947-2			
Isolation behaviour		■	■				■			
Trip units:	thermomagnetic									
	T fixed, M fixed	TMF	■	-	-	-	-	-	-	
	T adjustable, M fixed	TMD	-	■	-	-	■	-	-	
	T adjustable, M adjustable (5...10 x In)	TMA	-	-	-	-	-	-	-	
	T adjustable, M fixed (3 x In)	TMG	-	-	-	-	■	■	■	
	T adjustable, M adjustable (2.5...5 x In)	TMG	-	-	-	-	-	-	-	
	magnetic only	MA	-	-	-	-	■	■ (MF up to In 12.5 A)		
	electronic	PR221DS	-	-	-	-	■	-	-	
		PR221GP/PR221MP	-	-	-	-	■	-	-	
		PR222DS	-	-	-	-	-	-	-	
		PR223DS	-	-	-	-	-	-	-	
		PR231/P	-	-	-	-	-	-	-	
		PR232/P	-	-	-	-	-	-	-	
		PR331/P	-	-	-	-	-	-	-	
		PR332/P	-	-	-	-	-	-	-	
Interchangeability		-	-				-			
Versions		F	F				F-P			
Terminals	fixed	FC Cu	FC Cu-EF-FC CuAl-HR				F-FC Cu-FC CuAl-EF-ES-R			
	plug-in	-	-				F-FC Cu-FC CuAl-EF-ES-R			
	withdrawable	-	-				-			
Fixing on DIN rail		-	DIN EN 50022				DIN EN 50022			
Mechanical life	[No. operations]	25000	25000				25000			
	[No. Hourly operations]	240	240				240			
Electrical life @ 415 V AC	[No. operations]	8000	8000				8000			
	[No. Hourly operations]	120	120				120			
Basic dimensions - fixed version	3 poles	W [mm]	25.4 (1 pole)				76			
	4 poles	W [mm]	-				102			
		D [mm]	70				70			
		H [mm]	130				130			
Weight	fixed	3/4 poles [kg]	0.4 (1 pole)				0.9/1.2			
	plug-in	3/4 poles [kg]	-				1.1/1.5			
	withdrawable	3/4 poles [kg]	-				1.5/1.9			

TERMINAL CAPTION  
 F = Front  
 EF = Front extended  
 ES = Front extended spread

FC Cu = Front for copper cables  
 FC CuAl = Front for copper-aluminium cables  
 R = Rear orientated  
 HR = Rear flat horizontal

VR = Rear flat vertical  
 HR/VR = Rear flat orientated  
 MC = Multicable  
 F = fixed circuit-breakers

P = plug-in circuit-breakers  
 W = withdrawable circuit-breakers  
 ■ The breaking capacity for settings  
 In = 16 A and In = 20 A is 16 kA



# Circuit-breakers for power distribution

## Electronic trip units

### Basic protection functions

2



**(L) Protection against overload**

This protection function trips when there is an overload with inverse long-time delay trip according to the IEC 60947-2 Standard ( $I^2t=k$ ). The protection cannot be excluded.



**(S) Protection against short-circuit with time delay**

This protection function trips when there is a short-circuit, with long inverse time-delay trip ( $I^2t=k$  ON) or a constant trip time ( $I^2t=k$  OFF). The protection can be excluded.



**(I) Instantaneous protection against short-circuit**

This protection function trips instantaneously in case of a short-circuit. The protection can be excluded.



**(G) Protection against earth fault**

The protection against earth fault trips when the vectorial sum of the currents passing through the current sensors exceeds the set threshold value, with long inverse time-delay trip ( $I^2t=k$  ON) or a constant trip time ( $I^2t=k$  OFF). The protection can be excluded.

### Advanced protection functions

The PR332/P trip unit makes it possible to carry out highly developed protection against the most varied types of fault.

In fact, it adds the following advanced protection functions to the basic protection functions.



**(L) Protection against overload (IEC 60255-3)**

This protection trips in case of an overload with inverse long-time delay according to IEC 60255-3 Standard, for the coordination with fuses and MV protections. The protection can be excluded.

IEC 60255-3



**(U) Protection against unbalanced phase**

The protection function against unbalanced phase U can be used in those cases where a particularly precise control is needed regarding missing and/or unbalance of the phase currents. The trip time is instantaneous. The protection can be excluded.



**(OT) Protection against overtemperature**

The protection against overtemperature trips instantaneously when the temperature inside the trip unit exceeds 85 °C, in order to prevent any temporary or continual malfunction of the microprocessor. The protection cannot be excluded.



**(Rc) Protection against residual current <sup>(1)</sup>**

This integrated protection is based on current measurements made by an external toroid and is alternative to protection against earth fault G. The protection can be excluded.



**(ZS) Zone selectivity <sup>(2)</sup>**

ZS zone selectivity is an advanced method for carrying out coordination of the protections in order to reduce the trip times of the protection closest to the fault in relation to the time foreseen by time selectivity. Zone selectivity can be applied to the protection functions S and G, with constant time-delay trip. The protection can be excluded.



**(UV, OV, RV) Protections against voltage**

The three protections trip with a constant time-delay in the case of undervoltage, overvoltage and residual voltage respectively. The latter allows to detect interruptions of the neutral (or of the earthing conductor in systems with earthed neutral) and faults which cause movement of the star centre in systems with isolated neutral (e.g. large earth faults) to be identified. Movement of the star centre is calculated by vectorially summing the phase voltages. The protections can be excluded.



**(RP) Protection against reversal of power**

The protection against reversal power causes tripping of the breaker, with constant time-delay trip, when the flow of power reverses sign and exceeds, as an absolute value, the set threshold. It is particularly suitable for protection of large machines such as generators. The protection can be excluded.



**(UF, OF) Protections of frequency**

The two protections detect the variation in network frequency above or below the adjustable thresholds, opening the circuit-breaker, with constant time-delay trip. The protection can be excluded.

<sup>(1)</sup> It is not suitable for human protection.

<sup>(2)</sup> For further information about zone selectivity, please see the section: "Circuit-breakers for zone selectivity".

## Electronic trip units for power distribution



SACE PR221DS



2

	PR221DS	PR221DS	PR221GP
Protection functions	L S / I	I	L S I

SACE PR222DS/P



	PR222DS/P	PR222DS/P
Protection functions	L S I	L S I G

SACE PR222DS/PD



	PR222DS/PD	PR222DS/PD
Protection functions	L S I	L S I G

SACE PR223DS



	PR223DS
Protection functions	L S I G

## PR221DS

The PR221DS trip unit, available for T2, T4, T5 and T6, provides protection functions against overload L and short-circuit S/I (version PR221DS-LS/I): with this version, by moving the dedicated dip-switch, you can choose whether to have inverse time-delay S or instantaneous I protection against short-circuit. Alternatively, the version with only the protection function against instantaneous short-circuit I is available (version PR221DS-I, also see page 2/40 and following).

There is a single adjustment for the phases and the neutral. However, for the neutral it can be decided whether to request the protection threshold of the functions at 50 - 100% of that

of the phases for  $T_{max} T2 I_n = 160 A$  ( $T2 I_n < 160 A$ ,  $N = 100%$ ), whereas for T4, T5 and T6 it is possible to select the protection threshold OFF, 50% or 100% directly from the front of the trip unit by means of the specific dip switch. The trip coil is always supplied with the PR221DS trip unit for  $T_{max} T2$  and is housed in the right-hand slot of the circuit-breaker. Dedicated auxiliary contacts are available for T2 with electronic trip unit (see page 3/24).

For  $T_{max} T4, T5$  and T6, the opening solenoid is housed internally and therefore, by not using the right-hand slot of the circuit-breaker, all the auxiliary contacts available can be used.

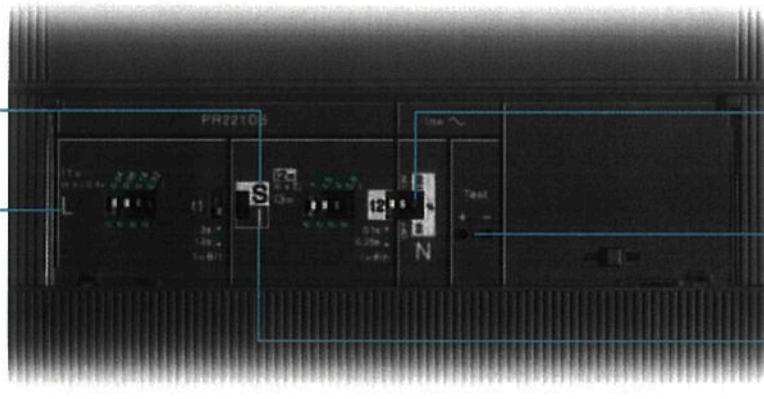
## PR221DS-LS/I

### Protection S

Against short-circuit with delayed trip

### Protection L

Against overload



Dip-switch for neutral setting (only for T4, T5 and T6)

Socket for TT1 test unit

Protection I  
Against short-circuit with instantaneous trip

## Protection functions and parameterisations

Protection functions <sup>(1)</sup>	Trip threshold	Trip curves	Excludability	Relation $t=f(I)$
<b>L</b> Against overload with long inverse time delay trip and trip characteristic according to an inverse time curve ( $I^2t=k$ ) according to IEC 60947-2 Standard	$I_1 = 0.40 - 1 \times I_n$ step = $0.04 \times I_n$ Trip between $1.1...1.30 \times I_1$ (T4,T5,T6) Trip between $1.05...1.30 \times I_1$ (T2)	at $6 \times I_1$ $t_1 = 3-6$ (only for T2) <b>12s</b> (only for T4,T5,T6) Tolerance: $\pm 10\%$ up to $6 \times I_n$ (T4,T5,T6) $\pm 10\%$ up to $2 \times I_n$ (T2) $\pm 20\%$ above $6 \times I_n$ (T4,T5,T6) $\pm 20\%$ above $2 \times I_n$ (T2)	–	$t = k/I^2$
<b>S</b> Against short-circuit with inverse short time delay trip and trip characteristic with inverse time ( $I^2t=k$ ) (selectable as an alternative to protection function I)	$I_2 = 1-1.5-2-2.5-3-3.5-4.5-5.5-6.5-7-7.5-8-8.5-9-10 \times I_n^{(2)}$ Tolerance: $\pm 10\%$ (T4,T5,T6) $\pm 10\%$ up to $2 \times I_n$ (T2) $\pm 20\%$ above $2 \times I_n$ (T2)	at $8 \times I_n$ $t_2 = 0.1 - 0.25s$ Tolerance: $\pm 10\%$ up to $6 \times I_n$ (T4,T5,T6) $\pm 20\%$ above $6 \times I_n$ (T4,T5,T6) $\pm 20\%$ (T2)	■	$t = k/I^2$
<b>I</b> Against short-circuit with instantaneous trip (selectable as an alternative to protection function S)	$I_3 = 1-1.5-2-2.5-3-3.5-4.5-5.5-6.5-7-7.5-8-8.5-9-10 \times I_n^{(2)}$ Tolerance: $\pm 10\%$ (T4,T5,T6) $\pm 20\%$ (T2)	instantaneous	■	$t = k$

<sup>(1)</sup> These tolerances hold in the following conditions:  
– self-powered trip unit at full power (without start-up)  
– two or three-phase power supply  
In conditions other than those considered, the following tolerances hold:

	Trip threshold	Trip time
S	$\pm 20\%$	$\pm 20\%$
I	$\pm 20\%$	$\leq 40ms$

<sup>(2)</sup> For  $T4 I_n = 320 A$ ,  $T5 I_n = 630 A$  and  $T6 I_n = 1000 A \Rightarrow I_{1,max} = 9.5 \times I_n$ ,  
 $I_{2,max} = 9.5 \times I_n$ .  
The setting at  $10 \times I_n$  corresponds to  $9.5 \times I_n$ .

# Accessories

## Versions and types

3

Starting from the fixed version with front terminals, the Tmax circuit-breakers can be converted into the various versions (plug-in for T2, T3, T4 and T5; withdrawable for T4, T5, T6 and T7), using the conversion kits. This makes management of the product, its versions and stocks as a whole very flexible. In any case, it is always possible to request the circuit-breaker in the desired version completely preset in the factory, by ordering, on the same line, the fixed circuit-breaker and the conversion kit, to which must be added the fixed part.

T7 is available in two different versions: the lever operating mechanism version similar to the other sizes in the Tmax family, and the new motorizable version.



### Fixed

The Tmax FIXED three-pole or four-pole version circuit-breakers foresee:

- circuit-breakers characterised by just two depths up to 1000 A: 70 mm for Tmax T1, T2 and T3 and 103.5 mm for Tmax T4, T5 and T6. For T7 the depth varies according to the type of operating mechanism (with lever or spring charging motor)
- standard front in groups of circuit-breakers: 45 mm for Tmax T1, T2 and T3 and 105 mm for T4 and T5, 140 mm for T6 and 280 mm for T7
- flange for compartment door
- possibility of assembly on back plate (or on DIN rail with T1, T2 and T3, with the help of the special accessory, see page 3/56)
- thermomagnetic (on Tmax T1, T2, T3, T4, T5 and T6) or electronic (on Tmax T2, T4, T5, T6 and T7) trip units
- standard FC Cu type terminals (front for copper cables) for T1 and F type (front) on all the Tmax family sizes.



### Plug-in

The PLUG-IN version of the circuit-breaker (Tmax T2, T3, T4 and T5) consists of:


- fixed part to be installed directly on the back plate of the unit
- moving part obtained from the fixed circuit-breaker with addition of the isolating contacts (near the connection terminals), of the rear frame (for fixing to the fixed part) and of the terminal covers.













The circuit-breaker is racked out by unscrewing the top and bottom fixing screws. A special lock prevents circuit-breaker racking in and racking out with the contacts in the closed position.

In the case where the circuit-breaker has electrical accessories mounted (SOR, UVR, MOS, MOE, MOE-E, AUX, AUX-E, AUE, RC222), the socket-plug connectors or the adapters for isolation of the relative auxiliary circuits must also be ordered (see page 3/30).

## Connection terminals

### Circuit-breaker



	F	EF	ES	FC Cu	FC CuAl	FC CuAl	MC	RC CuAl	HR	VR	HR for RC221/222	R
												
	Front terminals	Front extended terminals	Front extended spread terminals	Front terminals for copper cables	Front terminals for CuAl cables	Front terminals for CuAl cables <sup>(1)</sup>	Multi-cable terminals	Rear terminals for CuAl cables	Rear flat horizontal terminals	Rear flat vertical terminals	Rear flat horizontal terminals	Rear horizontal terminals
T1		F		F <sup>(2)</sup>		F			F		F	
T2	F <sup>(2)</sup>	F	F	F	F	F						F
T3	F <sup>(2)</sup>	F	F	F	F	F						F
T4	F <sup>(2)</sup>	F	F	F	F	F	F					F
T5	F <sup>(2)</sup>	F	F	F	F	F						F
T6 630	F <sup>(2)</sup>	F	F		F			F				F
T6 800	F <sup>(2)</sup>	F	F			F		F				F
T6 1000		F <sup>(2)(3)</sup>	F <sup>(3)</sup>			F <sup>(3)</sup>						F <sup>(3)</sup>
T7	F <sup>(2)</sup>	F	F			F			F	F		F


<sup>(1)</sup> Housed externally

<sup>(2)</sup> Standard supply

<sup>(3)</sup> A type of terminal among those indicated in the table must necessarily be mounted on the T6 1000 A circuit-breaker (complete circuit-breaker, breaking part and loose protection trip unit).

F = Fixed

### Fixed part



	F	EF	ES	FC Cu	FC CuAl	FC CuAl	R	RS	HR	VR	HR/VR
	Front terminals	Front extended terminals	Front extended spread terminals	Front terminals for copper cables	Front terminals for CuAl cables	Front terminals for CuAl cables <sup>(1)</sup>	Rear horizontal terminals	Rear spreaded terminals	Rear flat horizontal terminals	Rear flat vertical terminals	Rear flat terminals
T2	P <sup>(2)</sup>	P	P	P	P	P	P				
T3	P <sup>(2)</sup>	P	P	P	P	P	P				
T4		P-W		P-W	P-W				P-W	P-W	
T5		P-W	P <sup>(3)</sup> -W <sup>(3)</sup>	P-W	P-W				P-W	P-W	
T6		W							W	W	
T7		W	W					W			W

<sup>(1)</sup> Housed externally

<sup>(2)</sup> Standard supply

<sup>(3)</sup> For T5 630 only

P = Plug-in

W = Withdrawable



## Rear flat horizontal and vertical terminals for fixed parts - HR/VR

These allow connection of busbars or cable terminals at the rear.  
There are rear horizontal or vertical terminals.



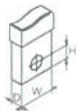
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Type	Version	Pieces	Busbars [mm]			Cable terminal [mm]		Tightening [Nm]		Terminal covers			Phase separators
			W	D	Ø	W	Ø	A	B <sup>(1)</sup>	high	low	fixed part	
T4	P - W	1	20	10	9	20	9	6	18	-	-	-	-
T5 400	P - W	1	25	10	11	25	11	9	18	-	-	-	-
T5 630	P - W	2	40	15	11	40	11	-	18	-	-	-	-
T6 630	W	2	40	5	14	40	14	-	30	-	-	-	-
T6 800	W	2	50	5	14	50	14	-	30	-	-	-	-
T7 1250 <sup>(2)(3)</sup>	W	2	50	8	2x11	-	-	12	40	-	-	-	-
T7 1600 <sup>(3)</sup>	W	2	50	10	2x11	-	-	12	40	-	-	-	-

<sup>(1)</sup> class 4.8 screws (not supplied)

<sup>(2)</sup> up to 1250 A

<sup>(3)</sup> for vertical assembly directly in the factory, use extra code 1SDA063571R1



A = Tightening the terminal onto the circuit-breaker  
B = Tightening the cable/busbar onto the terminal  
R = On request  
S = Standard  
Pieces = Number of busbars, cables or cable terminals

# Accessories

## Service releases

3

The Tmax family of circuit-breakers can be fitted with service releases (shunt opening release, shunt closing release and undervoltage release). These are available in the pre-cabled version, depending on the size of the circuit-breaker fitted with 1 m long free cables, with a connector with 1 m cables or with a simple pin connector and two terminals to be mounted in the terminal board, or in the uncabled version, with cabling to be carried out by the customer.

Assembly is carried out for all the releases by pressing into the special seat in the left part of the circuit-breaker (right for T7) and fixing with the screw provided.

The releases are always alternative to each other for T1, T2, T3 (both for the three-pole and four-pole version), whereas for T4, T5 and T6 in the four-pole version the shunt opening release (not possible with PS-SOR) and the undervoltage release can be housed at the same time, as long as they are in the wired version and with the shunt opening release necessarily mounted in the slot of the third pole. T4, T5, T6 circuit-breakers in the withdrawable version can be equipped only with pre-cabled accessories; the T4-T5-T6 circuit-breakers complete with motorized controls can only be fitted with prewired undervoltage and shunt opening releases.

The T7 circuit-breaker allows simultaneous mounting of all three service releases. These two possibilities are available on the three-pole version as well. Moreover Tmax T7 can be equipped with two shunt opening releases instead of the undervoltage release to facilitate some specific applications where a very high safety level of the remote circuit-breaker opening command is required.

### Shunt opening release – SOR

Allows circuit-breaker opening by means of an electric command. Operation of the release is guaranteed for a voltage between 70% and 110% of the rated power supply voltage value  $U_n$ , both in alternating current and in direct current. For Tmax T1, T2, T3, T4, T5 and T6, the SOR shunt opening release is fitted with a limit contact for cutting off the power supply in the open position and with the release tripped.



1SDC210C25F0001

T1-T2-T3



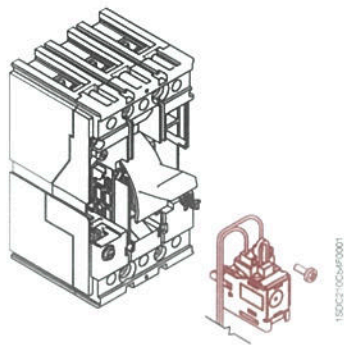
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T4-T5-T6

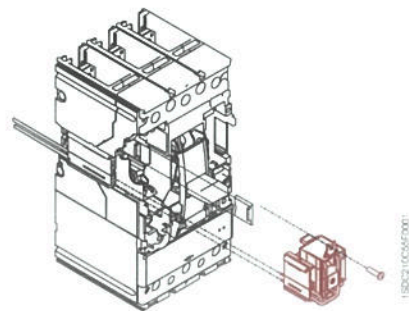


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T7



T1-T2-T3



T4-T5-T6

### SOR - Electrical characteristics

Version	Inrush power consumption					
	Tmax T1, T2, T3		Tmax T4, T5, T6		Tmax T7	
	AC [VA]	DC [W]	AC [VA]	DC [W]	AC [VA]	DC [W]
12 V DC		50		150		
24 V AC/DC					430	430
24...30 V AC/DC	50	50	150	150		
30 V AC/DC					300	300
48 V AC/DC					300	300
48...60 V AC/DC	60	60	150	150		
60 V AC/DC					300	300
110...120 V AC/DC					300	300
120...127 V AC/DC					300	300
110...127 V AC - 110...125 V DC	50	50	150	150		
220...240 V AC/DC					300	300
220...240 V AC - 220...250 V DC	50	50	150	150		
240...250 V AC/DC					300	300
380...400 V AC					300	
380...440 V AC	55		150			
415...440 V AC					300	
480...525 V AC	55		150			
Opening times [ms]	15	15	15	15	50	50

3

### Shunt opening release with permanent service – PS-SOR

Furthermore, for T4, T5 and T6, opening coils with permanent service (PS-SOR) are available, with much lower power consumption and which can be supplied continuously: in this case, in fact, they are not fitted with auxiliary limit contact. The pre-cabled or uncabled version can be chosen for these coils as well.

### PS-SOR - Electrical characteristics

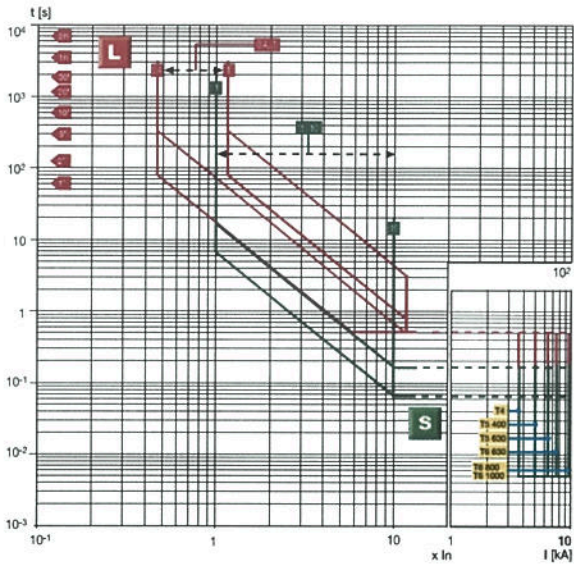
Version	Tmax T4, T5, T6	
	AC [VA]	DC [W]
24 V AC/DC	4	4
110...120 V AC	4	–

# Trip curves for power distribution Circuit-breakers with electronic trip units

APS60 APS100

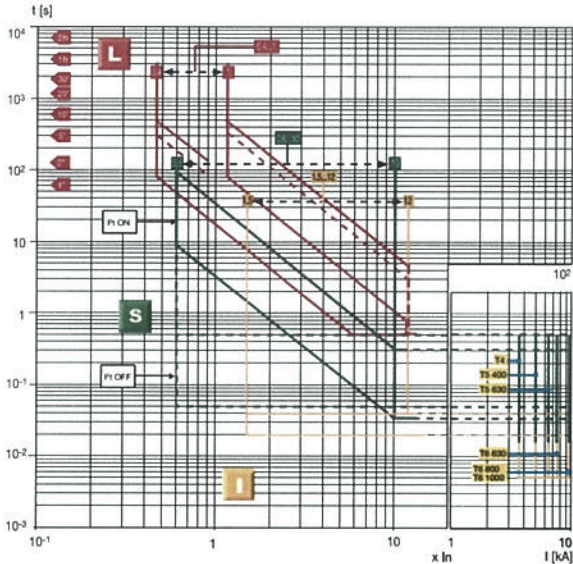
T4 250/320 - T5 400/630 - T6 630/800/1000  
PR221DS  
L-S Functions

Note: For T4 In = 320 A, T5 In = 630 A and T6 In = 1000 A  $\Rightarrow I_{p,max} = 9.5 \times I_n$

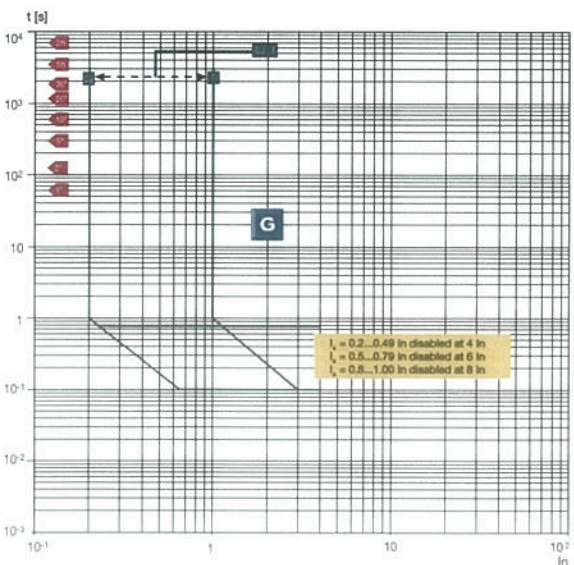


T4 250/320 - T5 400/630 - T6 630/800/1000  
PR222DS - PR222DS/PD - PR223DS  
L-S-I Functions

Note: The dotted curve of function L corresponds to the maximum delay ( $t_1$ ) which can be set at  $6 \times I_n$  in the case where 320 A CTs are used for T4 and 630 A for T5. For all the CT sizes  $t_1 = 18s$  except with 320 A CT (T4), 630 A CT (T5) and 1000 A CT (T6) where  $t_1 = 10.5s$ . For T4 In = 320 A, T5 In = 630 A and T6 In = 1000 A  $\rightarrow I_{p,max} = 9.5 \times I_n$ ,  $I_{l,max} = 9.5 \times I_n$ . For T6 In = 800 A  $\rightarrow I_{p,max} = 10.5 \times I_n$ . For PR223DS the L protection function can be set to  $I_l = 0.18 \dots 1 \times I_n$ .



T4 250/320 - T5 400/630 - T6 630/800/1000  
PR222DS - PR222DS/PD - PR223DS  
G Function



T7 800/1000/1250/1600 - PR231/P  
L-I Functions

