SACE Tmax XT4

Low voltage molded case circuit-breakers

Break new ground

- Data and connectivity
- Ease of use and installation
- Performance and protection
- Safety and reliability

The SACE Tmax XT4

The world of circuit breaking and circuit protection in your hands

The SACE Tmax XT range takes circuit protection to the next level. Designed to perform at extremely high levels, simple to install and able to provide increasingly better safety, there is a frame to meet each and every one of your requirements. From a basic solution for standard applications - such as hotels - through to advanced, heavy-duty applications with cloud connectivity for ships, chemical parks or airports, the new range has got it covered: securely, professionally, reliably.

SACE Tmax XT4
The entrepreneur

A forward-thinking, multitasker. It finds solutions for all levels of complexity.

At a glance:

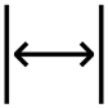
- Up to 250A
- For heavy duty
- Dimensions 105x82.5x160 (WxDxH mm)
- Thermal-magnetic, Ekip Dip, Ekip Touch/Hi-Touch

Construction characteristics

All the SACE Tmax XT molded case circuit-breakers are built in accordance with the following constructional characteristics.

Double insulation
The Tmax XT circuit-breaker has double insulation between the live power parts (excluding the terminals) and the front parts of the apparatus where the operator works during normal operation. The seat of each electrical accessory is completely segregated from the power circuit, preventing any risk of contact with live parts. The operating mechanism especially is completely insulated from the powered circuits.
Furthermore, the circuit-breaker has oversized insulation, both between the live internal parts and near the connection terminals. Furthermore, the distances exceed those required by the IEC Standards and fully comply with the prescriptions of the UL 489 Standard.

Positive operation
The operating lever always indicates the precise position of the moving contacts of the circuit-breaker, thereby guaranteeing safe and reliable signals, in compliance with IEC 60073 and IEC 60417-2 Standards (I = Closed; O = Open; yellow-green line = open due to protection trip).
The circuit-breaker operating mechanism has a free release regardless of the pressure on the lever and the speed of operation. Protection tripping automatically opens the moving contacts: to close them again, the operating mechanism must first be reset by pushing the operating lever from the intermediate position to the lowest open position.



Insulation behaviour
In the open position, the circuit-breaker guarantees insulation distances in compliance with the IEC 60947-2 Standard, thus preventing leakage currents to flow between the input and output terminals.

Tropicalization
Circuit-breakers and accessories in the Tmax XT series are tested in compliance with the IEC 60068-2-30 Standard, carrying out 2 cycles at 55 °C with the “variant 1” method (clause 7.3.3).
The suitability of the Tmax XT series under the most severe environmental conditions is further ensured with the hot-humid climate according to climatograph 8 in the IEC 60721-2-1 Standards thanks to:

- molded insulating cases made of synthetic resins reinforced with glass fibers;
- anti-corrosion treatment of the main metallic parts;
- Fe/Zn 12 zinc-plating (ISO 2081) protected by a conversion layer, free from hexavalent chromium (ROHS-compliant), with the same corrosion resistance guaranteed by ISO 4520 class 2C;
- application of anti-condensation protection for electronic overcurrent releases and relative accessories.

SACE Tmax XT switch-disconnectors

Switch-disconnectors are devices created from the corresponding circuit-breakers and feature the same overall dimensions, versions, and can be fitted with the same accessories.

Applications

These devices are mainly used as:

- general disconnection devices in sub-switchboards;
- switching and insulation devices for lines, bus bars or groups of apparatus;
- bus ties.

In the open position, the disconnector guarantees a sufficient insulation distance (between the contacts) to ensure safety and to prevent an electrical arc from striking.

Utilization category

Tmax XT disconnectors comply with utilization categories defined by IEC 60947-3 Standard.

Characteristics

Size			XT1D	XT3D	XT4D
Conventional free air thermal current, Ith		[A]	160	250	250
Poles		[No.]	3, 4	3, 4	3, 4
Versions			Fixed, Plug-in	Fixed, Plug-in	Fixed, Plug-in, Withdrawable
Rated service voltage, Ue	(AC) 50-60Hz	[V]	690	690	690
	(DC)	[V]	500	500	500
Rated insulation voltage, Ui		[V]	800	800	800
Rated impulse withstand voltage, Uimp		[kV]	8	8	8
Rated making capacity in shortcircuit, Icm	(Min) Disconnector only	[kA]	2.8	5.3	5.3
	(Max) With automatic circuit-breaker on supply side	[kA]	154	105	330
Rated short-time withstand current for 1s, Icw		[kA]	2	3	3.6
Rated operating current, Ie	**(AC) 50-60Hz**				
AC-22A	415-440Vac		160	250	250
AC-23A			125	200	200
AC-22A	690V AC		160	250	250
AC-23A			125	200	200
Rated operating current, Ie	**DC**				
DC-22A	250V DC		160 - 2p in series	250 - 2p in series	250 - 2p in series
DC-23A			125 - 2p in series	200 - 2p in series	200 - 2p in series
DC-22A	500V DC		160 - 4P in series	250 - 3p in series	250 - 2p in series
DC-23A			125 - 4P in series	200 - 3p in series	200 - 2p in series
DC-22A	750V DC		-	-	-
DC-23A			-	-	-
Electrical life AC22 / AC23 (AC) 440 V In					
Mechanical life					

(1) 1000A only for fixed execution with EF, ES, R and FCCuAl terminals. EF terminals are supplied as standard if no other terminals are ordered

Coordination

Supply side			XT1 160					XT2 160					XT3 250		XT4 250					XT5 400				
	Icu @ 415V AC		B	C	N	S	H	N	S	H	L	V	B	S	N	S	H	L	V	N	S	H	L	V
			18	25	36	50	70	36	50	70	120	150	36	50	36	50	70	120	150	36	50	70	120	200
Load side	**XT1D**	160	18	25	36	50	70	36	50	70	70	70	-	-	-	-	-	-	-	-	-	-	-	-
	XT3D	250	-	-	-	-	-	-	-	-	-	-	36	50	36	50	50	50	50	-	-	-	-	-
	XT4D	250	-	-	-	-	-	-	-	-	-	-	36	50	36	50	70	120	150	-	-	-	-	-
	XT5D	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	50	70	120	200
	XT5D	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	XT6D	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	XT6D	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	XT6D	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	XT7D	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	XT7D	1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	XT7D	1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Protection
Each switch-disconnector must be protected on the supply side by a coordinated device which safeguards it against short-circuits.
The section "Coordination" in the table below shows the correspondence between each switch-disconnector and the relevant circuit-breaker.

Making capacity
The making capacity Icm is highly important since a switch-disconnector must be able to withstand the dynamic, thermal and current stresses which can occur during closing operations without being destroyed, right up to short-circuit closing conditions.

000	XT5D		XT6D	XT7D	XT7D M
	400	630	630 - 800 - 1000	1000 - 1250 - 1600	1000 - 1250 - 1600
	3, 4	3, 4	3, 4	3, 4	3, 4
	Fixed, Plug-in, Withdrawable		Fixed, Withdrawable [1]	Fixed, Withdrawable	Fixed, Withdrawable
	690	690	690	690	690
	750	750	750	750	750
	1000	1000	1000	1000	1000
	8	8	8	8	8
	7,65	12,3	30	40	40
	440	440	220	252	252
	5	7,6	15	20	20

400	630	630 - 800 - 1000	1000 - 1250 - 1600	1000 - 1250 - 1600
400	630	630 - 800	1000 - 1250 - 1600	1000 - 1250 - 1600
400	630	630 - 800 - 1000	1000 - 1250 - 1600	1000 - 1250 - 1600
400	630	630 - 800	1000 - 1250 - 1600	1000 - 1250 - 1600

400 2p in series	630 2p in series	630 - 800 - 1000 - 2p in series	1000 - 1250 - 1600 - 2p in series	1000 - 1250 - 1600 - 2p in series
400 2p in series	630 2p in series	630 - 800 - 2p in series	1000 - 1250 - 1600 - 2p in series	1000 - 1250 - 1600 - 2p in series
400 2p in series	630 2p in series	630 - 800 - 1000 - 2p in series	1000 - 1250 - 1600 - 3p in series	1000 - 1250 - 1600 - 3p in series
400 2p in series	630 2p in series	630 - 800 - 2p in series	1000 - 1250 - 3p in series	1000 - 1250 - 3p in series
400 3p in series	630 3p in series	630 - 800 - 1000 - 3p in serie	1000 - 1250 - 1600 - 4 p in series	1000 - 1250 - 1600 - 4 p in series
400 3p in series	630 3p in series	630 - 800 - 3p in serie	1000 - 1250 - 4 p in series	1000 - 1250 - 4 p in series
5,000	3,000	3,500	2,500	2,500
20,000	20,000	20,000	10,000	20,000

XT5 630					XT6 800			XT6 1000			XT7 1000			XT7 1250			XT7 1600			XT7 M 1000			XT7 M 1250			XT7 M 1600		
N	S	H	L	V	N	S	H	N	S	H	S	H	L	S	H	L	S	H	L	S	H	L	S	H	L	S	H	L
36	50	70	120	200	36	50	70	36	50	70	50	70	120	50	70	120	50	70	120	50	70	120	50	70	120	50	70	120
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	50	70	120	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	50	70	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
-	-	-	-	-	36	50	70	-	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
-	-	-	-	-	-	-	-	36	50	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	50	70	120	-	-	-	-	-	-	50	70	120	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	70	120	-	-	-	-	-	-	50	70	120	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	70	120	-	-	-	-	-	-	50	70	120

Summary

A brief overview and more useful information

Order Codes

A brief overview and more useful information

The link provided here will redirect you to the **detailed product catalog**, where you can find more **information about the products and the order codes.**

https://search.abb.com/library/Download.aspx?DocumentID=1SDC210100D0203&LanguageCode=en&DocumentPartId=&Action=Launch