

## LV Breakers and Switches





## Electrification products

ABB is a global leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. ABB in India serves customers in process, manufacturing and consumer industries, utilities, the oil & gas sector and infrastructure markets through a wide manufacturing and marketing network.

ABB offers a full range of low- and medium-voltage solutions to connect, protect, control and measure a wide range of electrical systems for all major industries, including the residential sector.

The business improves the reliability and efficiency of electrical installations through modular substation packages, distribution automation products, switchgear, circuit breakers, measuring and sensing devices, control products, wiring accessories, and enclosures and

cabling systems, including KNX systems designed to integrate and automate a building's lighting, ventilation, heating, security and data communication networks.

ABB's product range serves the diverse needs of customers, offering value-for-money and high levels of quality and reliability. These products are backed by the technological expertise of ABB's centres of excellence across the globe, each of which excel in a specific range of low voltage products.

ABB's electrification products offering in India are designed, manufactured and tested in-house in conformance with requirements of the ISO 9000 series. These products conform to the latest IEC standards, EN specifications, national standards such as IS, BS, VDE, etc., in addition to the "CE" mark.

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**ABB Ability™** Electrical distribution control system is the innovative cloud-computing platform designed to monitor, optimize, predict and control the electrical system.

**ABB Ability™** Electrical distribution control system is built on a state-of-the-art cloud architecture for data collection, processing and storage.

This cloud architecture has been developed together with Microsoft in order to enhance performance and guarantee the highest reliability and security.



# Architecture

## Truly plug & play

### Embedded solution with Ekip Com Hub

Emax 2, Ekip UP and TruONE equipped with the new Ekip Com Hub establishes the cloud connection for the whole switchboard.

This dedicated cartridge-type communication module just needs to be inserted into the terminal box and connected to the internet.

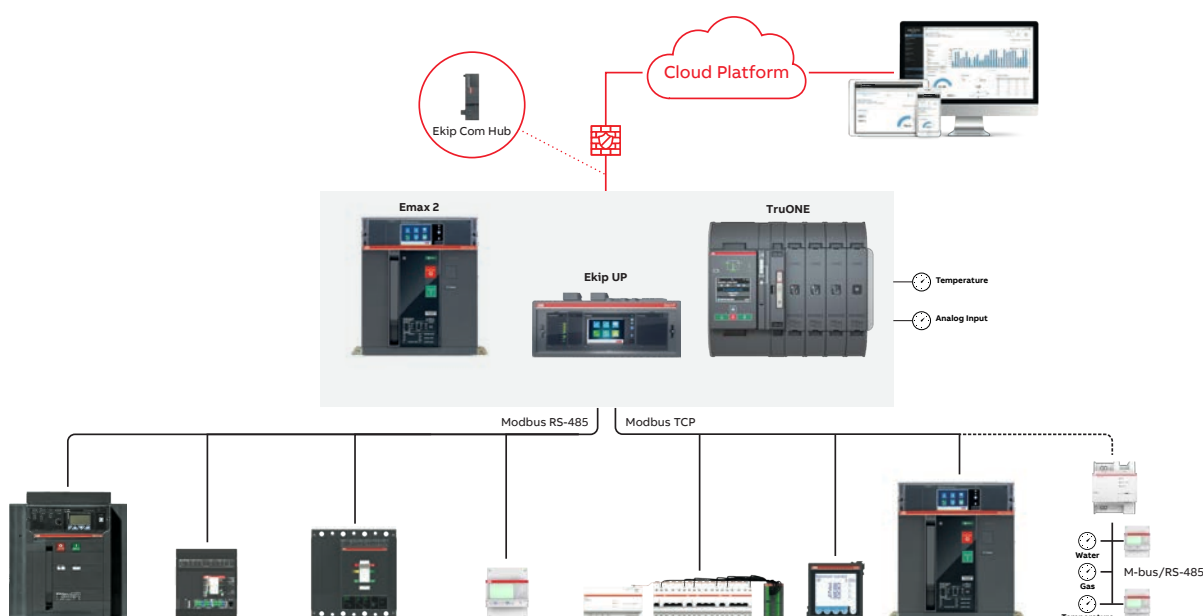


ABB showcases a further evolution in the low-voltage distribution business, setting a new benchmark in terms of simplicity and performance.

ABB Ability™ Electrical Distribution Control System enables the collection of relevant information from the ABB devices installed in the low-voltage power distribution system.

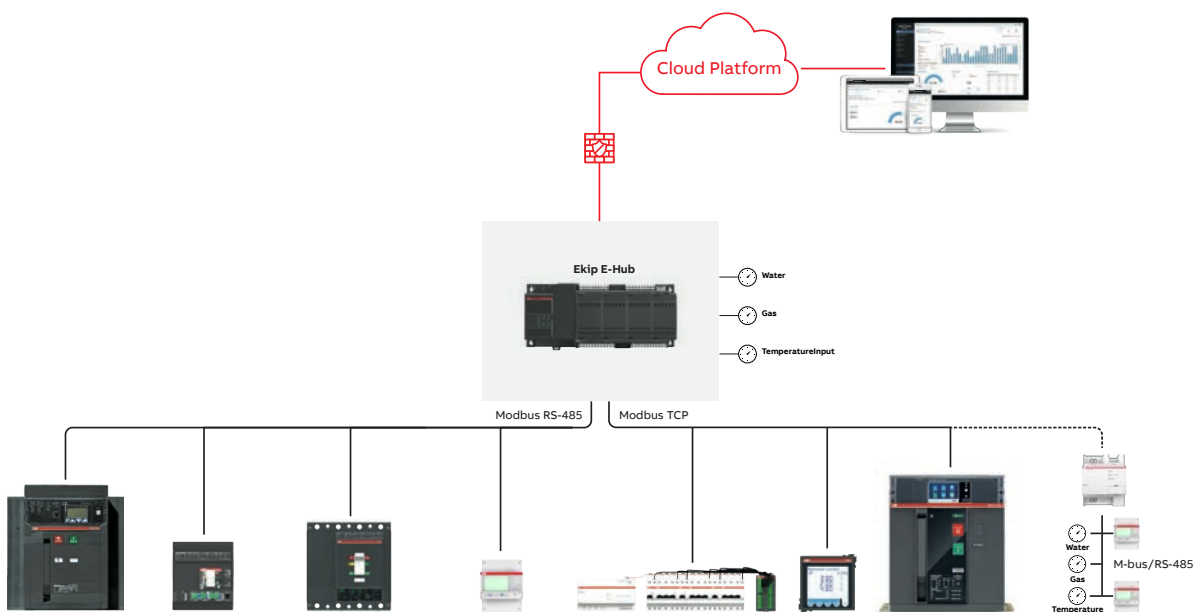
These devices can be connected, plug & play, to the cloud-computing platform by sharing data either with Emax 2 (equipped with Ekip Com Hub) or with Ekip E-Hub via Modbus RS-485, Modbus TCP and Ekip Link.

Family	Device
Low voltage MCCB	Tmax XT
	Tmax T
Low voltage ACB	New Emax
	Emax 2
Digital units	Ekip UP
Low voltage switches and fusegear	TruONE ATS
	Slimline XR ITS 2.1
Digital inputs interface	Ekip Signalling MODBUS TCP
Sub-Metering	EQ Meters
Power meters	M2M
Branch monitoring	CMS700
Medium voltage relays	REF 542 Plus
And many others to come...	

### External solution with Ekip E-Hub

The Ekip E-Hub module can be mounted on DIN rail to collect data throughout the system. Moreover, it is possible to connect sensors for

environmental parameters (temperature, water, gas) via both analog and digital I/O. Modules for Wi-Fi or GPRS connection are provided as optional features.



INFORMATION										COMMUNICATION
State	Current	Voltages	Power	Energy	Power factor	Power quality	Maintenance & Diagnostics	Load management	Analog or pulse/digital inputs	Protocol
.	.	.	.	.	.	.	.	.	.	Modbus RS485, Modbus TCP, Ekip Com Hub
.	.	.	.	.	.	.	.	.	.	Modbus RS485
.	.	.	.	.	.	.	.	.	.	Modbus RS485
.	.	.	.	.	.	.	.	.	.	Modbus RS485, Modbus TCP, Ekip Com Hub
.	.	.	.	.	.	.	.	.	.	Modbus RS485, Modbus TCP, Ekip Com Hub
.	.	.	.	.	.	.	.	.	.	Modbus RS485, Modbus TCP, Ekip Com Hub
.	.	.	.	.	.	.	.	.	.	Modbus RS485
.	.	.	.	.	.	.	.	.	.	Modbus TCP
.	.	.	.	.	.	.	.	.	.	Modbus RS485
.	.	.	.	.	.	.	.	.	.	Modbus RS485, Modbus TCP
.	.	.	.	.	.	.	.	.	.	Modbus TCP
.	.	.	.	.	.	.	.	.	.	Modbus TCP

\* Provided the product with dedicated accessories for communication and metering functions \*\* only with Ekip E-Hub module

ABB Ability Electrical Distribution Control System brings advantages to customers from the design to the operations stage.

The digital solution adds value to facilities, meeting customer demands and enabling them to comply with higher energy efficiency standards.

Real time analysis of valuable data from field devices enables customers to closely monitor the performance of multiple installations with a single supervision system.

Clear information about consumption and improvement opportunities makes cutting waste and improving energy efficiency simple. Customers also benefit from lower energy bills and reductions in unplanned downtime.

ABB's "plug and play" devices make installation quick and easy. Customers can make existing installations smart with no need to replace components. New and retrofitted solutions are up and running in no time, immediately starting to collect data.



### Speed up your projects

- Increase the facility's value by 5%
- Reduce investment in supervision systems by 15%
- Achieve compliance or higher class of energy efficiency standards
- Faster payback



### Easy to install

- Connect to the cloud in only 10 minutes
- Reduce cabling by 60% and connectivity components by 25%
- Upgrade in 1 day the existing installation
- Upgrade with zero component replacement and existing installation



### Energy efficiency

- Save up to 20% on maintenance costs
- Save up to 20% on energy bill
- Get proactive alerts and guarantee operations in 1 minute
- Remove energy inefficiency by up to 10%



Global website for  
ABB Ability™ EDCS

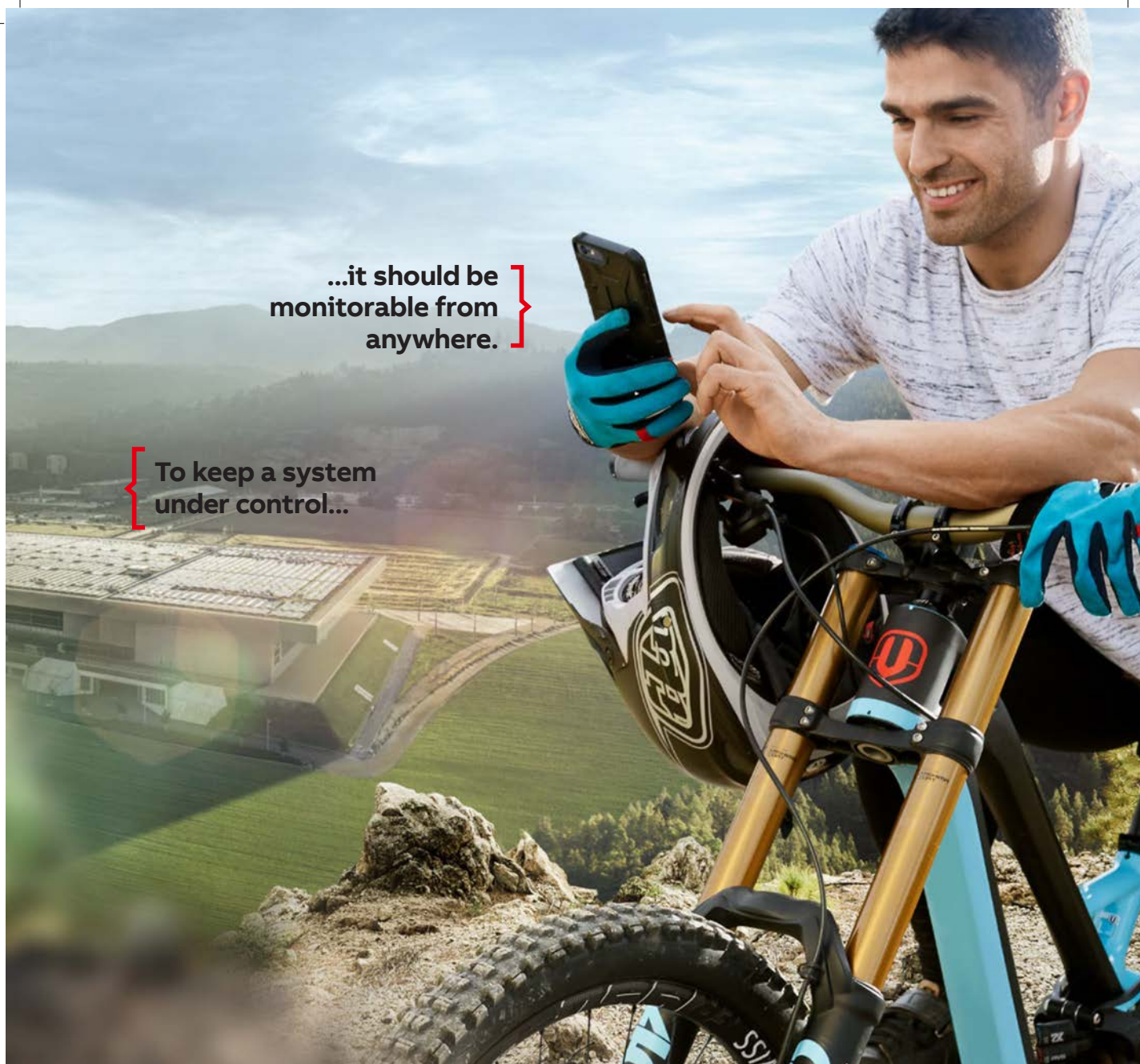


# ABB's comprehensive range of breakers and switches

The range of ABB breakers and switches ranks amongst the most extensive on the market with a full range of innovative solutions for various applications, helping to optimise resources, reduce energy costs, boost productivity.

- Moulded case circuit breakers
- Air circuit breakers
- HRC fuse & fuse base
- Switch disconnecter fuse
- Switch disconnectors
- Changeover switches - manual & motorized
- Auto transfer switches
- Cam switches
- Cable distribution cabinet - Kabeldon
- Fuse gear - easyline and inline (Fuse switch disconnecter)
- Switch disconnecter for DC and photovoltaic application
- MCCB for DC and photovoltaic application





...it should be  
monitorable from  
anywhere. }

{ To keep a system  
under control...

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## Introducing new **SACE Tmax XT** with cloud-connected moulded case circuit breakers.

### **SACE Tmax XT**

Plant management of the future – SACE Tmax XT sets standards in modern plant and energy management. Access, monitor and control information remotely, anywhere, at any time. Improving efficiency and saving energy. [go.abb/xt](https://go.abb/xt)

**ABB**



## ArTu. Born certified

Fully checked and certified (IEC 60439-1 and IEC 61439-1 and 2 Standard) by an external independent organisation (Acea Lovag), the ArTu switchgear is a synonym of safety and quality. The certification is the fruit of severe tests carried out on the whole configuration, consisting of metalwork structures, circuit-breakers and busbar system.

The ArTu K series switchgear is ideal for primary distribution switchgear (PowerCenter type) upto 6300A with air and moulded-case circuit-breakers and any internal segregations up to Form 4, and for floor-mounted secondary distribution switchgear with moulded-case and modular circuit-breakers. The switchgear has been tested for Internal Arc and Seismic.



### The ArTu switchgear is noted for the following features:

- Integrated range of modular metalwork structures up to 6300 A with common accessories;
- Possibility of fulfilling all application requirements in terms of installation (floorstanding, modular and corner versions) and degree of protection (IP31, IP41, IP54 & IP65)
- Maximum integration with modular apparatus and the moulded-case and air circuit-breakers, so that additional drilling or adaptations are not required
- Minimum switchgear assembly time, thanks to the simplicity of the kits, standardization of the small assembly items, self-supporting elements and the presence of clear reference points for assembly of the plates and panels – Segregations in kits up to Form 4.

The use and installation of the kits according to the instructions provided means that assembly and cabling times can be reduced to a minimum, for example thanks to the reference points for positioning the panels and plates, and that respect of the insulation distances and the rated characteristics of the circuit-breakers are guaranteed.

## Emax - Low voltage air circuit breakers

- CT (Rogowski coil) range of 400 - 6300A (E1, E2, E3, E4 and E6) with breaking capacity range of 42-150KA
  - Configured breakers are now available in E1, E2 and E3 frames
  - SACE Emax circuit-breakers and their accessories conform to the international IEC 60947, EN 60947 CEI EN 60947 and IEC 61000 standards and comply with following EC directives "Low Voltage Directive" (LVD) no 73/23 EEC
  - "Electromagnetic Compatibility Directive" (EMC) nr. 89/336 EEC
  - Complete range of common accessories
  - Double insulation
  - Same height and depth for the whole range
  - Protection releases provide complete set of standard protection function, advanced protection functions, measurement functions
  - Optional modules (measurements, signalling, communication, wireless com) to upgrade the protection releases
  - Neutral protection from OFF to 200%
  - Interchangeability of releases
  - Low voltage switch disconnectors upto 6300 amps and automatic circuit breakers upto 5000 amps in 1000V DC
- Note : Prices on request



Extremely Simple Installation



Completely re-engineered protection releases



Fully Modular construction

# Emax - Low voltage air circuit breakers

Configured breaker		Pole	PR121 LI	PR121 LSIG	PR122 LSIG
Frame	Rating				
E1 - 50KA -Withdrawable moving part - WMP	800A Manual	3P	1SDA055712R1	1SDA055714R1	1SDA055717R1
	1000A Manual		1SDA059214R1	1SDA059222R1	1SDA059234R1
	1250A Manual		1SDA055744R1	1SDA055746R1	1SDA055749R1
	1600A Manual		1SDA055776R1	1SDA055778R1	1SDA055781R1
E2 - 65KA -Withdrawable moving part - WMP	2000A Manual		1SDA055936R1	1SDA055938R1	1SDA055941R1
E3 - 65KA -Withdrawable moving part - WMP	2500A Manual		1SDA056128R1	1SDA056130R1	1SDA056133R1
	3200A Manual		1SDA056160R1	1SDA056162R1	1SDA056165R1
E4 - 75KA -Withdrawable moving part - WMP	4000A Manual		1SDA056800R1	1SDA056802R1	1SDA056805R1
E1 - Withdrawable fixed part - WFP - HR-HR	FIXED PART WFP HR-HR	3P	1SDA059666R1 ■		
E2 - Withdrawable fixed part - WFP - HR-HR			1SDA059667R1 ■		
E3 - Withdrawable fixed part - WFP - HR-HR			1SDA059669R1 ■		
E4 - Withdrawable fixed part - WFP - HR-HR			1SDA059670R1 ■		
E1 - 50KA -Withdrawable moving part - WMP	800A Manual	4P	1SDA055720R1	1SDA055722R1	1SDA055725R1
	1000A Manual		1SDA059216R1	1SDA059224R1	1SDA059236R1
	1250A Manual		1SDA055752R1	1SDA055754R1	1SDA055757R1
	1600A Manual		1SDA055784R1	1SDA055786R1	1SDA055789R1
E2S - 65KA -Withdrawable moving part - WMP	2000A Manual		1SDA055944R1	1SDA055946R1	1SDA055949R1
E3 - 65KA -Withdrawable moving part - WMP	2500A Manual		1SDA056136R1	1SDA056138R1	1SDA056141R1
	3200A Manual		1SDA056168R1	1SDA056170R1	1SDA056173R1
E4 - 75KA -Withdrawable moving part - WMP	4000A Manual		1SDA056808R1	1SDA056810R1	1SDA056813R1
E1 - Withdrawable fixed oart - WFP - HR-HR	FIXED PART WFP HR-HR	4P	1SDA059762R1 ■		
E2 - Withdrawable fixed part - WFP - HR-HR			1SDA059763R1 ■		
E2S - Withdrawable fixed part - WFP - HR-HR			1SDA059764R1 ■		
E3 - Withdrawable fixed part - WFP - HR-HR			1SDA059765R1 ■		
E4 - Withdrawable fixed part - WFP - HR-HR			1SDA059766R1 ■		

\* All the configured breaker will have accessories fitted from the factory

## Note:

1. Withdrawable fixed parts (WFP) and withdrawable moving parts (WMP) are to be ordered together for a draw out complete breaker.
2. To convert the breaker from manual operated (MDO or MF) to electrical operated (EDO or EF), order MDO/EDO conversion kit which comprises closing coil, opening coil and motor operator. Suitable operating voltage for the conversion kit has to be mentioned.
3. For other current rating and breaking capacity, ACB requirement, contact our nearest sales office.

## Tmax moulded case circuit breakers

Tmax moulded-case circuit-breakers guarantee an extremely high performance level while being progressively smaller in size, simple to install and able to provide increasingly better safety guarantees for the operator. In addition to being ideal for the secondary distribution of alternate and direct current, they feature dedicated solutions for all application requirements.

Moulded-case circuit-breakers can be used in low voltage civil and industrial installations with 1 to 3200 A operating current. The Tmax family includes 9 circuit-breaker sizes in three- or four-pole versions:

- XT1, XT2, XT3 and XT4 up to 250A;
- T4, T5 and T6 up to 1000A;
- T7 and T8 up to 3200A.

The ultimate short-circuit breaking capacity (Icu) at 415V ranges from 18kA to 200kA, or up to 100kA for 690V. The following ranges are available:

- Circuit-breakers for AC and DC power distribution;
- Circuit-breakers for zone selectivity;
- Circuit-breakers for motor protection;
- Circuit-breakers for application up to 1150V AC and 1500V DC
- Switch-disconnectors.

Tmax circuit-breakers can be equipped with thermomagnetic, magnetic only or electronic trip units; all of which are interchangeable. Since assembly instructions are simple, trip units can quickly and easily be replaced; even in the field. All this makes the circuit-breakers very easy to operate with considerable savings due to rationalized stock management.

All Tmax circuit breakers can be enhanced with a vast range of standardized accessories. This convenience not only cuts down on inventory, but creates an extremely flexible and easily managed solution.



# Tmax circuit breakers

Type	Iu (40° C) [A]	Ue [V]		Category	Release	Icu (380 - 415 V AC) [kA]									
		AC	DC			16	25	36	50	70	85	100	120	150	200
XT1	160	690	500	A	TMD/TMF MF/MA	B	C	N	S	H					
XT2	160	690	500	A	TMD/TMA MF/MA Ekip LS/I Ekip I Ekip LSI Ekip LIG Ekip LSIG Ekip M-I Ekip M-LIU Ekip M-LRIU Ekip N-LS/I			N	S	H		L	V		
XT3	250	690	500	A	MF/MA TMD TMG			N	S						
XT4	250	690	500	A	TMD/TMA MF/MA Ekip LS/I Ekip I Ekip LSI Ekip LIG Ekip LSIG Ekip E-LSIG Ekip M-LIU Ekip M-LRIU Ekip G-LS/I Ekip N-LS/I			N	S	H		L	V		
T5	400 630	690 1150	750 1000	B (400 A) A (630 A)	TMA (500 A) TMG (500 A) PR221DS PR222DS Ekip M Ekip E-LSIG			N	S	H		L		V	
T6	630 800 1000	690 1150	750 1000	B (630A - 800 A) A (1000 A)	TMA (800 A) PR221DS PR222DS Ekip M			N	S	H		L		V	
T7	800 1000 1250 1600	690		B	PR231/P PR232/P PR331/ P PR332/P				S	H		L	V		

## Trip Units

### Thermal magnetic trip units

- MA - Magnetic only trip unit with adjustable magnetic thresholds for motor protection
- TMF - Fixed thermal and fixed magnetic for power distribution
- TMD - Adjustable thermal (70-100% of I<sub>n</sub>) and fixed magnetic (10 x I<sub>n</sub>) for power distribution
- TMA - Adjustable thermal (70-100% of I<sub>n</sub>) and adjustable magnetic (5-10 of I<sub>n</sub>) for power distribution
- TMG - Adjustable thermal (70-100% of I<sub>n</sub>) and low fixed magnetic (3 x I<sub>n</sub>) for generator protection

### Microprocessor based electronic trip units

Ekip LS/I or Ekip LSI	L = 0.40 - 1 of In	Ekip LIG	L = 0.40 - 1 of In	Ekip LSIG or Ekip E-LSIG	Ekip M-LIU	L = 0.4 - 1 of In	Ekip M-LRIU	L = 0.4 - 1 of In	
	S = 1 - 10 of In		I = 1 - 10 of In			S = 0.6 - 10 of In		I = 6 - 13 of In	R = 3 - 9 of In
	I = 1 - 10 of In		G = 0.2 - 1 of In			I = 1.5 - 12 of In		U* = ON or OFF	I = 6 - 13 of In
						G = 0.2 - 1 of In			G = 0.2 - 1 of In
		New						U* = ON or OFF	
PR221	L = 0.40 - 1 of In	PR222	L = 0.4 - 1 of In	PR231	PR331	L = 0.4 - 1 of In	L = 0.4 - 1 of In		
	S = 1 - 10 of In		S = 0.6 - 10 of In			S = 1 - 10 of In	S = 0.6 - 10 of In		
	I = 1 - 10 of In		I = 1.5 - 12 of In			I = 1 - 12 of In	I = 1.5 - 15 of In		
			G = 0.2 - 1 of In				G = 0.2 - 1 of In		

L = Overload    S = Short circuit    I = Instantaneous short circuit    G = Earth fault

U = phase loss (U): With selector in ON position, circuit breaker trips if at least one current phase is lower than 0.1xI<sub>n</sub> and at least a second one higher than 0.25xI<sub>n</sub>;

Ekip N-LS/I : Neutral can be set in the OFF or ON positions, at 100% or at 160% of the phases

Ekip G-LS/I : Neutral, in four-pole circuit-breakers, can be set in the OFF, ON positions at 50% or 100% of the phases;

Note: For detailed information about trip units, refer technical catalogue.



# Tmax power distribution circuit breakers

## XT1



Breaking capacity at 415VAC

	Icu	Ics (Icu)
B	18kA	100%
C	25kA	100%
N	36kA	100%

TMD			B		C		N	
Frame	In (A)	Poles	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)
XT1 160	16	3	1SDA066799R1	6,790	1SDA080825R1 *	7,300	1SDA080827R1 *	9,840
	20		1SDA066800R1		1SDA080826R1 *		1SDA080828R1 *	
	25		1SDA066801R1		1SDA067391R1		1SDA080829R1	
	32		1SDA066802R1		1SDA067392R1		1SDA067411R1	
	40		1SDA066803R1 ■		1SDA067393R1 ■		1SDA067412R1 ■	
	50		1SDA066804R1 ■		1SDA067394R1 ■		1SDA067413R1 ■	
	63		1SDA066805R1 ■		1SDA067395R1 ■		1SDA067414R1 ■	
	80		1SDA066806R1 ■		1SDA067396R1 ■		1SDA067415R1 ■	
	100		1SDA066807R1 ■		1SDA067397R1 ■		1SDA067416R1 ■	
	125		1SDA066808R1 ■	9,600	1SDA067398R1 ■	11,240	1SDA067417R1 ■	11,360
	160		1SDA066809R1 ■	11,020	1SDA067399R1 ■	14,510	1SDA067418R1 ■	15,140
	16	4	1SDA066810R1	9,370	1SDA080840R1 *	10,580	1SDA080842R1 *	12,440
	20		1SDA066811R1		1SDA080841R1 *		1SDA080843R1 *	
	25		1SDA066812R1		1SDA067400R1		1SDA080844R1 ■	
	32		1SDA066813R1 ■		1SDA067401R1 ■		1SDA067419R1 ■	
	40		1SDA066814R1 ■		1SDA067402R1 ■		1SDA067420R1 ■	
	50		1SDA066815R1		1SDA067403R1 ■		1SDA067421R1	
	63		1SDA066816R1 ■		1SDA067404R1 ■		1SDA067422R1 ■	
	80		1SDA066817R1 ■		1SDA067405R1 ■		1SDA067423R1 ■	
	100		1SDA066818R1 ■		1SDA067406R1 ■		1SDA067424R1 ■	
	125		1SDA066888R1 ■	11,870	1SDA067409R1 ■	13,370	1SDA067427R1 ■	14,610
	160		1SDA066821R1 ■	15,140	1SDA067410R1 ■	17,320	1SDA067428R1 ■	18,400

\*TMF trip unit

■ Stock items

# Tmax power distribution circuit breakers

## XT1



Breaking capacity at 415VAC

	Icu	Ics (Icu)
S	50kA	75%
H	70kA	50%

### TMD / TMF\*

			S		H	
Frame	In (A)	Poles	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)
XT1 160	16	3	1SDA080830R1*	10,820	1SDA080835R1*	12,990
	20		1SDA080831R1*		1SDA080836R1*	
	25		1SDA080832R1		1SDA080837R1	
	32		1SDA080833R1 ■		1SDA080838R1	
	40		1SDA080834R1 ■		1SDA080839R1	
	50		1SDA067431R1		1SDA067449R1	
	63		1SDA067432R1 ■		1SDA067450R1	
	80		1SDA067433R1 ■		1SDA067451R1	
	100		1SDA067434R1 ■		1SDA067452R1	
	125	4	1SDA067435R1 ■	14,060	1SDA067453R1	17,320
	160		1SDA067436R1 ■	17,320	1SDA067454R1	21,650
	16		1SDA080845R1*	15,690	1SDA080850R1*	17,860
	20		1SDA080846R1*		1SDA080851R1*	
	25		1SDA080847R1		1SDA080852R1	
	32		1SDA080848R1		1SDA080853R1	
	40		1SDA080849R1		1SDA080854R1	
	50		1SDA067439R1		1SDA067457R1	
	63		1SDA067440R1 ■		1SDA067458R1	
	80		1SDA067441R1		1SDA067459R1	
	100		1SDA067442R1 ■		1SDA067460R1	
	125		1SDA067445R1 ■	18,400	1SDA067463R1	20,560
	160		1SDA067446R1	20,560	1SDA067464R1	22,730

\*TMF trip unit

## XT3

Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36kA	75%
S	50kA	50%

### TMD

			N		S	
Frame	In (A)	Poles	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)
XT3 250	200	3	1SDA068058R1 ■	17,880	1SDA068220R1 ■	19,730
	250		1SDA068059R1 ■	20,510	1SDA068221R1 ■	23,970
	200	4	1SDA068069R1 ■	23,120	1SDA068231R1 ■	26,710
	250		1SDA068070R1 ■	26,290	1SDA068232R1 ■	28,290

■ Stock items

# Tmax power distribution circuit breakers

Protection: TMD/TMA

## XT2/XT4/T5/T6



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%



### TMD / TMA\*

			N		S		H	
Frame	In (A)	Poles	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)
XT2160	1.6	3	1SDA067000R1	12,560	1SDA067540R1	13,740	1SDA067584R1	19,040
	2		1SDA067001R1		1SDA067541R1		1SDA067585R1	
	2.5		1SDA067002R1		1SDA067542R1		1SDA067586R1	
	3.2		1SDA067003R1		1SDA067543R1		1SDA067587R1	
	4		1SDA067004R1		1SDA067544R1		1SDA067588R1	
	5		1SDA067005R1		1SDA067545R1		1SDA067589R1	
	6.3		1SDA067006R1		1SDA067546R1		1SDA067590R1	
	8		1SDA067007R1		1SDA067547R1		1SDA067591R1	
	10		1SDA067008R1		1SDA067548R1 ■		1SDA067592R1	
	12.5		1SDA067009R1		1SDA067549R1		1SDA067593R1	
	16		1SDA067010R1 ■	12,020	1SDA067550R1 ■	13,200	1SDA067594R1	18,500
	20		1SDA067011R1 ■		1SDA067551R1		1SDA067595R1	
	25		1SDA067012R1		1SDA067552R1 ■		1SDA067596R1	
	32		1SDA067013R1 ■		1SDA067553R1 ■		1SDA067597R1	
	40		1SDA067014R1 ■		1SDA067554R1 ■		1SDA067598R1	
	50		1SDA067015R1		1SDA067555R1 ■		1SDA067599R1	
	63		1SDA067016R1 ■		1SDA067556R1 ■		1SDA067600R1 ■	
	80		1SDA067017R1		1SDA067557R1 ■		1SDA067601R1	
	100		1SDA067018R1 ■		1SDA067558R1 ■		1SDA067602R1 ■	
	125		1SDA067019R1 ■	14,610	1SDA067559R1 ■	16,890	1SDA067603R1 ■	25,660
XT4 250	160		1SDA067020R1 ■	17,860	1SDA067560R1 ■	20,890	1SDA067604R1	29,330
	200		1SDA068090R1 ■	21,240	1SDA068310R1 ■	23,890	1SDA068343R1	30,260
	225		1SDA068091R1	23,890	1SDA068311R1	24,410	1SDA068344R1	31,860
	250		1SDA068092R1 ■	24,410	1SDA068312R1 ■	25,590	1SDA068345R1 ■	32,390
T5	320	3	1SDA054436R1 ■	29,790	1SDA054440R1 ■	32,740	1SDA054444R1 ■	40,670
	400		1SDA054437R1 ■		1SDA054441R1 ■		1SDA054445R1 ■	
	500		1SDA054456R1 ■		1SDA054461R1 ■		1SDA054465R1	
T6	630		1SDA060202R1 ■	43,610	1SDA060204R1 ■	44,900	1SDA060206R1	53,470
	800		1SDA060214R1 ■	56,320	1SDA060216R1 ■	59,060	1SDA060218R1 ■	60,300

\* 40 A onwards

■ Stock items

# Tmax power distribution circuit breakers

Protection: TMA



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%



## TMD / TMA\*

			N		S		H	
Frame	In (A)	Poles	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)
XT2160	1.6	4	1SDA067021R1	16,670	1SDA067561R1	18,080	1SDA067605R1	23,270
	2		1SDA067022R1		1SDA067562R1		1SDA067606R1	
	2.5		1SDA067023R1		1SDA067563R1		1SDA067607R1	
	3.2		1SDA067024R1		1SDA067564R1		1SDA067608R1	
	4		1SDA067025R1		1SDA067565R1		1SDA067609R1	
	5		1SDA067026R1		1SDA067566R1		1SDA067610R1	
	6.3		1SDA067027R1		1SDA067567R1		1SDA067611R1	
	8		1SDA067028R1		1SDA067568R1		1SDA067612R1	
	10		1SDA067029R1	16,130	1SDA067569R1	17,530	1SDA067613R1	22,850
	12.5		1SDA067030R1		1SDA067570R1		1SDA067614R1	
	16		1SDA067031R1		1SDA067571R1		1SDA067615R1	
	20		1SDA067032R1		1SDA067572R1		1SDA067616R1	
	25		1SDA067033R1		1SDA067573R1		1SDA067617R1	
	32		1SDA067034R1		1SDA067574R1 ■		1SDA067618R1	
	40		1SDA067035R1		1SDA067575R1		1SDA067619R1	
	50		1SDA067036R1		1SDA067576R1		1SDA067620R1	
XT4 250	63		1SDA067037R1 ■	19,490	1SDA067577R1 ■	21,970	1SDA067621R1	28,140
	80		1SDA067038R1		1SDA067578R1		1SDA067622R1	
	100		1SDA067039R1 ■		1SDA067579R1 ■		1SDA067623R1	
	125		1SDA067042R1 ■		1SDA067582R1 ■		1SDA067626R1	
T5	160	4	1SDA067043R1 ■	23,270	1SDA067583R1 ■	25,970	1SDA067627R1	34,410
	200		1SDA068109R1 ■	28,680	1SDA068329R1 ■	32,390	1SDA068362R1	37,160
	225		1SDA068110R1	29,190	1SDA068330R1	32,920	1SDA068363R1	37,700
	250		1SDA068111R1 ■	29,730	1SDA068331R1 ■	33,450	1SDA068364R1	39,190
T6	320	4	1SDA054477R1 ■	36,090	1SDA054479R1 ■	39,890	1SDA054481R1	47,200
	400		1SDA054478R1 ■		1SDA054480R1 ■		1SDA054482R1 ■	
	500		1SDA054487R1 ■	48,510	1SDA054489R1 ■	53,120	1SDA054491R1 ■	63,740
	630	4	1SDA060210R1 ■	52,300	1SDA060211R1 ■	57,640	1SDA060212R1	66,510
	800		1SDA060222R1 ■	63,640	1SDA060223R1 ■	69,730	1SDA060224R1	72,440

\* 40 A onwards

■ Stock items

# Tmax power distribution circuit breakers

Protection: LS/I

## XT2/XT4/T5/T6



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%



### Protection : LS/I

			N		S		H	
Frame	In (A)	Poles	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
XT2 160	10	3	1SDA067054R1	19,800	1SDA067800R1	23,800	1SDA067857R1	26,630
	25		1SDA067055R1		1SDA067801R1		1SDA067858R1	
	63		1SDA067056R1	17,630	1SDA067802R1	21,650	1SDA067859R1	24,460
	100		1SDA067057R1		1SDA067803R1		1SDA067860R1	
	160		1SDA067058R1		1SDA067804R1		1SDA067861R1	
XT4 250	250	3	1SDA068126R1	29,440	1SDA068475R1	34,640	1SDA068515R1	39,990
T5 400	400		1SDA054317R1	40,030	1SDA054333R1	41,870	1SDA054349R1	53,120
T5 630	630		1SDA054396R1	42,630	1SDA054404R1	44,520	1SDA054412R1	56,540
T6 800	800		1SDA060268R1	65,490	1SDA060278R1	72,610	1SDA060289R1	90,160
T6 1000*	1000		1SDA060537R1	1,00,770	1SDA060547R1	1,08,730	1SDA060561R1	1,29,940

Frame	In (A)	Poles	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
XT2 160	10	4	1SDA067090R1	25,120	1SDA067833R1	29,650	1SDA067890R1	33,230
	25		1SDA067091R1		1SDA067834R1		1SDA067891R1	
	63		1SDA067092R1	22,940	1SDA067835R1	27,480	1SDA067892R1	31,050
	100		1SDA067093R1		1SDA067836R1		1SDA067893R1	
	160		1SDA067095R1		1SDA067838R1	38,530	1SDA067895R1	41,780
XT4 250	250	4	1SDA068147R1	38,420	1SDA068495R1	42,910	1SDA068535R1	46,420
T5 400	400		1SDA054325R1	49,720	1SDA054341R1	56,810	1SDA054357R1	66,400
T5 630	630		1SDA054400R1	58,060	1SDA054408R1	63,220	1SDA054416R1	73,740
T6 800	800		1SDA060273R1	74,990	1SDA060283R1	91,490	1SDA060294R1	1,11,620
T6 1000*	1000		1SDA060542R1	1,45,840	1SDA060556R1	1,52,470	1SDA060566R1	1,85,620

Note: XT2/XT4 with Ekip LS/I release ; T5-T6 with PR221 LS/I release

\*Extended front (EF) terminals are supplied as standard in T6 1000A MCCB



# Tmax power distribution circuit breakers

NEW

Protection: LIG

## MCCBs with Overload, Short circuit and Earth Fault Protections XT2/XT4

Conventional Solution	ABB Intelligent solution
MCCB with Overload (L) and Short-circuit protection (I)	MCCB with Ekip DIG LIG release - Integrated Overload(L), Short-circuit (I) and Earth Fault (G) protections
External Earth Fault Module (G)	
Power supply module	
Shunt release	
Wire-harness assembly	



## Ekip DIP LIG with XT2/XT4 MCCBs

Microprocessor based electronic trip units

Protection functions	Threshold
Overload "L" Protection	0.4...1 x In in steps of 0.04
Inst. Short-circuit "I" Protection	OFF - 1...10 x In
Earth Fault "G" Protection	OFF - 0.2 to 1 x In

Ekip LIG		N Version (Icu=Ics=36kA @ 415 V AC)			
Frame	Poles	In (A)	Ordering Code	Description	L.P.(₹)
XT2 160	3	63	1SDA100012R1 ■	XT2N 160 Ekip LIG In=63A 3p F F	26,640
		100	1SDA100013R1 ■	XT2N 160 Ekip LIG In=100A 3p F F	26,640
		160	1SDA100014R1 ■	XT2N 160 Ekip LIG In=160A 3p F F	31,100
XT4 250		250	1SDA100185R1 ■	XT4N 250 Ekip LIG In=250A 3p F F	32,720
XT2 160	4	63	1SDA100027R1 ■	XT2N 160 Ekip LIG In=63A 4p F F	34,630
		100	1SDA100028R1 ■	XT2N 160 Ekip LIG In=100A 4p F F	34,630
		160	1SDA100029R1 ■	XT2N 160 Ekip LIG In=160A 4p F F	40,430
XT4 250		250	1SDA100200R1 ■	XT4N 250 Ekip LIG In=250A 4p F F	42,530

Ekip LIG		S Version (Icu=Ics=50kA @ 415 V AC)			
Frame	Poles	In (A)	Ordering Code	Description	L.P.(₹)
XT2 160	3	63	1SDA100042R1 ■	XT2S 160 Ekip LIG In=63A 3p F F	28,090
		100	1SDA100043R1 ■	XT2S 160 Ekip LIG In=100A 3p F F	28,090
		160	1SDA100044R1 ■	XT2S 160 Ekip LIG In=160A 3p F F	33,210
XT4 250		250	1SDA100215R1 ■	XT4S 250 Ekip LIG In=250A 3p F F	34,610
XT2 160	4	63	1SDA100057R1 ■	XT2S 160 Ekip LIG In=63A 4p F F	36,510
		100	1SDA100058R1 ■	XT2S 160 Ekip LIG In=100A 4p F F	36,510
		160	1SDA100059R1 ■	XT2S 160 Ekip LIG In=160A 4p F F	43,170
XT4 250		250	1SDA100230R1 ■	XT4S 250 Ekip LIG In=250A 4p F F	44,990

■ Stock items

# Tmax power distribution circuit breakers

Protection: LSIG

## XT2/XT4/T5/T6



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%



### Ekip LSIG

Frame	In (A)	Poles
XT2 160	10	3
	25	
	63	
	100	
XT4 250	160	3
	250	
XT2 160	10	4
	25	
	63	
	100	
XT4 250	160	4
	250	

N	
Ordering code	L.P. (₹)
1SDA067072R1	38,970
1SDA067073R1	
1SDA067074R1 ■	36,800
1SDA067075R1 ■	
1SDA067076R1 ■	39,510
1SDA068141R1 ■	41,130
1SDA067108R1	46,330
1SDA067109R1	
1SDA067110R1 ■	44,150
1SDA067111R1 ■	
1SDA067113R1 ■	47,410
1SDA068162R1 ■	49,350

S	
Ordering code	L.P. (₹)
1SDA067815R1	41,660
1SDA067816R1 ■	
1SDA067817R1 ■	39,510
1SDA067818R1 ■	
1SDA067819R1 ■	42,760
1SDA068490R1 ■	43,840
1SDA067851R1	49,560
1SDA067852R1	
1SDA067853R1 ■	47,410
1SDA067854R1 ■	
1SDA067856R1 ■	51,310
1SDA068510R1 ■	52,600

H	
Ordering code	L.P. (₹)
1SDA067872R1	50,320
1SDA067873R1	
1SDA067874R1	48,160
1SDA067875R1	
1SDA067876R1	51,420
1SDA068530R1 ■	53,580
1SDA067908R1	59,970
1SDA067909R1	
1SDA067910R1	57,800
1SDA067911R1	
1SDA067913R1	61,690
1SDA068550R1	64,290

### PR222DS/P-LSIG

Frame	In (A)	Poles
T5 400	400	3
T5 630	630	
T6 800	800	
T6 1000*	1000	
T5 400	400	4
T5 630	630	
T6 800	800	
T6 1000*	1000	

N	
Ordering code	L.P. (₹)
1SDA054323R1 ■	59,450
1SDA054399R1 ■	63,220
1SDA060271R1 ■	97,540
1SDA060540R1	1,32,590
1SDA054331R1 ■	67,620
1SDA054403R1 ■	73,360
1SDA060276R1 ■	1,12,700
1SDA060545R1 ■	1,76,360

S	
Ordering code	L.P. (₹)
1SDA054339R1 ■	61,980
1SDA054407R1 ■	65,770
1SDA060281R1 ■	1,02,090
1SDA060554R1 ■	1,45,840
1SDA054347R1 ■	69,560
1SDA054411R1 ■	80,940
1SDA060286R1 ■	1,15,340
1SDA060559R1	1,85,620

H	
Ordering code	L.P. (₹)
1SDA054355R1	77,040
1SDA054415R1 ■	79,690
1SDA060292R1	1,13,680
1SDA060564R1	1,79,000
1SDA054363R1	86,330
1SDA054419R1	1,08,900
1SDA060297R1	1,33,790
1SDA060569R1	2,25,400

Note: \*Extended front (EF) terminals are supplied as standard in T6 1000A MCCB

■ Stock items

# Tmax power distribution circuit breakers

For MODBUS communication

## XT2/XT4/T5/T6



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%



### Ekip LSIG

			N		S		H	
Frame	In (A)	Poles	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
XT2 160	10	3	1SDA067072R1	38,970	1SDA067815R1	41,660	1SDA067872R1	50,320
	25		1SDA067073R1		1SDA067816R1 ■		1SDA067873R1	
	63		1SDA067074R1 ■	36,800	1SDA067817R1 ■	39,510	1SDA067874R1	48,160
	100		1SDA067075R1 ■		1SDA067818R1 ■		1SDA067875R1	
XT4 250	160		1SDA067076R1 ■	39,510	1SDA067819R1 ■	42,760	1SDA067876R1	51,420
	250		1SDA068141R1 ■	41,130	1SDA068490R1 ■	43,840	1SDA068530R1 ■	53,580
XT2 160	10	4	1SDA067108R1	46,330	1SDA067851R1	49,560	1SDA067908R1	59,970
	25		1SDA067109R1		1SDA067852R1		1SDA067909R1	
	63		1SDA067110R1 ■	44,150	1SDA067853R1 ■	47,410	1SDA067910R1	57,800
	100		1SDA067111R1 ■		1SDA067854R1 ■		1SDA067911R1	
XT4 250	160		1SDA067113R1 ■	47,410	1SDA067856R1 ■	51,310	1SDA067913R1	61,690
	250		1SDA068162R1 ■	49,350	1SDA068510R1 ■	52,600	1SDA068550R1	64,290

Note : Consider ordering "Ekip Com" for MODBUS communication (Refer page no 45)

### PR222DS/PD-LSIG

Frame	In (A)	Poles	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
T5 400	400	3	1SDA081522R1	86,730	1SDA081525R1 ■	89,250	1SDA081528R1	1,04,310
T5 630	630		1SDA081523R1	90,510	1SDA081526R1 ■	93,030	1SDA081529R1	1,06,960
T6 800	800		1SDA081540R1	1,24,040	1SDA081546R1	1,28,590	1SDA081552R1	1,40,180
T6 1000*	1000		1SDA081541R1	1,59,090	1SDA081547R1	1,72,340	1SDA081553R1	2,05,500
T5 400	400	4	1SDA081531R1	90,470	1SDA081534R1	96,840	1SDA081537R1	1,13,610
T5 630	630		1SDA081532R1	1,00,630	1SDA081535R1	1,08,220	1SDA081538R1	1,36,180
T6 800	800		1SDA081543R1	1,39,200	1SDA081549R1	1,41,850	1SDA081555R1	1,60,310
T6 1000*	1000		1SDA081544R1	2,02,860	1SDA081550R1	2,12,110	1SDA081556R1	2,49,710

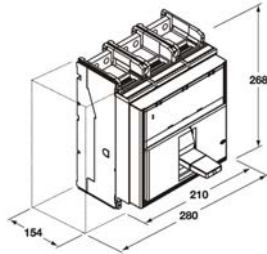
Note: Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG

\*Extended front (EF) terminals are supplied as standard in T6 1000A MCCB

■ Stock items

# Tmax power distribution circuit breakers

## T7



Breaking capacity at 415VAC

	Icu	Ics (Icu)
S	50kA	100%
H	70kA	100%



### T7 1250/1600 PR231/P LS/I

In (A)	Poles
1250	3
1600	
1250	4
1600	

#### S

Ordering code	L.P. (₹)
1SDA062866R1	1,35,070
1SDA062994R1 ■	1,55,510
1SDA062874R1 ■	1,69,670
1SDA063002R1	1,86,740

#### H

Ordering code	L.P. (₹)
1SDA062898R1	1,83,270
1SDA063026R1	2,01,340
1SDA062906R1	2,18,950
1SDA063034R1	2,42,920

### PR331/P LSIG

1250	3
1600	
1250	4
1600	

1SDA062868R1 ■	1,78,730
1SDA062996R1	1,85,720
1SDA062876R1	1,98,510
1SDA063004R1	2,18,440

1SDA062900R1	2,14,430
1SDA063028R1	2,34,970
1SDA062908R1	2,52,960
1SDA063036R1	2,73,500

### PR332/P LSIG

1250	3
1600	
1250	4
1600	

1SDA062871R1	1,80,460
1SDA062999R1	1,95,810
1SDA062879R1	2,05,980
1SDA063007R1	2,25,320

1SDA062903R1	2,23,060
1SDA063031R1	2,41,810
1SDA062911R1	2,58,740
1SDA063039R1	2,84,260

### T7 1250M/1600M PR231/P LS/I

In (A)	Poles
1250	3
1600	
1250	4
1600	

#### S

Ordering code	L.P. (₹)
1SDA062882R1	1,55,510
1SDA063010R1	1,72,480
1SDA062890R1	1,73,420
1SDA063018R1	2,08,250

#### H

Ordering code	L.P. (₹)
1SDA062914R1	2,03,110
1SDA063042R1	2,27,090
1SDA062922R1	2,44,140
1SDA063050R1	2,71,550

### PR331/P LSIG

1250	3
1600	
1250	4
1600	

1SDA062884R1	1,81,550
1SDA063012R1	1,98,080
1SDA062892R1	2,11,050
1SDA063020R1	2,34,390

1SDA062916R1	2,31,210
1SDA063044R1	2,52,280
1SDA062924R1	2,71,010
1SDA063052R1	2,98,540

### PR332/P LSIG

1250	3
1600	
1250	4
1600	

1SDA062887R1	1,92,890
1SDA063015R1	2,11,050
1SDA062895R1	2,24,120
1SDA063023R1	2,45,740

1SDA062919R1	2,42,920
1SDA063047R1	2,65,760
1SDA062927R1	2,85,600
1SDA063055R1	3,12,030

Note : For Motorizable T7 M frame, order along with above code, motor operator, shunt opening coil & shunt closing coil of required voltage.

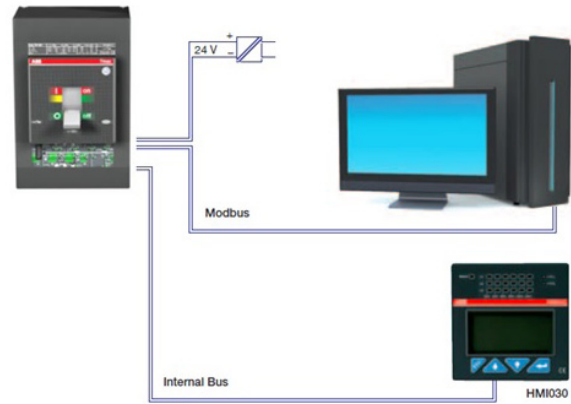
■ Stock items

# Tmax power distribution circuit breakers

## Ekip E-LSIG

Integrated solution for energy measurement

- Integrated energy metering
- Individual protection LEDs
- Internal Bus for HMI connectivity
- Advance measurements such as power factor, frequency, peak factor, energy, power harmonic analysis and THD



## XT4

			N		S		H	
Frame	In (A)	Poles	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)
XT4 160	40	3	1SDA069601R1	Upon request	1SDA069611R1	Upon request	1SDA069621R1	Upon request
	63		1SDA069602R1		1SDA069612R1		1SDA069622R1	
	100		1SDA069603R1		1SDA069613R1		1SDA069623R1	
	160		1SDA069604R1		1SDA069614R1		1SDA069624R1	
XT4 250	250	4	1SDA069605R1	Upon request	1SDA069615R1	Upon request	1SDA069625R1	Upon request
XT4 160	40		1SDA069606R1		1SDA069616R1		1SDA069626R1	
	63		1SDA069607R1		1SDA069617R1		1SDA069627R1	
	100		1SDA069608R1		1SDA069618R1		1SDA069628R1	
XT4 250	160		1SDA069609R1		1SDA069619R1		1SDA069629R1	
	250		1SDA069610R1		1SDA069620R1		1SDA069630R1	

## T5

			N		S		H	
Frame	In (A)	Poles	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)	Ordering code	L.P.(₹)
T5 400	320	3	1SDA081043R1	Upon request	1SDA081044R1	Upon request	1SDA081045R1	Upon request
	400		1SDA081048R1		1SDA081049R1		1SDA081050R1	
T5 630	630	4	1SDA081063R1	Upon request	1SDA081064R1	Upon request	1SDA081065R1	Upon request
T5 400	320		1SDA081053R1		1SDA081045R1		1SDA081055R1	
	400		1SDA081058R1		1SDA081059R1		1SDA081060R1	
T5 630	630		1SDA081068R1		1SDA081069R1		1SDA081070R1	



# Tmax motor protection circuit breakers

Characteristics of circuit-breakers for protecting motors in three pole versions.

## Tmax Motor Protection Trip units

### > Magnetic trip units:

Frame	Protection	Range
XT2 160	MF ( $I_n \leq 12.5A$ )	$14 \times I_n$
	MA ( $12.5A < I_n \leq 160$ )	$6..14 \times I_n$
XT3 250	MA	$6..12 \times I_n$
XT4 250	MA	$5..10 \times I_n$

MF – Magnetic fix

MA – Magnetic Adjustable

### > Microprocessor trip units:

o Only Short circuit protection release

XT2/XT4		T5/T6		T7/T7M	
Ekip M-I	$I = 6 - 14 \text{ of } I_n$	PR221 DS-I	$I = 1 - 10 \text{ of } I_n$	PR231P-I	$I = 1 - 10 \text{ of } I_n$

o Advanced Motor protection release

XT2/XT4		XT2/XT4/T5/T6	
Ekip M-LIU	L = 0.4 - 1 of $I_n$	Ekip M-LRIU	L = 0.4 - 1 of $I_n$
	I = 6 - 13 of $I_n$		R = 3 - 9 of $I_n$
	U* = ON or OFF		I = 6 - 13 of $I_n$
			G = 0.2 - 1 of $I_n$
			U* = ON or OFF

L = Overload; R = Protection against rotor blockage; I = Instantaneous short circuit; G = Earth fault

U = phase loss (U): With selector in ON position, circuit breaker trips if at least one current phase is lower than  $0.1I_n$  and at least a second one higher than  $0.25I_n$ .



## Tmax motor protection circuit breakers

### Advantages of Ekip M-LRIU protection unit:

#### Duty mode setting (Normal/Heavy):

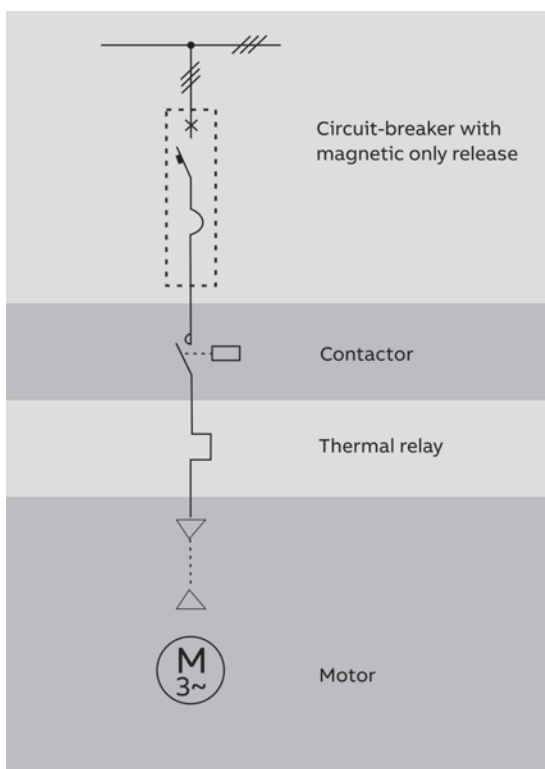
- Normal duty mode requires use of a circuit-breaker and a contactor. In the case of tripping, the Ekip M-LRIU release commands the opening of the contactor via PR212/CI;
- Heavy duty mode foresees circuit-breaker opening for all overcurrent conditions, and just the function of motor operation is entrusted to the contactor

#### PTC protection setting:

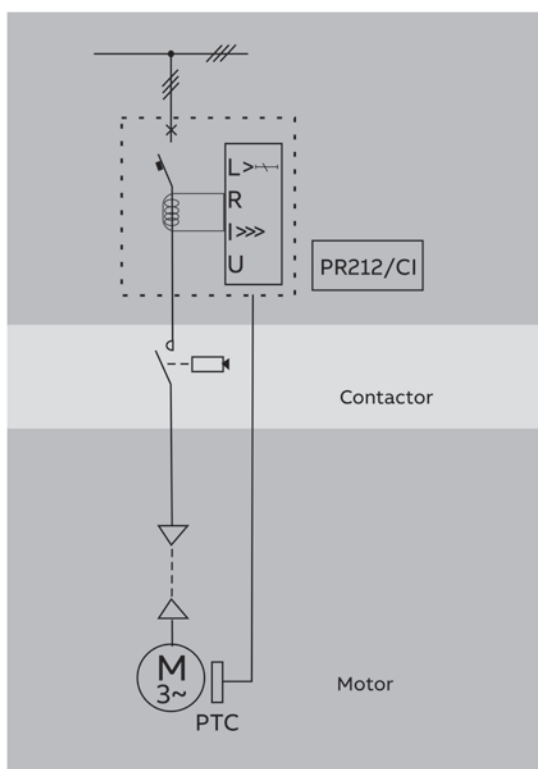
- PTC: this protection, monitors the temperature inside the protected motor by means of a PTC sensor.

#### ❖ ABB solutions for starting, switching and protection of three-phase asynchronous motors:

- o A traditional system
- o A system of integrated protection



Traditional System



System of integrated protection

# Tmax motor distribution circuit breakers

Protection: Magnetic Only

## XT2/XT4



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%

### MF/MA\*

In (A)	In (A)	Poles
	1	
	2	
	4	
	8.5	
	12.5	
XT2 160	20	3
	32	
	52	
	80	
	100	
	160	
XT4 250	200	

### N

Ordering code	L.P. (₹)
1SDA067044R1	
1SDA067045R1	
1SDA067046R1	13,370
1SDA067047R1	
1SDA067048R1 ■	
1SDA067049R1 ■	
1SDA067050R1 ■	
1SDA067051R1 ■	13,160
1SDA067052R1 ■	
1SDA067053R1 ■	
1SDA076529R1	15,820
1SDA068121R1	27,980

### S

Ordering code	L.P. (₹)
1SDA067760R1	
1SDA067761R1	
1SDA067762R1	14,450
1SDA067763R1 ■	
1SDA067764R1 ■	
1SDA067765R1 ■	
1SDA067766R1 ■	
1SDA067767R1 ■	14,240
1SDA067768R1 ■	
1SDA067769R1 ■	
1SDA076530R1 ■	16,570
1SDA068440R1 ■	30,470

### H

Ordering code	L.P. (₹)
1SDA067770R1	
1SDA067771R1	
1SDA067772R1	15,870
1SDA067773R1	
1SDA067774R1	
1SDA067775R1	
1SDA067776R1	
1SDA067777R1	15,660
1SDA067778R1	
1SDA067779R1	
1SDA076535R1	21,760
1SDA068450R1	36,570

\* 20 amps onwards

## XT3



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36KA	75%
S	50KA	50%

### MA

Frame	In (A)	Poles
	100	
	125	
XT3 250	160	3
	200	

### N

Ordering code	L.P.(₹)
1SDA068071R1	
1SDA068072R1	15,820
1SDA068073R1	
1SDA068074R1	18,150

### S

Ordering code	L.P.(₹)
1SDA068279R1	
1SDA068280R1	16,460
1SDA068281R1	
1SDA068282R1 ■	18,680

■ Stock items

# Tmax motor protection circuit breakers

Microprocessor based short circuit protection MCCBs

## XT2/XT4/T5/T6/T7/T7M



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



### Ekip M-I

			N		S		H	
In (A)	In (A)	Poles	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
XT2 160	20	3	1SDA067086R1	17,680	1SDA067829R1	21,240	1SDA067886R1	22,420
	32		1SDA067087R1		1SDA067830R1		1SDA067887R1	
	52		1SDA067088R1		1SDA067831R1		1SDA067888R1	
	100		1SDA067089R1		1SDA067832R1		1SDA067889R1	
	160		1SDA067063R1	21,880	1SDA067809R1	28,680	1SDA067866R1	30,800
XT4 250	250		1SDA068131R1 ■	33,450	1SDA068480R1 ■	36,310	1SDA068520R1	43,010

### T5

#### PR221 DS-I

			N		S		H	
In (A)	Poles		Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
400	3		1SDA054319R1	38,520	1SDA054335R1 ■	42,220	1SDA054351R1	51,110
630			1SDA054397R1 ■	41,020	1SDA054405R1 ■	45,950	1SDA054413R1	54,410

### T6 800

#### PR221 DS-I

			N		S		H	
In (A)	Poles		Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
800	3		1SDA060269R1	66,340	1SDA060279R1	74,360	1SDA060290R1	91,040
1000			1SDA060538R1	1,01,750	1SDA060548R1	1,09,790	1SDA060562R1	1,39,940



### T7 1250/1600

#### PR231/P I

			S		H	
In (A)	Poles		Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
1250	3		1SDA062865R1	1,33,300	1SDA062897R1	1,89,160
1600	3		1SDA062993R1	1,60,350	1SDA063025R1	2,08,060

### T7 1250M/1600M

#### PR231/P I

			S		H	
In (A)	Poles		Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
1250	3		1SDA062881R1	1,64,840	1SDA062913R1	2,09,900
1600	3		1SDA063009R1	1,78,110	1SDA063041R1	2,34,820

■ Stock items

# Tmax motor protection circuit breakers

Advanced Motor Protection MCCBs

## XT2/XT4



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%



### Breaking Part

Frame	Poles
XT2 160	3
XT4 160	
XT4 250	

N

Ordering code	L.P. (₹)
1SDA068163R1	Upon request
1SDA068289R1	
1SDA068173R1	

S

Ordering code	L.P. (₹)
1SDA068164R1	Upon request
1SDA068290R1	
1SDA068174R1	

H

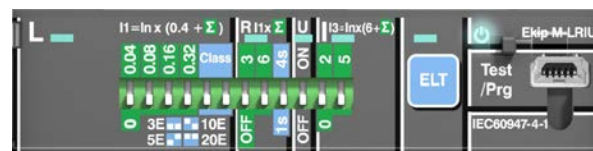
Ordering code	L.P. (₹)
1SDA068165R1	Upon request
1SDA068291R1	
1SDA068175R1	

### Loose trip units

#### EKIP M-LIU

In (A)	In (A)	Poles
XT2	25	3
	63	
	100	
	160	

Ordering code	L.P. (₹)
1SDA067352R1	Upon request
1SDA067353R1	
1SDA067354R1	
1SDA067355R1	



#### Ekip M-LRIU

In (A)	In (A)	Poles
XT2	25	3
	63	
	100	
XT4	160	3
	200	

Ordering code	L.P. (₹)
1SDA067357R1	Upon request
1SDA067358R1	
1SDA067359R1	
1SDA068036R1	
1SDA068037R1	

# Tmax motor protection circuit breakers

## Advanced Motor Protection MCCBs

### T5/T6



Breaking capacity at 415VAC

	Icu	Ics (Icu)
N	36kA	100%
S	50kA	100%
H	70kA	100%



#### T5

##### Ekip M-LRIU

In (A)	Poles
320	3
400	3

#### N

Ordering code	L.P.(₹)
1SDA054551R1	62,060
1SDA064157R1	

#### S

Ordering code	L.P.(₹)
1SDA054553R1	69,610
1SDA064158R1	

#### T6

##### Ekip M-LRIU

In (A)	Poles
630	3

#### N

Ordering code	L.P.(₹)
1SDA060311R1	87,270

#### S

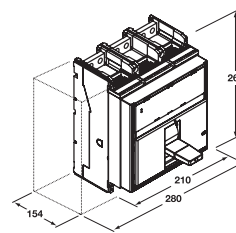
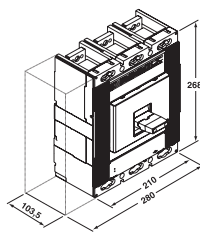
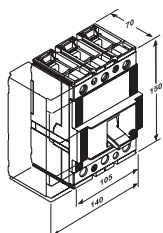
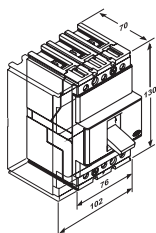
Ordering code	L.P.(₹)
1SDA060312R1	95,420

#### H

Ordering code	L.P.(₹)
1SDA060313R1	1,10,810



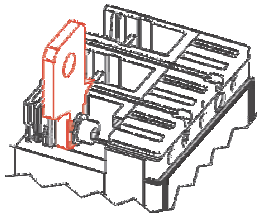
# Tmax switch disconnectors



SD Frame	In(A)	Icw kA (1s)	Poles	Ordering code	L.P.(₹)
XT1D	160	2	3	1SDA068208R1	8,760
XT3D	250	3		1SDA068210R1	19,750
XT4D	250	3.6		1SDA068212R1	22,370
T5D	400	3.6		1SDA054599R1	29,090
T5D	500	3.6		1SDA054601R1	35,420
T6D	630	15		1SDA060343R1	40,080
T6D	800	15		1SDA060345R1	44,270
T6D	1000	15		1SDA060594R1	77,150
T7D	1000	20		1SDA062032R1	87,580
T7D	1250	20		1SDA062036R1	1,19,290
T7D	1600	20		1SDA062040R1	1,24,300
T7D M	1000	20		1SDA062034R1	1,08,130
T7D M	1250	20		1SDA062038R1	1,36,780
T7D M	1600	20		1SDA062042R1	1,50,570

SD Frame	In(A)	Icw kA (1s)	Poles	Ordering code	L.P.(₹)
XT1D	160	2	4	1SDA068209R1	13,090
XT3D	250	3		1SDA068211R1	23,650
XT4D	250	3.6		1SDA068213R1	29,730
T5D	400	3.6		1SDA054600R1	36,950
T5D	500	3.6		1SDA054602R1	45,160
T6D	630	15		1SDA060344R1	48,190
T6D	800	15		1SDA060346R1	72,350
T6D	1000	15		1SDA060595R1	96,380
T7D	1000	20		1SDA062033R1	1,11,640
T7D	1250	20		1SDA062037R1	1,46,730
T7D	1600	20		1SDA062041R1	1,53,000
T7D M	1000	20		1SDA062035R1	1,36,840
T7D M	1250	20		1SDA062039R1	1,68,330
T7D M	1600	20		1SDA062043R1	1,88,250

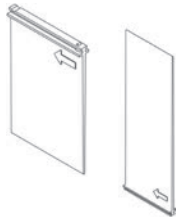
# Tmax accessories



## Accessories for T-Max MCCBs

Extended spreaded terminals - ES			
Frame	Description	Ordering code	L.P. (₹)
XT1	KIT ES XT1 6pcs	1SDA066891R1 ■	1,800
	KIT ES XT1 8pcs	1SDA066892R1 ■	2,440
XT2	KIT ES XT2 6pcs	1SDA066895R1 ■	2,460
	KIT ES XT2 8pcs	1SDA066896R1 ■	3,020
XT3	KIT ES XT3 6pcs	1SDA066899R1 ■	2,650
	KIT ES XT3 8pcs	1SDA066900R1 ■	3,400
XT4	KIT ES XT4 6pcs	1SDA066903R1 ■	3,070
	KIT ES XT4 8pcs	1SDA066904R1 ■	3,870
T5	Kit EST5 6pcs	1SDA055038R1 ■	4,400
	Kit EST5 8pcs	1SDA055039R1 ■	5,860

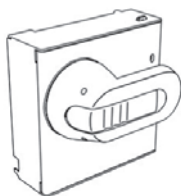
Note: Phase barrier supplied as standard with above copper spreaders.



Separator - PB			
Frame	Description	Ordering code	L.P. (₹)
XT1-XT3	PB 100mm 4pcs XT1-XT3 3p	1SDA066676R1	710
	PB 200mm 4pcs XT1-XT3 3p	1SDA066678R1	900
	PB 100mm 6pcs XT1-XT3 4p	1SDA066681R1	1,070
	PB 200mm 6pcs XT1-XT3 4p	1SDA066683R1	1,350
XT2-XT4	PB 100mm 4pcs XT2-XT4 3p	1SDA066675R1	750
	PB 200mm 4pcs XT2-XT4 3p	1SDA066677R1 ■	1,150
	PB 100mm 6pcs XT2-XT4 4p	1SDA066680R1	1,150
	PB 200mm 6pcs XT2-XT4 4p	1SDA066682R1	1,730
T5	PB100 4 pcs - Low T4, T5	1SYN850207R0001	1,010
	PB100mm 4pcs T4-5-T7-A3 3P	1SDA054970R1	940
	PB 100mm 6pcs T4-5-T7-A3 3P	1SDA054971R1	1,380
	PB100 4 pcs - Low T4, T5	1SYN850207R0001	1,010
	PB100 6 pcs - Low T4, T5 - 400A	1SYN850210R0001 ■	1,450

Note: For T5 630A contact the nearest sales office

## Rotary handle operating mechanism

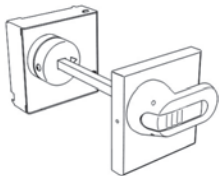


Direct - RHD			
Frame	Description	Ordering code	L.P. (₹)
XT1...XT4	RHD XT1-XT3 F/P STANDARD DIRECT	1SDA066475R1 ■	1,690
	RHD XT2-XT4 F/P STANDARD DIRECT	1SDA069053R1 ■	2,020
	RHD XT2-XT4 W STANDARD DIRECT	1SDA066476R1	2,020
T5	RHD Normal for Fixed/Plug-in T4-T5	1SDA054926R1 ■	3,620
	RHD Normal for withdrawble T4-T5	1SDA054928R1	4,020
T6	RHD Normal for fixed T6	1SDA060405R1 ■	4,970
	RHD Normal for withdrawble T6	1SDA060407R1	6,270
T7	RHD Normal for Fixed/Plug-in T7	1SDA062120R1	6,460

Note:- F/P: Fixed/Plug-in ; W:Withdrawable

■ Stock items

# Tmax accessories



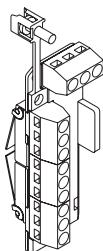
Transmitted - RHE			
Frame	Description	Ordering code	L.P. (₹)
XT1...XT4	RHE XT1-XT3 F/P STANDARD RETURNED(250mm)	1SDA082810R1 ■	1,580
	RHE XT1-XT3 F/P STANDARD RETURNED (500mm)	1SDA066479R1	1,800
	RHE XT2-XT4 F/P STANDARD RETURNED (250mm)	1SDA082811R1 ■	2,100
	RHE XT2-XT4 F/P STANDARD RETURNED (500mm)	1SDA069055R1	2,320
	RHE XT2-XT4 W STANDARD RETURNED	1SDA066480R1 ■	2,320
	RHS L XT2-XT4 F/P STAND. SX LATERAL	1SDA069058R1	3,720
	RHS R XT2-XT4 F/P STAND. DX LATERAL	1SDA069060R1	3,660
	RHE Normal for Fixed/Plug-in T4-T5 250mm	1SDA070447R1 ■	3,390
T5	RHE Normal for Withdrawable T4-T5	1SDA054933R1 ■	6,180
T6	RHE Normal for Fixed T6	1SDA060409R1 ■	6,470
	RHE Normal for Withdrawable T6	1SDA060411R1	7,510
T7	RHE Normal for Fixed/Plug-in T7	1SDA062122R1 ■	7,850

Note:- F/P: Fixed/Plug-in ; W: Withdrawable



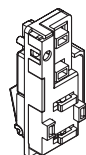
## Electrical signals

Auxiliary contact - AUX (Uncabled version)			
Frame	Description	Ordering code	L.P. (₹)
XT1....XT4	AUX 1Q 250Vac/dc XT1...XT4	1SDA066422R1 ■	970
	AUX 1Q 24Vdc XT1...XT4	1SDA066423R1	1,510



Auxiliary contact - AUX			
Frame	Description	Ordering code	L.P. (₹)
T5..T6(1)	AUX 1Q 1SY 250V AC/DC T1...T6 (1)	1SDA051368R1 ■	1,680
	AUX 3Q 1SY 250V AC/DC T1...T6 (1)	1SDA051369R1	2,710
	AUX 3Q 1SY 24V DC T1...T6 (1)	1SDA054914R1	2,620
T5	AUX-SA 1 S51 T4-T5	1SDA055050R1	
T7M	AUX 2Q 24V DC T7M-X1	1SDA062101R1	1,680
	AUX 2Q 400V AC T7M-X1	1SDA062102R1	
T7M	AUX SA T7M-X1 S51 24VDC	1SDA066100R1	6,450
	AUX SA T7M-X1 S51 250VAC	1SDA063553R1	7,500
T7	AUX 1Q + 1SY 24V DC T7	1SDA062103R1	
	AUX 1Q + 1SY 400V AC T7	1SDA062104R1 ■	2,620

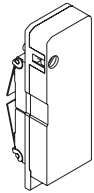
Note : Q=Changeover contact;SY= Trip indication contact  
For T7 / T7M in Withdrawable version sliding contact blocks for fixed and moving parts are necessary.



Cabled contact in electronic version			
Frame	Description	Ordering code	L.P. (₹)
T5	AUX-E-C 1Q 1SY T4-T5	1SDA054916R1	5,540
T6	AUX-E-C 1Q 1SY T6	1SDA064161R1	6,460

■ Stock items

# Tmax accessories



Auxiliary contact cabled-version - AUX - C			
Frame	Description	Ordering code	L.P. (₹)
XT1.....XT4	AUX-C 1Q+1SY 250V AC/DC XT1...XT4 F/P	1SDA066431R1 ■	1,590
	AUX-C 2Q+1SY 250VAC/DC XT1...XT4 F/P	1SDA066433R1 ■	2,540
	AUX-C 3Q+1SY 250VAC/DC XT2...XT4 F/P	1SDA066434R1 ■	3,020
	AUX-C 3Q+2SY 250VAC/DC XT2-XT4 F/P	1SDA066436R1	3,720
	AUX-C 2Q+2SY+1S51 250VAC/DC XT2-XT4 F/P	1SDA066438R1	4,020
	AUX-C 2Q 400V AC XT2-XT4 F/P	1SDA066440R1	1,910
	AUX-C 1Q+1SY 400Vac XT2-XT4 F/P	1SDA066444R1	3,040
	AUX-C 1Q+1SY 24Vdc XT1...XT4 F/P	1SDA066446R1 ■	2,230
T5-T6	AUX-C 3Q+1SY 24VDC XT2...XT4 F/P	1SDA066448R1	3,500
	AUX-C 1Q 1SY 250V AC/DC C T4-T5-T6	1SDA054910R1	2,230
	AUX-C 1Q 1SY 400V AC C T4-T5-T6	1SDA054912R1	3,280
	AUX-C 2Q 400V AC C T4-T5-T6	1SDA054913R1	3,770
	AUX-C 3Q 1SY 24VDC C T4-T5-T6	1SDA054915R1	3,530
	AUX-C 3Q 1SY 250V AC/DC C T4-T5-T6	1SDA054911R1 ■	4,180

Note : Q=Changeover contact;SY= Trip indication contact ;F/P: Fixed/Plug-in ; W:Withdrawable

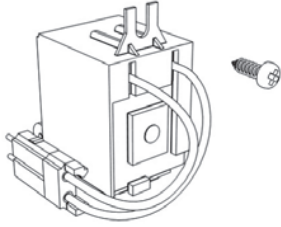
## Opening release

Shunt opening release - SOR (Un-cabled version - For Fixed and Plug-in circuit breakers)			
Frame	Description	Ordering code	L.P. (₹)
XT1.....XT4	SOR XT1...XT4 12 VDC	1SDA066313R1	
	SOR XT1...XT4 24-30 V AC/DC	1SDA066314R1 ■	
	SOR XT1...XT4 48-60 V AC/DC	1SDA066315R1	
	SOR XT1...XT4 110...127 V ac-110...125 V dc	1SDA066316R1	2,230
	SOR XT1...XT4 220...240 V ac-220...250 V dc	1SDA066317R1 ■	
	SOR XT1...XT4 380-440 V ac	1SDA066318R1	
	SOR XT1...XT4 480-525 V ac	1SDA066319R1	
T5-T6	SOR 12V DC T4-T5-T6	1SDA054862R1	
	SOR 24V AC/DC T4-T5-T6	1SDA054863R1	
	SOR 48...60V AC/DC T4-T5-T6	1SDA054864R1	
	SOR 110...120V AC-110...125V DC T4-T5-T6	1SDA054865R1 ■	3,380
	SOR 220...240V AC-220...250V DC T4-T5-T6	1SDA054866R1	
	SOR 380...440V AC T4-T5-T6	1SDA054867R1	
	SOR 480...500V AC T4-T5-T6	1SDA054868R1	
T7-T7M-X1	SOR 24V AC/DC T7-T7M-X1	1SDA062065R1	
	SOR 30V AC/DC T7-T7M-X1	1SDA062066R1	
	SOR 48V AC/DC T7-T7M-X1	1SDA062067R1	
	SOR 60V AC/DC T7-T7M-X1	1SDA062068R1	
	SOR 110...120V AC/DC T7-T7M-X1	1SDA062069R1	
	SOR 120...127V AC/DC T7-T7M-X1	1SDA063547R1	6,610
	SOR 220...240V AC/DC T7-T7M-X1	1SDA063548R1	
	SOR 240...250V AC/DC T7-T7M-X1	1SDA062070R1	
	SOR 380...400V AC T7-T7M-X1	1SDA062071R1	
	SOR 415...440V AC T7-T7M-X1	1SDA062072R1	

Note: For T7 / T7M in Withdrawable version sliding contact blocks for fixed and moving parts are necessary.

■ Stock items

# Tmax accessories



Shunt opening release - SOR - C (Cabled version)			
Frame	Description	Ordering code	L.P. (₹)
XT1...XT4	SOR-C XT1...XT4 F/P 12 Vdc	1SDA066321R1	3,400
	SOR-C XT1...XT4 F/P 24-30 Vac/dc	1SDA066322R1	
	SOR-C XT1...XT4 F/P 48-60 Vac/dc	1SDA066323R1	
	SOR-C XT1...XT4 F/P 110-127Vac-110-125Vdc	1SDA066324R1	
	SOR-C XT1...XT4 F/P 220-240Vac-220-250Vdc	1SDA066325R1	
	SOR-C XT1...XT4 F/P 380-440 Vac	1SDA066326R1	
	SOR-C XT1...XT4 F/P 480-525 Vac	1SDA066327R1	3,980
	SOR-C XT2-XT4 W 12 Vdc	1SDA066328R1	
	SOR-C XT2-XT4 W 24-30 Vac/dc	1SDA066329R1	
	SOR-C XT2-XT4 W 48-60 Vac/dc	1SDA066330R1	
	SOR-C XT2-XT4 W 110-127Vac-110-125Vdc	1SDA066331R1	
	SOR-C XT2-XT4 W 220-240Vac-220-250Vdc	1SDA066332R1	
	SOR-C XT2-XT4 W 380-440 Vac	1SDA066333R1	
	SOR-C XT2-XT4 W 480-525 Vac	1SDA066334R1	
T5-T6	SOR-C 12V DC T4-T5-T6	1SDA054869R1	5,960
	SOR-C 24V AC/DC T4-T5-T6	1SDA054870R1	
	SOR-C 48...60V AC/DC T4-T5-T6	1SDA054871R1	
	SOR-C 110...120V AC-110...125V DC T4-T5-T6	1SDA054872R1	
	SOR-C 220...240V AC-220...250V DC T4-T5-T6	1SDA054873R1 ■	5,960
	SOR 380...440V AC T4-T5-T6	1SDA054875R1	
	SOR 480...500V AC T4-T5-T6	1SDA054868R1	3,380

Note:- F/P: Fixed/Plug-in ; W: Withdrawable

## Test unit- SOR

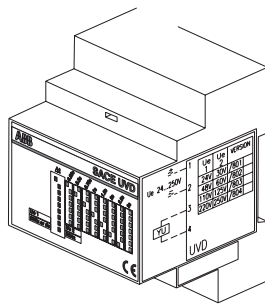
Frame	Description	Ordering code	L.P. (₹)
T7-T7M-X1-E1/6	SOR test unit T7-T7M-X1-E1/6	1SDA050228R1	31,600

Under voltage release - UVR (Un-cabled version - For Fixed and Plug-in circuit breakers)			
Frame	Description	Ordering code	L.P. (₹)
XT1....XT4	UVR XT1...XT4 24-30 VAC/DC	1SDA066389R1	4,190
	UVR XT1...XT4 48 VAC/DC	1SDA069064R1	
	UVR XT1...XT4 60 VAC/DC	1SDA066390R1	
	UVR XT1...XT4 110-127Vac-110-125Vdc	1SDA066391R1	
	UVR XT1...XT4 220-240Vac-220-250Vdc	1SDA066392R1 ■	
	UVR XT1...XT4 380-440 Vac	1SDA066393R1 ■	
T5-T6	UVR XT1...XT4 480-525 Vac	1SDA066394R1	7,820
	UVR 24V AC/DC T4-T5-T6	1SDA054880R1	
	UVR 48V AC/DC T4-T5-T6	1SDA054881R1	
	UVR 60V AC/DC T4-T5-T6	1SDA054882R1	
	UVR 110...120V AC-110...125V DC T4-T5-T6	1SDA054883R1 ■	
	UVR 220...240V AC-220...250V DC T4-T5-T6	1SDA054884R1 ■	
	UVR 380...440V AC T4-T5-T6	1SDA054885R1 ■	
	UVR 480...500V AC T4-T5-T6	1SDA054886R1	
T7-T7M	UVR 24V AC/DC T7-T7M-X1	1SDA062087R1	8,790
	UVR 30V AC/DC T7-T7M-X1	1SDA062088R1	
	UVR 48V AC/DC T7-T7M-X1	1SDA062089R1	
	UVR 60V AC/DC T7-T7M-X1	1SDA062090R1	
	UVR 110...120V AC/DC T7-T7M-X1	1SDA062091R1	
	UVR 120...127V AC/DC T7-T7M-X1	1SDA063551R1	
	UVR 220...240V AC/DC T7-T7M-X1	1SDA063552R1	
	UVR 240...250V AC/DC T7-T7M-X1	1SDA062092R1	
	UVR 380...400V AC T7-T7M-X1	1SDA062093R1	
	UVR 415...440V AC T7-T7M-X1	1SDA062094R1	

Note: For T7 TM in Withdrawable version sliding contact blocks for fixed and moving parts are necessary.

■ Stock items

# Tmax accessories

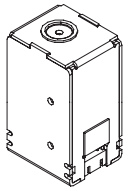


Under voltage release C - UVR - C (Cabled version)			
Frame	Description	Ordering code	L.P. (₹)
XT1....XT4	UVR-C XT1..XT4 F/P 24-30 VAC/DC	1SDA066396R1	6,530
	UVR-C XT1..XT4 F/P 48 Vac/dc	1SDA069065R1	
	UVR-C XT1..XT4 F/P 60 Vac/dc	1SDA066397R1	
	UVR-C XT1..XT4 F/P 110-127Vac-110-125Vdc	1SDA066398R1	
	UVR-C XT1..XT4 F/P 220-240Vac-220-250Vdc	1SDA066399R1 ■	
	UVR-C XT1..XT4 F/P 380-440 Vac	1SDA066400R1	
	UVR-C XT1..XT4 F/P 480-525 Vac	1SDA066401R1	7,070
	UVR-C XT2-XT4 W 24-30 Vac/dc	1SDA066403R1	
	UVR-C XT2-XT4 W 48 Vac/dc	1SDA069066R1	
	UVR-C XT2-XT4 W 60 Vac/dc	1SDA066404R1	
	UVR-C XT2-XT4 W 110-127Vac-110-125Vdc	1SDA066405R1	
	UVR-C XT2-XT4 W 220-240Vac-220-250Vdc	1SDA066406R1	
T5-T6	UVR-C XT2-XT4 W 380-440 Vac	1SDA066407R1	10,560
	UVR-C XT2-XT4 W 480-525 Vac	1SDA066408R1	
	UVR-C 24V AC/DC T4-T5-T6	1SDA054887R1	
	UVR-C 48V AC/DC T4-T5-T6	1SDA054888R1	

Note:- F/P: Fixed/Plug-in ; W: Withdrawable

Time delay device for under voltage release- UVD			
Frame	Description	Ordering code	L.P. (₹)
XT1....XT4	UVD T1...T6 - XT1...XT4 24...30 Vac/dc	1SDA051357R1	35,710
	UVD T1...T6 - XT1...XT4 48...60 Vac/dc	1SDA051358R1	
	UVD T1...T6 - XT1...XT4 110...125 Vac/dc	1SDA051360R1	
	UVD T1...T6 - XT1...XT4 220...250 Vac/dc	1SDA051361R1	
T5...T6	UVD 24...30V AC/DC T1...T6	1SDA051357R1	12,290
	UVD 48...60V AC/DC T1...T6	1SDA051358R1	
	UVD 110...125V AC/DC T1...T6	1SDA051360R1	
	UVD 220...250V AC/DC T1...T6	1SDA051361R1	
T7-T7M	UVD 24/30V AC/DC E1/6 - T7-T7M-X1	1SDA038316R1	12,520
	UVD 48V AC/DC E1/6 - T7-T7M-X1	1SDA038317R1	
	UVD 60V AC/DC E1/6 - T7-T7M-X1	1SDA038318R1	
	UVD 110...125V AC/DC E1/6 - T7-T7M-X1	1SDA038319R1	
	UVD 220...250V AC/DC E1/6 - T7-T7M-X1	1SDA038320R1	

Note: Order along with relative UV release



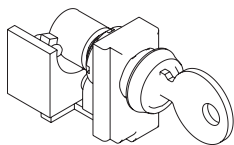
Shunt closing release			
Frame	Description	Ordering code	L.P. (₹)
T7M	SCR 24V AC/DC T7M-X1	1SDA062076R1	8,360
	SCR 30V AC/DC T7M-X1	1SDA062077R1	
	SCR 48V AC/DC T7M-X1	1SDA062078R1	
	SCR 60V AC/DC T7M-X1	1SDA062079R1	
	SCR 110...120V AC/DC T7M-X1	1SDA062080R1	
	SCR 120...127V AC/DC T7M-X1	1SDA063549R1	
	SCR 220...240V AC/DC T7M-X1	1SDA063550R1	
	SCR 240...250V AC/DC T7M-X1	1SDA062081R1	
	SCR 380...400V AC T7M-X1	1SDA062082R1	
	SCR 415...440V AC T7M-X1	1SDA062083R1	

Note: For T7 M in withdrawable version sliding blocks for fixed and moving parts are necessary.

■ Stock items



# Tmax accessories



## Key lock

Key Lock - KLC			
Frame	Description	Ordering code	L.P. (₹)
KLC for Manual Breaker			
XT1.....XT4	KLC XT1 KEY LOCK RONIS ON CB DIFF.KEY	1SDA066593R1	2,020
	KLC XT1 KEY LOCK RONIS ON CB TYPE A	1SDA066594R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE B	1SDA066595R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE C	1SDA066596R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE D	1SDA066597R1	
	KLC XT1 KEY LOCK RONIS EQ.FEL.A OP/CL	1SDA066598R1	
	KLC XT2-XT4 KEY LOCK RONIS SE.OP.xC.BRE.	1SDA066599R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE A	1SDA066600R1 ■	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE B	1SDA066601R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE C	1SDA066602R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE D	1SDA066603R1	
	KLC XT2-XT4 KEY LOCK RONIS EQ.FE.A OP/CL	1SDA066604R1	
	KLC XT3 KEY LOCK RONIS SEV.OP. X C.BREA.	1SDA066605R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE A	1SDA066606R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE B	1SDA066607R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE C	1SDA066608R1	
T7	KLC XT3 KEY LOCK RONIS ON CB TYPE D	1SDA066609R1	3,520
	KLC XT3 KEY LOCK RONIS EQ.FEL.A OP/CL	1SDA066610R1	
	KLC-D Key Lock - Different Key in Open Position T7	1SDA062134R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7	1SDA062135R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7	1SDA062136R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7	1SDA062137R1	
T7 M	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7	1SDA062138R1	3,730
	KLC Arrangment for Ronis Key Lock T7	1SDA062139R1	
	KLC Arrangment for Profalux Key Lock T7	1SDA062140R1	
	KLC-D Different Key in open Position T7M	1SDA062141R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7M	1SDA062142R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7M	1SDA062143R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7M	1SDA062144R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7M	1SDA062145R1	
KLC Same Key Ronis-Profalux T7M		1SDA062146R1	



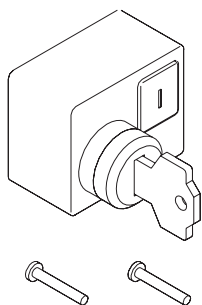
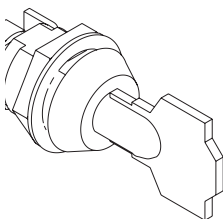
Pad Lock - KLC			
Frame	Description	Ordering code	L.P. (₹)
KLC for Manual breaker			
XT1.....XT4	PLL XT1-XT3 REMOV.PADL.DEVICE OPEN PLUG	1SDA066588R1	1,480
	PLL XT1-XT3 PADLOCKS DEVICE OPEN	1SDA066589R1	
	PLL XT2-XT4 PADLOCKS DEVICE OPEN	1SDA066590R1	
	PLL XT1-XT3 PADLOCKS DEVICE OP/CL	1SDA066591R1	
	PLL XT2-XT4 PADLOCKS DEVICE OP/CL	1SDA066592R1	



Key Lock for Rotary Handle - RHL			
Frame	Description	Ordering code	L.P. (₹)
XT1.....XT4	RHL XT1...XT4 KEY LOCK RONIS SEVERAL	1SDA066617R1 ■	1,590
	RHL XT1...XT4 KEY LOCK RONIS TYPE A	1SDA066618R1 ■	
	RHL XT1...XT4 KEY LOCK RONIS TYPE B	1SDA066619R1	
	RHL XT1...XT4 KEY LOCK RONIS TYPE C	1SDA066620R1	
	RHL XT1...XT4 KEY LOCK RONIS TYPE D	1SDA066621R1	
	RHL XT1...XT4 KEY LOCK RONIS SEVER. OP/CL	1SDA066622R1	
	RHL XT1...XT4 KEY LOCK RONIS SEVER. OP/CL	1SDA069182R1	
	MOL-D XT1-XT3 KEY LOCK RONIS DIFF. KEY	1SDA066623R1	

■ Stock items

# Tmax accessories



Key Lock for Front/Rotary/Fixed Part- KLF			
Frame	Description	Ordering code	L.P. (₹)
T5	KLF-D Lock for Front/Rotary Handle - Different Key in open Position T4-T5	1SDA054939R1	3,350
	KLF-S Block for Front/Rotary Handle - Same Key (N. 20005) T4-T5	1SDA054940R1 ■	
	KLF-S Block for Front/Rotary Handle - Same Key (N. 20006) T4-T5	1SDA054941R1	
	KLF-S Block for Front/Rotary Handle - Same Key (N. 20007) T4-T5	1SDA054942R1	
T5-T6	KLF-S Block for Front/Rotary Handle - Same Key (N. 20008) T4-T5	1SDA054943R1	3,170
	KLF-D FP Different Key for Each Circuit Breaker T4-T5-T6	1SDA055230R1	
	KLF-D FP Same Key for Different Groups of Circuit Breaker T4-T5-T6	1SDA055231R1	
	KLF-D Ronis Fixed Part- Lock Type Ronis T4-T5-T6	1SDA055233R1	
T6	KLF-D Different Key in open Position T6	1SDA060658R1	3,260
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20005) T6	1SDA060659R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20006) T6	1SDA060660R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20007) T6	1SDA060661R1	
T7	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20008) T6	1SDA060662R1	3,260
	KLF-D Different Key in open Position T7	1SDA063555R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7	1SDA063556R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7	1SDA063557R1	
T7	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7	1SDA063558R1	3,260
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7	1SDA063559R1	
	KLF Arrangement for Ronis key lock T7	1SDA063560R1	
	KLF Arrangement for Profalux key lock T7	1SDA063561R1	

## Key lock for motor operated- MOL

Frame	Description	Ordering code	L.P. (₹)
XT1-XT3	MOL-S XT1-XT3 KEY LOCK RONIS TYPE A	1SDA066624R1	3,390
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE B	1SDA066625R1	
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE C	1SDA066626R1	
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE D	1SDA066627R1	
XT2-XT4	MOL-D XT2-XT4 KEY LOCK RONIS DIFF. KEY	1SDA066629R1	3,390
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE A	1SDA066630R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE B	1SDA066631R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE C	1SDA066632R1	
T5	MOL-S XT2-XT4 KEY LOCK RONIS TYPE D	1SDA066633R1	3,390
	MOL-M XT2-XT4 KEY LOCK RONIS MAN. OPER.	1SDA066634R1	
	MOL-D - Same Key T4-T5	1SDA054904R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T4-T5	1SDA054905R1 ■	
T5-T6	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T4-T5	1SDA054906R1	3,390
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T4-T5	1SDA054907R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T4-T5	1SDA054908R1	
	MOL-M - Lock only on Manual Operation - Same Key T4-T5-T6	1SDA054909R1	
T6	MOL-D - Different Key T6	1SDA060611R1	3,390
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T6	1SDA060612R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T6	1SDA060613R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T6	1SDA060614R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T6	1SDA060615R1	

## Motor operator with direct action - MOD

Frame	Description	Ordering code	L.P. (₹)
XT1-XT3	MOD XT1-XT3 24 V dc	1SDA066457R1	22,300
	MOD XT1-XT3 48...60 V dc	1SDA066458R1	
	MOD XT1-XT3 110...125 V ac/dc	1SDA066459R1	19,120
	MOD XT1-XT3 220...250 V ac/dc	1SDA066460R1 ■	
	MOD XT1-XT3 380...440 V ac	1SDA066461R1	22,300
	MOD XT1-XT3 480...525 V ac	1SDA066462R1	

■ Stock items

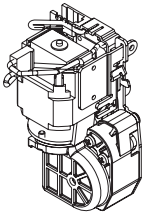
# Tmax accessories



Stored Energy Motor Operator - MOE			
Frame	Description	Ordering code	L.P. (₹)
XT2-XT4	MOE XT2-XT4 24 V dc	1SDA066463R1	29,520
	MOE XT2-XT4 48...60 V dc	1SDA066464R1	
	MOE XT2-XT4 110...125 V ac/dc	1SDA066465R1	
	MOE XT2-XT4 220...250 V ac/dc	1SDA066466R1 ■	22,540
	MOE XT2-XT4 380...440 V ac	1SDA066467R1	
	MOE XT2-XT4 480...525 V ac	1SDA066468R1	
T5	MOE 24 V DC T4-T5	1SDA054894R1	41,225
	MOE 48...60 V DC T4-T5	1SDA054895R1	
	MOE 110...125 V AC / DC T4-T5	1SDA054896R1	34,070
	MOE 220...250 V AC / DC T4-T5	1SDA054897R1 ■	
	MOE 380 V AC T4-T5	1SDA054898R1	35,325
	MOE 24 V DC T6	1SDA060395R1	
T6	MOE 48...60 V DC T6	1SDA060396R1	41,590
	MOE 110...125 V AC/DC T6	1SDA060397R1	
	MOE 220...250 V AC/DC T6	1SDA060398R1 ■	
	MOE 380 V AC T6	1SDA060399R1	



Stored energy motor operator with electronics - MOE-E			
Frame	Description	Ordering code	L.P. (₹)
XT2 - XT4	MOE-E XT2-XT4 24V dc X REM.CONTR.	1SDA066469R1	32,470
	MOE-E XT2-XT4 48...60V dc X REM.CONTR.	1SDA066470R1	
	MOE-E XT2-XT4 110...125V ac/d X REM.CONT.	1SDA066471R1	
	MOE-E XT2-XT4 220...250V ac/dc X REM.CONT	1SDA066472R1	32,470
	MOE-E XT2-XT4 380...440V ac X REM.CONTR	1SDA066473R1	
	MOE-E XT2-XT4 480...525V ac X REM.CONTR	1SDA066474R1	
T5	MOE-E 24 V DC T4-T5	1SDA054899R1	45,340
	MOE-E 48...60 V DC T4-T5	1SDA054900R1	
	MOE-E 110...125 V AC / DC T4-T5	1SDA054901R1	37,470
	MOE-E 220...250 V AC / DC T4-T5	1SDA054902R1 ■	
	MOE-E 380 V AC T4-T5	1SDA054903R1	38,850
	MOE-E 24 V DC T6	1SDA060400R1	
T6	MOE-E 48...60 V DC T6	1SDA060401R1	54,050
	MOE-E 110...125 V AC/DC T6	1SDA060402R1	
	MOE-E 220...250 V AC/DC T6	1SDA060403R1	
	MOE-E 380 V AC T6	1SDA060404R1	



Spring charging motor- M			
Frame	Description	Ordering code	L.P. (₹)
T7M	M 24...30V AC/DC T7M	1SDA062113R1	41,990
	M 48...60V AC/DC T7M	1SDA062114R1	44,220
	M 100...130V AC/DC T7M	1SDA062115R1	41,990
	M 220...250V AC/DC T7M	1SDA062116R1	
	M 380...415V AC T7M	1SDA062117R1	



High insulating terminal covers - HTC			
Frame	Description	Ordering code	L.P. (₹)
XT1...XT4	HTC XT1 3p TERMINAL COVERS HIGH 2pcs	1SDA066664R1	2,650
	HTC XT2 3p TERMINAL COVERS HIGH 2pcs	1SDA066666R1	3,020
	HTC XT3 3p TERMINAL COVERS HIGH 2pcs	1SDA066668R1	3,280
	HTC XT4 3p TERMINAL COVERS HIGH 2pcs	1SDA066670R1	3,660
	HTC XT1 4p TERMINAL COVERS HIGH 2pcs	1SDA066665R1	3,550
	HTC XT2 4p TERMINAL COVERS HIGH 2pcs	1SDA066667R1	4,020
	HTC XT3 4p TERMINAL COVERS HIGH 2pcs	1SDA066669R1	4,400
	HTC XT4 4p TERMINAL COVERS HIGH 2pcs	1SDA066671R1	4,880

■ Stock items

## Tmax accessories



Low insulating terminal covers - LTC			
Frame	Description	Ordering code	L.P. (₹)
XT1....XT4	LTC XT1 3p TERMINAL COVERS LOW 2pcs	1SDA066655R1	1,910
	LTC XT2 3p TERMINAL COVERS LOW 2pcs	1SDA066657R1	
	LTC XT3 3p TERMINAL COVERS LOW 2pcs	1SDA066660R1	
	LTC XT4 3p TERMINAL COVERS LOW 2pcs	1SDA066662R1	2,020
	LTC XT1 4p TERMINAL COVERS LOW 2pcs	1SDA066656R1	
	LTC XT2 4p TERMINAL COVERS LOW 2pcs	1SDA066659R1	
	LTC XT3 4p TERMINAL COVERS LOW 2pcs	1SDA066661R1	
	LTC XT4 4p TERMINAL COVERS LOW 2pcs	1SDA066663R1	2,860
T5	LTC 3p T5	1SDA054968R1	2,710
	LTC 4p T5	1SDA054969R1	3,570
T6	LTC 3p T6	1SDA014038R1	2,960
	LTC 4p T6	1SDA014039R1	3,950
T7-T7M	LTC 3p T7-T7M	1SDA063093R1	4,540
	LTC 4p T7-T7M	1SDA063094R1	5,830

Dialogue unit - PR 222/DS-PD			
Frame	Description	Ordering code	L.P. (₹)
T5-T6	PR222DS/PD LSI T4-T5-T6	1SDA055066R1	28,210
	PR222DS/PD LSI T4-T5-T6	1SDA055067R1	29,450

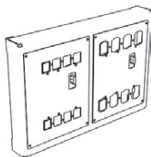
Note : Order X3 connector along with dialogue unit

Dialogue unit - Ekip E-LSIG			
Frame	Description	Ordering code	L.P. (₹)
T5	DIALOG Ekip E-LSIG MOD.T5 (EXTR)	1SDA081094R1	24,410

X3 connector			
Frame	Description	Ordering code	L.P. (₹)
T5-T6	X3 Connector for fixed circuit-breaker PR222DS or PR223DS	1SDA055059R1	3,720
	X3 Connector for plug-in/withdrawable circuit-breaker	1SDA055061R1	

X4 Connector			
Frame	Description	Ordering code	L.P. (₹)
T5-T6	X4 Connector for fixed circuit-breaker	1SDA055060R1	3,720
	X4 Connector for plug-in/withdrawable circuit-breaker	1SDA055062R1	

# Tmax accessories



Residual current devices			
Frame	Description	Ordering code	L.P. (₹)
XT1	RC Inst x XT1 3p F	1SDA067122R1	21,240
	RC Sel x XT1 3p F	1SDA067123R1	
	RC Sel 200 x XT1 4p F	1SDA067121R1	30,800
	RC Inst x XT1 4p F	1SDA067124R1	
	RC Sel x XT1 4p F	1SDA067125R1	24,640
XT2	RC Sel x XT2 4p F	1SDA067126R1	45,340
	RC Inst x XT3 3p F	1SDA067127R1	53,200
XT3	RC Sel x XT3 3p F	1SDA067128R1	59,140
	RC Inst x XT3 4p F	1SDA067129R1	57,240
	RC B Type x XT3 4p F	1SDA067132R1	89,090
	RC Sel x XT3 4p F	1SDA067130R1	63,020
T5	RC222/5 4p Fixed T5	1SDA054955R1	63,020

## Automation transfer switch - ATS

Automatic transfer switch			
Frame	Description	Ordering code	L.P. (₹)
XT2-XT4/ T5-T7/ E1-E6	ATS021	1SDA065523R1	87,080
	ATS022	1SDA065524R1	95,580

Note : ATS will be used along with either two motorized ACB or MCCBs with required interlocking and changeover base plate as per the requirement.

Mechanical interlock between circuit breakers			
Frame	Description	Ordering code	L.P. (₹)
XT1....XT4	MIR-HR XT1...XT4 MECH INTERLOCK HOR. 2 CB**	1SDA066637R1	14,340
	MIR-VR XT1...XT4 MECH INTERLOCK VER. 2 CB**	1SDA066638R1	
	MIR-P PLATE x XT1 F	1SDA066639R1	4,790
	MIR-P PLATE x XT2 F	1SDA066641R1	
	MIR-P PLATE x XT3 F	1SDA066643R1	
	MIR-P PLATE x XT4 F	1SDA066645R1	

Note : \*\* Following must be ordered to make the rear interlock.

1. A MIR-HR or MIR-VR
2. A plate MIR-P for each circuit breaker to be interlocked

Mechanical interlock between circuit breakers - MIR - to be used with copper spreaders only			
Frame	Description	Ordering code	L.P. (₹)
T5	MIR-HB Horizontal Interlock Frame Unit T4-T5	1SDA054946R1	10,800
	MIR-VB Vertical Interlock Frame Unit T4-T5	1SDA054947R1	
	MIR-P Plate for Interlock Type D T5 400 (F-P-W) or T5 630 (F)+T5 400 (F-P-W) or T5 630 (F)	1SDA054951R1	5,400
	MIR-P Plate for Interlock Type E T5 400 (F-P-W) or T5 630 (F) + T5 630 (P-W)	1SDA054952R1	
	MIR-P Plate for Interlock Type F T5 630 (P-W) + T5 630 (P-W)	1SDA054953R1	
T6	MIR-H Horizontal Mechanical Interlock T6	1SDA060685R1	17,110
	MIR-V Vertical Mechanical Interlock T6	1SDA060686R1	

Note: For interlocking in T4-T5, Order both frame and plate unit

Mechanical interlock with cables between 2 circuit breakers			
Frame	Description	Ordering code	L.P. (₹)
T7-T7M	Cable Kit for Interlock T7-T7M	1SDA062127R1	7,120
	Cable Kit for Interlock T7-T7M with E1-6	1SDA064568R1	7,750
	Plate for Interlock T7-T7M Fixed	1SDA062129R1	28,370
	Plate for Interlock T7-T7M withdrawable	1SDA062131R1	30,350

Note: It is necessary to order 2 plates and one kit of cables

# Tmax accessories



## Accessories for electronic trip units

Frame	Description	Ordering code	L.P. (₹)
XT2 - XT4	EKIP LED METER x LSI-LSIG-M/LRIU XT2-XT4	1SDA068660R1	10,820
	EKIP DISPLAY x LSI-LSIG-M/LRIU XT2-XT4	1SDA068659R1	12,750
	EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 F/P	1SDA068661R1	19,120
	EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 W	1SDA068662R1	
	KIT x CONNECTION Vaux 24Vdc XT2-XT4 F/P	1SDA066980R1	3,930
	KIT x CONNECTION Vaux 24Vdc XT2-XT4 W	1SDA066981R1	4,450
T4-T5-T6-T7-XT2-XT4/E1-E6	EKIP multimeter display on front of the switch board	1SDA074192R1	Upon request
	HMI030 interface on the front of switchgear	1SDA063143R1	35,670

Note:- F/P: Fixed/Plug-in ; W: Withdrawable



## Test and configuration unit

Frame	Description	Ordering code	L.P. (₹)
XT2 - XT4	Ekip TT Trip test unit	1SDA066988R1	6,360



## Bracket for fixing onto DIN rail

Frame	Description	Ordering code	L.P. (₹)
XT1	KIT DIN50022 XT1 3p PLATE DIN	1SDA066652R1	1,590
	KIT DIN50022 XT1 4p PLATE DIN	1SDA066419R1	1,690
	KIT DIN50022 XT1+RC Sel 200 PLATE DIN	1SDA067134R1	1,860
	KIT DIN50022 XT1+RC PLATE DIN	1SDA067135R1	2,020
XT3	KIT DIN50022 XT3 3p PLATE DIN	1SDA066420R1	
	KIT DIN50022 XT3 4p PLATE DIN	1SDA066421R1	2,230
	KIT DIN50022 XT3+RC PLATE DIN	1SDA067139R1	
XT2	KIT DIN50022 XT2-XT4 PLATE DIN	1SDA066653R1	1,590



## IP54 Protection for transmitted rotary handle

Frame	Description	Ordering code	L.P. (₹)
XT1....XT4	IP54 Protection for transmitted rotary handle-RHE	1SDA066587R1	2,440



# Tmax conversion kit



## Plug-in and drawout conversion

Frame	Pole	Type	Description	Ordering code	L.P. (₹)
XT1		Plugin kit	KIT P MP XT1 3p	1SDA066276R1	4,310
			XT1 P FP 3p EF	1SDA068183R1	8,010
XT2			KIT P MP XT2 3p	1SDA066278R1	4,810
			XT2 P FP 3p EF	1SDA068187R1	8,760
XT3			KIT P MP XT3 3p	1SDA066280R1	6,010
			XT3 P FP 3p EF	1SDA068192R1	9,020
XT4			KIT P MP XT4 3p	1SDA066282R1	6,960
			XT4 P FP 3p EF	1SDA068196R1	9,670

### Note:

The plug-in version must be composed as follows:

- 1) Fixed circuit-breaker
- 2) Conversion kit from fixed into moving part of plug-in
- 3) Fixed part of plug-in
- 4) For T5 630 -circuit-breaker and switch-disconnector in Plug-in and withdrawable version In max = 570 A

### Note:

The withdrawable version must be composed as follows:

- 1) Fixed circuit-breaker
- 2) Conversion kit from fixed into moving part of withdrawable
- 3) Fixed part of withdrawable
- 4) Front for lever operating mechanism or rotary handle or motor operator
- 5) Sliding contacts blocks if the circuit-breaker is automatic or fitted with electrical accessories (only for T7)
- 6) For T5 630 -circuit-breaker and switch-disconnector in Plug-in and withdrawable version In max = 570 A

# Tmax conversion kit



## Plug-in and drawout conversion

Frame	Pole	Type	Description	Ordering code	L.P. (₹)
XT1		Plug-in kit	KIT P MP XT1 4p	1SDA066277R1	5,720
			XT1 P FP 4p EF	1SDA068185R1	10,920
XT2			KIT P MP XT2 4p	1SDA066279R1	6,270
			XT2 P FP 4p EF	1SDA068190R1	11,960
XT3			KIT P MP XT3 4p	1SDA066281R1	7,070
			XT3 P FP 4p EF	1SDA068194R1	12,580
XT4			KIT P MP XT4 4p	1SDA066283R1	9,220
			XT4 P FP 4p EF	1SDA068198R1	13,000

## Accessories:

Frame / Type	Description	Ordering code	L.P. (₹)
Connector	Socket-plug panel connector with 3PINS (XT1...XT4)	1SDA066409R1	1,270
	Socket-plug panel connector with 6PINS (XT1...XT4)	1SDA066410R1	2,520
	Socket-plug panel connector with 9PINS (XT1...XT4)	1SDA066411R1	3,830
	Socket-plug panel connector with 15PINS (XT1...XT4)	1SDA066412R1	6,330
	Socket-plug connector of moving part 12PINS (XT2...XT4)	1SDA066413R1	6,840
	Socket-plug connector of fixed part 12PINS (XT2...XT4)	1SDA066414R1	
	Connector 4th pole SOR-PS-SOR (XT2...XT4)	1SDA066415R1	1,260
	Connector 4th pole UVR (XT2...XT4)	1SDA066418R1	1,150
	ADP 5pin SOR-C /UVR-C T4-T5-T6 P/W	1SDA055173R1	2,180
	ADP 6pin AUX -C T4-T5-T6 P/W	1SDA054922R1 ■	1,880
	ADP 10pin MOE AUE -C T4-T5-T6 P/W	1SDA054924R1	2,400
	ADP 12pin AUX -C T4-T5-T6 P/W	1SDA054923R1	3,080
MOT T7M	LEFT SLIDING CONTAC.MP C.BR.T7-T7M-X1	1SDA062164R1	5,100
	LEFT SLIDING CONTAC.FP C.BR.T7M-X1	1SDA062167R1	7,540
SOR/SCR/UVR/AUX - T7-T7M	RIGHT SLIDING CONTAC.MP C.BR.T7-T7M-X1	1SDA062166R1	5,100
	RIGHT SLIDING CONTAC.FP C.BR.T7M-X1	1SDA062169R1	7,540
Central Block for T7-T7M	Central block - MP T7 - T7M	1SDA062165R1	5,100
	Central block - FP T7 - T7M	1SDA062168R1	7,540

■ Stock items

# Tmax PV: Photovoltaic range moulded case switch disconnecter



Tmax PV is the latest T Generation product up to 1600 A/1100 V DC/1500V DC.

- IEC 60947-3 certification
- 6 different sizes: from the compact T1 (which can be mounted on DIN rail) to high-performance
- T7, available in the two versions, with lever operating mechanism and motor operator
- Rated insulation voltage up to 1150 V DC/1500V DC
- Advantages like
  - excellent performance-dimensions
  - vast and complete range of accessories for all requirements
  - complete remote control with MOE options

Rated current In (A)	Rated voltage	Description	Version / Poles	Ordering code	L.P. (₹)
160	1100 V DC	T1D/PV 160 4p F FC Cu 1100V DC	Fixed / 4p	1SDA069816R1	Upon request
200		T3D/PV 200 4p F FC Cu 1100V DC	Fixed / 4p	1SDA069822R1	
250		T4D/PV 250 4p F F 1100V DC	Fixed / 4p	1SDA069823R1	
500		T5D /PV 500 4p F F 1100V DC	Fixed / 4p	1SDA069824R1	
800		T6D/PV 800 4p F F 1100V DC	Fixed / 4p	1SDA069825R1	
1250		T7D/PV 1250 4p F F 1100V DC	Fixed / 4p	1SDA069826R1	
1250M		T7D/PV 1250 4p F F M 1100V DC	Fixed / 4p	1SDA069827R1	
1600		T7D/PV 1600 4p F F 1100V DC	Fixed / 4p	1SDA069828R1	
1600M		T7D/PV 1600 4p F F M 1100V DC	Fixed / 4p	1SDA069829R1	

Rated current In (A)	Rated voltage	Description	Version / Poles	Ordering code	L.P. (₹)
250	1500V DC	T4D/PV-E 250 4p F F 1500V DC	Fixed / 4p	1SDA073559R1	Upon request
500		T5D/PV-E 500 4p F F 1500V DC	Fixed / 4p	1SDA076898R1	
1250		T7D/PV-E 1250 4p F F M 1500V DC	Fixed / 4p	1SDA073560R1	
1600		T7D/PV-E 1600 4p F F M 1500V DC	Fixed / 4p	1SDA073561R1	
250		KIT 2JUMPER U 2+2PS T4D/PV 250	Kit jumpers	1SDA070454R1	Upon request
500		KIT 2JUMPER U 2+2PS T5D/PV-E 500	Kit jumpers	1SDA076899R1	
1250		KIT JUMPER U 2+2PS T7D/PV 1250	Kit jumpers	1SDA070429R1	
1600		KIT JUMPER U 2+2PS T7D/PV 1600	Kit jumpers	1SDA070431R1	

\*For information contact our nearest sales office

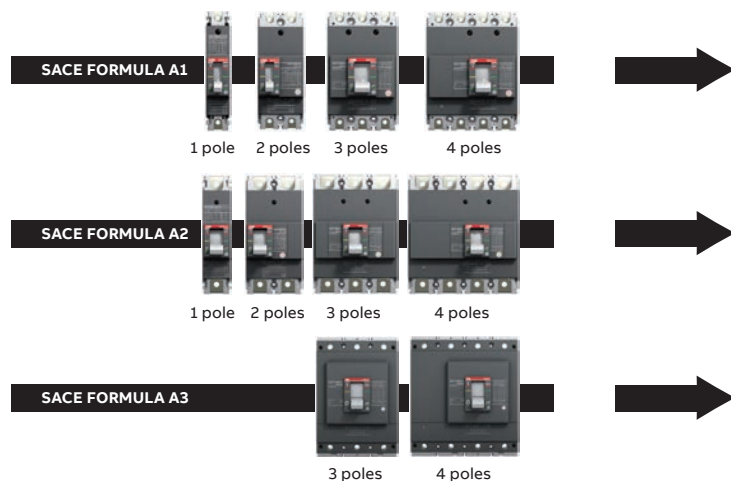
\*Jumper kit is compulsory to order with 1500V DC version

# FORMULA moulded case circuit breaker

## New low voltage moulded case circuit breakers up to 630A

### General characteristics

- Conforms to IEC 60947-2
- Fixed thermal magnetic release throughout the range
- Compact dimensions
- Common range of accessories
- Available in 1P, 2P, 3P & 4 pole versions
- Line-load reversibility
- Suitable for DC application till 250Vdc
- Operation voltage till 550VAC, insulation voltage of 690VAC and impulse voltage of 6KV



### FORMULA A1

- Rated current,  $I_n$  15...125A
- 1, 2, 3, 4 pole versions
- $I_{cu}$  = 10, 18, 25, 36KA

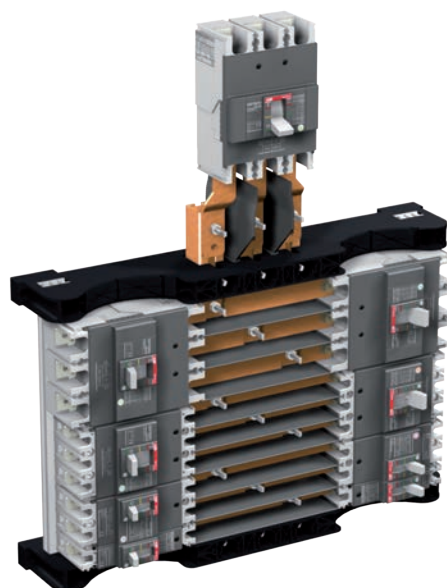
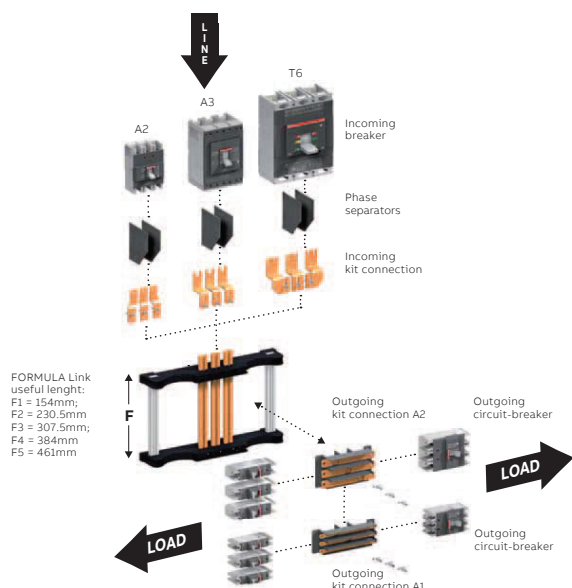
### FORMULA A2

- Rated current,  $I_n$  125...250A
- 1, 2, 3, 4 pole versions
- $I_{cu}$  = 18, 25, 36KA

### FORMULA A3

- Rated current,  $I_n$  320...630A
- 3, 4 pole versions
- $I_{cu}$  = 36, 50KA

## FORMULA link system



# FORMULA moulded case circuit breaker

- FORMULA link in accordance with IEC 60439 Standard
- FORMULA link is a component of a power distribution system which divides the main power supply over different users
- The FORMULA link is characterised on the supply side by a main circuit-breaker which protects the whole distribution system, and on the load side by smaller sized circuit-breakers, dedicated to the individual users
- FORMULA link assembly for total discrimination between upstream and downstream devices

## FORMULA link - Electrical characteristics

FORMULA link frame	[A]	250	400	630/800
Incoming breaker		A2	A3	T6
Outgoing breaker		A1	A1-A2	A1-A2
Rated operational voltage 50/60 Hz	[V]	550AC	550AC	550AC
Rated insulation voltage	[V]	690AC	690AC	690AC
Rated short time withstand current (1s)	[KA]	30	40	40



## Fixed thermal and fixed magnetic MCCB

### A1 125

#### TMF

		A1A 125 Icu = 10KA		A 1B 125 Icu = 18KA		A 1C 125 Icu = 25KA		A 1N 125 Icu = 36KA	
In(A)	Poles	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)	Ordering code	L.P. (₹)
25	3	1SDA066512R1 ■	2,850	1SDA066699R1	3,830	1SDA066711R1	4,640	1SDA066723R1	5,470
32		1SDA068757R1 ■		1SDA068758R1 ■		1SDA068759R1 ■		1SDA068760R1	
40		1SDA066514R1 ■		1SDA066701R1		1SDA066713R1		1SDA066725R1	
50		1SDA066515R1 ■		1SDA066702R1		1SDA066714R1		1SDA066726R1	
63		1SDA068768R1 ■		1SDA068769R1 ■		1SDA068770R1 ■		1SDA068771R1 ■	
80		1SDA066518R1 ■		1SDA066705R1		1SDA066717R1 ■		1SDA066729R1	
100	4	1SDA066520R1 ■	3,360	1SDA066707R1 ■	4,410	1SDA066719R1 ■	4,940	1SDA066731R1 ■	5,750
125		1SDA066521R1 ■		1SDA066708R1 ■		1SDA066720R1 ■		1SDA066732R1 ■	
25		1SDA066526R1		1SDA066735R1		1SDA066747R1		1SDA066759R1	
32		1SDA068761R1 ■		1SDA068762R1		1SDA068763R1 ■		1SDA068764R1	
40		1SDA066528R1		1SDA066737R1		1SDA066749R1		1SDA066761R1	
50		1SDA066529R1		1SDA066738R1		1SDA066750R1		1SDA066762R1	
63	4	1SDA068772R1 ■	3,830	1SDA068773R1 ■	4,870	1SDA068774R1 ■	5,980	1SDA068775R1 ■	6,960
80		1SDA066532R1		1SDA066741R1		1SDA066753R1		1SDA066765R1	
100		1SDA066534R1 ■		1SDA066743R1 ■		1SDA066755R1 ■		1SDA066767R1 ■	
125		1SDA066535R1 ■		1SDA066744R1 ■		1SDA066756R1 ■		1SDA066768R1 ■	

■ Stock items

# FORMULA moulded case circuit breaker

## A2 250 TMF

In(A)	Poles
160	3
200	
250	
160	4
200	
250	

## A2B 250 Icu = 18KA

Ordering code	L.P. (₹)
1SDA066549R1 ■	7,720
1SDA066551R1 ■	9,040
1SDA066553R1 ■	9,720
1SDA066555R1 ■	10,040
1SDA066557R1 ■	11,510
1SDA066559R1 ■	12,560

## A2C 250 Icu = 25KA

Ordering code	L.P. (₹)
1SDA066776R1 ■	8,240
1SDA066778R1 ■	9,720
1SDA066780R1 ■	10,400
1SDA066788R1 ■	10,710
1SDA066790R1 ■	12,430
1SDA066792R1 ■	14,280

## A2N 250 Icu = 36KA

Ordering code	L.P. (₹)
1SDA066782R1 ■	8,750
1SDA066784R1 ■	11,070
1SDA066786R1 ■	12,430
1SDA066794R1 ■	11,380
1SDA066796R1 ■	14,280
1SDA066798R1 ■	15,770

## A3 400 TMF

In(A)	Poles
320	3
400	
320	4
400	

## A3N 400 Icu = 36KA

Ordering code	L.P. (₹)
1SDA066560R1	26,900
1SDA066561R1	
1SDA066568R1	34,830
1SDA066569R1	

## A3S 400 Icu = 50KA

Ordering code	L.P. (₹)
1SDA066562R1	29,300
1SDA066563R1	
1SDA066570R1	38,110
1SDA066571R1	

## A3 630 TMF

In(A)	Poles
500	3
630	
500	4
630	

## A3N 630 Icu = 36KA

Ordering code	L.P. (₹)
1SDA066564R1	29,300
1SDA066566R1	34,830
1SDA066572R1	37,670
1SDA066574R1	44,400

## A3S 630 Icu = 50KA

Ordering code	L.P. (₹)
1SDA066565R1	31,690
1SDA066567R1	38,880
1SDA066573R1	40,350
1SDA066575R1	50,820

## Accessories

Terminals			
Front extended spread terminal - ES	Poles	Ordering code	L.P. (₹) 6 pieces
A1	3P	1SDA082242R1 ■	480
A2		1SDA082247R1 ■	1,200

Terminals			
Front extended spread terminal - ES	Poles	Ordering code	L.P. (₹) 8 pieces
A1	4	1SDA082243R1 ■	650
A2		1SDA082248R1 ■	1,350

	Description	A1-A2	
		Ordering code	L.P. (₹)
Rotary handle	RHD - Operating mechanism direct handle	1SDA066154R1 ■	1,290
	RHE - Operating mechanism transmitted handle	1SDA066158R1 ■	1,690
	SOR-C 220...240 VAC - 220...250 VDC	1SDA066137R1	2,100
Shunt opening release – SOR-C Cabled version	SOR-C 380...440 VAC	1SDA066138R1	1,940
Auxiliary contacts – AUX-C Cabled version	AUX-C 1Q + 1SY 250 VAC/DC	1SDA066149R1 ■	1,760
Undervoltage release – UVR-C Cabled version	UVR-C 220...240 VAC - 220...250 VDC	1SDA066146R1	4,010
	UVR-C 380...440 VAC	1SDA066147R1	

■ Stock items



# Switches

ABB has a wide portfolio of low voltage switches. They are suitable for diverse applications, in motor control centers, in switch boards and as main switches in various equipments and machines. From single to 8 poles and combination switches for change-over, automatic transfer, bypass, reversing etc.

## Switch disconnectors 16 – 4000 A

The switch disconnector is largely used as the main switch in low voltage switchgears for distribution of power, starting and stopping motors and isolating loads during maintenance.

The range from 16 to 125 Amps are either base plate or door mounted by snap-on or screw fitting front operated 3, 4, 6 and 8-pole are available as standard.

From 160 to 4000 Amps the switch disconnectors, also called load break switches, are designed as pole modules and they are available as 1, 2, 3 and 4-pole versions, front or side operated.

## Switch disconnectors OTDC and OTDCP 10 – 1600 A

The OTDC range of switch-disconnectors is specially designed for DC applications. Thanks to a compact design, efficiency and reliability, OTDC switches bring photovoltaic installations to the next level.

## Switch disconnector fuses 16 – 1250A

The switch disconnector fuse is used as the main switch in low voltage switchgears in industry for distributing power and protecting motors, cables and other devices against short circuits and over loads.

The switch disconnector fuses are available for all types of fuse links, DIN, BS, NFC, UL, CSA.

The range includes single pole to four pole versions, front-or side-operated. The pole module design enables location of the operating mechanism in any position together with the direction of the terminals giving flexibility to installation in different types of cubicle designs.

## Change-over and transfer switches 16 – 3200 A

ABB's change-over and transfer switches are designed to transfer loads from one power source to another in a wide variety of applications.

The range includes switches from 16 to 3200 Amperes, which can be operated manually, remotely by using a motor or automatically.

ABB's change-over and transfer switches are tested according to IEC 60947-6-1 and IEC 60947-3 standards. The switches have ratings in AC31 and AC33 utilization categories, up to 415 V. In motorized switches, the motor operators have a wide voltage operation range.

## Enclosed switches 16 – 1600 A

The ABB enclosed switches are suitable for power distribution in factories and buildings, as local motor isolators and as main switches. Each incoming supply shall be provided with a hand operated main switch-disconnector according to the Machine Directive EN 60204 and isolate reliably the electrical equipment from the supply.

ABB enclosed switches are designed and tested to meet these requirements and complies with IEC 60 947-3.

The enclosed switches are easy to install and safe to use in industrial, public and residential environments. The indication of the handle is always reliable and lockable in the OFF-position with a standard padlock. ABB's long experience in switch disconnects guarantees a long and safe use.

## Cam switches 10 – 315 A

ABB's new OC, OM, ON and OL rotary cam switches offer a complete range of cam switches for control, instrumentation and motor starting applications, maximizing the benefits and optimizing your use of assets. The standard cam switches provide you with a variety of functionalities for the most common mounting types and applications with minimum footprint area.





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## **Optimized two-poles 1500V DC switch disconnectors**

Small sized and with increased  
efficiency and performance

A fully optimized range of two-pole DC switch-disconnectors for 1500V utility-scale photovoltaic power plants covering 315-800A current range. The new design offers both a size reduction and an increase in efficiency and performances, helping manufacturers to adapt quickly to the industry's rapid adoption of 1500V DC solutions. A switch range that allows manufacturers and utilities to improve their systems efficiency, lowering power losses and reducing the size of combiner boxes, enclosures and inverters. <https://go.abb/otdc>



# DC switch disconnectors for PV application



## OTDC 10...32A

- Modular design
- Simple and fast installation
- DIN rail or screw mounted
- Tunnel terminals for easy termination
- Shortcircuit bars are pre-installed as standard
- Maximum energy efficiency
- Available in plastic enclosure

New



## OTDC 100A....1600A

- ABB offers a compact DC switch range for single and multi circuit disconnecting
- Carefully designed arc plates and dual magnetic breaking, breaking power is optimized across the entire current range.
- As a result of symmetric pole design, the connections are independent of polarity. The user can make the connections in both ways.
- OTDC is the only DC switch in the market that has visible contacts.
- The mechanism can be located between the poles or on the side of the switch.
- Special four pole versions can be made for double circuit applications.
- The operation of the switch is not vulnerable to voltage peaks and it is independent of the user (quick make quick break).
- The switches are available in direct mounting handle version as well as external door mounted handle version.
- The power losses are very low, results in high efficiency.

New



Rated current in (A)	Rated voltage	Description	Ordering code	L.P. (₹)
10	1000 V DC	OTDC16F2	1SCA121454R1001	Upon request
16		OTDC16F3	1SCA121457R1001	
25		OTDC25F3	1SCA121458R1001 ■	
32		OTDC32F3	1SCA121459R1001 ■	
100		OTDC100E11K	1SCA125821R1001	
160		OTDC160E11K	1SCA123745R1001	
200		OTDC200E11K-I	1SCA125626R1001 ■	
250		OTDC250E11K-I	1SCA125865R1001 ■	
315		OTDC315F11K	1SCA158258R1001	
400		OTDC400F11K	1SCA158266R1001	
500		OTDC500F11K	1SCA158274R1001	
630		OTDC630F22K	1SCA137209R1001	
800		OTDC800F11K	1SCA158854R1001	
1000		OTDC1000E22K	1SCA143710R1001	
1250		OTDC1250E22K	1SCA143716R1001	
1600		OTDC1600E22K	1SCA143719R1001	
315	1500 V DC	OTDC315FV11K	1SCA158260R1001	Upon request
400		OTDC400FV11K	1SCA158268R1001	
500		OTDC500FV11K	1SCA158276R1001	

Note: The above are direct mounted handle version, we also offer door mounted handle as suffix P version of same ratings.

Life Cycle Management (LCM) Status of OTDC switch-disconnector range OTDC315E... OTDC800E... and OTDC250US... OTDC600US and related accessories will change from Active to Classic on January 1st, 2019 and will be available till stocks last. On January 1st 2020 the LCM status will change from Classic to Obsolete.

■ Stock items \*For information contact our nearest sales office

## ONE20

### Enclosed switches for residential and commercial installations



#### ONE20

Switches can be used as main switches or for local isolation in various applications, such as HVAC, residential water pumps and heat pumps or commercial lighting.

#### High quality

ABB is a synonym of quality: each ONE20 switch is tested and approved at the factory. The enclosures are made of durable materials with high UV resistance, which makes it suitable for indoor or outdoor use.

#### Reduced installation time

Compression glands are included in the delivery. They can be easily installed on the threaded knock-out cable entry.

#### Simple and modern design

The enclosure is compact and has the same size for 2, 3 and 4 pole types. ONE20 is available in three colors.

#### Maximized safety

The handle can be padlocked in the OFF position with up to three padlocks and in ON position with one padlock.

#### Features

- Available in 2-, 3- and 4- pole versions
- Thermal current (Ith) 20A
- Color options: light grey, dark grey, red-yellow
- Weather proof enclosure due to high IP class (IP67) and
- UV resistant material

#### Enclosed switches ONE20

Poles	Description	Ordering code	L.P. (₹)
2	ONE20M2W	1SCA138456R1001	1,020
3	ONE20M3W	1SCA138457R1001	1,530
4	ONE20M4W	1SCA138459R1001	1,790
2	ONE20M2G	1SCA135532R1001	1,030
3	ONE20M3G	1SCA135535R1001	1,520
4	ONE20M4G	1SCA135538R1001	1,790
2	ONE20M2Y	1SCA135533R1001	1,030
3	ONE20M3Y	1SCA135536R1001	1,520
4	ONE20M4Y	1SCA135540R1001	1,790

# Fusegear

## Easyline - XLP

Fuse Switch Disconnecter 1, 2, 3 & 4P for both AC and DC application 160...630A

All units are applicable for AC voltage, and the 1-pole and 2-pole range are also rated for DC voltage.

In addition to be used as single apparatus, the 3-pole range from size 00 to size 3 (160A - 630A) are also designed to be used in distribution systems by use of a busbar adapter for easy installation. The Busbar adapters are available for 40 mm, and 60 mm distance in-between centre of the phases for each busbar

systems. The whole EasyLine range got a sturdy, uniform design that is operator friendly and safe with IP 30 from front in closed position and IP 20 in open position. EasyLine Fuse Switch Disconnectors are developed and type tested according to IEC60947-3 and based on a long history, going back to 1958 when we successfully introduced the manually dependent operated LHB.



### Features

- All the XLP cable terminals can be delivered with integrated bolts for cable lugs or with integrated bridge clamps (BC) for easy direct cable connection
- Typetested according to EN60947-3
- Easy to recycle/EN14001 standards
- Quick-make operation device
- Integrated IP20 cable termination
- IP30 degree of protection from the front
- Replacement compatible to similar types in the market
- Voltage measuring from the front
- V-0 plastic materials

### Advantages

- Easy to install
- Easy to operate
- Sturdy design
- High personal safety
- Wide range of cable terminals and snap-on accessories
- Compact, add-on Electronic Fuse Monitoring (EFM)
- Busbar adapters

### Applications

- UPS: Uninterruptible Power Supply, used for the power supply for computer/servers, storage devices, communication network systems, industry control systems, etc.
- Telecom power supplies
- General protection in smaller distribution panels using 1-pole or 2-pole configurations AC or DC

### Fusegear - Fuse switch disconnector

Description	Ordering code	L.P. (₹)
XLP000-6CC	1SEP201428R0001	3,820
XLP00-6BC	1SEP101890R0002	4,910
XLP1-6BC	1SEP101891R0002	12,560
XLP2-6BC	1SEP101892R0002	19,650
XLP3-6BC	1SEP101975R0002	32,210

# Fusegear

## InLine II - ZLBM/ZHBM

Designed for the future

ABB is proud to introduce the latest technology of Fuse Switch Disconnectors to ensure the best stability and highest safety in the power distribution network.

The new generation InLine II also offers the highest level of personal safety during operation and service.



### Features

- Available as 160A, 250A, 400A, 630A, 800 and 1250A types in combination with NH/DIN HRC Fuse Links acc. to EN/IEC 60269
- Type tested in accordance to EN/IEC 60947-3
- 1 - pole and 3 - pole variants
- For vertical and horizontal installations
- Designed for 185 mm busbar distance
- IP30 degree of protection from the front
  - Padlocking in open and closed position at the 3 - pole version
  - Padlocking in closed position at the 1 - pole version
- Park position with possible padlocking at the 1 - pole type
- Sealing solutions
- Wide range of accessories and cable terminal connections
- Compatible dimensions to equivalent products in the market

### Advantages

- High level of personal safety by:
  - Safe and reliable operation ON/OFF
  - Safe and simple replacement of the NH fuse links

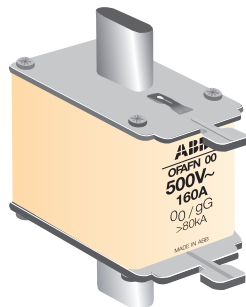
- Universal terminal bolts offering standing bolt or fixed nut for high flexibility of cable connections
- Variants with integrated V-clamps
- Available in two alternative depths (ZLBM/ZHBM), L-version (ZLBM) will save space in Cable Distribution Cabinets by offering reduced depth
- Easy installation of current transformers in the H-version (ZHBM)
- Variants with non corrosive steel materials (stainless steel)
- Designed for intelligent communication to support a high level of stability in the power distribution network

### Applications

- Cable Distribution Cabinets (CDC)
- Low voltage distribution in compact secondary substations (CSS)
- Distribution boards for industry, housing and office buildings
- Installations



# OFAF HRC fuse links and base, DIN-type



## DIN -type fuse links, gG, 500 V, 80 kA

The ordering code includes one fuse link, the delivery batch is according to the column.

Fuse size	Rated current In (A)	Description	Delivery batch [pcs]	Ordering code	L.P. (₹)
000	2	OFAFN000GG2	6	1SCA107747R1001 ■	220
	6	OFAFN000GG6	6	1SCA107748R1001 ■	
	10	OFAFN000GG10	6	1SCA107749R1001 ■	
	16	OFAFN000GG16	6	1SCA107750R1001 ■	
	20	OFAFN000GG20	6	1SCA107751R1001 ■	
	25	OFAFN000GG25	6	1SCA107751R1002 ■	
	32	OFAFN000GG32	6	1SCA107752R1001 ■	
00	63	OFAFN000GG63	6	1SCA107753R1001 ■	510
	6	OFAFN00GG6	6	1SCA107754R1001	
	10	OFAFN00GG10	6	1SCA107755R1001	
	16	OFAFN00GG16	6	1SCA107756R1001	
	20	OFAFN00GG20	6	1SCA107757R1001	
	25	OFAFN00GG25	6	1SCA107758R1001	
	32	OFAFN00GG32	6	1SCA107759R1001 ■	
	50	OFAFN00GG50	6	1SCA107760R1001 ■	
	63	OFAFN00GG63	6	1SCA107761R1001 ■	
	80	OFAFN00GG80	6	1SCA107762R1001 ■	
0	100	OFAFN00GG100	6	1SCA107763R1001 ■	980
	125	OFAFN00GG125	6	1SCA107764R1001 ■	
	160	OFAFN00GG160	6	1SCA107765R1001 ■	
	160	OFAF0H160	3	1SCA022627R3170	
	200	OFAF0H200	3	1SCA022629R5140 ■	
1	32	OFAFN1GG32	6	1SCA107766R1001	730
	50	OFAFN1GG50	6	1SCA107767R1001	
	63	OFAFN1GG63	6	1SCA107768R1001	
	80	OFAFN1GG80	6	1SCA107769R1001	
	100	OFAFN1GG100	6	1SCA107770R1001	
	125	OFAFN1GG125	6	1SCA107771R1001	
	160	OFAFN1GG160	6	1SCA107772R1001 ■	
	200	OFAFN1GG200	3	1SCA107773R1001 ■	
2	250	OFAFN1GG250	3	1SCA107774R1001 ■	1,080
	100	OFAFN2GG100	3	1SCA107775R1001	
	125	OFAFN2GG125	3	1SCA107776R1001	
	250	OFAFN2GG250	3	1SCA107778R1001	
	315	OFAFN2GG315	3	1SCA107779R1001 ■	
3	400	OFAFN2GG400	3	1SCA107780R1001 ■	1,670
	315	OFAFN3GG315	3	1SCA107781R1001	
	500	OFAFN3GG500	3	1SCA107783R1001 ■	
	630	OFAFN3GG630	3	1SCA107784R1001 ■	
4	800	OFAFN3GG800	3	1SCA107785R1001 ■	Upon request
	1250	OFAF4H1250	1	1SCA022627R7830	
4a	1250	OFAF4AH1250	1	1SCA022637R4360	



Fuse size	Rated current In (A)	Description	Ordering code	L.P. (₹)
00	160	Fuse Base - Din type	1SCA833001R2001 ■	420
1	250		1SCA833001R2002 ■	850
2	400		1SCA833001R2003 ■	1,450
3	630		1SCA833001R2004 ■	1,930

■ Stock items



# OFF HRC fuse links and base, BS-type

## BS -type fuse links, gG, 415 V, 80 kA

The type code includes one fuse link, but the delivery batch is according to the column.



Fuse size	Rated current In [A]	Description	Delivery batch [pcs]	Ordering code	L.P. (₹)
<b>Offset blade tag fuse link</b>					
F1	2	OFFNF1GG2	10	1SCA107786R1001 ■	70
	4	OFFNF1GG4	10	1SCA107787R1001 ■	
	6	OFFNF1GG6	10	1SCA107788R1001 ■	
	10	OFFNF1GG10	10	1SCA107789R1001 ■	
	16	OFFNF1GG16	10	1SCA107790R1001 ■	
	20	OFFNF1GG20	10	1SCA107791R1001 ■	80
	25	OFFNF1GG25	10	1SCA107792R1001 ■	
	32	OFFNF1GG32	10	1SCA107793R1001 ■	
<b>Offset bolted tag fuse link</b>					
A2	6	OFFNA2GG6	10	1SCA107795R1001	100
	10	OFFNA2GG10	10	1SCA107796R1001	
	16	OFFNA2GG16	10	1SCA107798R1001	
	20	OFFNA2GG20	10	1SCA107827R1001	
	25	OFFNA2GG25	10	1SCA107800R1001	
A3	32	OFFNA2GG32	10	1SCA107801R1001 ■	130
	40	OFFNA3GG40	10	1SCA107803R1001 ■	
	50	OFFNA3GG50	10	1SCA107804R1001	
A4	63	OFFNA3GG63	10	1SCA107805R1001 ■	280
	50	OFFNA4GG50	10	1SCA107806R1001	
	63	OFFNA4GG63	10	1SCA107807R1001	
	80	OFFNA4GG80	10	1SCA107808R1001	
	100	OFFNA4GG100	10	1SCA107809R1001 ■	
	125	OFFNA4GG125	10	1SCA107810R1001 ■	
<b>Central bolted tag fuse link</b>					
B1	50	OFFNB1GG50	10	1SCA107811R1001	330
	63	OFFNB1GG63	10	1SCA107812R1001	
	80	OFFNB1GG80	10	1SCA107813R1001	
	100	OFFNB1GG100	10	1SCA107814R1001	
B2	125	OFFNB2GG125	10	1SCA107816R1001	490
	160	OFFNB2GG160	5	1SCA107817R1001 ■	
	200	OFFNB2GG200	5	1SCA107818R1001 ■	
B3	250	OFFNB3GG250	1	1SCA107819R1001 ■	710
	315	OFFNB3GG315	1	1SCA107820R1001	
B4	400	OFFNB4GG400	1	1SCA107822R1001	1,250
C1	400	OFFNC1GG400	1	1SCA107823R1001	1,900
C2	500	OFFNC2GG500	1	1SCA107824R1001	2,140
C2	630	OFFNC2GG630	1	1SCA107825R1001	2,140
C3	800	OFFNC3GG800	1	1SCA107826R1001	2,710



Fuse size	Rated current In [A]	Description	Delivery batch [pcs]	Ordering code	L.P. (₹)
F1	20	Control Fuse	100	1SYN833001R2005 ■	150
	32	Base	100	1SYN833001R2009 ■	180

■ Stock items

# OESA/OS switch disconnecter fuse, DIN-type

## DIN type

32 - 800A SDF supplied with shaft and handle, Mechanism at the end of the switch fuse



Notes:  
4<sup>th</sup> pole of all SFU's are 100% rated and are in the switched neutral (SN) version.

- Contact our nearest sales office
- For mechanism inbetween poles configuration
  - For motorized switch disconnecter fuse requirement
  - For 4th pole with fuse protection
  - For Switch disconnecter fuse with direct mounting handle

Rated current In [A]	Poles	Recommend Fuse size	Description	Ordering code	L.P. (₹)
32	2	000/ 00	OESA0032D2	1SCA022108R4330	2,140
63			OESA0063D2	1SCA022080R5470	2,670
100		00	OESA00100D2	1SCA022080R5210	5,150
125			OESA125D2	1SYN833039R2012	6,880
160			OESA00160D2	1SCA022108R4500	7,350
200		0	OS200D02P	1SCA022759R9220	9,480
250		0-1	OS250D02P	1SCA022760R0170	11,800
315		0-2	OS315D02P	1SYN833040R2012	15,670
400			OS400D02P	1SCA022811R2740	17,600
630		3	OS630D02P	1SCA107745R1001	29,960
800			OS800D02P	1SCA022837R2650	34,010
1250		4	OS1250D02P	1SCA114051R1001	Upon request
32	3	000/ 00	OESA00-32	1SCA022058R7710 ■	2,350
63			OESA 00-63	1SCA022057R6850 ■	3,220
100		00	OESA00100	1SCA022025R7830 ■	6,200
125			OESA 00125	OESA00125 ■	8,310
160			OESA00-160	1SCA022077R8130 ■	8,900
200		0	OS200D03P	1SYN022709R9500 ■	11,460
250		0-1	OS250D03P	1SYN022719R0090	14,270
315		0-2	OS315D03P	1SYN953046P3001 ■	18,940
400			OS400D03P	1SYN022719R0250 ■	21,290
630		3	OS630D03P	1SYN022825R2830 ■	36,240
800			OS800D03P	1SYN022825R4880 ■	38,580
1250		4	OS1250D03P	1SCA105475R1001	Upon request
32	TPN	000/ 00	OESA0032N ■	OESA0032N	2,470
63			OESA0063N ■	OESA0063N	3,340
100		00	OESA00100N ■	OESA00100N	6,550
125			OESA00125N ■	OESA00125N	8,780
160			OESA00160N ■	OESA00160N	9,830
200		0	OS200D03N3P	1SYN022749R8710 ■	12,400
250		0-1	OS250D03N3P	1SYN022749R9430 ■	14,980
315		0-2	OS315D03N3P	1SYN953047P3001 ■	20,110
400			OS400D03N3P	1SYN022753R9320 ■	22,210
630		3	OS630D03N3P	1SYN100858R1001 ■	36,810
800			OS800D03N3P	1SYN100859R1001 ■	39,740
1250		4	OS1250D03N3P	1SCA107932R1001	Upon request
32	4 (Switched Neutral)	000/ 00	OESA 00-32A4	1SCA022067R7610	2,700
63			OESA 00-63A4	1SCA022057R7740 ■	3,510
100		00	OESA00100A4	1SCA022043R6760	6,800
125			OESA00125A4	OESA00125A4	9,350
160			OESA 00-160A4	1SCA022080R7840	10,520
200		0	OS200D04N2P	1SYN022709R9680	13,570
250		0-1	OS250D04N2P	1SYN022719R2380	15,900
315		0-2	OS315D04N2P	1SYN953048P3001 ■	22,800
400			OS400D04N2P	1SYN022719R2460 ■	24,550
630		3	OS630D04N2P	1SYN022825R4290 ■	39,290
800			OS800D04N2P	1SYN022825R5180 ■	44,600
1250		4	OS1250D04N2P	1SCA105248R1001	Upon request

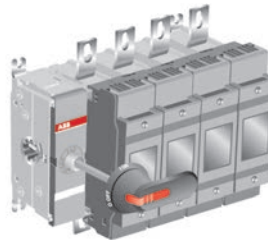
■ Stock items

# OESA/OS switch disconnecter fuse, BS-type

## BS

32 - 800A SDF supplied with shaft and handle

### Mechanism at the end of the switch fuse



Note:  
4<sup>th</sup> pole of all SFU's are 100% rated  
and are in the switched neutral (SN)  
version.

- Contact our nearest sales office
- For 1250A switch disconnecter fuse requirement
  - For mechanism in between poles configuration
  - For motorized switch disconnecter fuse requirement
  - For 4th pole with fuse protection

Rated current In [A]	Poles	Recommend Fuse size	Description	Ordering code	L.P. (₹)
32	2	A2	OESA32G2	1SCA022108R6110	1,890
63		A3	OESA63G2	1SCA022108R6380	2,580
100		A4	OESA100G2	1SCA022087R7970	5,040
125		A4	OESA125G2	1SYN833038R2012	6,390
160		B2	OESA160B2	1SCA022082R6550	6,970
200		B1-B2	OS200B02P	1SCA022769R7820	8,420
250		B1-B3	OS250B02P	1SCA022769R9440	10,730
315		B1-B4	OS315B02P	1SCA022817R3450	15,570
400		B1-B4	OS400B02P	1SCA022813R7220	15,850
630		C1-C2	OS630B02P	1SCA113529R1001	27,540
800		C1-C3	OS800B02P	1SCA022837R6480	32,880
1250		D1	OS1250B02P	1SCA114070R1001	Upon request
32	3	A2	OESA32G1	1SCA022057R1540	2,290
63		A3	OESA63G1	1SCA022057R0310 ■	3,110
100		A4	OESA100G1	1SCA022042R0920 ■	6,100
125		A4	OESA125G1	OESA125G1	7,730
160		B2	OESA160B3	1SCA022076R9570	8,420
200		B1-B2	OS200B03P	1SYN022709R9330	10,180
250		B1-B3	OS250B03P	1SYN022750R6660	12,990
315		B1-B4	OS315B03P	1SYN022719R0680	18,830
400		B1-B4	OS400B03P	1SYN022719R0840	19,180
630		C1-C2	OS630B03P	1SYN022825R5850	33,320
800		C1-C3	OS800B03P	1SYN022825R7550	39,740
1250		D1	OS1250B03P	1SCA105250R1001	Upon request
32	TPN	A2	OESA32G1N ■	OESA32G1N ■	2,410
63		A3	OESA63G1N ■	OESA63G1N ■	3,220
100		A4	OESA100G1N ■	OESA100G1N ■	6,440
125		A4	OESA125G1N ■	OESA125G1N ■	7,950
160		B2	OESA160B3N ■	OESA160B3N	8,670
200		B1-B2	OS200B03N3P	1SYN022750R0620 ■	10,890
250		B1-B3	OS250B03N3P	1SYN022750R8010 ■	14,040
315		B1-B4	OS315B03N3P	1SYN022753R8940	19,290
400		B1-B4	OS400B03N3P	1SYN022753R9160	20,240
630		C1-C2	OS630B03N3P	1SYN100860R1001	33,900
800		C1-C3	OS800B03N3P	1SYN100861R1001	37,980
1250		D1	OS1250B03N3P	1SCA107936R1001	Upon request
32	4 (Switched Neutral)	A2	OESA32G4	1SCA022059R9040	2,760
63		A3	OESA63G4	1SCA022057R1110	3,510
100		A4	OESA100G4	1SCA022043R7570	7,600
125		A4	OESA125G4 ■	OESA125G4	9,350
160		B2	OESA160B4	1SCA022080R3690	10,520
200		B1-B2	OS200B04N2P	1SYN022709R9410	13,680
250		B1-B3	OS250B04N2P	1SYN022750R7800	16,140
315		B1-B4	OS315B04N2P	1SYN022719R2710	23,140
400		B1-B4	OS400B04N2P	1SYN022719R2890	23,380
630		C1-C2	OS630B04N2P	1SYN022825R6230	40,330
800		C1-C3	OS800B04N2P	1SYN022825R8010	46,170
1250		D1	OS1250B04N2P	1SCA105469R1001	Upon request

■ Stock items

# Accessories for OESA/OS switch disconnecter fuse, 32..800 A



## Phase barriers

Frame	Pole	Height (mm)	Description	Ordering code	L.P. (₹)
OS200...400	3	100	PB100 low	1SDA054970R1 ■	930
	4	100	PB100 low	1SDA054971R1 ■	1,380



## Auxiliary contacts

Frame	Contact function	Description	Ordering Code	L.P. (₹)
OESA 32...160	1NO+1NC	OESAZX 15	OESAZX 15	520
	2NO+2NC	OESAZX 16	OESAZX 16	1,000
OS200...800	1NO	OA1G10	1SCA022353R4970	550
	1NC	OA3G01	1SCA022456R7410	610
Screw mounting to the left side of the switch		OEA28	1SCA022714R8810 ■	710

Note: OEA 28 has to be order along with 200 & 250A TPN switch only



## Fuse monitor

Frame	Rated voltage [Vac]	Description	Ordering code	L.P. (₹)
OS200...800	100...260	OFS260	1SCA022716R0180	7,400
	380...690	OFS690	1SCA022715R9920	7,590



## Wrapped neutral link

Frame	Description	Ordering code	L.P. (₹)
OESA32...63	OESAZX87	OESAZX 87	470
OESA100	OESAZX 86/1	OESAZX 86/1	840
OESA125...160	OESAZX86	OESAZX 86	920
OS200...250	OXN250	1SCA022752R9950	4,210
OS315...400	OXN400	1SCA022770R3060	11,030
OS630...800	OXN800S	1SCA022831R4880	12,640

## Handle adaptor

OHB145...OHB175	OHBZX200	1SCA125960R1001	1,310
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## Handles

Frame	Description	Ordering code	L.P. (₹)
OESA32...63	YASDB51	YASDB 51	770
OESA100...160	YASDB10	YASDB 10	1,150
OS200...250	OHB80J6	1SCA022381R0240 ■	1,580
OS315...400	OHB145J12	1SCA022381R2110	1,940
OS630...800	OHB175J12	1SCA022381R2450	2,290



## Shaft

Frame	Description	Ordering code	L.P. (₹)
OESA/OS32...250	EXP6X210	1SCA022295R6080	400
OS315...400	EXP12X250	1SCA022325R6980	800
OS630...800	EXP12X280	1SCA022137R5140	1,030



## Fuse covers for OESA switch disconnecter fuse

Frame	Type	Description	Ordering code	L.P. (₹)
32...63	DIN	Fuse cover	1SYN833035R2012	70
32...63	BS		1SYN833036R2012	70
100...160	DIN		1SYN833037R2012	80

Note: Ordering code mentioned above for fuse cover is per piece

■ Stock items

# OT switch disconnectors



## Front operated switch-disconnectors with direct knob type handle

Rated current In [A]	Pole	Description	Ordering code	L.P.(₹)
16	3	OT16F3	1SCA104811R1001	1,150
25		OT25F3	1SCA104857R1001 ■	1,210
40		OT40F3	1SCA104902R1001	1,370
63		OT63F3	1SCA105332R1001	1,470
80		OT80F3	1SCA105798R1001	2,950
100		OT100F3	1SCA105004R1001	4,050
125		OT125F3	1SCA105033R1001	4,140

## Accessories for OT 16..125 F

### Selector handles for base and DIN-rail mounted switches

For shaft diameter 6 mm, door drilling 22.5 mm. Indication I-O and ON-OFF

### IP65 handles, NEMA 1, 3R, 12

Padlockable with max. 3 padlocks with bail diameter 5...8 mm, defeatable door interlock in ON-position, door interlocking in OFF-position when padlocked

Frame	Description	Ordering code	L.P. (₹)
OT16...125F- Black	OHBS2AJ	1SCA105213R1001	610
OT16...125F-Red-yellow	OHYS2AJ	1SCA105296R1001	730

## Shafts

Suitable for all the switches in this section, OT16...125F

Frame	Description	Ordering code	L.P. (₹)
OT16...125F	OX56X130	1SCA101655R1001 ■	420

## Door mounted switch-disconnectors with snap on and screw type mounting

### Handle for screw and snap on mouting to be ordered seperately

Rated current In [A]	Pole	Description	Ordering code	L.P. (₹)
16	3	OT16FT3	1SCA104838R1001 ■	1,270
25		OT25FT3	1SCA104884R1001	1,580
40		OT40FT3	1SCA104940R1001 ■	1,900
63		OT63FT3	1SCA105382R1001	2,630
80		OT80FT3	1SCA105431R1001	3,230
100		OT100FT3	1SCA105023R1001	5,400
125		OT125FT3	1SCA105060R1001	6,890

## Accessories for OT 16..125 FT

### Selector handles for door mounted switches

Indication I-O and ON-OFF. No separate shaft needed

### Screw mounting, hole distance 36 mm

Padlockable with max. 3 padlocks, IP65, hole distance 36/48 mm, NEMA 1, 3R, 12

Frame	Description	Ordering code	L.P. (₹)
OT16...125FT- Black	OHBS2RJ	1SCA105232R1001	710
OT16...125FT- Red Yellow	OHYS2RJ	1SCA105323R1001	730

Note:  
For any different arrangement kindly contact our nearest sales office.

■ Stock items

# OT switch disconnectors



Contact our nearest sales office

- For Door mounted switch disconnector
- For different configuration of Shaft and Handle (selector type)
- For 6 & 8 pole switch disconnector requirement
- 1 pole switch disconnector also available on request



Note:

Contact our nearest sales office

- For requirement of motorized isolators
- For mechanism in between poles configuration
- For switch disconnector with direct mounted handle
- For side operated switches

## Front operated switch-disconnectors

OT 16A-3150A switch disconnector supplied with extended shaft and IP 65 pistol type handle

Rated current In [A]	Poles	Description	Ordering code	L.P. (₹)
160	2	OT160EV02P	1SCA120508R1001	6,310
200		OT200E02P	1SCA022751R1400	6,710
250		OT250E02P	1SCA022735R2500	8,270
315		OT315E02P	1SCA022866R5590	9,520
400		OT400E02P	1SCA022741R7210	12,820
630		OT630E02P	1SCA022866R5670	16,080
800		OT800E02P	1SCA022835R4830	19,860
1000		OT1000E02P	1SCA105795R1001	41,330
1250		OT1250E02P	1SCA106136R1001	49,600
1600		OT1600E02P	1SCA106142R1001	66,130
2000		OT2000E02P	1SCA120025R1001	82,660
2500		OT2500E02P	1SCA113956R1001	1,03,330
3200	3	OT3200E02P	1SCA128581R1001	1,48,790
4000		OT4000E02P	1SCA128595R1001	1,73,600
16		OT16F3	1SYN104811R1001 ■	2,260
25		OT25F3	1SYN104857R1001 ■	2,290
40		OT40F3	1SYN104902R1001 ■	2,370
63		OT63F3	1SYN105332R1001 ■	2,400
80		OT80F3	1SYN105798R1001 ■	3,860
100		OT100F3	1SYN105004R1001 ■	5,150
125		OT125F3	1SYN105033R1001 ■	5,240
160		OT160G03P	1SCA135139R1001	6,660
16		OT16F4N2	1SYN104829R1001	2,440
25	4	OT25F4N2	1SYN104886R1001	2,530
40		OT40F4N2	1SYN104932R1001 ■	2,590
63		OT63F4N2	1SYN105365R1001	2,960
80		OT80F4N2	1SYN105413R1001 ■	5,070
100		OT100F4N2	1SYN105018R1001 ■	5,350
125		OT125F4N2	1SYN105051R1001 ■	5,520
160		OT160G04P	1SCA135140R1001	9,140
160		OT160EV03P	1SCA120514R1001 ■	6,990
200		OT200E03P	1SCA022712R0800 ■	7,820
250		OT250E03P	1SCA022710R0100 ■	9,640
315		OT315E03P	1SCA022718R8510 ■	10,570
400		OT400E03P	1SCA022718R8780 ■	14,250
630	3	OT630E03P	1SCA022718R8940 ■	17,650
800		OT800E03P	1SCA022718R9410 ■	22,050
1000		OT1000E03P	1SCA022860R5930 ■	43,170
1250		OT1250E03P	1SCA022860R6230 ■	55,120
1600		OT1600E03P	1SCA022860R6580 ■	73,480
2000		OT2000E03P	1SCA108036R1001	90,020
2500		OT2500E03P	1SCA104972R1001 ■	1,14,800
3200		OT3200E03P	1SCA128481R1001	1,65,330
4000		OT4000E03P	1SCA12484R1001	1,92,870
160		OT160EV04P	1SCA120521R1001 ■	9,640
200		OT200E04P	1SCA022713R4930 ■	9,850
250	4	OT250E04P	1SCA022710R0520 ■	11,020
315		OT315E04P	1SCA022719R1730 ■	11,950
400		OT400E04P	1SCA022719R1810 ■	15,350
630		OT630E04P	1SCA022719R2030 ■	20,960
800		OT800E04P	1SCA022719R2110 ■	25,260
1000		OT1000E04P	1SCA022860R6150	56,940
1250		OT1250E04P	1SCA022860R6310	71,640
1600		OT1600E04P	1SCA022860R6740	91,840
2000		OT2000E04P	1SCA108038R1001	1,08,390
2500		OT2500E04P	1SCA105140R1001	1,33,190
3200		OT3200E04P	1SCA128482R1001	1,79,110
4000		OT4000E04P	1SCA124856R1001	2,02,070

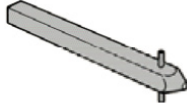
■ Stock items

# Accessories for OT switch disconnectors



## Handles

Frame	Description	Ordering code	L.P. (₹)
OT16...125	OHB45J6	1SCA022380R8770 ■	940
OT160...250	OHB65J6	1SCA022380R9660 ■	1,270
OT315...400	OHB95J12	1SCA022381R0830	1,460
OT630...800	OHB125J12	1SCA022381R1560 ■	1,580
OT1000...4000	OHB274J12	1SCA115920R1001 ■	4,490



## Shaft

Frame	Description	Ordering code	L.P. (₹)
OT16...125	OXp6X170	1SCA108224R1001 ■	340
OT160...250	OXp6X210	1SCA022295R6080	400
OT315...800	OXp12X185	1SCA022325R6710	640
OT1000...4000	OXp12X280	1SCA022137R5140	1,040



## Auxiliary contact

Frame	Contact function	Description	Ordering code	L.P. (₹)
OT16...4000	1NO	OA1G10	1SCA022353R4970 ■	550
OT16...125	1NC	OA1G01	1SCA022353R4890 ■	550
OT160EV...4000	1NC	OA3G01	1SCA022456R7410 ■	610



## Phase barrier

Frame	Poles	Description	Ordering code	L.P. (₹)
OT160...OT800	3	PB100 low	1SDA054970R1	940
OT160...OT800	4	PB100 low	1SDA054971R1	1,380
OT1000...2500	3 & 4	OTB1600/6	1SCA100768R1001	4,050
OT3200...4000	3 & 4	OTB4000/6	1SCA129040R1001	4,100



## Mechanical interlock mechanism

(Prevents one switch from closing to ON-position, if the other is not in OFF-position)

Frame	Shaft distance [mm]	Description	Ordering code	L.P. (₹)
OT16...125	100	OTZW24	1SCA022639R5610	2,050
OT160...250	190	OTZW10	1SCA022431R5280	2,500
OT315...400	250	OETLZW14	1SCA022077R3410	6,340
OT315...800	300	OETLZW3	1SCA022049R0380	6,610
OT315...4000	500	OETLZW15	1SCA022081R9340	7,350



## Terminal shrouds snap-on mounting, transparent

For 3-pole switches

Frame	Description	Ordering code	L.P. (₹)
OT 16...40F3	OTS40T3	1SCA105317R1001	350
OT63...80F3	OTS63T3	1SCA022353R6750 ■	260
OT 100...125F3	OTS125T3	1SCA022379R968	530

Note:

for requirement of terminal shrouds for higher current rating contact our nearest sales office



# OT manual changeover switches

## Manual changeover switches, I-O-II -operation

Supplied with extended shaft and IP 65 pistol type handle



Rated current In [A]	Poles	Description	Ordering code	L.P. (₹)	
16	3	OT16F3C	1SYN104816R1001 ■	3,500	
25		OT25F3C	1SYN104863R1001 ■	4,420	
40		OT40F3C	1SYN104913R1001 ■	4,790	
63		OT63F3C	1SYN105338R1001 ■	6,250	
80		OT80F3C	1SYN105402R1001	6,880	
100		OT100F3C	1SYN105008R1001 ■	9,200	
125	4	OT125F3C	1SYN105037R1001 ■	9,640	
16		OT16F4C	1SYN104831R1001	4,420	
25		OT25F4C	1SYN104877R1001	4,590	
40		OT40F4C	1SYN104934R1001 ■	5,070	
63		OT63F4C	1SYN105369R1001 ■	7,080	
80		OT80F4C	1SYN105418R1001 ■	7,440	
100		OT100F4C	1SYN105019R1001	10,950	
125		OT125F4C	1SYN105054R1001 ■	11,210	
Supplied with bridging bars, extended shaft and IP 65 pistol type handle					
160		3	OT160E03CP	1SYN022772R6510 ■	13,320
200			OT200E03CP	1SYN022771R7520 ■	13,770
250			OT250E03CP	1SYN022771R3450 ■	16,550
315	OT315E03CP		1SYN022772R6780 ■	20,200	
400	OT400E03CP		1SYN022771R8500 ■	23,880	
630	OT630E03CP		1SYN022785R6050 ■	35,820	
800	OT800E03CP		1SYN022785R6300	45,920	
1000	OT1000E03CP		1SYN022872R1680 ■	1,23,990	
1250	OT1250E03CP		1SYN022872R0790	1,37,760	
1600	OT1600E03CP		1SYN022872R1840	1,69,910	
2000	4	OT2000E03CP	1SYN103908R1001	2,57,170	
2500		OT2500E03CP	1SYN105615R1001	2,80,130	
3200		OT3200E03CP	1SYN129156R1001	4,04,110	
160		OT160E04CP	1SYN022775R9440 ■	15,620	
200		OT200E04CP	1SYN022771R7280 ■	16,080	
250		OT250E04CP	1SYN022775R4640 ■	17,910	
315		OT315E04CP	1SYN022775R7150 ■	21,870	
400		OT400E04CP	1SYN022771R8680 ■	25,720	
630		OT630E04CP	1SYN022785R6130 ■	44,090	
800		OT800E04CP	1SYN022785R6210 ■	53,270	
1000	4	OT1000E04CP	1SYN022872R1500	1,42,360	
1250		OT1250E04CP	1SYN022872R1250	1,48,790	
1600		OT1600E04CP	1SYN022872R2310	1,83,690	
2000		OT2000E04CP	1SYN103912R1001	3,30,630	
2500		OT2500E04CP	1SYN103906R1001	3,67,380	
3200		OT3200E04CP	1SYN129158R1001	4,82,180	

Note: Contact our nearest sales office

1. For 6 pole change over
2. For manual/motorized bypass switch
3. For manual closed transition
4. For wide phase manual change over

■ Stock items

# OT motorized changeover switches

## Changeover switches, motor operation, I-O-II -operation

Supplied with bridging bars and handle



Rated current In [A]	Poles	Description	Ordering code	L.P.(₹)
40	3	OTM40F3CMA230V	1SYN120096R1001	28,780
63		OTM63F3CMA230V	1SYN120095R1001	30,430
80		OTM80F3CMA230V	1SYN120093R1001	33,190
100		OTM100F3CMA230V	1SYN120071R1001	34,840
125		OTM125F3CMA230V	1SYN120070R1001	35,960
160		OTM160E3CM230C	1SYN022845R8610	44,520
200		OTM200E3CM230C	1SYN022845R8960	45,100
250		OTM250E3CM230C	1SYN022845R9260	55,640
315		OTM315E3CM230C	1SYN022847R1210	56,230
400		OTM400E3CM230C	1SYN022847R1630	67,660
630		OTM630E3CM230C	1SYN103567R1001	76,140
800		OTM800E3CM230C	1SYN103570R1001	1,13,180
1000		OTM1000E3CM230C	1SYN112677R1001	1,68,680
1250		OTM1250E3CM230C	1SYN112676R1001	1,85,090
1600		OTM1600E3CM230C	1SYN112678R1001	2,22,570
2000	4	OTM2000E3CM230C	1SYN112709R1001	3,75,150
2500		OTM2500E3CM230C	1SYN112710R1001	4,12,050
40		OTM40F4CMA230V	1SYN120102R1001	30,980
63		OTM63F4CMA230V	1SYN120101R1001 ■	32,640
80		OTM80F4CMA230V	1SYN120100R1001	34,300
100		OTM100F4CMA230V	1SYN120098R1001 ■	35,410
125		OTM125F4CMA230V	1SYN120097R1001 ■	37,630
160		OTM160E4CM230C	1SYN022848R1510 ■	45,700
200		OTM200E4CM230C	1SYN022846R1590 ■	45,930
250		OTM250E4CM230C	1SYN022846R1910 ■	56,230
315		OTM315E4CM230C	1SYN022847R2870 ■	57,400
400		OTM400E4CM230C	1SYN022847R3250 ■	72,050
630		OTM630E4CM230C	1SYN022873R1990 ■	77,890
800		OTM800E4CM230C	1SYN022872R8340 ■	1,17,130
1000		OTM1000E4CM230C	1SYN112703R1001	1,69,860
1250		OTM1250E4CM230C	1SYN112702R1001	1,86,270
1600		OTM1600E4CM230C	1SYN112704R1001	2,28,420
2000		OTM2000E4CM230C	1SYN112712R1001	4,05,880
2500		OTM2500E4CM230C	1SYN112713R1001	4,42,790

Note:

Motor voltage Ue 110-240 V AC/DC (OTM40...125A)

Motor voltage Ue 220-240 V AC (OTM160...2500A)0

OMD control units can be purchased separately for their motorized changeover switches in order to build an ATS by themselves. Contact nearest sales office for making selection.

Contact our nearest sales office:

- For motor voltage Ue 110...125 V AC/DC (160A-2500A)
- For motor voltage Ue = 48V DC (160A-2500A)

■ Stock items

# Compact ATS NEW

## Automatic transfer switches, I - O - II operation

Supplied with bridging bars and direct mounted handle



Rated current In [A]	Pole	Description	Ordering code	L.P.(₹)
63	3	OTM63F3C20D400C	1SYN151423R1001	41,240
63		OTM63F3C21D400C	1SYN151423R1002	59,600
125		OTM125F3C20D400C	1SYN151423R1003	46,240
125		OTM125F3C21D400C	1SYN151423R1004	67,380

Rated current In [A]	Pole	Description	Ordering code	L.P.(₹)
40	4	OTM40F4C20D400C	1SYN151252R1001	41,020
40		OTM40F4C21D400C	1SYN151253R1001	62,310
40		OTM40F4CB21D400C	1SYN150580R1001	62,310
63		OTM63F4C20D400C	1SYN151254R1001	43,170
63		OTM63F4C21D400C	1SYN151255R1001	65,220
63		OTM63F4CB21D400C	1SYN150586R1001	65,220
125		OTM125F4C20D400C	1SYN151250R1001	50,860
125		OTM125F4C21D400C	1SYN151251R1001	73,680
125		OTM125F4CB21D230C	1SYN150574R1001	73,680

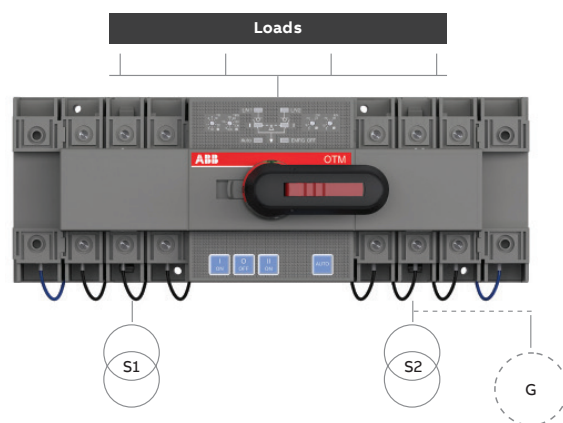
Note:

- For 2 pole requirement contact nearest sales office



### OTM\_C20D:

- For Network/Network application
- Fixed version with pre-defined delay times and voltage thresholds



### OTM\_C21D

- For Network/Network and Network/Genset applications
- Adjustable version with configurable transfer and back-switching delays
- Adjustable over and under-voltage thresholds

## The world's first true ATS is here

Introducing TruONE.

A critical breakthrough for critical power



### WHAT MAKES TRUONE® UNIQUE

- Overlapping neutral\*
- One unit, One wire – just like an ATS should be
- Below 50 ms in-phase transfer
- Readily available emergency manual operation
- IEC/UL1008 approved
- Performance tested beyond standard requirements
- Variants with and without stable OFF-position
- ABB Ability™: EDCS for cloud-based services
- Ekip Com modules for uniform platform
- Configuration via Ekip Connect 3
- Predictive maintenance
- Modular structure to simplify service

\*in UL version only

# OT automatic transfer switches

## Automatic transfer switches, I - O - II operation

Supplied with bridging bars and handle



Automatic operation, equipped with OMD300 controller unit with integrated dual power supply				
Rated current In [A]	Poles	Description	Ordering code	L.P.(₹)
160	4	OTM160E4C3D230C	1SYN106305R1001 ■	1,04,320
200		OTM200E4C3D230C	1SYN106309R1001	1,07,830
250		OTM250E4C3D230C	1SYN106313R1001	1,11,340
315		OTM315E4C3D230C	1SYN106317R1001	1,16,620
400		OTM400E4C3D230C	1SYN106318R1001 ■	1,23,060
630		OTM630E4C3D230C	1SYN108726R1001	1,64,080
800		OTM800E4C3D230C	1SYN108728R1001	2,16,830
1000		OTM1000E4C3D230C	1SYN112852R1001	2,34,410
1250		OTM1250E4C3D230C	1SYN112851R1001	2,69,570
1600		OTM1600E4C3D230C	1SYN112848R1001	3,51,600



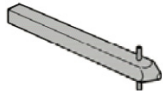
Automatic operation, equipped with OMD800 controller unit with display				
Rated current In [A]	Poles	Description	Ordering code	L.P.(₹)
160	4	OTM160E4C8D230C	1SYN101020R1001	1,40,640
200		OTM200E4C8D230C	1SYN101021R1001	1,46,510
250		OTM250E4C8D230C	1SYN101022R1001	1,52,370
315		OTM315E4C8D230C	1SYN101063R1001	1,58,230
400		OTM400E4C8D230C	1SYN101064R1001	1,75,800
630		OTM630E4C8D230C	1SYN108453R1001	1,93,400
800		OTM800E4C8D230C	1SYN108455R1001	2,34,410
1000		OTM1000E4C8D230C	1SYN112861R1001	2,98,860
1250		OTM1250E4C8D230C	1SYN112864R1001	3,28,170
1600		OTM1600E4C8D230C	1SYN112867R1001	4,10,200

Note:

- Motor voltage Ue 220-240 V AC
- For 3 pole requirement contact the nearest sales office
- For OMD800, consider accessory ODPS for dual power supply

■ Stock items

## Accessories for changeovers (manual, motorized, ATS)



### Shaft

Frame	Description	Ordering code	L.P. (₹)
OT16...125F_C	EXP6x170	1SCA108224R1001	340
OT160...250_C	EXP6x161	1SCA022067R176 ■	340
OT315...400_C	EXP12x166	1SCA022325R671	540
OT630...3200_C	EXP12x185	1SCA022325R710 ■	640



### Handle

Frame	Description	Ordering code	L.P. (₹)
OT16...125F_C	OHB45J6E311	1SCA022817R2130 ■	2,180
OT160...250_C	OHB65J6E011	1SCA022383R2480 ■	2,420
OT315...400_C	OHB95J12E011	1SCA022621R0760 ■	2,760
OT630...800_C	OHB125J12E011	1SCA022589R3340 ■	3,060
OT1000...3200_C	OHB200J12PE011	1SCA022873R4230	6,700



### Auxiliary contacts

Frame	Contact functions	Installation side	Description	Ordering code	L.P. (₹)
OT16...125F_C OTM40...125	1NO	Right	OA1G10	1SCA022353R497	550
	1NC	Right	OA8G01	1SCA022744R224 ■	980
	1NO	Left	OA7G10	1SCA022673R114 ■	870
	1NC	Left	OA1G01	1SCA022353R489	550
OT160...3200 OTM160...2500	1NO	Right	OA1G10	1SCA022353R4970	550
	1NC	Right	OA3G01	1SCA022456R7410	610



### Phase barriers

3-pole change-overs need 8 barriers and 4-pole change-overs need 12 barriers for full protection.

Frame	Poles	Description	Ordering code	L.P. (₹)
OT160...800 OTM160...800	3	PB100 low	1SDA054970R1	940
	4	PB100 low	1SDA054971R1	1,380



### Basic ATS controller for motorised change over

Frame	Description	Ordering code	L.P. (₹)
40...2500A	ODPS230	1SCA122946R1001 ■	12,640

Note: Contact our nearest sales office for more information

■ Stock items

# Enclosed switches

**Wide range of enclosed heavy duty switches**  
**From 16 to 1600 Amperes, 690 V**



Enclosed switches are designed and used as main switches for applications, which need to be isolated from the network. The range includes front operated and side operated switch disconnectors, switch fuses and changeover switches enclosed in plastic, steel sheet or stainless steel sheet and aluminium enclosures. They are rated for utilization categories including disconnecting as well as making and breaking the load. In addition, the switch fuses equipped with fuse links protects the application and the cables from overload currents and short circuits.

## **Plastic enclosures**

The plastic enclosures are most suitable for locations with high chemical and moisture requirements. In addition, they are light and easy to install and handle.

## **Steel sheet enclosures**

The steel sheet enclosures are hot dip galvanized and the surface is polyester powder painted. The enclosures are durable and robust for various environments.

## **Stainless steel sheet enclosures**

The stainless steel sheet enclosures are made of AISI 304 stainless steel. They are used particularly in the food and beverage industry and in locations where high hygiene

is required. The smooth surface does not require any painting and is easy to clean.

## **Aluminum alloy enclosures**

Aluminum enclosures have very good impact strength and protection against UV light. They are suitable both for indoor and outdoor use in medium to heavy-duty applications.

## **Safety for personnel – reliable position indication**

- Padlocking in the OFF-position with one, three or six (with the shackle L6) padlocks against unintentional start-up The handle cannot be padlocked in the OFF-position if one of the contacts is not in the OFF position
- The cover cannot be removed if the handle is padlocked
- Door interlock in the ON-position
- Arc proof, short circuit durability function: Expander washers in aluminium enclosures with  $I_e > 160\text{ A}$  and door locking release in large metal sheet enclosures type MSC
- Door interlock defeatable with rectangular and pistol type handles



## Kabeldon low voltage switchgear system

Kabeldon low voltage distribution system by ABB is used to build modern systems for various applications,

from substations and cable distribution cabinets to distribution boards in industry.



Features of the Kabeldon IP-system are its simplicity and reliability. These are the most important factors when you want to achieve low operating costs and high delivery reliability in a distribution system.

- Busbars of continuously-extruded aluminium sections, insulated with a layer of polyamid.
- The busbar has a touch-proof contact slot. This ensures safety regardless of where on the busbar the switching device will be placed.
- Blade fuses in all of the fuse-switch disconnectors.
- The switching devices can be arranged in any order, regardless of rated current.
- All parts, busbars and devices, fulfil IP2X protection in accordance with IEC 60529\*).
- Switching devices 100-1600 A.

- It is easy to add new switching devices to existing distribution boards.
- Switching devices are mounted on and connected to the busbar system in the same operation.
- Switching devices can be connected when the system is live.
- Always voltage-free ("dead") when changing fuses.
- Busbars are available with rated currents from 400 to 1600 A.
- Switching devices, connectors and busbars combine to form a modular system. Each module is 12.5 mm. The modular system makes planning easier.
- The compact design of the switching devices makes them suitable for use in many different types of distribution boards.
- All switching devices have a utilisation category so that they can be used in cable distribution cabinets, substations and other distribution boards.