

# ST47 - MINI CIRCUIT BREAKER



## DESCRIPTION / APPLICATION

A circuit breaker is an automatically operated electrical switch designed to protect an electrical circuit from damage caused by excess current from an overload or short circuit. Its basic function is to interrupt current flow after a fault is detected. Circuit breakers are rated both by the normal current that they are expected to carry, and the maximum short-circuit current that they can safely interrupt. This latter figure is the ampere interrupting capacity (AIC) of the breaker. It is in conformity with IEC 60947 standard.

## MAIN TECHNICAL DATA

Electrical Features	Standard		SANS556-1 IEC60947-2
	Rated current	A	1, 3, 5, 6, 10, 15, 16, 20, 25, 32, 40, 50, 60, 63
	Poles		1P, 2P, 3P, 4P*
	AC Volts	V	230V, 415V
	Rated frequency	Hz	50/60
	Rated breaking capacity	kA	3
Mechanical Features	Thermo-magnetic release characteristic	Curve	B*, C*, D* (white toggle)
	Electrical life expectancy	times	4000
	Mechanical life expectancy	times	10000
	Protection degree		IP20
	Best Ambient temperature	°C	30
Installation	Ambient temperature (with daily average $\leq 35^{\circ}\text{C}$ )	°C	-30°C to +60°C
	Terminal connection type		Cable/Pin-type busbar
	Connection		Top and bottom
	Tighten torque (max)	Nm	2.5Nm
	Mounting		DIN Rail EN 60715(35mm) by means of fast clip device

**ACCESSORIES**

Auxiliary contact		CBA-AUX-XXX
Shunt release		CBA-AUX-XXX
Under voltage trip		UVT-XXX
Alarm contact		CBA-XXX
Lockout		CBA-LOCKOUT

\* Available on request

**PART NUMBER EXAMPLE**

BASE NUMBER	KA RATING	POLES	AMPERAGE	CURVE
ST-AD47	3KA	1P	10A	C
<b>EXAMPLE</b>	<b>CB-ST47-3110</b>			

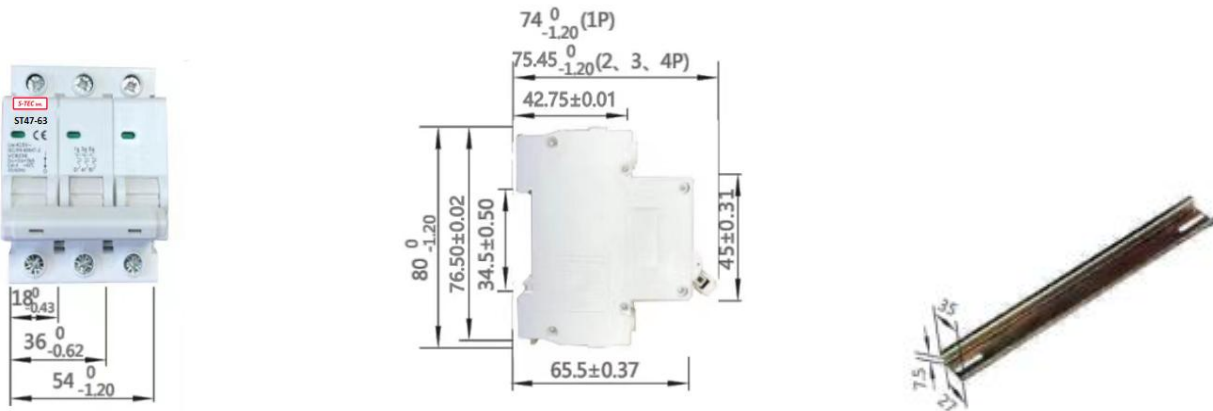
**TEMPERATURE DERATING**

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed. South Africa is calibrated at 40°C.

Rated Current In(A)	Temperature compensation rate corresponding to different temperatures								
	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	55°C	60°C
1A, 2A, 3A, 4A, 6A	1.2	1.14	1.09	1.05	1	0.96	0.82	0.75	0.7
10A, 16A, 20A, 25A, 32A	1.18	1.12	1.08	1.04	1	0.96	0.92	0.88	0.84
40A, 50A, 63A	1.16	1.12	1.07	1.03	1	0.97	0.87	0.83	0.8

Eg.: When 1A breaker working on -10°C, 1.2A current is required(1.2A=1Ax1.2 as above chart)

**DIMENSIONS AND MOUNTING**



**TRIPPING CURVES**

**C Curve**

**D Curve**

