

**news**



## ***SACE Isomax S2X 100 moulded-case circuit-breaker*** ***The “great/little” current-limiter***

Within the range of current-limiting circuit-breakers, the new S2X 100 moulded-case is added to the already well-known S3X, S4X and S6X. With the same dimensions and possibility of accessories as the other S2 size circuit-breakers, it is fitted with adjustable thermomagnetic release (with magnetic release at  $10 \times I_{th}$ ), and can be used in distribution installations where

efficient protection against overcurrents is required. Within the ABB SACE L.V. offer, it replaces the well-known LNA 100, with a piece of apparatus in line with the most severe technical requirements of modern electrical installations, to be put in co-ordination with the other SACE Isomax S series circuit-breakers. Available in the three- and four-pole, fixed and plug-in versions, it can

be combined with the RC series of residual current releases and, if necessary, fitted with the new solenoid operator in the version to the side of or on the front of the circuit-breaker. Like all current-limiting circuit-breakers, the main function carried out is that of limiting the specific let-through energy to a maximum in the case of short-circuit, safeguarding the integrity of the lines and apparatus of the whole

installation. Furthermore, it can be installed on the Unifix H series of rapid cabling systems manufactured by ABB Elettroconduttore. The SACE S2X 100 circuit-breaker complies with the IEC 947-2 international Standards and is characterised by a breaking capacity  $I_{cu} = 70\text{kA}$  (440V AC) and by rated uninterrupted current of 100A.

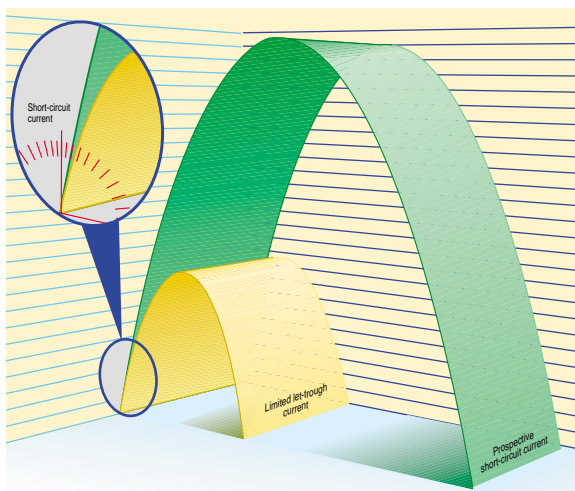
**ABB SACE L.V.**

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## Detailed technical data

## SACE Isomax S2X 100

Rated uninterrupted current, $I_u$	[A]	100
Rated service current, $I_n$	[A]	1 ... 100
Number of poles	N°	3-4
Rated service voltage, $U_e$ (AC) 50-60 Hz	[V~]	690
Rated impulse withstand voltage, $U_{imp}$	[kV]	6
Rated insulation voltage, $U_i$	[V]	690
Test voltage at industrial frequency for 1 minute	[V]	3000
Rated ultimate breaking capacity under short-circuit, $I_{cu}$		<b>X</b>
(AC) 50-60 Hz 220/230 V~	[kA]	100
<b>(AC) 50-60 Hz 380/415 V~</b>	<b>[kA]</b>	<b>70</b>
<b>(AC) 50-60 Hz 440 V~</b>	<b>[kA]</b>	<b>70</b>
(AC) 50-60 Hz 500 V~	[kA]	50
(AC) 50-60 Hz 690 V~	[kA]	10
Rated service breaking capacity under short-circuit, $I_{cs}$	% $I_{cu}$	75%
Rated making capacity under short-circuit (415 V~), $I_{cm}$	[kA]	154
Trip time (440 V~ / $I_{cu}$ )	[ms]	3.5
Category of utilisation (EN 60947-2)		A
Isolation behaviour		■
Reference Standards	IEC 60947-2 / 60947-2	
Release	T adjustable, 0.7 ... 1x $I_n$ , M fixed at 10 x $I_{th}$	
Fixing on DIN rail EN 50022		■
Mechanical life (no. of operations / hourly operations)	N°	25000 / 240
Electrical life (415V~) (no. of operations / hourly operations)	N°	8000 / 120
Basic dimensions	fixed version (3/4 poles)	Width [mm] 90 / 120
		Depth [mm] 70
		Height [mm] 120
Weights	fixed version (3/4 poles)	[kg] 1.1 / 1.5
	plug-in version (3/4 poles)	[kg] 1.3 / 1.7



### Isolation behaviour

In the open position, the circuit-breaker guarantees circuit isolation in compliance with the IEC 947-2 Standard.

The breaking technique allows high value short-circuit currents to be tripped extremely rapidly (up to 70 kA at 380/415/440 V~).

Moreover, the special shape of the breaking



parts, constructed using the technique with double breaking per pole, exploits the electrodynamic repulsion force to the maximum, allowing the peak values of fault currents to be limited to values considerably lower than those of the prospective short-circuit

currents at the point of installation.

### Applications

They are suitable for installation in all types of plants (civil, industrial and service sector), and generally wherever high intensity short-circuit currents can occur.



### Reduced dimensions

The 70 mm depth and the operating lever, compared with the LNA 100 handle, allow a reduction in the overall dimensions of the switchboard installation and uniformity in the supporting structures.



### ABB SACE L.V. SPA

Head office: Via Baloni, 35  
24123 Bergamo - Italia  
Tel.: +39 035 395111  
Telex: +39 301627 ABBSAC I  
Telefax: +39 035 395306-395433

<http://www.abb.com>

For further information regarding the SACE Isomax S range, please ask for the relative technical catalogue.

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