

Miniature circuit-breakers

S 280 series 80-100 A

2CSC401001B0202



ABB

Protection up to 100 A in one module



With the introduction of the new S 280 80-100A in the S 2.. range, ABB is now able to offer a complete system of circuit-breakers which are capable of meeting all the circuit protection requirements up to 100 A, from domestic to industrial applications.

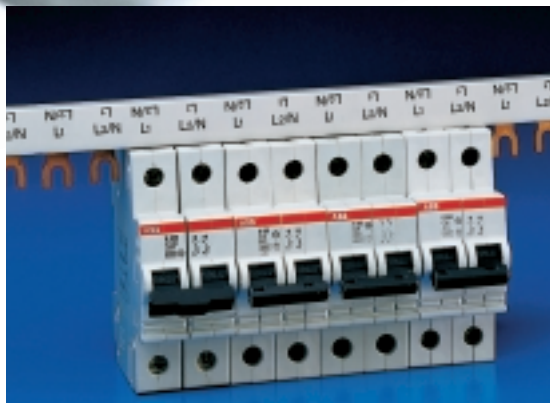
Being the unique series on the market that reaches these rated currents in one module width, the

new S 280 is available in 1P-2P-3P-4P versions with breaking capacity of 6 kA according to CEI EN 60898 Standard and tripping characteristics B, and C.

A whole family of auxiliary elements (the same as in the S 2.. range) is supplied with the new S 280, enabling numerous functions and configurations to be developed.

Left: the new S 280 wired with other S 2.. MCBs by a fork connection busbar

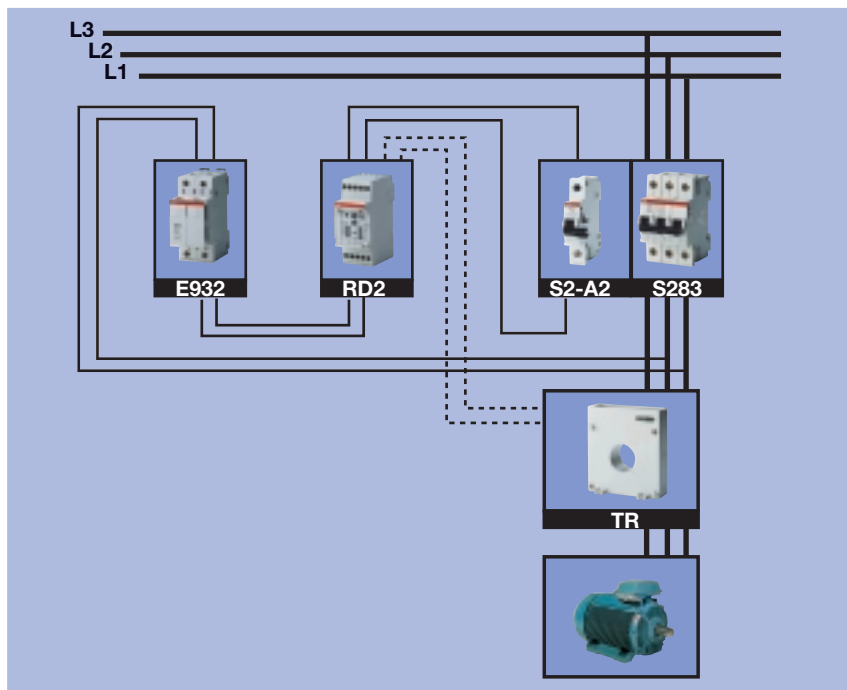
Right: the new S 280 has the same profile of the S 2.. range and is provided with a handle that makes movement easier



Left: in acknowledgement of their high level of quality, all the circuit-breakers in the S 280 series have been awarded the IMQ and CCIB approvals

Right: S 280 MCBs are the unique series on the market in 1P-1 module width up to 100 A





Residual current protection can be provided by installing an electronic residual current relay RD1/RD2 with separate toroidal transformer allowing to set the sensitivity and the tripping time delay for the provision of selective protection



Upper/lower size of terminals is 35 mm² for flexible cables/ 50 mm² for rigid cables



Wiring with fork type and pin type insulated busbars and with Unifix, ABB rapid wiring system which facilitates the work of installers and panel builders

Auxiliary elements and accessories

The new S 280 series can be coupled with auxiliary elements and accessories to obtain a variety of functions and configurations.

Auxiliary contacts

The auxiliary contacts indicate the “open” or “closed” position of the circuit-breaker enabling the tripping of a remote signal (e.g. luminous) at each manual or automatic change of state.

They are available in the 1 NO+1 NC, 2 NC, 2 NO, 2 NO+1 NC, 1 NO+2 NC, 3 NO, 3 NC versions and with Faston connections.

Signal contacts

The signal contacts indicate the automatic tripping of the circuit-breaker when caused by an overload or short-circuit. In the event of manual operation, they indicate no change in the state of the circuit-breaker.

A version with auxiliary and signal contacts in 1/2 module is also available

Shunt trips

Available in two versions with different rated current, the shunt trips are used for remote tripping of the circuit-breakers.

Undervoltage releases

The undervoltage releases are used to protect the load in the event of a voltage drop between 70% and 35% of its rated value, as established by the Standards. In many cases it is used to prompt an emergency outage in positive safety conditions.

They are available in

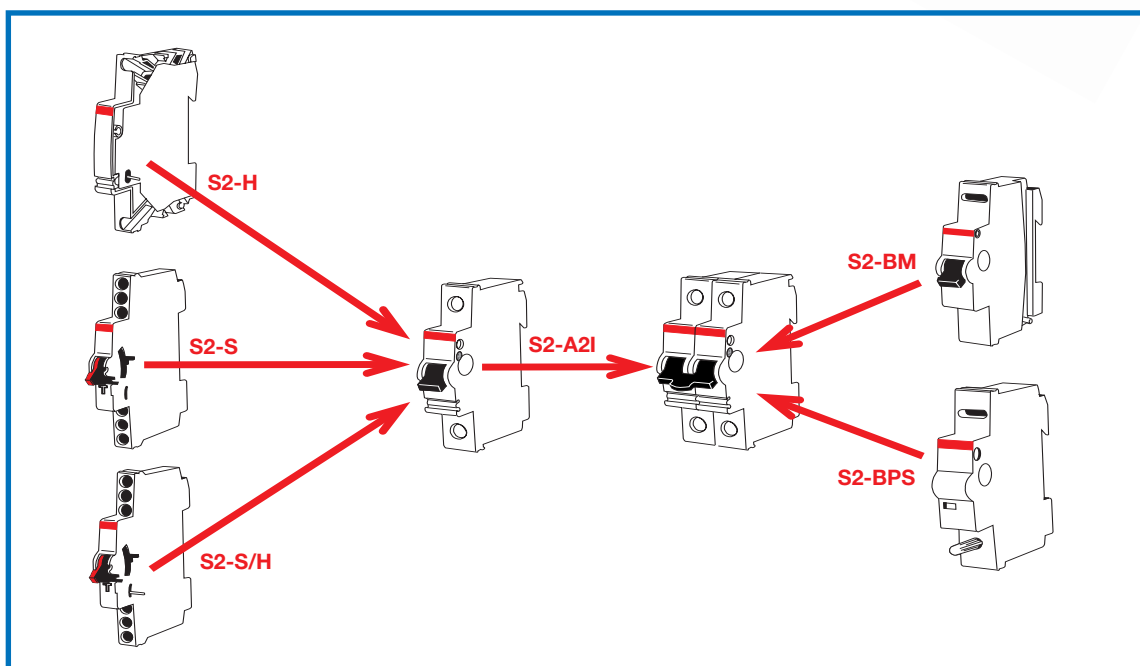
six versions differing in the values of rated voltage.

Accessories

The new S 280 is also supplied with a complete series of

accessories (the same as in the S 2.. range) which can quickly and easily resolve even the smallest problems during installation. The offer includes mechanical

interlocks, terminal covers, false-pole spacers, mechanical blocks, flanges for rear board mounting, screw protection covers, label carriers.



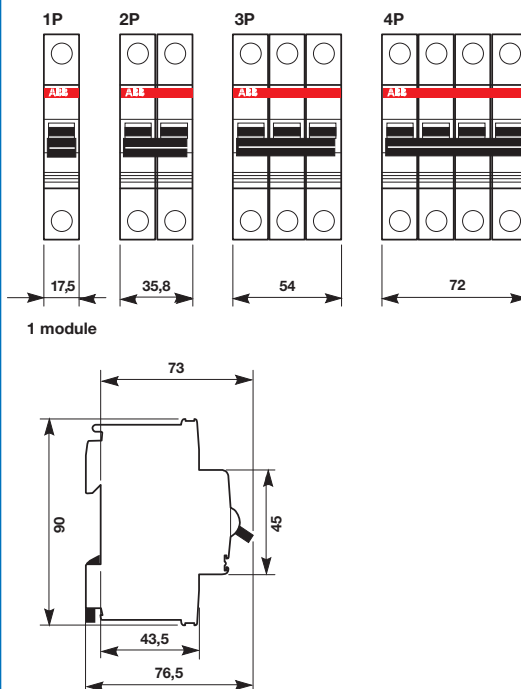
Technical features

Standards		IEC 60898 – IEC 60947-2	
Rated current, I _n	[A]	80, 100	
Poles		1P, 2P, 3P, 4P	
Rated voltage, U _e	one-pole AC	[V]	230
	multiple-pole AC	[V]	230/400
	one-pole DC	[V]	60
	multiple-pole DC	[V]	110
Insulation voltage U _i		[V]	500
Max. operating voltage, U _b max		[V]	440
Min. operating voltage, U _b min		[V]	12 V a.c. – 12 V d.c.
Rated frequency		[Hz]	50...60
Rated breaking capacity acc. to IEC 60898	I _{cn}	[A]	6000
Rated breaking capacity acc. to IEC 60947-2	ultimate I _{cu}	[kA]	10
	service I _{cs}	[kA]	10
Rated breaking capacity acc. to IEC 60947-2	ultimate I _{cu}	[kA]	6
	service I _{cs}	[kA]	6
Rated breaking capacity acc. to IEC 60947-2	ultimate I _{cu}	[kA]	6
	service I _{cs}	[kA]	6
Voltage withstanding capacity at rated frequency (50-60 Hz)	impulse (1.2/50)	[kV]	5
		[kV]	3
Thermomagnetic release characteristic	B	3 I _n ≤ I _m ≤ 5 I _n	
	C	5 I _n ≤ I _m ≤ 10 I _n	
Dissipated power per pole	80 A	[W]	5
	100 A	[W]	6.75
Internal resistance per pole	80 A	[mOhm]	0.77
	100 A	[mOhm]	0.67
Toggle		black sealable in ON-OFF position	
Electrical life		4000	
Mechanical life		10000	
Protection degree	housing	IP4X/IPXXD (installed)	
	terminals	IP2X/IPXXB (frontal)	
Self-extinguishing degree		V0 thickness 1.6 UL 94 yellow paper	
Mechanical shock resistance		minimum 30g – 2 shocks – duration 13 ms	
		5g – 20 cycles at frequency 5...150...5 Hz with load 0.8 I _n	
Tropicalization	humid heat	[°C/RH]	28 cycles with 55/95 ... 100
	constant climatic conditions	[°C/RH]	23/83 – 40/93 – 55/20
	variable climatic conditions	[°C/RH]	25/95 – 40/95
Ambient temperature		[°C]	-25...+55
Storage temperature		[°C]	-40...+70
Terminal size upper/lower per cable		[mm²]	35 flexible – 50 rigid
Mounting		on DIN rail EN 50022 (35 mm) by means of rapid fixing device	
Tightening torque		[Nm]	2.5
Pole dimensions (HxDxW)		[mm]	90 x 68 x 17.5
Pole weight		[g]	160

Ordering information

Rated current I _n [A]	Code Characteristic	
	B	C
1P – Type S 281		
80	11178645	11178643
100	11178646	11178644
2P – Type S 282		
80	11178651	11178649
100	11178652	11178650
3P – Type S 283		
80	11178657	11178655
100	11178658	11178656
4P – Type S 284		
80	16064740	16064724
100	16064757	16064732

Overall dimension



Industrial^{IT} is the solution developed by ABB for the all-round integration of a company's activities, where each product is seen as part of a complete solution.

Products and technologies are grouped into functional categories (Suites), each of which measures, controls, optimizes and supports a specific "block" of activities, and they can ensure coordinated interaction thanks to the platform created by ABB (AIP: Aspect Integrator Platform).

In addition to interactivity between certified products, every certified product also guarantees the ready availability of all the information needed for it to function - technical characteristics, installation instructions, use and maintenance instructions, environmental certificates and declarations, all updated to the latest version... a considerable advantage for the user*.

For further information, go to the Products and services/ Industrial^{IT} section on our web site: <http://www.abb.com>

* All product technical data and related documentation can be found in Internet and are accessible to the customer. The standard documentation is in English, but there are local language versions for each country where a given product is marketed.



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Due to possible developments of standards as well as of materials, the characteristics and dimensions specified in the this document may only be considered binding after confirmation by ABB SACE.