

Miniature circuit-breakers S 280 series 80-100 A



Protection up to 100 A in one module



With the introduction of the new S 280 80-100 A 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.

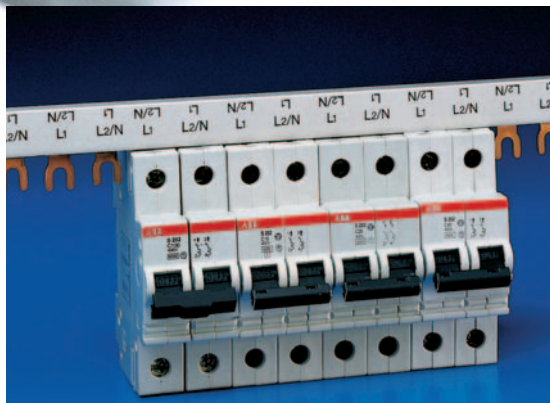
Being the unique series on the market that reaches these rated currents in one module width, the new S 280 is available in 1P-2P-3P-4P versions with

breaking capacity of 6 kA according to IEC 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

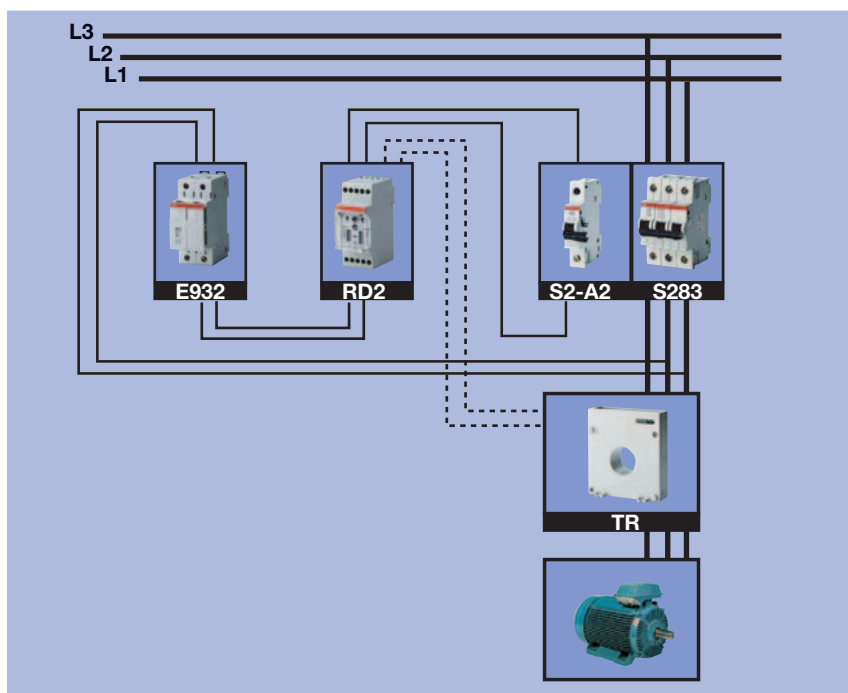
Right: the new S 280 has the same profile of the S 2.. range and is provided with a handle that makes movement easier



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

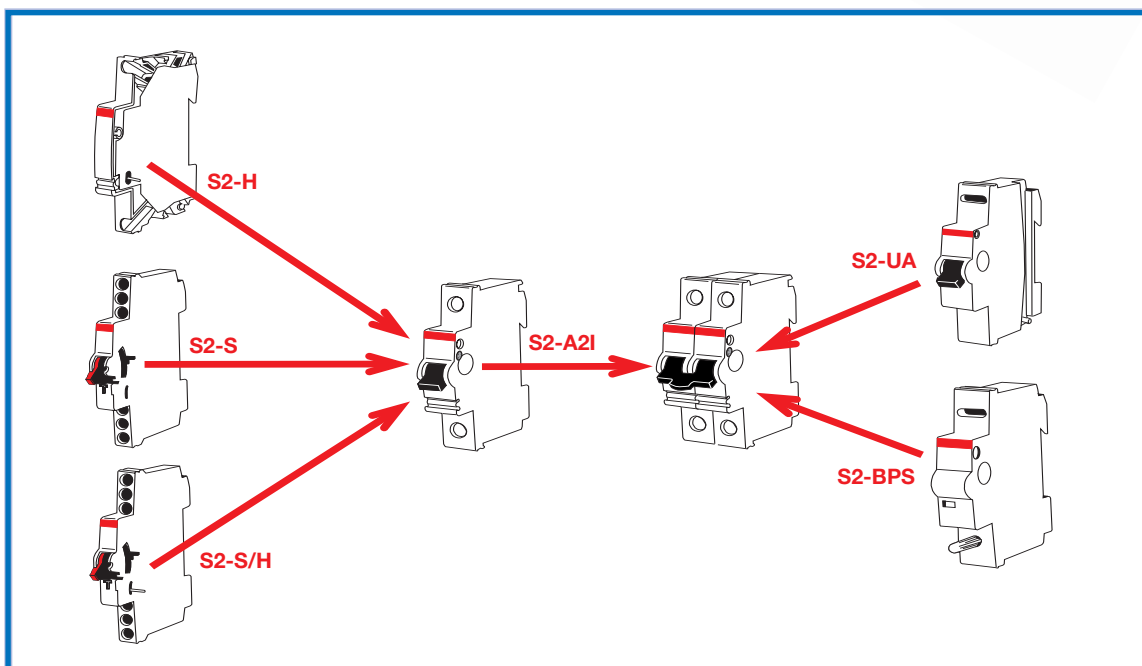
They are available in six versions differing in the values of rated voltage.

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.



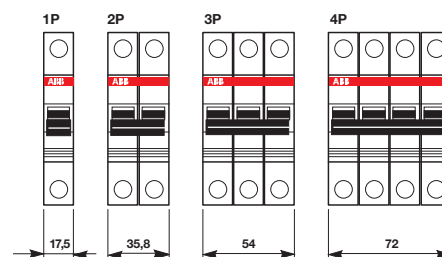
Technical features

Standards			IEC 60898 – IEC 60947-2
Rated current, I _n		[A]	80, 100
Poles			1P, 2P, 3P, 4P
Rated voltage, U _o	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 _o max		[V]	440
Min. operating voltage, U _o 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 2 poles – 230 V	ultimate I _{cu}	[kA]	10
	service I _{cs}	[kA]	10
Rated breaking capacity acc. to IEC 60947-2 3 poles – 400 V	ultimate I _{cu}	[kA]	6
	service I _{cs}	[kA]	6
Rated breaking capacity acc. to IEC 60947-2 4 poles – 400 V	ultimate I _{cu}	[kA]	6
	service I _{cs}	[kA]	6
Voltage withstanding capacity	impulse (1.2/50)	[kV]	5
	at rated frequency (50-60 Hz)	[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 30 g – 2 shocks – duration 13 ms
Resistance to vibrations acc. to IEC 68-2-6			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		[mm ²]	35 flexible – 50 rigid
Mounting			on DIN rail EN 60715 (35 mm) by means of rapid fixing device
Tightening torque		[Nm]	2.5
Pole dimensions (H x D x W)		[mm]	90 x 68 x 17.5
Pole weight		[g]	160

Ordering information

Rated current I_n [A]		Order code	
		old	new
1 P-Type	S281-B80	11178645	GH S281 0001 R0805
	S281-B100	11178646	GH S281 0001 R0825
2 P-Type	S282-B80	11178651	GH S282 0001 R0805
	S282-B100	11178652	GH S282 0001 R0825
3 P-Type	S283-B80	11178657	GH S283 0001 R0805
	S283-B100	11178658	GH S283 0001 R0825
4 P-Type	S284-B80	16064740	GH S284 0001 R0805
	S284-B100	16064757	GH S284 0001 R0825
1 P-Type	S281-C80	11178643	GH S281 0001 R0804
	S281-C100	11178644	GH S281 0001 R0824
2 P-Type	S282-C80	11178649	GH S282 0001 R0804
	S282-C100	11178650	GH S282 0001 R0824
3 P-Type	S283-C80	11178655	GH S283 0001 R0804
	S283-C100	11178656	GH S283 0001 R0824
4 P-Type	S284-C80	16064724	GH S284 0001 R0804
	S284-C100	16064732	GH S284 0001 R0824

Overall dimension



1 module

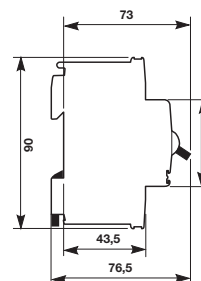




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