

DS Disconnect switches range

Bremas disconnect switches range is designed for safety operations even under load. **DS disconnect switches** series ensure high performance in small spaces and are suitable both for switching resistive loads and inductive loads or motors. In only two sizes are available current rating from 20A to 100A.

■ 20-32-40A

- Rated current: 20A - 32A - 40A
- Rated insulation voltage 800V
- Protection degree IP20
- Rear mounting or Base mounting
- Padlockable handles and knobs

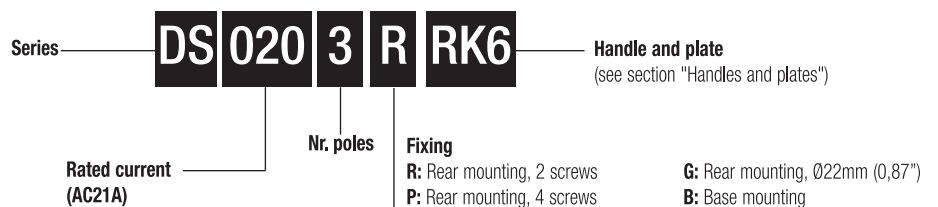


■ 50-63-80-100A

- Rated current: 50A - 63A - 80A - 100A
- Rated insulation voltage 690V
- Protection degree IP20
- Rear mounting or Base mounting
- Padlockable handles and knobs



Code structure



Range

The DS disconnect switches series are characterized by high performance and are suitable for installation in distribution circuits and power engines, in distribution boards or directly on the machine, with alternate current rating from 20 up to 100A.



20-32-40A



50-63-80-100A

Dimensions

The **DS series** has the most compact dimensions on the market that provide installation in reduced spaces also thanks to the many handles with IP66 protection degree.



20-32-40A



50-63-80-100A

Fixing types

It is possible to choose between different fixing types according to the needs:

■ Rear mounting

- 2 holes with vertical interaxis 28mm (1.10")
- 4 holes with interaxis 36mm / 48mm (1.42"/1.89")
- Single hole \varnothing 22 mm (0.87") holes with fixing nut

■ Base mounting with control shaft

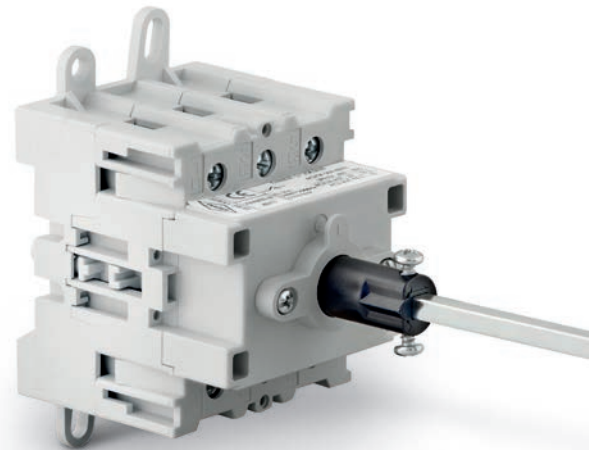
- Snap mount on DIN rail
- 2 screws
- Plate fixed on panel with 2 or 4 screws or with single hole \varnothing 22mm (0.87") with fixing nut

■ Base mounting direct operation (with handle)

■ Base mounting for panel board - DDN



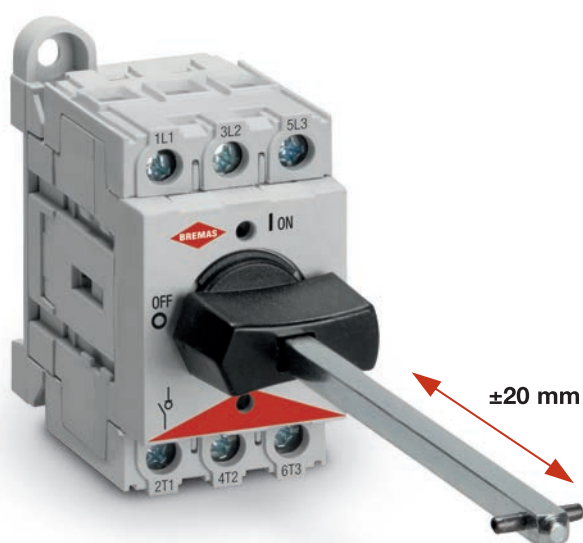
DDN version



Base mounting version

Adjustable depth for the control shaft

The base mounting version of the **DS** includes an ergonomic handle for direct command of the switch; the handle also incorporates a housing for the shaft with a fixing screw. The height of the shaft can be adjusted within an excursion of 20mm, therefore the need of cutting the shaft can be reduced. Base mounting switches are provided with 175mm. shaft.



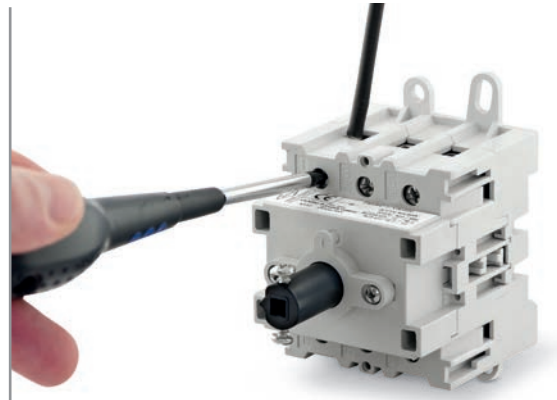
Easy to wire

The terminals access depending on the fixing option:

- Rear mounting: rear access to terminals.
- Base mounting: front access to terminals.



Rear mounting version



Base mounting version

And also:

- The clamps are provided in open position and equipped with captive plus-minus screws.
- Protection against direct contacts assured even when the panel is opened.

Equipment

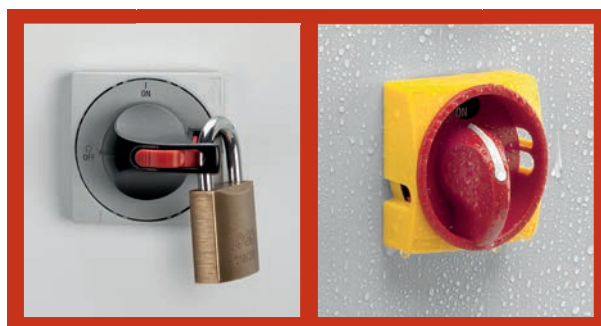
The DS disconnect switches series can be equipped with 2 additional poles and/or 2 auxiliary contact (max 1 per side).



Plates and knobs for every application

A complete IP66 range

All the most common plates and knobs are available, for base and rear mounting, with or without padlocking. For all these plates and knobs the IP66 degree of protection is guaranteed, allowing the installation even in difficult environments.











Safety for the operator

The base mounting plates and knobs are provided with door interlock mechanism in "I/ON" position to avoid door opening when the board is connected to the supply.



International Standards and approvals

Country	USA / Canada	Canada	Germany	Switzerland	Denmark	Norway	Sweden	Finland	Austria	Great Britain	IEC International electrical Commission
Authority	UL investigated according to CSA	CSA International	Verband Deutscher Elektrotechniker	Schweizerischer Elektrotechnischer Verein	Danmarks Elektriske Materielkontrol	Norges Elektriske Materielkontrol	Svenska Elektriske Materielkontroll-anstalten	Sähötär-kastukeskus	Österreichischer Verband für Elektrotechnik	British Standards Institution	IEC International electrical Commission
Mark of standard			VDE 0660 ⁽¹⁾							BS EN 60947 ⁽¹⁾	IEC 60947 ⁽²⁾
DS020	•	+	+	+	+	+	+	+	+	+	+
DS032	•	+	+	+	+	+	+	+	+	+	+
DS040	•	+	+	+	+	+	+	+	+	+	+
DS050	•	+	+	+	+	+	+	+	+	+	+
DS063	•	+	+	+	+	+	+	+	+	+	+
DS080	•	+	+	+	+	+	+	+	+	+	+
DS100	•	+	+	+	+	+	+	+	+	+	+

- Approved
- + Conforms to requirements

UL Approval File E101686

Notes:

- 1) It is not required to bear a symbol but switches must conform to requirements.
- 2) IEC does not operate an approval scheme

Technical data IEC 947-3 EN 60947-3

			DS020	DS032	DS040	DS050	DS063	DS080	DS100
Rated operating voltage	Ui	V	800	800	800	690	690	690	690
Rated insulation voltage	Ue	V	800	800	800	690	690	690	690
Rated impulse withstand voltage	Uimp	kV	8	8	8	6	6	6	6
Rated thermal current for open switch	Ith	A	25	32	40	50	63	80	100
Rated thermal current for enclosed switch	Ithe	A	25	32	40	50	63	80	80
Rated operation frequency		Hz	50/60	50/60	50/60	50	50	50	50
Power dissipation for each pole		W	0,6	1,3	2,5	4,6	3,7	5,8	7,5

Rated operating current Ie

AC-21A Switching resistive loads, including moderate overloads	690V	Ie	A	20	32	40	50	63	80	100
AC-22A Switching of mixed resistive and inductive loads, including moderate overloads	690V	Ie	A	20	32	40	50	63	80	100

Rated operating power

AC-23A Switching of motor loads or other highly inductive loads	400V	Kw (A)	9 (18)	11 (22)	15 (28)	22 (40)	25 (47)	30 (55)	35 (63)
	690V	Kw (A)	9 (13)	11 (16)	15 (18)	18,5 (19)	18,5 (19)	25 (25)	30 (31)
AC-3 Squirrel cage motors: starting, switching off motors during running	400V	Kw (A)	5,5 (10)	7,5 (14)	11 (21)	18,5 (33)	18,5 (33)	25 (44)	30 (54)
	690V	Kw (A)	5,5 (6)	7,5 (8)	11 (12)	15 (16)	15 (16)	19 (20)	22 (23)
Rated breaking capability in category AC-23A (cos φ=0,45)	400V	A	144	176	228	320	376	440	504
	690V	A	104	128	144	-	-	-	-

Short circuit protection

Rated short time withstand current (1s)	Icw	A	300	400	500	1500	1500	1500	1500
Rated short-circuit make capacity	Icm	A	750	750	750	2000	2000	2500	2500
Rated conditional short-circuit current		kA	10	10	10	15	15	15	15
With fuses class gG	500V	A	20	32	40	63	63	100	100

Technical data UL/CSA (sec. UL508)

General use voltage	Ue	V	600	600	600	600	600	600	600	
General use current	600Vac	Ie	A	20	30	40	80	80	100	100
Rated operating power										
1 phase - 2 pole	120V	Hp/FLA	1 / -	1,5 / -	- / -	3/34	3/34	5/56	5/56	
	240V	Hp/FLA	2 / -	3 / -	- / -	3/17	5/28	7,5/40	10/50	
3 phase - 3 pole	200V	Hp/FLA	- / -	- / -	- / -	7,5/25,3	10/32	15/48	20/62	
	240V	Hp/FLA	5 / 15,2	7,5 / 22	- / -	15/42	20/54	20/54	25/68	
	480V	Hp/FLA	10 / 14	15 / 21	- / -	20/27	25/34	40/52	50/65	
	600V	Hp/FLA	15 / 17	20 / 22	10-11	30/32	30/32	50/52	50/52	
Line protection fuses (DS size 1: Class RK5, 600Vac, 200kA A.I.C.), (DS size 2: Class J, 600Vac)		A	20	30	40	225	225	225	225	
Short Circuit Rating@600Vac		kA	5	5	10	10	10	10	10	

Mechanical characteristics

Mechanical life (120 cycles/hour)	Mil.Man					2	2	2	2
Connecting capability with flexible wires	Min-Max	mm ²	1,5 - 10	1,5 - 10	1,5 - 10	6-35	6-35	6-35	6-35
Connecting capability with solid wires	Min-Max	mm ²	1,5 - 16	1,5 - 16	1,5 - 16	10-50	10-50	10-50	10-50
Connecting capability with flexible wires	Min-Max	AWG	16/08	16/08	16/08	10/01	10/01	10/01	10/01
Connecting capability with solid wires	Min-Max	AWG	16/06	16/06	16/06	08/01	08/01	08/01	08/01
Terminal screw			M4	M4	M4	M5	M5	M5	M5
Screw tightening torque		Nm	1,7	1,7	1,7	2,8	2,8	2,8	2,8
		ib.in	12	12	12	24	24	24	24

Protection degree IEC 529 EN 60529

Terminals		IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Handles		IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP66

Ambient conditions

Operational ambient temperature	°C					-25 ÷ +55			
Storage ambient temperature	°C					-25 ÷ +55			
Withstand to constant humid according to IEC 60068							sec. IEC 60068-2-78		
Withstand to cycling humid according to IEC 60069							sec. IEC 60068-2-30		

Auxiliary contacts

			DSC040NOx			XC012AB XC012CB			
Rated insulation voltage	Ui	V	800	800	800	690	690	12	12
Rated thermal current for open switch	Ith	A	10	10	10	12	12	12	12
AC-15 Control of a.c electromagnetic loads	240V	A	3	3	3	6	6	6	6