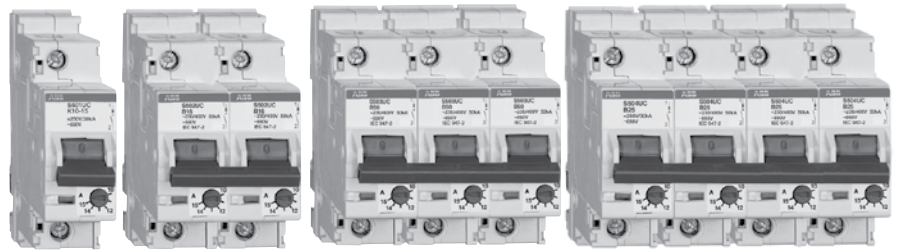


# S500 Miniature Circuit Breakers



**S500 Series**  
UL 1077



## Description

The S500 high performance MCB offers a compact solution to circuit protection. The S500 devices are UL tested current limiting and DIN rail mounted. The S500 is available with application-specific trip characteristics to provide maximum circuit protection.

The breakers offer thermal-magnetic trip protection according to B and K characteristics.

For the worldwide market, the breakers carry CSA, IEC, CE and many other agency approvals.

## Features

- High breaking capacity
- Fast breaking time (2.3 - 2.5 ms)
- Adjustable trip unit
- DIN rail mounting
- Finger safe terminals
- Multi-functional terminals
- Wide range of accessories
- UL 1077 recognized 600 VAC and 600 VDC versions
- UL1077 AC adjustable K
- UL1077 DC adjustable B, K
- UL File # E167556
- IEC #E60497-2

	<b>S500</b>	<b>S500UC</b>
<b>Amperage</b>	0.1 – 45 A	0.1 – 63 A
<b>Voltage</b>	UL: 600Y/277 VAC IEC: 690 VAC	UL: 250 VDC per pole (750 VDC for 4P) IEC: 250 VDC per pole (750 VDC for 4P)
<b>Poles</b>	1, 2, 3	1, 2, 3, 4
<b>Trip characteristics</b>	K	B, K
<b>Interrupting ratings</b>	Up to 30 kA: UL 1077 Up to 30 kA: CSA C22.2	30 kA: UL 1077 30 kA: CSA C22.2
<b>Auxiliary contacts</b>	Yes	Yes
<b>Bell alarm</b>	Yes	Yes
<b>Shunt trip</b>	No	No
<b>Undervoltage release</b>	No	No
<b>Bus bar</b>	Yes	Yes

# S500-K, UL 600Y/277 VAC / IEC 690 VAC

## Supplemental protection

### UL 1077, CSA 22.2, IEC

# K



S501-K



S502-K



S503-K

No. of poles	Rated current	Catalog number	List price	No. of poles	Rated current	Catalog number	List price
1	0.1 – 0.15	S501-K0.15	\$ 186	3	0.1 – 0.15	S503-K0.15	\$ 518
	0.14 – 0.21	S501-K0.21			0.14 – 0.21	S503-K0.21	
	0.2 – 0.3	S501-K0.3			0.2 – 0.3	S503-K0.3	
	0.28 – 0.42	S501-K0.42			0.28 – 0.42	S503-K0.42	
	0.38 – 0.58	S501-K0.58			0.38 – 0.58	S503-K0.58	
	0.53 – 0.8	S501-K0.8			0.53 – 0.8	S503-K0.8	
	0.73 – 1.1	S501-K1.1			0.73 – 1.1	S503-K1.1	
	1 – 1.5	S501-K1.5			1 – 1.5	S503-K1.5	
	1.4 – 2.1	S501-K2.1			1.4 – 2.1	S503-K2.1	
	2 – 3	S501-K3			2 – 3	S503-K3	
	2.8 – 4.2	S501-K4.2			2.8 – 4.2	S503-K4.2	
	3.8 – 5.8	S501-K5.8			3.8 – 5.8	S503-K5.8	
	5.3 – 8	S501-K8			5.3 – 8	S503-K8	
	7.3 – 11	S501-K11			7.3 – 11	S503-K11	
	10 – 15	S501-K15			10 – 15	S503-K15	
	14 – 20	S501-K20			14 – 20	S503-K20	
	18 – 26	S501-K26			18 – 26	S503-K26	
23 – 32	S501-K32	23 – 32	S503-K32				
29 – 37	S501-K37	29 – 37	S503-K37				
34 – 41	S501-K41	34 – 41	S503-K41				
38 – 45	S501-K45	38 – 45	S503-K45				
2	0.1 – 0.15	S502-K0.15	370				
	0.14 – 0.21	S502-K0.21					
	0.2 – 0.3	S502-K0.3					
	0.28 – 0.42	S502-K0.42					
	0.38 – 0.58	S502-K0.58					
	0.53 – 0.8	S502-K0.8					
	0.73 – 1.1	S502-K1.1					
	1 – 1.5	S502-K1.5					
	1.4 – 2.1	S502-K2.1					
	2 – 3	S502-K3					
	2.8 – 4.2	S502-K4.2					
	3.8 – 5.8	S502-K5.8					
	5.3 – 8	S502-K8					
	7.3 – 11	S502-K11					
	10 – 15	S502-K15					
	14 – 20	S502-K20					
	18 – 26	S502-K26					
23 – 32	S502-K32						
29 – 37	S502-K37						
34 – 41	S502-K41						
38 – 45	S502-K45						

### Tripping characteristic K

UL 1077	IEC
600 VAC	690 VAC
Up to 30 kA	Up to 30 kA

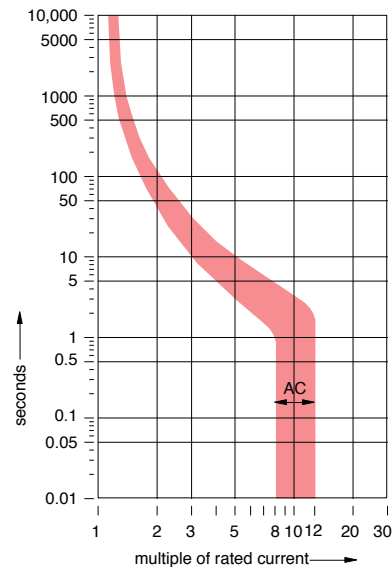
### Inductive loads

- K Curve
- Designed for allowing higher in-rush currents during system start up
- Example: motors, transformers

### Accessories & technical data

Accessories – See page 71

Technical data – See page 76 - 82



# S500UC-B, 250 VDC per pole (750 VDC 4P), UL/IEC Supplemental protectors

UL1077, CSA 22.2, IEC

Miniature circuit breakers

# B



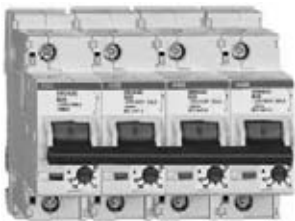
S501UC-B



S502UC-B



S503UC-B



S504UC-B

No. of poles	Rated current	Catalog number	List price	No. of poles	Rated current	Catalog number	List price
1	6	S501UC-B6	\$ 310	3	6	S503UC-B6	\$ 880
	10	S501UC-B10			10	S503UC-B10	
	13	S501UC-B13			13	S503UC-B13	
	16	S501UC-B16			16	S503UC-B16	
	20	S501UC-B20			20	S503UC-B20	
	25	S501UC-B25			25	S503UC-B25	
	32	S501UC-B32			32	S503UC-B32	
	40	S501UC-B40			40	S503UC-B40	
	50	S501UC-B50			50	S503UC-B50	
	63	S501UC-B63			63	S503UC-B63	
2	6	S502UC-B6	600	4	6	S504UC-B6	1,250
	10	S502UC-B10			10	S504UC-B10	
	13	S502UC-B13			13	S504UC-B13	
	16	S502UC-B16			16	S504UC-B16	
	20	S502UC-B20			20	S504UC-B20	
	25	S502UC-B25			25	S504UC-B25	
	32	S502UC-B32			32	S504UC-B32	
	40	S502UC-B40			40	S504UC-B40	
	50	S502UC-B50			50	S504UC-B50	
	63	S502UC-B63			63	S504UC-B63	

### Tripping characteristic B

UL 1077	IEC
250 VDC per pole (750 VDC 4P)	250 VDC per pole (750 VDC 4P)
30 kA	30 kA

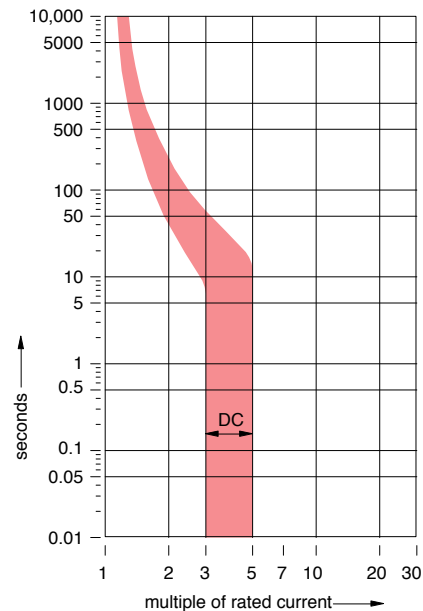
### Inductive loads

- B Curve
- Designed for allowing higher in-rush currents during system start up
- Example: motors, transformers

### Accessories & technical data

Accessories – See page 71

Technical data – See page 76 - 82



## S500UC-K, 250 VDC per pole (750 VDC 4P), UL/IEC Supplemental protectors UL1077, CSA 22.2, IEC

# K



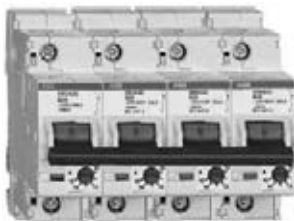
S501UC-K



S502UC-K



S503UC-K



S504UC-K

No. of poles	Rated current	Catalog number	List price	No. of poles	Rated current	Catalog number	List price
1	0.1 – 0.15	S501UC-K0.15	\$ 270	3	0.1 – 0.15	S503UC-K0.15	\$ 760
	0.14 – 0.21	S501UC-K0.21			0.14 – 0.21	S503UC-K0.21	
	0.2 – 0.3	S501UC-K0.3			0.2 – 0.3	S503UC-K0.3	
	0.28 – 0.42	S501UC-K0.42			0.28 – 0.42	S503UC-K0.42	
	0.38 – 0.58	S501UC-K0.58			0.38 – 0.58	S503UC-K0.58	
	0.53 – 0.8	S501UC-K0.8			0.53 – 0.8	S503UC-K0.8	
	0.73 – 1.1	S501UC-K1.1			0.73 – 1.1	S503UC-K1.1	
	1 – 1.5	S501UC-K1.5			1 – 1.5	S503UC-K1.5	
	1.4 – 2.1	S501UC-K2.1			1.4 – 2.1	S503UC-K2.1	
	2 – 3	S501UC-K3			2 – 3	S503UC-K3	
	2.8 – 4.2	S501UC-K4.2			2.8 – 4.2	S503UC-K4.2	
	3.8 – 5.8	S501UC-K5.8			3.8 – 5.8	S503UC-K5.8	
	5.3 – 8	S501UC-K8			5.3 – 8	S503UC-K8	
	7.3 – 11	S501UC-K11			7.3 – 11	S503UC-K11	
	10 – 15	S501UC-K15			10 – 15	S503UC-K15	
	14 – 20	S501UC-K20			14 – 20	S503UC-K20	
18 – 26	S501UC-K26	18 – 26	S503UC-K26				
23 – 32	S501UC-K32	23 – 32	S503UC-K32				
29 – 37	S501UC-K37	29 – 37	S503UC-K37				
34 – 41	S501UC-K41	34 – 41	S503UC-K41				
38 – 45	S501UC-K45	38 – 45	S503UC-K45				
2	0.1 – 0.15	S502UC-K0.15	520	4	0.1 – 0.15	S504UC-K0.15	1,070
	0.14 – 0.21	S502UC-K0.21			0.14 – 0.21	S504UC-K0.21	
	0.2 – 0.3	S502UC-K0.3			0.2 – 0.3	S504UC-K0.3	
	0.28 – 0.42	S502UC-K0.42			0.28 – 0.42	S504UC-K0.42	
	0.38 – 0.58	S502UC-K0.58			0.38 – 0.58	S504UC-K0.58	
	0.53 – 0.8	S502UC-K0.8			0.53 – 0.8	S504UC-K0.8	
	0.73 – 1.1	S502UC-K1.1			0.73 – 1.1	S504UC-K1.1	
	1 – 1.5	S502UC-K1.5			1 – 1.5	S504UC-K1.5	
	1.4 – 2.1	S502UC-K2.1			1.4 – 2.1	S504UC-K2.1	
	2 – 3	S502UC-K3			2 – 3	S504UC-K3	
	2.8 – 4.2	S502UC-K4.2			2.8 – 4.2	S504UC-K4.2	
	3.8 – 5.8	S502UC-K5.8			3.8 – 5.8	S504UC-K5.8	
	5.3 – 8	S502UC-K8			5.3 – 8	S504UC-K8	
	7.3 – 11	S502UC-K11			7.3 – 11	S504UC-K11	
	10 – 15	S502UC-K15			10 – 15	S504UC-K15	
	14 – 20	S502UC-K20			14 – 20	S504UC-K20	
18 – 26	S502UC-K26	18 – 26	S504UC-K26				
23 – 32	S502UC-K32	23 – 32	S504UC-K32				
29 – 37	S502UC-K37	29 – 37	S504UC-K37				
34 – 41	S502UC-K41	34 – 41	S504UC-K41				
38 – 45	S502UC-K45	38 – 45	S504UC-K45				

### Tripping characteristic K

UL 1077	IEC
250 VDC per pole (750 VDC 4P)	250 VDC per pole (750 VDC 4P)
30 kA	30 kA

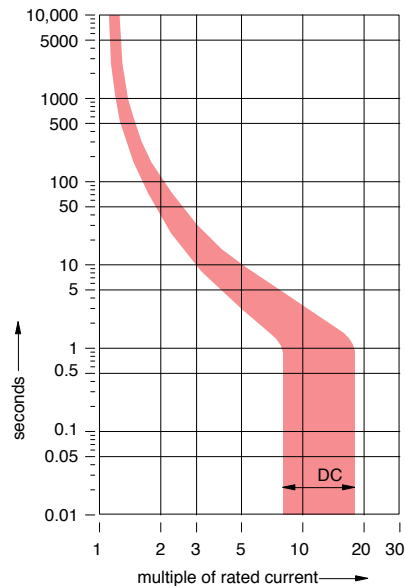
### Inductive loads

- K Curve
- Designed for allowing higher in-rush currents during system start up
- Example: motors, transformers

### Accessories & technical data

Accessories – See page 71

Technical data – See page 76 - 82



# Accessories

## S500 UL1077

Miniature  
circuit breakers



S500-H11

### Auxiliary contacts

The auxiliary contacts will signal whether the breaker is in the ON or OFF position.

Description	Catalog number	List price
For field mounting: left side		
1 N.O./1 N.C.	<b>S500-H11</b>	<b>\$ 84</b>
2 N.O.	<b>S500-H20</b>	<b>84</b>
2 N.C.	<b>S500-H02</b>	<b>84</b>

### Bell alarm

The bell alarm includes a set of contacts that will only signal when the breaker has tripped.

Typically the contacts would be connected to an alarm or bell to signal the operator that an overcurrent trip has occurred. The bell alarm also includes a test button for testing the alarm contacts without opening the breaker.

Description	Catalog number	List price
For field mounting: left side		
1 N.O./1 N.C.	<b>S500-S11</b>	<b>\$ 92</b>
2 N.O.	<b>S500-S20</b>	<b>92</b>
2 N.C.	<b>S500-S02</b>	<b>92</b>

### Handle mechanism

Description	Catalog number	List price
Handle mechanism	<b>S500-RD3</b>	<b>\$ 80</b>

For use with 1-4 pole S500 MCBs and disconnect switch selector handles with 5mm shafts.

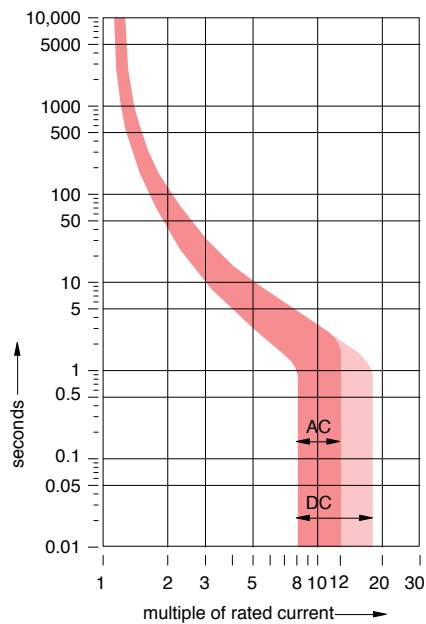
### Power feed terminal - Accepts into 2/0 AWG

Description	Catalog number	List price
Power feed terminal	<b>S500-K2</b>	<b>\$ 25</b>

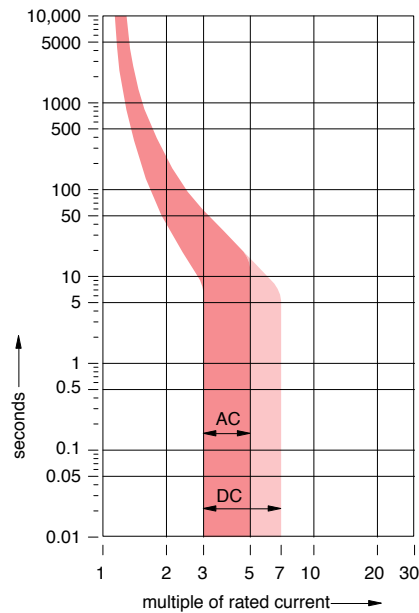
## Technical data S500-K & S500UC-B, K

Technical data	S500-K	S500UC-B, K
Approvals		
UL	1077	1077
CSA	C22.2 - No. 235	C22.2
Number of poles	1, 2, 3, +N, +NA	1, 2, 3, 4
Tripping characteristic	K	B, K
Rated currents	0.1 to 45 A	B: 6 - 63 A; K: 0.15 - 45 A
Rated voltage	480Y/277 VAC, 600Y/346 VAC	250 VDC per pole (750 VDC 4 pole)
Frequency	50/60 Hz	50/60 Hz
Mounting position	vertical, horizontal	vertical, horizontal
Standard mounting	35mm DIN rail	35mm DIN rail
Clamps only for CU	16 - 4 AWG	16 - 4 AWG
Service life, mechanical at rated load	20,000	20,000
Ambient temperature	40°C... 104°F	40°C... 104°F

Tripping characteristic K



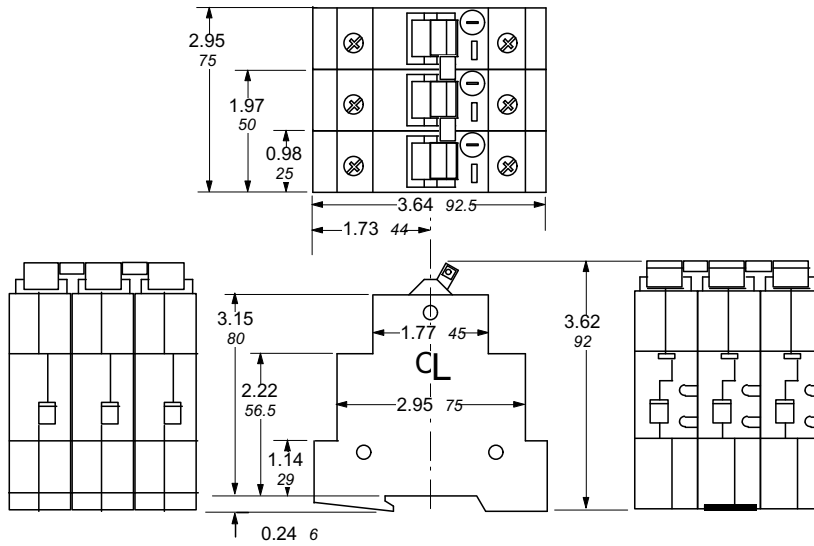
Tripping characteristic B



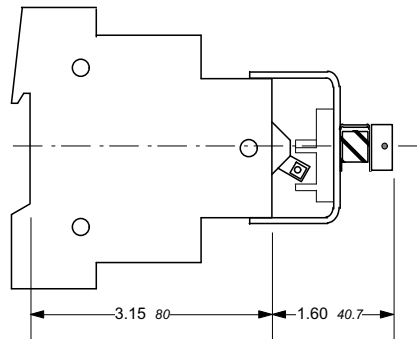
# Approximate dimensions S500 & Accessories

Miniature  
circuit breakers

## S500



## S500-RD3 Handle mechanism



## S500 Front mounting kit

