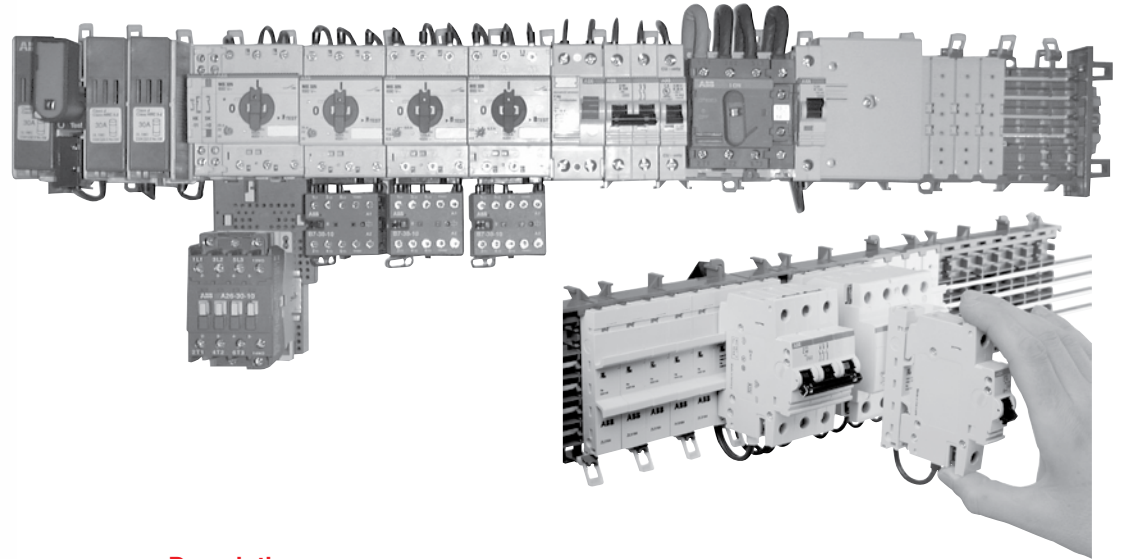


Modular power distribution bus system

smissline

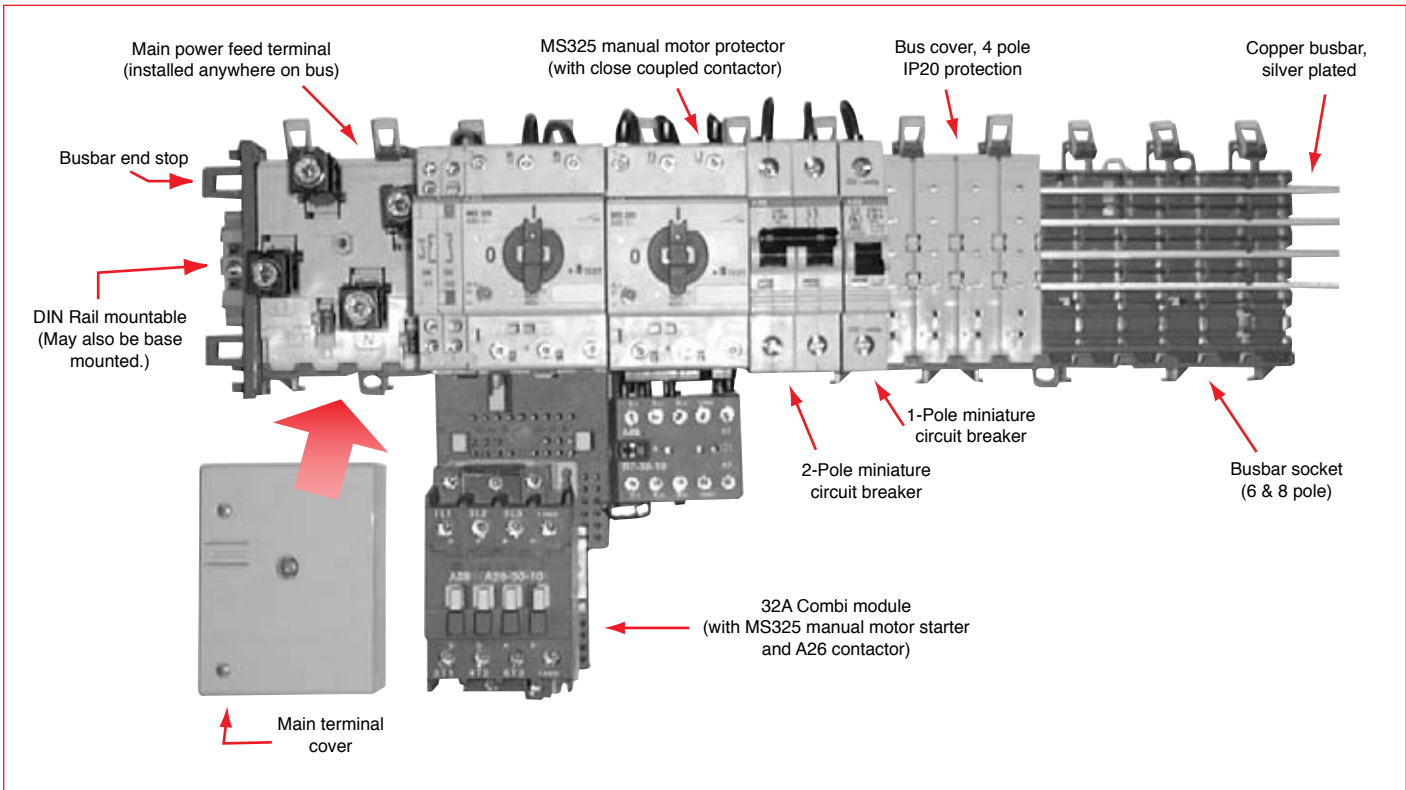
ABB smissline
Modular power distribution bus system

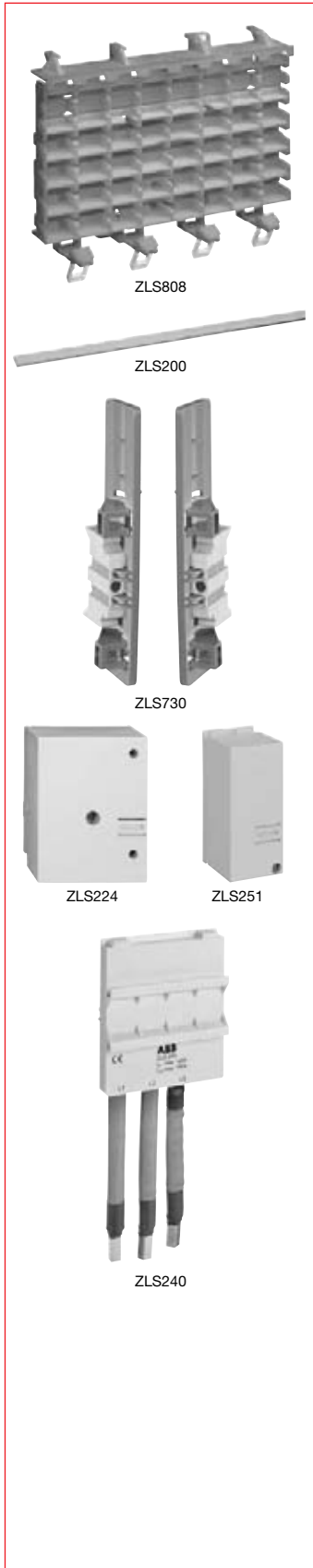


Description

- The smissline power distribution bus system provides a versatile and flexible means of distributing power to a wide variety of electrical devices. Ideal for group motor installations and ABB modular DIN rail products
- Hot swappable socket mounted components.
- Individual devices may be turned off and safely removed without turning off power to the whole bus.
- Bus system "Starter kits" available in various lengths, can also be easily cut down for custom installations.
- Busbar rated 100A when end fed and up to 200A when center fed. Main power feed terminals may be installed anywhere along the bus system.
- Individual bus stab adapters are available in L1, L2, L3 and N phase connections; they can be connected together to form multi-pole units. Unwired modules are available where bus connection is not required. 18mm width.
- Snap-on installation. No tools required to install or remove bus mounted components.
- System can be DIN rail or base mounted.
- Bus covers protect unused portions of the bus from accidental contact providing total bus isolation and IP20 finger safe protection.
- Reputable history of performance and reliability.
- UL508 Recognized, UL File No. E222110.

Components





Sockets

Number of Modules	Length (inches)	Catalog number	List price
8	5.7	ZLS808	\$ 30
6	4.3	ZLS806	28

Bus bar — 100A for L1, L2 L3, neutral and ground

	Length (inches)	Catalog number	List price
Cut to desired length	78.7	ZLS200	\$ 95

End stops

		Catalog number	List price
Left and right included		ZLS730	\$ 30

Main power feed terminals

Width in modules	End feed (A)	Center feed (A)	Phases	Wire range AWG	Catalog number	List price
4	100	150	3P 3P+N	10-1/0	ZLS225 ZLS224	\$ 110 120
2	100	200	N L1 L2 L3	8-4/0	ZLS250 ZLS251 ZLS252 ZLS253	60

Main power feed bus stab adaptor

Width in modules	End feed (A)	Center feed (A)	Phases		Catalog number	List price
4	100	100	3P		ZLS240	\$ 110
4	100	100	3P+N		ZLS241	120

Combi module

Description	Width Mods	Qty		Catalog number	List price
Bottom clip Bottom fed	3	1		ZLS8403LWB-S	\$ 110
Bottom clip Top fed	3	1		ZLS8403LWT-S	





For connecting MMP, contactor, and breaker combinations to busbar.



Bus stab adapter being installed

Bus stab adapters and connectors

Bus stab adapters

	Current Rating (A)	Phase	Catalog number	List price
Top Clip Top Fed 	32	N	ZLS160	\$ 20
		L1	ZLS161	20
		L2	ZLS162	20
		L3	ZLS163	20
		L1 300mm	ZLS161L300	23
		L2 300mm	ZLS162L300	23
		L3 300mm	ZLS163L300	23
	L1, L2, L3	ZLS183TT	60	
	63	N	ZLS170	30
		L1	ZLS171	30
		L2	ZLS172	30
		L3	ZLS173	30
		L1 300mm	ZLS171L300	33
L2 300mm		ZLS172L300	33	
L3 300mm	ZLS173L300	33		
L1, L2, L3	ZLS189TT	60		
*	*	ZLS164	13	
Top Clip Bottom Fed 	32	N	ZLS176	20
		L1	ZLS177	20
		L2	ZLS178	20
		L3	ZLS179	20
		L1 300mm	ZLS177L300	23
		L2 300mm	ZLS178L300	23
		L3 300mm	ZLS179L300	23
	L1, L2, L3	ZLS183TB	60	
	63	N	ZLS166	30
		L1	ZLS167	30
		L2	ZLS168	30
		L3	ZLS169	30
		L1 300mm	ZLS167L300	33
L2 300mm		ZLS168L300	33	
L3 300mm	ZLS169L300	33		
L1, L2, L3	ZLS189TB	60		
*	*	ZLS164	13	
Bottom Clip Top Fed 	32	N	ZLS166	20
		L1	ZLS167	20
		L2	ZLS168	20
		L3	ZLS169	20
		L1 300mm	ZLS167L300	23
		L2 300mm	ZLS168L300	23
		L3 300mm	ZLS169L300	23
	L1, L2, L3	ZLS183BT	60	
	63	N	ZLS166	30
		L1	ZLS167	30
		L2	ZLS168	30
		L3	ZLS169	30
		L1 300mm	ZLS167L300	23
L2 300mm		ZLS168L300	23	
L3 300mm	ZLS169L300	23		
L1, L2, L3	ZLS189BT	60		
*	*	ZLS164	13	
Bottom Clip Bottom Fed 	32	N	ZLS160	30
		L1	ZLS161	30
		L2	ZLS162	30
		L3	ZLS163	30
		L1 300mm	ZLS161L300	23
		L2 300mm	ZLS162L300	23
		L3 300mm	ZLS163L300	23
	L1, L2, L3	ZLS183BB	60	
	63	N	ZLS170	30
		L1	ZLS171	30
		L2	ZLS172	30
		L3	ZLS173	30
		L1 300mm	ZLS171L300	33
L2 300mm		ZLS172L300	33	
L3 300mm	ZLS173L300	33		
L1, L2, L3	ZLS189BB	60		
*	*	ZLS164	13	

Multi-pole bus stab adapter connectors

Quantity	Catalog number	List price
1 bag	ZLS174	\$ 10

Connection pieces are used to join individual bus stab adapters into any multi-pole configuration desired (L1-L2, L1-N, L1-L2-L3, etc.). Each bag contains enough pieces to make 25 connections. For example, 25 2-pole bus stab adapters or 12 3-pole bus stab adapters.



ZLS100



ZLS101



ZLS722



ZLS239

Bus covers

	Quantity	Catalog number	List price
	5 pack	ZLS100	\$ 25

Covers unused portions of the busbar to protect from physical contact. Supplied as a 4-module unit, separable into 1-module units by snapping it apart.

Bus cover DIN rail extensions

	Quantity	Catalog number	List price
	10 pack	ZLS101	\$ 20

Snaps on to ZLS100 and provides 18mm wide mounting position for any DIN rail mounted device.

Bus covers – High profile

Width in modules	Quantity	Catalog number	List price
1/2 module	5 pack	ZLS721	\$ 23
1 module	5 pack	ZLS722	\$ 30

Bus divider

Width in modules	Quantity	Catalog number	List price
1 module	1	ZLS239	\$ 10

Allows a single smisline assembly to be divided into two isolated busbar systems.

Components

Neutral and ground



ZLS811



ZLS812



ZLS815



ZLS832



ZLS833



ZLS821



ZLS820

Neutral and ground sockets

Number of modules	Length (inches)	Catalog number	List price
8	5.7	ZLS811	\$ 17
6	4.3	ZLS810	15

Use ZLS200, 100A busbar from page 20.5.

Neutral terminals

Width in modules	Wire range		Catalog number	List price
	AWG	mm ²		
1/2	14 - 8	10	ZLS812	\$ 22
1	10 - 1	50	ZLS813	40
2	8 - 3/0	95	ZLS254	60

Ground terminals

Width in modules	Wire range		Catalog number	List price
	AWG	mm ²		
1/2	14 - 8	10	ZLS815	\$ 22
1	10 - 1	50	ZLS816	40
2	8 - 3/0	95	ZLS255	60

Neutral and ground bus covers

Description	Width in modules	Quantity	Catalog number	List price
With DIN rail top	1	Package of 10	ZLS832	\$ 25
Flat top	8	Package of 1	ZLS833	5

Labels

Description	Quantity	Catalog number	List price
Self-adhesive, 6 x 17mm	Sheet of 420	ZLS825	\$ 90
Paper (protective cover required)	Sheet of 160	ZLS821	12
Cover	Bag of 100	ZLS820	100

Applications with other ABB products

Manual motor protectors

smisline



MS325-1.0

For more information on manual motor protectors, see Section 5.



MS116

Manual motor protectors — Type MS325

Thermal setting range (Amps)	Single-phase horsepower ratings ①		3-phase horsepower ratings			Catalog number	List price
	120V	240V	240V	480V	600V		
0.10 – 0.16	—	—	—	—	—	MS325-0.16	\$ 144
0.16 – 0.25	—	—	—	—	—	MS325-0.25	
0.25 – 0.40	—	—	—	—	—	MS325-0.40	
0.40 – 0.63	—	—	—	—	—	MS325-0.63	
0.63 – 1.0	—	—	—	1/2	1/2	MS325-1.0	165
1.0 – 1.6	—	1/10	—	3/4	3/4	MS325-1.6	
1.6 – 2.5	—	1/6	1/2	1	1.5	MS325-2.5	
2.5 – 4.0	1/8	1/3	1	2	3	MS325-4.0	
4.0 – 6.3	1/4	1/2	1.5	3	5	MS325-6.3	
6.3 – 9.0	1/3	1	2.5	5	7.5	MS325-9.0	
9.0 – 12.5	1/2	2	3	7.5	10	MS325-12.5	
12.5 – 16	1	2.5	5	10	10	MS325-16	
16 – 20	1.5	3	5	10	15	MS325-20	211.50
20 – 25	2	3	7.5	15	20	MS325-25	223.50

NOTE: Use Discount schedule MA

Manual motor protectors — Type MS116

Thermal setting range (Amps)	Single-phase horsepower ratings ①		3-phase horsepower ratings			Catalog number	List price
	120V	240V	240V	480V	600V		
0.10 – 0.16	—	—	—	—	—	MS116-0.16	\$ 129
0.16 – 0.25	—	—	—	—	—	MS116-0.25	
0.25 – 0.40	—	—	—	—	—	MS116-0.40	
0.40 – 0.63	—	—	—	—	—	MS116-0.63	
0.63 – 1.0	—	—	—	1/2	1/2	MS116-1.0	148.50
1.0 – 1.6	—	1/10	—	3/4	3/4	MS116-1.6	
1.6 – 2.5	—	1/6	1/2	1	1.5	MS116-2.5	
2.5 – 4.0	1/8	1/3	1	2	3	MS116-4.0	
4.0 – 6.3	1/4	1/2	1.5	3	5	MS116-6.3	
6.3 – 10	1/2	1.5	3	5	7.5	MS116-10	
8.0 – 12	1/2	2	3	7.5	10	MS116-12	
10 – 16	1	2	5	10	10	MS116-16	

NOTE: Use Discount schedule MA

Manual motor protector/contactor close coupling adapters

Device	Catalog number	List price
MS116 + B6/B7 contactor	BEA7/116	\$ 9
MS116 + A9, A12, A16 contactor	BEA16/116	
MS325 + B6/B7 contactor	BEA7/325	12
MS325 + A9, A12, A16 contactor	BEA16/325	13.50
MS325 + A26 contactor	BEA26/325	15

NOTE: Use Discount schedule MA

Applications with other ABB products

Miniature contactors



B6C-1

Miniature contactors — Non-reversing with screw connections

General purpose AC1	Maximum motor FLA AC3	3 Phase motor horsepower				Single phase		Number of power poles	Auxiliary contacts	Catalog number	List price
		208V	230V	460V	600V	120V	230V				
AC operated											
12	6.8	1	2	3	1	1/2	1	3 3 4	1 N.O. 1 N.C. —	B6C-Δ B6C-Δ01 B6C4P-Δ	\$ 51
16	9.6	2	3	5	5	1	2	3 3 4	1 N.O. 1 N.C. —	B7C-Δ B7C-Δ01 B7C4P-Δ	72
DC operated											
12	6.8	1	2	3	1	1/2	1	3 3	1 N.O. 1 N.C.	BC6C-Δ BC6C-Δ01	57
16	9.6	2	3	5	5	1	2	3 3	1 N.O. 1 N.C.	BC7C-Δ BC7C-Δ01	78

NOTE: Use Discount schedule AA

Miniature mechanically interlocked contactors with screw connections

General purpose AC1	Maximum motor FLA AC3	3 Phase motor horsepower				Single phase		Number of power poles	Auxiliary contacts	Catalog number	List price
		208V	230V	460V	600V	120V	230V				
AC operated											
12	6.8	1	2	3	1	1/2	1	3	1 N.O. 1 N.C.	VB6M-Δ VB6M-Δ01	\$ 104
16	9.6	2	3	5	5	1	2	3	1 N.O. 1 N.C.	VB7M-Δ VB7M-Δ01	143
DC operated											
12	6.8	1	2	3	1	1/2	1	3	1 N.O. 1 N.C.	VBC6M-Δ VBC6M-Δ01	105
16	9.6	2	3	5	5	1	2	3	1 N.O. 1 N.C.	VBC7M-Δ VBC7M-Δ01	156

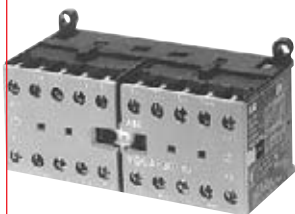
NOTE: Use Discount schedule AA

Coil voltage selection

Δ Coil voltage suffix. Refer to Coil Voltage Selection Chart and substitute the desired coil voltage suffix for the Δ.

Coil voltage selection chart

	Volts								
	12	24	42	48	110/125	110/120	220	220/240	380/415
AC 40-450 Hz		F	L	G		1		2	M
DC	U	Y	V	W	P		R		



VB6M-1

For more information on miniature controls, see Section 4

Applications with other ABB products

A-Line contactors

A9 - A26, AC operated

smisline



A26-30-10-84



A9M-30-10-84



A9R-30-10-84

General purpose current	UL motor switching current	Maximum motor horsepower ratings				Standard Aux. contacts		Non-reversing		Mechanically interlocked		Reversing	
		208V	240V	480V	575/600V	NO	NC	Catalog number	List price	Catalog number	List price	Catalog number	List price
AC1		UL rated											
21	9	2	2	5	7.5	1 0	0 1	A9-30-10-84 A9-30-01-84	\$ 78	A9M-30-10-84 A9M-30-01-84	\$ 255	A9R-30-10-84 A9R-30-01-84	\$ 315
25	11	3	3	7.5	10	1 0	0 1	A12-30-10-84 A12-30-01-84	84	A12M-30-10-84 A12M-30-01-84	315	A12R-30-10-84 A12R-30-01-84	375
30	17	5	5	10	15	1 0	0 1	A16-30-10-84 A16-30-01-84	102	A16M-30-10-84 A16M-30-01-84	345	A16R-30-10-84 A16R-30-01-84	413
40	28	7.5	10	20	25	1 0	0 1	A26-30-10-84 A26-30-01-84	183	A26M-30-10-84 A26M-30-01-84	405	A26R-30-10-84 A26R-30-01-8	480

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 contactor: A75-30-11-**80**

Auxiliary contact blocks

For additional auxiliary contact blocks, see catalog number explanation on page 1.2. Add \$ 20 to list price for each additional auxiliary, and see page 1.18 for available combinations. Only side-mounted blocks are allowed to be factory installed. If auxiliary contacts are not required for A50 - A300, subtract \$ 40 from list price and change catalog number to "00" instead of "11."

Mechanical interlock

Mechanically interlocked contactors are designed for reversing, 2 speed, reduced voltage, etc. type starter applications. The complete assembly consists of two mechanically and electrically interlocked contactors mounted as follows with line and load terminals:

- A9 - A16 — mounted on 35mm DIN rail
- A26 - A300 — mounted on common baseplate

Power wiring is not included. The NC electrical interlock is provided with the mechanical interlock for A9 - A110 contactors.

Coil voltage selection chart

Hz	Cntr type	Volts															
		12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	A		81	83	84	84		34	36	80	42		86	86	51	53	55
50	A		81	83	84					80			85	86			55

For other voltages, see page 1.26.

Reversing

Reversing contactors are designed for reversing type starter applications. The complete assembly consists of two mechanically and electrically interlocked contactors mounted as follows with line and load terminals:

- A9 - A16 — mounted on 35mm DIN rail
- A26 - A300 — mounted on common baseplate

The NC electrical interlock is provided with the mechanical interlock for A9 - A110 contactors.

For more information on
across the line contactors
see Section 1.

Applications with other ABB products

Miniature MCCBs

S200U, 240 VAC

K UL 489 CSA C22.2 - NO. 5
VDE 0660
Cable & equipment protection



S201U-K, 1 pole



S202U-K, 2 pole

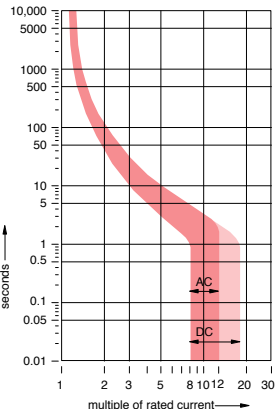


S203U-K, 3 pole



S204U-K, 4 pole

K



Rated current	Catalog number	List price	Delivery class	Sugg. order qty	Wgt. oz. (1 pc.)
1 pole					
0.2	S201U-K0.2	\$ 54			
0.3	S201U-K0.3	54			
0.5	S201U-K0.5	54			
0.75	S201U-K0.75	54			
1	S201U-K1	54			
1.6	S201U-K1.6	54			
2	S201U-K2	54			
3	S201U-K3	54			
4	S201U-K4	54			
5	S201U-K5	54			
6	S201U-K6	54			
8	S201U-K8	54			
10	S201U-K10	54	A	10	4.6
13	S201U-K13	54			
15	S201U-K15	54			
16	S201U-K16	54			
20	S201U-K20	54			
25	S201U-K25	56			
30	S201U-K30	58			
32	S201U-K32	58			
40	S201U-K40	64			
50	S201U-K50	70			
60	S201U-K60	80			
63	S201U-K63	80			

Rated current	Catalog number	List price	Delivery class	Sugg. order qty	Wgt. oz. (1 pc.)
2 pole					
0.2	S202U-K0.2	128			
0.3	S202U-K0.3	128			
0.5	S202U-K0.5	128			
0.75	S202U-K0.75	128			
1	S202U-K1	128			
1.6	S202U-K1.6	128			
2	S202U-K2	128			
3	S202U-K3	128			
4	S202U-K4	128			
5	S202U-K5	128			
6	S202U-K6	128			
8	S202U-K8	128			
10	S202U-K10	128	A	5	9.2
13	S202U-K13	128			
15	S202U-K15	128			
16	S202U-K16	128			
20	S202U-K20	128			
25	S202U-K25	130			
30	S202U-K30	134			
32	S202U-K32	134			
40	S202U-K40	134			
50	S202U-K50	162			
60	S202U-K60	182			
63	S202U-K63	182			

Rated current	Catalog number	List price	Delivery class	Sugg. order qty	Wgt. oz. (1 pc.)
3 pole					
0.2	S203U-K0.2	\$ 194			
0.3	S203U-K0.3	194			
0.5	S203U-K0.5	194			
0.75	S203U-K0.75	194			
1	S203U-K1	194			
1.6	S203U-K1.6	194			
2	S203U-K2	194			
3	S203U-K3	194			
4	S203U-K4	194			
5	S203U-K5	194			
6	S203U-K6	194			
8	S203U-K8	194			
10	S203U-K10	194	A	1	13.9
13	S203U-K13	194			
15	S203U-K15	194			
16	S203U-K16	194			
20	S203U-K20	194			
25	S203U-K25	196			
30	S203U-K30	200			
32	S203U-K32	200			
40	S203U-K40	214			
50	S203U-K50	246			
60	S203U-K60	280			
63	S203U-K63	280			

Rated current	Catalog number	List price	Delivery class	Sugg. order qty	Wgt. oz. (1 pc.)
4 pole					
0.2	S204U-K0.2	265			
0.3	S204U-K0.3	265			
0.5	S204U-K0.5	265			
0.75	S204U-K0.75	265			
1	S204U-K1	265			
1.6	S204U-K1.6	265			
2	S204U-K2	265			
3	S204U-K3	265			
4	S204U-K4	265			
5	S204U-K5	265			
6	S204U-K6	265			
8	S204U-K8	265			
10	S204U-K10	265	B	1	18.0
13	S204U-K13	265			
15	S204U-K15	265			
16	S204U-K16	265			
20	S204U-K20	265			
25	S204U-K25	275			
30	S204U-K30	285			
32	S204U-K32	285			
40	S204U-K40	314			
50	S204U-K50	343			
60	S204U-K60	392			
63	S204U-K63	392			

Delivery Class

- A** - Standard item, stock to 2 weeks lead time
- B** - Stock to 4 weeks lead time
- C** - 6 to 8 week lead time

UL489 listed as branch circuit protective device

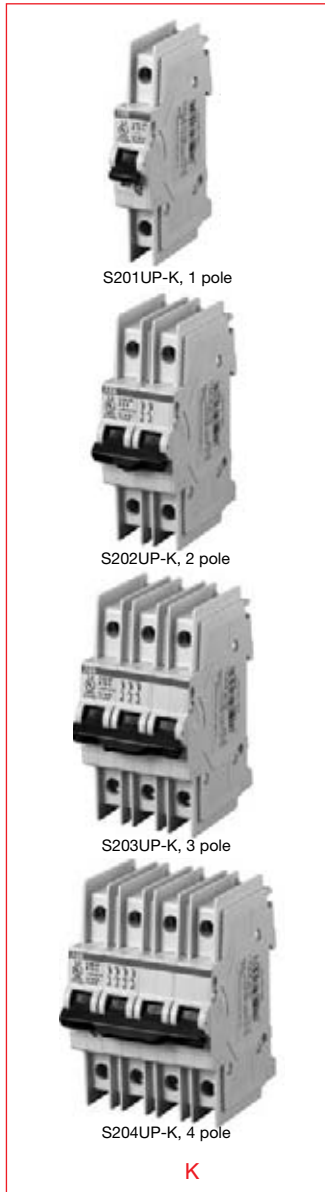
Applications with other ABB products

Miniature MCCBs

S200UP, 480Y/277 VAC

smisline

K UL 489 CSA C22.2 - NO. 5
VDE 0660
Cable & equipment protection



Rated current	Catalog number	List price	Delivery class	Sugg. order qty	Wgt. oz. (1 pc.)
1 pole					
0.2	S201UP-K0.2	\$ 90			
0.3	S201UP-K0.3	90			
0.5	S201UP-K0.5	90			
0.75	S201UP-K0.75	90			
1	S201UP-K1	90			
1.6	S201UP-K1.6	90			
2	S201UP-K2	90			
3	S201UP-K3	90			
4	S201UP-K4	90			
5	S201UP-K5	90			
6	S201UP-K6	90			
8	S201UP-K8	90	A	10	4.6
10	S201UP-K10	90			
13	S201UP-K13	90			
15	S201UP-K15	90			
16	S201UP-K16	90			
20	S201UP-K20	90			
25	S201UP-K25	90			

Rated current	Catalog number	List price	Delivery class	Sugg. order qty	Wgt. oz. (1 pc.)
3 pole					
0.2	S203UP-K0.2	\$ 320			
0.3	S203UP-K0.3	320			
0.5	S203UP-K0.5	320			
0.75	S203UP-K0.75	320			
1	S203UP-K1	320			
1.6	S203UP-K1.6	320			
2	S203UP-K2	320			
3	S203UP-K3	320			
4	S203UP-K4	320			
5	S203UP-K5	320			
6	S203UP-K6	320			
8	S203UP-K8	320	A	1	13.9
10	S203UP-K10	320			
13	S203UP-K13	320			
15	S203UP-K15	320			
16	S203UP-K16	320			
20	S203UP-K20	320			
25	S203UP-K25	320			

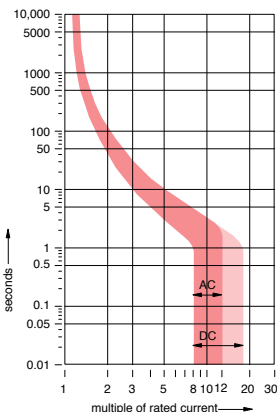
Rated current	Catalog number	List price	Delivery class	Sugg. order qty	Wgt. oz. (1 pc.)
2 pole					
0.2	S202UP-K0.2	210			
0.3	S202UP-K0.3	210			
0.5	S202UP-K0.5	210			
0.75	S202UP-K0.75	210			
1	S202UP-K1	210			
1.6	S202UP-K1.6	210			
2	S202UP-K2	210			
3	S202UP-K3	210			
4	S202UP-K4	210			
5	S202UP-K5	210			
6	S202UP-K6	210			
8	S202UP-K8	210	A	5	9.2
10	S202UP-K10	210			
13	S202UP-K13	210			
15	S202UP-K15	210			
16	S202UP-K16	210			
20	S202UP-K20	210			
25	S202UP-K25	210			

Rated current	Catalog number	List price	Delivery class	Sugg. order qty	Wgt. oz. (1 pc.)
4 pole					
0.2	S204UP-K0.2	440			
0.3	S204UP-K0.3	440			
0.5	S204UP-K0.5	440			
0.75	S204UP-K0.75	440			
1	S204UP-K1	440			
1.6	S204UP-K1.6	440			
2	S204UP-K2	440			
3	S204UP-K3	440			
4	S204UP-K4	440			
5	S204UP-K5	440			
6	S204UP-K6	440	B	1	18.0
8	S204UP-K8	440			
10	S204UP-K10	440			
13	S204UP-K13	440			
15	S204UP-K15	440			
16	S204UP-K16	440			
20	S204UP-K20	440			
25	S204UP-K25	440			

Delivery Class

- A** - Standard item, stock to 2 weeks lead time
- B** - Stock to 4 weeks lead time
- C** - 6 to 8 week lead time

UL489 listed as branch circuit protective device



Technical data

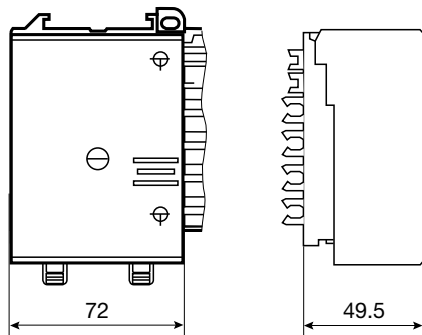
Approximate dimensions

Technical data

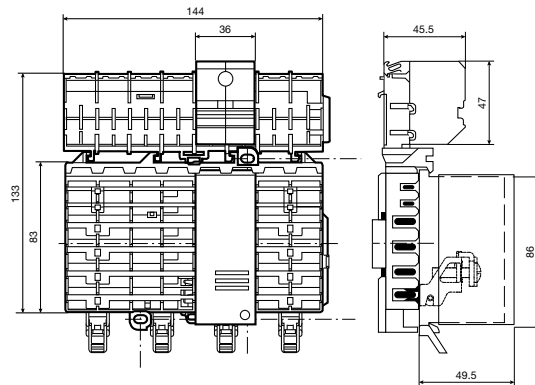
Item	Description	
Rated voltage	VAC	600
Rated current	A	100 (end feed); up to 200A (center feed)
Short circuit rating	KAIC	50 when protected by 150A fuse
Approval		UL508 Recognized component
Power feed terminals wire range	AWG	10-1/0 & 8-3/0

Approximate dimensions

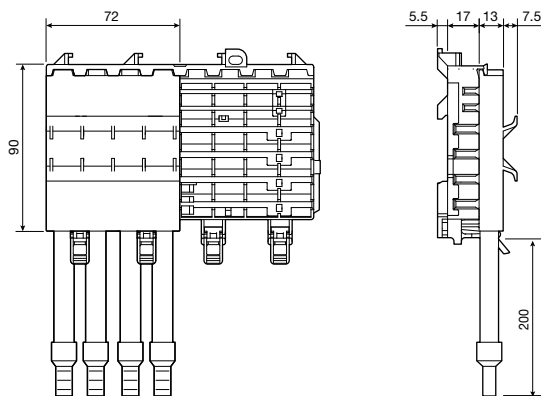
ZLS224 – Main power feed terminal



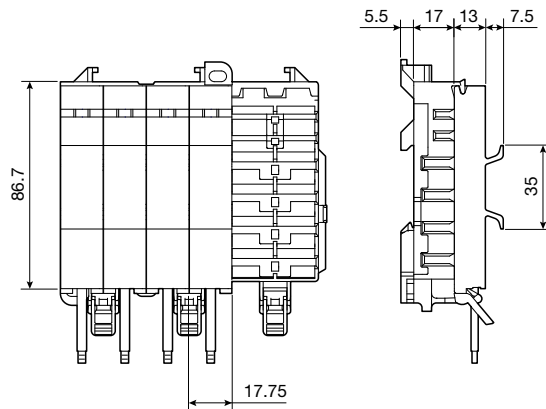
Incoming terminal components



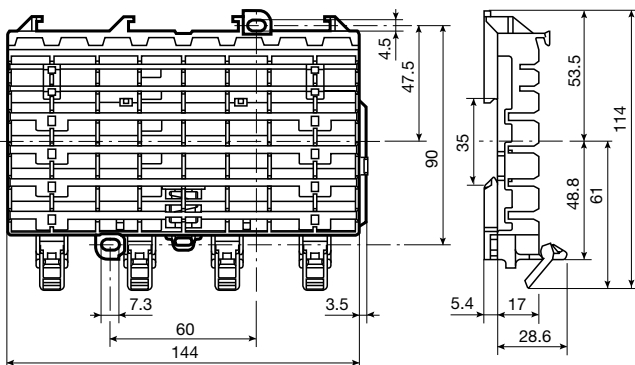
Adapter for non-smisline devices, 100A



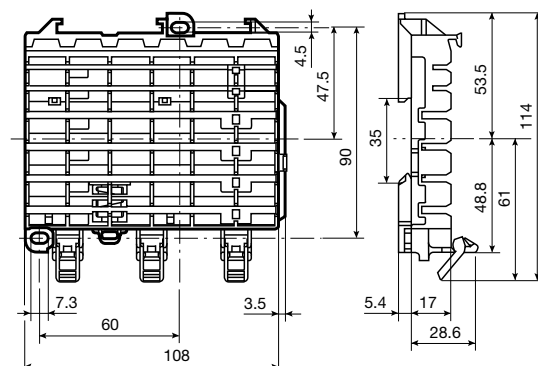
Adapter for foreign devices, 30A, 60A



ZLS808 – Socket base



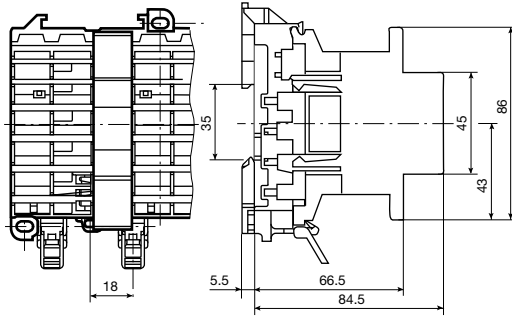
ZLS806 – Socket base



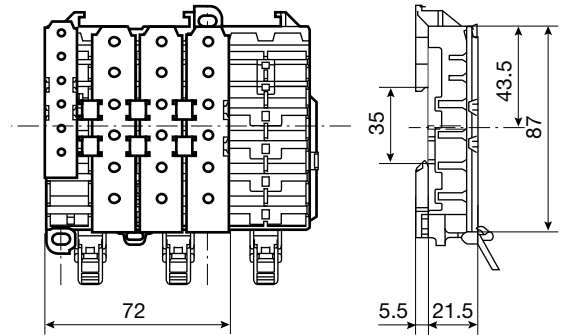
Approximate dimensions

smisline

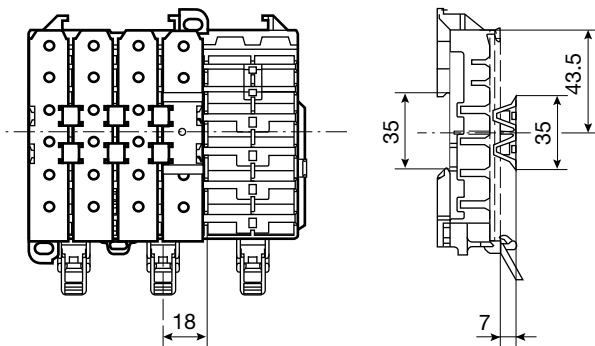
ZLS239 – Busbar isolator



ZLS100 – Bus bar cover



ZLS101 – Extension adapter





Notes
