CONTROL SECTION 8

Electronic relays and controls

Timers, power supplies, relays, limit switches

Section Updated 7/2022

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This represents an overview of ABB's limit switches offering. Please reference the **Limit Switches catalog** for the complete portfolio.
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Time relays
CT-C range

CT-MFC.12

CT-ERC.22

Selection table

	Order number	1SVR508010R1300	1SVR508020R0000	1SVR508020R1100	1SVR508120R0000	1SVR508100R0000	1SVR508100R0100	1SVR508110R0000	1SVR508110R0100	1SVR508130R0000	1SVR508150R0000	1SVR508160R0000	1SVR508160R0100	1SVR508210R0100	1SVR508211R0100
	Type	CT-MKC.31	CT-MFC.12	CT-MFC.21	CT-ARC.12	CT-ERC.12	CT-ERC.22	CT-AHC.12	CT-AHC.22	CT-VWC.12	CT-EBC.12	CT-TGC.12	CT-TGC.22	CT-SAC.22	CT-SDC.22
Timing function															
ON-delay		■	■	■		■	■								
OFF-delay with aux. voltage		■	■	■				■	■						
OFF-delay w/o aux. voltage					■										
Impulse-ON		■	■	■						■					
Impulse-OFF with aux. voltage		■	■	■											
Impulse-OFF w/o aux. voltage					■										
Flasher starting with ON		■	■	■							■				
Flasher starting with OFF		■	■	■							■				
Pulse generator starting with ON or OFF												■	■		
Pulse former		■	■	■											
Star-delta change-over														■	■
Features															
Control input, voltage-related triggering			■	■				■	■			■	■		
Time range															
0.05 s - 100 h		■	■	■		■	■	■	■	■	■	2	2		
0.05 s - 10 min					■									■	■
Supply voltage															
12-240 V AC/DC		■		■											
24-48 V DC			■		■	■	■	■	■	■	■	■	■	■	■
24-240 V AC			■		■	■	■	■	■	■	■	■	■	■	■
Output															
Solid state		■													
c/o contact			1	2	1	1	2	1	2	1	1	1	2		
n/o contact														2	2

Time relays
CT-S range

CT-MVS.21P

CT-MBS.22P

CT-ERS.21P

CT-AHS.22P

CT-SDS.23P

—

*** Order number and type**
All devices are available either with push-in terminals (P-type) or double-chamber cage connection terminals (S-type).

Terminal	Type	Order number
Push-in	● = P	■ = 4
Screw	● = S	■ = 3

Selection table

	Order number*	1SVR7■0020R0200	1SVR7■0020R3300	1SVR7■0021R2300	1SVR7■0020R3100	1SVR7■0030R3300	1SVR7■0010R0200	1SVR7■0010R3200	1SVR7■0040R3300	1SVR7■0100R0300	1SVR7■0100R3300	1SVR7■0100R3100	1SVR7■0180R0300	1SVR7■0180R3300	1SVR7■0180R3100	1SVR7■0110R3300	1SVR7■0120R3100	1SVR7■0120R3300	1SVR7■0210R3300	1SVR7■0211R2300
	Type*	CT-MVS.21●	CT-MVS.22●	CT-MVS.23●	CT-MVS.12●	CT-MXS.22●	CT-MFS.21●	CT-MBS.22●	CT-WBS.22●	CT-ERS.21●	CT-ERS.22●	CT-ERS.12●	CT-APS.21●	CT-APS.22●	CT-APS.12●	CT-AHS.22●	CT-ARS.11●	CT-ARS.21●	CT-SDS.22●	CT-SDS.23●
Timing function																				
ON-delay	⊠	■	■	■	■		■	■	■	■	■	■								
ON-delay, accumulative	⊠(+)	■	■	■	■		■													
OFF-delay w. aux. voltage	▬	■	■	■	■		■	■					■	■	■	■				
OFF-delay w. aux. voltage, accumulative	▬						■													
OFF-delay w/o aux. voltage	▬																■	■		
ON- and OFF-delay, symmetrical	⊠▬	■	■	■	■		■	■												
ON- and OFF-delay, symmetrical, accumulative	⊠▬						■													
ON- and OFF-delay, asymmetrical	⊠▬					■														
ON/OFF function	▭	■	■	■	■	■	■	■	■											
Impulse-ON	1⎍⊠	■	■	■	■		■	■	■											
Impulse-ON, accumulative	1⎍⊠						■													
Impulse-OFF w. aux. voltage	1⎍▬	■	■	■	■		■	■												
Impulse-OFF w. aux. voltage, accumulative	1⎍▬						■													
Impulse-ON and OFF	1⎍⊠▬					■														
Fixed impulse with adjustable time delay	⊠1⎍								■											
Adjustable impulse with fixed time delay	⊠1⎍								■											
Flasher starting with ON	⎍⊠						■	■	■											
Flasher with reset, starting with ON	⎍⊠						■	■												
Flasher starting with OFF	⎍▬						■	■	■											
Flasher with reset, starting with OFF	⎍▬						■	■												
Flasher starting with ON or OFF	⎍⊠▬	■	■	■	■															
Pulse generator starting with ON or OFF	⊠▬⎍					■														
Single pulse generator	⊠▬1⎍					■														
Pulse former	1⎍	■	■	■	■		■	■												
Star-delta change-over	△																		■	■
Star-delta change-over with impulse	△1⎍	■	■	■			■	■												
Features																				
Control input, voltage-related triggering		■	■	■	■	■							■	■	■					
Control input, volt-free triggering							2	1								■				
Remote potentiometer connection		■				2	■	■												
2nd c/o contact selectable as instantaneous contact		■					■	■												
Extended temperature range (-40...+60°C)		■					■			■			■							

(Table continued on next page)

Time relays
CT-S range

CT-MVS.21P

CT-MBS.22P

CT-ERS.21P

CT-AHS.22P

CT-SDS.23P

—
*** Order number and type**
All devices are available either with push-in terminals (P-type) or double-chamber cage connection terminals (S-type).

Terminal	Type	Order number
Push-in	● = P	■ = 4
Screw	● = S	■ = 3

Selection table (continued)

Type*	CT-MVS.21●	CT-MVS.22●	CT-MVS.23●	CT-MVS.12●	CT-MXS.22●	CT-MFS.21●	CT-MBS.22●	CT-WBS.22●	CT-ERS.21●	CT-ERS.22●	CT-ERS.12●	CT-APS.21●	CT-APS.22●	CT-APS.12●	CT-AHS.22●	CT-ARS.11●	CT-ARS.21●	CT-SDS.22●	CT-SDS.23●
Order number*	1SVR7■0020R0200	1SVR7■0020R3300	1SVR7■0021R2300	1SVR7■0020R3100	1SVR7■0030R3300	1SVR7■0010R0200	1SVR7■0010R3200	1SVR7■0040R3300	1SVR7■0100R0300	1SVR7■0100R3300	1SVR7■0100R3100	1SVR7■0180R0300	1SVR7■0180R3300	1SVR7■0180R3100	1SVR7■0110R3300	1SVR7■0120R3100	1SVR7■0120R3300	1SVR7■0210R3300	1SVR7■0211R2300
Time range																			
0.05 s - 10 min																■	■	■	■
0.05 s - 300 h	■	■	■	■	2	■	■	■	■	■	■	■	■	■	■				
Supply voltage																			
24-48 V DC		■		■	■		■	■		■	■		■	■	■			■	
24-240 V AC		■		■	■		■	■		■	■		■	■	■			■	
24-240 V AC/DC	■					■			■			■				■	■		
380-440 V AC			■																■
Output																			
c/o contact	2	2	2	1	2	2	2	2	2	2	1	2	2	1	2	1	2		
n/o contact																		2	2

Monitoring relays
Single-phase current

CM-SRS.22S

CM-SFS.22P

Selection table

Order number	1SVR730840R0200	1SVR740840R0200	1SVR730841R0200	1SVR740841R0200	1SVR730841R1200	1SVR740841R1200	1SVR730840R0300	1SVR730841R0300	1SVR730841R1300	1SVR730840R0400	1SVR740840R0400	1SVR730841R0400	1SVR740841R0400	1SVR730841R1400	1SVR740841R1400	1SVR730840R0500	1SVR730841R0500	1SVR730841R1500	1SVR730840R0600	1SVR740840R0600	1SVR730840R0700	1SVR730760R0400	1SVR740760R0400	1SVR730760R0500
Type	CM-SRS.11S	CM-SRS.11P	CM-SRS.11S	CM-SRS.11P	CM-SRS.11S	CM-SRS.11P	CM-SRS.12S	CM-SRS.12S	CM-SRS.12S	CM-SRS.21S	CM-SRS.21P	CM-SRS.21S	CM-SRS.21P	CM-SRS.21S	CM-SRS.21P	CM-SRS.22S	CM-SRS.22S	CM-SRS.22S	CM-SRS.M1S	CM-SRS.M1P	CM-SRS.M2S	CM-SFS.21S	CM-SFS.21P	CM-SFS.22S
Rated control supply voltage U_s																								
24 - 240 V AC/DC	■	■					■			■	■					■			■	■	■	■	■	■
110 - 130 V AC			■	■				■				■	■				■							
220 - 240 V AC					■	■			■					■	■			■						
Measuring ranges AC/DC																								
3 - 30 mA	■	■	■	■	■	■				■	■	■	■	■	■				■	■		■	■	
10 - 100 mA	■	■	■	■	■	■				■	■	■	■	■	■				■	■		■	■	
0.1 - 1 A	■	■	■	■	■	■				■	■	■	■	■	■				■	■		■	■	
0.3 - 1.5 A							■	■	■							■	■	■			■			■
1 - 5 A							■	■	■							■	■	■			■			■
3 - 15 A							■	■	■							■	■	■			■			■
Monitoring function																								
Over- or undercurrent	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Window current monitoring																						■	■	■
Latching																			sel	sel	sel	sel	sel	sel
Open-circuit or closed-circuit principle																			sel	sel	sel	sel	sel	sel
Timing functions for tripping delay																								
ON-delay, 0.1 - 30 s										adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj			
ON- or OFF-delay, 0.1 - 30 s																						sel	sel	sel
Output																								
c/o contact	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Connection type																								
Push-in terminals		■		■		■					■		■		■					■			■	
Double-chamber cage connection terminals	■		■		■		■	■	■	■		■		■		■	■	■	■		■	■		■

adj: adjustable
sel: selectable

Monitoring relays
Single-phase voltage

CM-ESS.MP

CM-EFS.2

Selection table

Order number	1SVR730830R0300	1SVR740830R0300	1SVR730831R0300	1SVR740831R0300	1SVR730831R1300	1SVR740831R1300	1SVR730830R0400	1SVR740830R0400	1SVR730831R0400	1SVR740831R0400	1SVR730831R1400	1SVR740831R1400	1SVR730830R0500	1SVR740830R0500	1SVR730750R0400	1SVR740750R0400
Type	CM-ESS.1S	CM-ESS.1P	CM-ESS.1S	CM-ESS.1P	CM-ESS.1S	CM-ESS.1P	CM-ESS.2S	CM-ESS.2P	CM-ESS.2S	CM-ESS.2P	CM-ESS.2S	CM-ESS.2P	CM-ESS.MS	CM-ESS.MP	CM-EFS.2S	CM-EFS.2P
Rated control supply voltage U_s																
24 - 240 V AC/DC	■	■					■	■					■	■	■	■
110 - 130 V AC			■	■					■	■						
220 - 240 V AC					■	■					■	■				
Measuring ranges AC/DC																
3 - 30 V	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
6 - 60 V	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
30 - 300 V	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
60 - 600 V	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Monitoring function																
Over- or undervoltage	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
Windows voltage monitoring															■	■
Latching													sel	sel	sel	sel
Open-circuit or closed-circuit principle													sel	sel	sel	sel
Timing functions for tripping delay																
ON-delay, 0.1 - 30 s							adj	adj	adj	adj	adj	adj	adj	adj		
ON- or OFF-delay, 0.1 - 30 s															sel	sel
Output																
c/o contact	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
Connection type																
Push-in terminals		■		■		■		■		■		■		■		■
Double-chamber cage connection terminals	■		■		■		■		■		■		■		■	

adj: adjustable
sel: selectable

Monitoring relays

Three-phase single functional

CM-PBE

CM-PSS.41P

CM-PAS.31P

Selection table

Order number	1SVR550881R9400	1SVR550882R9500	1SVR550870R9400	1SVR550871R9500	1SVR550824R9100	1SVR550826R9100	1SVR730824R9300	1SVR740824R9300	1SVR730784R2300	1SVR740784R2300	1SVR730784R3300	1SVR740784R3300	1SVR730794R1300	1SVR740794R1300	1SVR730794R3300	1SVR740794R3300	1SVR730794R2300	1SVR740794R2300	1SVR730774R1300	1SVR740774R1300	1SVR730774R3300	1SVR740774R3300
Type	CM-PBE	CM-PBE	CM-PVE	CM-PVE	CM-PFE	CM-PFE.2	CM-PFS.S	CM-PFS.P	CM-PSS.31S	CM-PSS.31P	CM-PSS.41S	CM-PSS.41P	CM-PVS.31S	CM-PVS.31P	CM-PVS.41S	CM-PVS.41P	CM-PVS.81S	CM-PVS.81P	CM-PAS.31S	CM-PAS.31P	CM-PAS.41S	CM-PAS.41P
Rated control supply voltage U_s																						
Phase to phase																						
160-300 V AC													■	■					■	■		
200-400 V AC																	■	■				
200-500 V AC						■	■	■														
208-440 V AC					■																	
300-500 V AC															■	■					■	■
320-460 V AC			■	■																		
380 V AC									■	■												
380-440 V AC	■	■																				
400 V AC											■	■										
Phase to neutral																						
185-265 V AC			■																			
220-240 V AC	■																					
Rated frequency																						
50/60 Hz	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Suitable for monitoring																						
Single-phase mains	■		■																			
Three-phase mains	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Monitoring function																						
Phase failure	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Phase sequence					■	■	■	■	sel	sel	sel	sel	sel	sel	sel	sel	sel	sel	■	■	■	■
Overvoltage			■	■					■	■	■	■	■	■	■	■	■	■				
Undervoltage			■	■					■	■	■	■	■	■	■	■	■	■				
Unbalance																			■	■	■	■
Neutral[1]	■		■																			
Thresholds																						
adjustable (adj) or fixed (fix)	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	adj	adj	adj	adj	adj	adj	adj	adj
Timing functions for tripping delay																						
ON delay							fix	fix											sel	sel	sel	sel
On and OFF delay	fix	fix	fix	fix	fix	fix			adj	adj	adj	adj	adj	adj	adj	adj	adj	adj				
Connection type																						
Push-in terminals										■		■		■		■		■		■		■
Double-chamber cage connection terminals									■		■		■		■		■		■		■	

[1] The external conductor voltage towards the neutral conductor is measured.

adj: adjustable
sel: selectable
fix: fixed

Monitoring relays

Three-phase multi-functional

CM-MPS.23P

CM-MPN.52P

Selection table

Order number	1SVR730885R1300	1SVR740885R1300	1SVR730885R3300	1SVR740885R3300	1SVR730884R1300	1SVR740884R1300	1SVR730884R3300	1SVR740884R3300	1SVR730885R4300	1SVR740885R4300	1SVR730884R4300	1SVR740884R4300	1SVR750487R8300	1SVR760487R8300	1SVR750488R8300	1SVR760488R8300	1SVR750489R8300	1SVR760489R8300
Type	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P
Rated control supply voltage U_s																		
Phase to phase																		
160-300 V AC					■	■												
300-500 V AC							■	■			■	■						
350-580 V AC													■	■				
450-720 V AC															■	■		
530-820 V AC																	■	■
Phase to neutral																		
90-170 V AC	■	■																
180-280 V AC			■	■					■	■								
Rated frequency																		
50/60 Hz	■	■	■	■	■	■	■	■					■	■	■	■	■	■
50/60/400 Hz									■	■	■	■						
Suitable for monitoring																		
Mains with harmonic content									■	■	■	■						
Single-phase mains	■	■	■	■					■	■								
Three-phase mains	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Monitoring function																		
Phase failure	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Phase sequence	sel	sel	sel	sel	sel	sel	sel	sel	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj
Automatic phase sequence correction									adj	adj	adj	adj	adj	adj	adj	adj	adj	adj
Overvoltage	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Undervoltage	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Unbalance	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Interrupted neutral monitoring[1]	■	■	■	■					■	■								
Thresholds																		
Adjustable (adj)	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj
Timing functions for tripping delay																		
On- or OFF delay	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj
Connection type																		
Push-in terminals		■		■		■		■		■		■		■		■		■
Double-chamber cage connection terminals	■		■		■		■		■		■		■		■		■	

[1] The relay detects by means of a phase unbalance the interruption of the neutral conductor. The external conductor voltage towards the neutral conductor is measured too.

adj: adjustable
sel: selectable

Monitoring relays
Grid feeding

CM-UFD.M*M

Selection table

Order number	1SVR560731R3700	1SVR560730R3401	1SVR560731R3701	1SVR560730R3402	1SVR560731R3702	1SVR560731R3703
Type	CM-UFD.M22M	CM-UFD.M31	CM-UFD.M31M	CM-UFD.M33	CM-UFD.M33M	CM-UFD.M34M
Rated control supply voltage U_s						
24-240 V AC/DC	■	■	■	■	■	■
Standard						
CEI 0-21	■					
VDE AR-N 4105, VDE AR-N 4110		■	■			
ENA G98, G99				■	■	
DRRG standard of DEWA						■
Rated frequency						
DC or 50 Hz	■	■	■			
DC or 50/60 Hz				■	■	■
Modbus RTU	■		■		■	■
Suitable for monitoring						
Single-phase mains	■	■	■	■	■	■
Three-phase mains	■	■	■	■	■	■
Monitoring function						
Over-/undervoltage	■	■	■	■	■	■
Over-/underfrequency	■	■	■	■	■	■
ROCOF (rate of change of frequency)	■	■	■	■	■	■
10 minutes average value	■	■	■	■	■	■
Vector shift		■	■	■	■	■
Thresholds	adj	adj	adj	adj	adj	adj

Monitoring relays
Insulation

CM-IWS.1

CM-IWS.2

CM-IWN.1

Selection table

	Order number	1SVR730670R0200	1SVR740670R0200	1SVR730660R0100	1SVR740660R0100	1SVR750660R0200	1SVR760660R0200	1SVR470670R1000	1SVR470670R1100
	Type	CM-IWS.2S	CM-IWS.2P	CM-IWS.1S	CM-IWS.1P	CM-IWN.1S	CM-IWN.1P	CM-IWM.10	CM-IWM.11
Rated control supply voltage U_s									
24 - 240 V AC/DC		■	■	■	■	■	■		
24 V DC								■	■
Measuring voltages									
250 V AC (L-PE)				■	■				
400 V AC (L-PE)		■	■			■	■		
690 V AC (L-PE)						■[1]	■[1]	■[2]	
1000 V AC (L-PE)									■[3]
300 V DC (L-PE)				■	■				
600 V DC (L-PE)						■	■		
690 V DC (L-PE)								■[2]	
1000 V DC (L-PE)						■[1]	■[1]		■[3]
Measuring range									
1 - 100 kΩ		■	■	■	■	■	■		
2 - 200 kΩ						■	■		
2 - 250 kΩ								■	■
System leakage capacitance, max.									
10 µF		■	■	■	■				
20 µF						■	■		
1000 µF								■	
3000 µF									■
Output									
1 c/o		■	■	■	■				
1 x 2 c/o or 2 x 1 c/o						■	■		
2 c/o								■	■
Operating principle									
Open-circuit principle		■	■	■	■			■	■
Open- or closed-circuit principle adjustable						■	■		

[1] With coupling unit CM-IVN screw version CM-IVN.S: 1SVR750669R9400
push-in version CM-IVN.P: 1SVR760669R9400

[2] Allowed voltage range of the supervised network: 0-760 V AC / 0-1000 V

[3] Allowed voltage range of the supervised network: 0-1100 V AC / 0-1500 V DC

(Table continued on next page)

Monitoring relays
Insulation

CM-IWS.1

CM-IWS.2

CM-IWN.1

Selection table (continued)

Type	CM-IWS.2S	CM-IWS.2P	CM-IWS.1S	CM-IWS.1P	CM-IWN.1S	CM-IWN.1P	CM-IWM.10	CM-IWM.11
Order number	1SVR730670R0200	1SVR740670R0200	1SVR730660R0100	1SVR740660R0100	1SVR750660R0200	1SVR760660R0200	1SVR470670R1000	1SVR470670R1100
Test								
Front-face button or control input	■	■	■	■	■	■	■	■
Reset								
Front-face button or control input	■	■	■	■	■	■	■	■
Fault storage / latching configurable	■	■	■	■	■	■		
Non volatile storage configurable	■	■	■	■	■	■		
Interrupted wire detection					■	■	■	■
Threshold values configurable	1	1	1	1	2	2	2	2
Control input (measuring input deactivation)								■
Connection type								
Push-in terminals		■		■		■		
Double-chamber cage connection terminals	■		■		■			
Screw terminals							■	■

Motor protection relays

Thermistor

CM-MSS.12S

CM-MSS.41S

CM-MSS.51S

Selection table

Order code	1SVR550805R9300	1SVR550800R9300	1SVR550801R9300	1SVR740720R1400	1SVR730720R1400	1SVR740700R0100	1SVR730700R0100	1SVR740700R2100	1SVR730700R2100	1SVR740722R1400	1SVR730722R1400	1SVR740700R0200	1SVR730700R0200	1SVR740700R2200	1SVR730700R2200	1SVR740712R1400	1SVR730712R1400	1SVR740712R0200	1SVR730712R0200	1SVR740712R2200	1SVR730712R2200	1SVR740712R1200	1SVR730712R1200	1SVR740712R1300	1SVR730712R1300
Type	CM-MSE	CM-MSE	CM-MSE	CM-MSS.11P	CM-MSS.11S	CM-MSS.12P	CM-MSS.12S	CM-MSS.13P	CM-MSS.13S	CM-MSS.21P	CM-MSS.21S	CM-MSS.22P	CM-MSS.22S	CM-MSS.23P	CM-MSS.23S	CM-MSS.31P	CM-MSS.31S	CM-MSS.32P	CM-MSS.32S	CM-MSS.33P	CM-MSS.33S	CM-MSS.41P	CM-MSS.41S	CM-MSS.51P	CM-MSS.51S
Characteristics																									
ATEX approval				■	■					■	■					■	■	■	■	■	■	■	■	■	■
Number of sensor circuits	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
Single or accumulative evaluation																								■	■
Number of LEDs				3	3	2	2	2	2	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3
Contacts																									
1 c/o (SPDT) contact						■	■	■	■																
2 c/o (SPDT) contacts												■	■	■	■			■	■	■	■	■	■		
1 n/o	■	■	■																						
1 n/c and 1 n/o				■	■					■	■					■	■								
2 x 1 c/o or 1 x 2 c/o contacts, configurable																								■	■
Reset																									
Manual												■	■	■	■	■	■	■	■	■	■	■	■	■	■
Remote												■	■	■	■	■	■	■	■	■	■	■	■	■	■
Auto	■	■	■	■	■	■	■	■	■	■	■	■[1]	■[1]	■[1]	■[1]	■[1]	■[1]	■[1]	■[1]	■[1]	■[1]	■[1]	■[1]	■[2]	■[2]
Test button																■	■	■	■	■	■	■	■	■	■
Functions																									
Short-circuit detection										■	■					■	■	■	■	■	■				
Short-circuit detection, configurable																						■	■	■	■
Dynamic interrupted wire detection				■	■					■	■					■	■	■	■	■	■	■	■	■	■
Non-volatile fault storage				■	■					■	■					■	■								
Non-volatile fault storage, configurable																						■	■	■	■

[1] For automatic reset, connect terminals S1 to T2.
[2] For automatic reset, connect terminals S1 to 1T2/2T2.

(Table continued on next page)

Motor protection relays
Thermistor

CM-MSS.12S

CM-MSS.41S

CM-MSS.51S

Selection table (continued)

Order code	1SVR550805R9300	1SVR550800R9300	1SVR550801R9300	1SVR740720R1400	1SVR730720R1400	1SVR740700R0100	1SVR730700R0100	1SVR740700R2100	1SVR730700R2100	1SVR740722R1400	1SVR730722R1400	1SVR740700R0200	1SVR730700R0200	1SVR740700R2200	1SVR730700R2200	1SVR740712R1400	1SVR730712R1400	1SVR740712R0200	1SVR730712R0200	1SVR740712R2200	1SVR730712R2200	1SVR740712R1200	1SVR730712R1200	1SVR740712R1300	1SVR730712R1300
Type	CM-MSE	CM-MSE	CM-MSE	CM-MSS.11P	CM-MSS.11S	CM-MSS.12P	CM-MSS.12S	CM-MSS.13P	CM-MSS.13S	CM-MSS.21P	CM-MSS.21S	CM-MSS.22P	CM-MSS.22S	CM-MSS.23P	CM-MSS.23S	CM-MSS.31P	CM-MSS.31S	CM-MSS.32P	CM-MSS.32S	CM-MSS.33P	CM-MSS.33S	CM-MSS.41P	CM-MSS.41S	CM-MSS.51P	CM-MSS.51S
Rated control supply voltage U_s																									
24 V AC	■																								
110-130 V AC		■																							
220-240 V AC			■																						
24-240 V AC/DC				■	■					■	■					■	■					■	■	■	■
24 V AC/DC						■	■					■	■					■	■						
110-130 V AC, 220-240 V AC								■	■					■	■					■	■				
Connection type																									
Push-in terminals				■		■		■		■		■		■		■		■		■		■		■	
Double-chamber cage connection terminals					■		■		■		■		■		■		■		■		■		■		■
Screw	■	■	■																						

Monitoring relays
Temperature

CM-TCS

Selection table

Order number	1SVR 730 740 R9100	1SVR 740 740 R9100	1SVR 730 740 R0100	1SVR 740 740 R0100	1SVR 730 740 R9200	1SVR 740 740 R9200	1SVR 730 740 R0200	1SVR 740 740 R0200	1SVR 730 740 R9300	1SVR 740 740 R9300	1SVR 730 740 R0300	1SVR 740 740 R0300
Type	CM-TCS.21S	CM-TCS.21P	CM-TCS.11S	CM-TCS.11P	CM-TCS.22S	CM-TCS.22P	CM-TCS.12S	CM-TCS.12P	CM-TCS.23S	CM-TCS.23P	CM-TCS.13S	CM-TCS.13P
Rated control supply voltage U_s												
24 V AC/DC	■	■			■	■			■	■		
24-240 V AC/DC			■	■			■	■			■	■
Sensor circuits (2 or 3 wire)												
Number of temperature sensors	1	1	1	1	1	1	1	1	1	1	1	1
Number of thresholds	2	2	2	2	2	2	2	2	2	2	2	2
Measuring temperature range												
-50...+50°C	■	■	■	■								
0...+100°C					■	■	■	■				
0...+200°C									■	■	■	■
Monitoring function												
Overtemperature	■	■	■	■	■	■	■	■	■	■	■	■
Undertemperature	■	■	■	■	■	■	■	■	■	■	■	■
Window temperature	■	■	■	■	■	■	■	■	■	■	■	■
Operating principle												
Open or closed-circuit principle	■	■	■	■	■	■	■	■	■	■	■	■
Output contacts												
c/o	2	2	2	2	2	2	2	2	2	2	2	2

Monitoring relays
Liquid level

CM-ENE MIN

CM-ENS.3x

Selection table

Order code	1SVR 550 855 R9500	1SVR 550 850 R9500	1SVR 550 851 R9500	1SVR 550 855 R9400	1SVR 550 850 R9400	1SVR 550 851 R9400	1SVR 730 850 R0100	1SVR 740 850 R0100	1SVR 730 850 R2100	1SVR 740 850 R2100	1SVR 730 850 R0200	1SVR 740 850 R0200	1SVR 730 850 R2200	1SVR 740 850 R2200	1SVR 730 850 R0300	1SVR 740 850 R0300
Type	CM-ENE MIN	CM-ENE MIN	CM-ENE MIN	CM-ENE MAX	CM-ENE MAX	CM-ENE MAX	CM-ENS.11S	CM-ENS.11P	CM-ENS.13S	CM-ENS.13P	CM-ENS.21S	CM-ENS.21P	CM-ENS.23S	CM-ENS.23P	CM-ENS.31S	CM-ENS.31P
Rated control supply voltage U_s																
24-240 V AC/DC							■	■			■	■			■	■
24 V AC	■			■												
110-130 V AC		■			■				■	■			■	■		
220-240 V AC			■			■			■	■			■	■		
Sensor circuit																
Number of electrodes (including ground reference)	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3
Response sensitivity range																
0-100 kOhm	■	■	■	■	■	■										
5-100 kOhm							adj	adj	adj	adj						
0.1-1000 kOhm											adj	adj	adj	adj	adj	adj
Monitoring function																
Dry running protection	■	■	■				■	■	■	■	■	■	■	■	■	■
Overflow protection				■	■	■	■	■	■	■	■	■	■	■	■	■
Liquid level control				■	■	■	■	■	■	■	■	■	■	■	■	■
Operating principle																
Open-circuit principle	■	■	■				■	■	■	■						
Closed-circuit principle				■	■	■										
Open- or closed-circuit principle											sel	sel	sel	sel	sel	sel
Adjustable ON-/OFF-delay																
0.1-10 s															■	■
Output contacts																
n/o	1	1	1	1	1	1										
c/o (SPDT)							1	1	1	1	1	1	1	1	2	2
Connection type																
Push-in terminals								■		■		■		■		■
Double-chamber cage connection terminals							■		■		■		■		■	
Screw	■	■	■	■	■	■										

adj: adjustable
sel: selectable

Monitoring relays
Accessories

Bar electrode

Suspension electrode

Ordering details

Accessories

Description	For type	Width in mm	For devices	Type	Order code	Pkg qty	Weight (1 pc) g (oz)
Adapter for screw mounting	CM-S CM-S.S/P	22.5	–	ADP.01	1SVR430029R0100	1	18.4 (0.65)
	CM-N CM-N.S/P	45	–	ADP.02	1SVR440029R0100	1	36.7 (1.30)
Marker label	CM-S, CM-N CM-S.S/P CM-N.S/P	–	without DIP switches	MAR.01	1SVR366017R0100	10	0.19 (0.007)
	CM-S, CM-N	–	with DIP switches	MAR.02	1SVR430043R0000	10	0.13 (0.005)
	CM-S.S/P CM-N.S/P	–	with DIP switches	MAR.12	1SVR730006R0000	10	0.152 (0.335)
Sealable transparent cover	CM-S	22.5	–	COV.01	1SVR430005R0100	1	5.2 (0.18)
	CM-N	45	–	COV.02	1SVR440005R0100	1	7.7 (0.27)
	CM-S.S/P	22.5	–	COV.11	1SVR730005R0100	1	4.0 (0.129)
	CM-N.S/P	45	–	COV.12	1SVR750005R0100	1	7 (0.247)

Bar electrodes

Description	Material no.	Type	Order code	Weight (1 pc) kg (lb)
Compact support for 3 bar electrodes	–	CM-KH-3	1SVR450056R6000	0.06 (0.132)
Distance plate for 3 bar electrodes		CM-AH-3	1SVR450056R7000	0.06 (0.132)
Counter nut for 1" thread		CM-GM-1	1SVR450056R8000	0.06 (0.132)
Length: 300 mm	1.4301	CM-SE-300	1SVR450056R0000	0.08 (0.176)
Length: 600 mm	1.4301	CM-SE-600	1SVR450056R0100	0.08 (0.176)
Length: 1000 mm	1.4301	CM-SE-1000	1SVR450056R0200	0.08 (0.176)

Suspension electrodes

Description	Connection	Material no.	Type	Order code	Weight (1 pc) kg (lb)
CM-HE suspension electrode high-alloy steel, material no. 1.4104 (according to EN 10088-1)	Screw	1.4104	CM-HE	1SVR402902R0000	0.074 (0.163)
CM-HC suspension electrode high-alloy steel, material no. 1.4104 (according to EN 10088-1)	Crimp	1.4104	CM-HC	1SVR402902R1000	0.09 (0.198)
CM-HCT suspension electrode suitable for drink water high-alloy steel, material no. 1.4301 (according to EN 10088-1)	Crimp	1.4301	CM-HCT	1SVR402902R2000	0.09 (0.198)

Monitoring relays
Accessories

CM-CT

CM-CT
with mounted accessories

CM-CT-A
mounted on DIN rail

Plug-in current transformers CM-CT

- Without primary conductor though with foot angle, insulating protective cap and bar fastening screws
- Primary / rated current from 50 A to 600 A
- Secondary current of 1 A or 5 A
- Class 1

Ordering details

Rated primary current	Secondary current	Burden class	Type	Order code	Weight (1 pc) g (oz)
50 A	1 A	1 VA / 1	CM-CT 50/1	1SVR450116R1000	0.31 (0.683)
75 A		1.5 VA / 1	CM-CT 75/1	1SVR450116R1100	0.31 (0.683)
100 A		2.5 VA / 1	CM-CT 100/1	1SVR450116R1200	0.276 (0.608)
150 A		2.5 VA / 1	CM-CT 150/1	1SVR450116R1300	0.32 (0.705)
200 A		2.5 VA / 1	CM-CT 200/1	1SVR450116R1400	0.222 (0.489)
300 A		5 VA / 1	CM-CT 300/1	1SVR450117R1100	0.29 (0.639)
400 A		5 VA / 1	CM-CT 400/1	1SVR450117R1200	0.27 (0.595)
500 A		5 VA / 1	CM-CT 500/1	1SVR450117R1300	0.29 (0.639)
600 A		5 VA / 1	CM-CT 600/1	1SVR450117R1400	0.24 (0.529)
50 A	5 A	1 VA / 1	CM-CT 50/5	1SVR450116R5000	0.3 (0.661)
75 A		1.5 VA / 1	CM-CT 75/5	1SVR450116R5100	0.31 (0.683)
100 A		2.5 VA / 1	CM-CT 100/5	1SVR450116R5200	0.31 (0.683)
150 A		2.5 VA / 1	CM-CT 150/5	1SVR450116R5300	0.28 (0.617)
200 A		5 VA / 1	CM-CT 200/5	1SVR450116R5400	0.29 (0.639)
300 A		5 VA / 1	CM-CT 300/5	1SVR450117R5100	0.252 (0.556)
400 A		5 VA / 1	CM-CT 400/5	1SVR450117R5200	0.26 (0.573)
500 A		5 VA / 1	CM-CT 500/5	1SVR450117R5300	0.208 (0.459)
600 A		5 VA / 1	CM-CT 600/5	1SVR450117R5400	0.21 (0.463)

Accessories

Description	Type	Order code	Weight (1 pc) g (oz)
Snap-on fastener for DIN rail mounting of CM-CT	CM-CT A	1SVR450118R1000	0.009 (0.02)

Primary switch mode
Single-phase

CP-S.1

Selection table

		Order number	1SVR320361R1000	1SVR320561R1000	1SVR320661R1000	1SVR320761R1000	1SVR320861R1000
			CP-S.1				
Rated output current	3 A		■				
	5 A			■			
	10 A				■		
	20 A					■	
	40 A						■
Rated output power	72 W		■				
	120 W			■			
	240 W				■		
	480 W					■	
	960 W						■
Rated input voltage	100-240 V AC		■	■	■	■	
	100-250 V DC		■	■	■	■	
	110-240 V AC						■
	110-250 V DC						■
Features	Power reserve design		■	■	■	■	■
	Adjustable output voltage		■	■	■	■	■
	Integrated input fuse		■	■	■	■	■
	Short-circuit stable		■	■	■	■	■
	Fold-forward behavior (U/I)		■	■	■	■	■
	Power factor correction		no	act	act	act	act
	Signalling contact		■	■	■	■	■
	Parallel connection		3	3	3	3	3
	Serial connection		2	2	2	2	2
	Coated PCBA		■	■	■	■	■

pas = passive, act = active

Primary switch mode power supplies

Single-phase

CP-D 12/0.83, CP-D 24/0.42 CP-D 12/2.1, CP-D 24/1.3 CP-D 24/2.5

CP-E 5/0.75 CP-E 12/2.5 CP-E 48/5.0 CP-E 24/20.0

CP-C.1 24/5.0
CP-C.1 24/5.0-C

CP-C.1 24/10.0
CP-C.1 24/10.0-C

CP-C.1 24/20.0
CP-C.1 24/20.0-C

CP-C.1 24/5.0
light grey

CP-C.1 24/10.0
light grey

Selection table

Order number	1SVR427041R1000	1SVR427043R1200	1SVR427041R0000	1SVR427043R0100	1SVR427044R0200	1SVR427045R0400	1SVR427033R3000	1SVR427032R1000	1SVR427035R1000	1SVR427030R0000	1SVR427031R0000	1SVR427032R0000	1SVR427034R0000	1SVR427035R0000	1SVR427036R0000	1SVR427030R2000	1SVR427031R2000	1SVR427034R0000	1SVR427035R2000	1SVR360563R1001	1SVR360663R1001	1SVR360763R1001	1SVR360563R2001	1SVR360663R2001	1SVR360763R2001	1SVR361563R1001	1SVR361663R1001	1SVR361763R1001
	Single-phase																											
	CP-D						**CP-E**													**CP-C.1**								
Rated output voltage																												
5 V DC							■																					
12 V DC	■	■						■	■																			
24 V DC			■	■	■	■				■	■	■	■	■	■					■	■	■	■	■	■	■	■	■
48 V DC																■	■	■	■									
Rated output current																												
0.42 A			■																									
0.625 A																■												
0.75 A										■																		
0.83 A	■																											
1.25 A											■						■											
1.3 A				■																								
2.1 A		■																										
2.5 A					■			■				■																
3 A							■																					
4.2 A						■																						
5 A													■					■		■			■			■		
10 A									■					■					■		■			■			■	
20 A															■							■			■			■
Rated output power																												
10 W	■		■																									
15 W							■																					
18 W										■																		
25 W		■																										
30 W				■				■			■					■												
60 W					■							■					■											
100 W						■																						
120 W									■				■							■			■			■		
240 W														■				■			■			■			■	
480 W															■				■			■			■			■
Rated input voltage																												
100-240 V AC	■	■	■	■	■	■	■	■		■	■	■				■	■			■	■	■	■	■	■	■	■	■
115/230 V AC auto select									■				■	■				■										
115-230 V AC															■				■									

(Table continued on next page)

Primary switch mode power supplies

Single-phase

CP-D 12/0.83, CP-D 24/0.42 | CP-D 12/2.1, CP-D 24/1.3 | CP-D 24/2.5

CP-E 5/0.75 | CP-E 12/2.5 | CP-E 48/5.0 | CP-E 24/20.0

CP-C.1 24/5.0
CP-C.1 24/5.0-C

CP-C.1 24/10.0
CP-C.1 24/10.0-C

CP-C.1 24/20.0
CP-C.1 24/20.0-C

CP-C.1 24/5.0
light grey

CP-C.1 24/10.0
light grey

Selection table (continued)

Order number	1SVR427041R1000	1SVR427043R1200	1SVR427041R0000	1SVR427043R0100	1SVR427044R0200	1SVR427045R0400	1SVR427033R3000	1SVR427032R1000	1SVR427035R1000	1SVR427030R0000	1SVR427031R0000	1SVR427032R0000	1SVR427034R0000	1SVR427035R0000	1SVR427036R0000	1SVR427030R2000	1SVR427031R2000	1SVR427034R0000	1SVR427035R2000	1SVR360563R1001	1SVR360663R1001	1SVR360763R1001	1SVR360563R2001	1SVR360663R2001	1SVR360763R2001	1SVR361563R1001	1SVR361663R1001	1SVR361763R1001
	Single-phase																											
	CP-D						**CP-E**													**CP-C.1**								
DC input voltage range																												
90-300 V DC																				■	■	■	■	■	■	■	■	■
90-375 V DC								■			■	■				■	■											
120-375 V DC	■	■	■	■	■	■	■			■					■				■									
210-375 V DC									■				■	■				■										
Features																												
Power reserve design																				■	■	■	■	■	■	■	■	■
Adjustable output voltage		■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Integrated input fuse	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Short-circuit stable	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fold-forward behavior (U/I)		■		■	■	■		■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fold-back behavior (hiccup)	■		■				■			■																		
Power factor correction									pas				pas	pas	act			pas	act	act	act	act	act	act	act	act	act	act
Signalling contact											■	■	■	■	■					■	■	■	■	■	■	■	■	■
Extended temp. range	■	■	■	■	■	■		■	■		■	■	■	■	■	■	■	■	■				■	■	■			
Parallel connection							■	■	3	■	■	■	3	3	3	■	■	3	3	5	5	5	5	5	5	5	5	5
Serial connection	■	■	■	■	■	■	■	■	2	■	■	■	2	2	2	■	■	2	2	2	2	2	2	2	2	2	2	2
Coated PCBA																							■	■	■			

pas: passive
act: active

Primary switch mode power supplies
Three-phase

CP-T 24/5.0

CP-T 24/10.0, CP-T 48/5.0

CP-T 24/20.0, CP-T 48/10.0

Selection table

Order number	1SVR427054R0000	1SVR427055R0000	1SVR427056R0000	1SVR427057R0000	1SVR427054R2000	1SVR427055R2000	1SVR427056R2000
	Three-phase						
	CP-T						
Rated output voltage							
24 V DC	■	■	■	■			
48 V DC					■	■	■
Rated output current							
5 A	■				■		
10 A		■				■	
20 A			■				■
40 A				■			
Rated output power							
120 W	■						
240 W		■			■		
480 W			■			■	
960 W				■			■
Rated input voltage							
3 x 400-500 V AC	■	■	■	■	■	■	■
DC input voltage range							
480-820 V DC	■	■	■	■	■	■	■
Features							
Adjustable output voltage	■	■	■	■	■	■	■
Integrated input fuse	■	■	■	■	■	■	■
Short-circuit stable	■	■	■	■	■	■	■
Fold forward behavior (U/I)	■	■	■		■	■	
Fold back behavior (hiccup)	■	■	■	■	■	■	■
Extended temp. range	■	■	■	■	■	■	■
Signalling contact	■	■	■	■			
Parallel connection		2	2	2	2	2	2
Serial connection		2	2	2	2	2	2

Electronic protection devices

EPD24

EPD24-TB-101-3A

Description

The protection devices EPD24 extend the ABB product range of modular DIN rail components by electronic overcurrent protection modules for selective protection of 24 V DC load circuits. This protection is achieved by a combination of active electronic current limitation in the case of a short circuit and an overload deactivation from 1.1 x I_n upwards.

If a fault occurs in a load circuit, the protection device EPD24 will detect this rapidly and reliably, then disable the power output transistor and hence interrupt the current flow in the defective circuit. The maximum possible overcurrent is always limited to 1.3…1.8 times the selected rated current. An activation of capacitive loads up to 20,000 µF is possible, deactivation only occurring in the case of overloads or short circuits. Selective deactivation of the defective current circuit means undefined error states and a complete system stop are prevented.

Ordering details

Rated current I_n A	bbn 40 16779 EAN	Type	Order code	Pkg qty	Weight (1 pc.) kg (lb)
0.5	829960	EPD24-TB-101-0.5A	2CDE601101R2905	4	0.065 (1.433)
1	829984	EPD24-TB-101-1A	2CDE601101R2001	4	0.065 (1.433)
2	830003	EPD24-TB-101-2A	2CDE601101R2002	4	0.065 (1.433)
3	830027	EPD24-TB-101-3A	2CDE601101R2003	4	0.065 (1.433)
4	830041	EPD24-TB-101-4A	2CDE601101R2004	4	0.065 (1.433)
6	830065	EPD24-TB-101-6A	2CDE601101R2006	4	0.065 (1.433)
8	830089	EPD24-TB-101-8A	2CDE601101R2008	4	0.065 (1.433)
10	830102	EPD24-TB-101-10A	2CDE601101R2010	4	0.065 (1.433)
12	830126	EPD24-TB-101-12A	2CDE601101R2012	4	0.065 (1.433)

Description	bbn 40 16779 EAN	Type	Order code	Pkg qty	Weight (1 pc.) kg (lb)
Busbars for LINE+ and 0 V, grey insulation, length 500 mm[1]	830140	EPD-BB500	2CDE605100R0500	10	0.2 (0.441)
Signal bars for aux. contacts, grey insulation, length 21 mm	830164	EPD-SB21	2CDE605200R0021	10	0.4 (0.882)

[1] Max. load with one line entry I_{max} = 50 A (recommended: mid line entry)
Max. load with two line entries I_{max} = 63 A

Pluggable interface relays
CR-S range

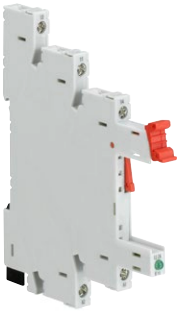
How to use the selection table
Choose the desired control supply voltage from the column “Control voltage”, e.g. "5 V DC".
Choose the desired kind of connection terminal from the column “Connection terminal”, e.g. "spring".
Choose the desired material of contact from the column “Contact Material” e.g. "gold plated".

Control voltage	Connection terminal	Contact material	Socket type	Socket order code	Relay type	Relay order code
5 V DC	screw	standard	CR-S006/024VDC1SS	1SVR405521R1100	CR-S005VDC1R	1SVR405501R1010
		gold plated	CR-S006/024VDC1SS	1SVR405521R1100	CR-S005VDC1RG	1SVR405501R1020
	spring	standard	CR-S006/024VDC1SZ	1SVR405521R1200	CR-S005VDC1R	1SVR405501R1010
		gold plated	**CR-S006/024VDC1SZ**	**1SVR405521R1200**	**CR-S005VDC1RG**	**1SVR405501R1020**
12 V AC	screw	standard	CR-S012/024VADC1SS	1SVR405521R3100	CR-S012VDC1R	1SVR405501R2010
		gold plated	CR-S012/024VADC1SS	1SVR405521R3100	CR-S012VDC1RG	1SVR405501R2020
	spring	standard	CR-S012/024VADC1SZ	1SVR405521R3200	CR-S012VDC1R	1SVR405501R2010
		gold plated	CR-S012/024VADC1SZ	1SVR405521R3200	CR-S012VDC1RG	1SVR405501R2020

Example
When you have chosen 5 V DC as control supply voltage, spring connection as connection terminal and gold plated as contact material the following order codes and type designators are valid:

Socket: CR-S006/024VDC1SZ, 1SVR405521R1200
Relay: CR-S005VDC1RG, 1SVR405501R1020

Pluggable interface relays
CR-S range



CR-S socket

CR-S relay

CR-S range relay assemblies

Control voltage	Connection terminal	Contact material	Socket type	Socket order code	Relay type	Relay order code
5 V DC	screw	standard	CR-S006/024VDC1SS	1SVR405521R1100	CR-S005VDC1R	1SVR405501R1010
		gold plated	CR-S006/024VDC1SS	1SVR405521R1100	CR-S005VDC1RG	1SVR405501R1020
	spring	standard	CR-S006/024VDC1SZ	1SVR405521R1200	CR-S005VDC1R	1SVR405501R1010
		gold plated	CR-S006/024VDC1SZ	1SVR405521R1200	CR-S005VDC1RG	1SVR405501R1020
12 V DC	screw	standard	CR-S006/024VDC1SS or CR-S012/024VADC1SS	1SVR405521R1100 or 1SVR405521R3100	CR-S012VDC1R	1SVR405501R2010
		gold plated	CR-S006/024VDC1SS or CR-S012/024VADC1SS	1SVR405521R1100 or 1SVR405521R3100	CR-S012VDC1RG	1SVR405501R2020
	spring	standard	CR-S006/024VDC1SZ or CR-S012/024VADC1SZ	1SVR405521R1200 or 1SVR405521R3200	CR-S012VDC1R	1SVR405501R2010
		gold plated	CR-S006/024VDC1SZ or CR-S012/024VADC1SZ	1SVR405521R1200 or 1SVR405521R3200	CR-S012VDC1RG	1SVR405501R2020
12 V AC	screw	standard	CR-S012/024VADC1SS	1SVR405521R3100	CR-S012VDC1R	1SVR405501R2010
		gold plated	CR-S012/024VADC1SS	1SVR405521R3100	CR-S012VDC1RG	1SVR405501R2020
	spring	standard	CR-S012/024VADC1SZ	1SVR405521R3200	CR-S012VDC1R	1SVR405501R2010
		gold plated	CR-S012/024VADC1SZ	1SVR405521R3200	CR-S012VDC1RG	1SVR405501R2020
24 V DC	screw	standard	CR-S006/024VDC1SS or CR-S012/024VADC1SS	1SVR405521R1100 or 1SVR405521R3100	CR-S024VDC1R	1SVR405501R3010
		gold plated	CR-S006/024VDC1SS or CR-S012/024VADC1SS	1SVR405521R1100 or 1SVR405521R3100	CR-S024VDC1RG	1SVR405501R3020
	spring	standard	CR-S006/024VDC1SZ or CR-S012/024VADC1SZ	1SVR405521R1200 or 1SVR405521R3200	CR-S024VDC1R	1SVR405501R3010
		gold plated	CR-S006/024VDC1SZ or CR-S012/024VADC1SZ	1SVR405521R1200 or 1SVR405521R3200	CR-S024VDC1RG	1SVR405501R3020
24 V AC	screw	standard	CR-S012/024VADC1SS	1SVR405521R3100	CR-S024VDC1R	1SVR405501R3010
		gold plated	CR-S012/024VADC1SS	1SVR405521R3100	CR-S024VDC1RG	1SVR405501R3020
	spring	standard	CR-S012/024VADC1SZ	1SVR405521R3200	CR-S024VDC1R	1SVR405501R3010
		gold plated	CR-S012/024VADC1SZ	1SVR405521R3200	CR-S024VDC1RG	1SVR405501R3020
48 V AC/DC	screw	standard	CR-S048/060VADC1SS	1SVR405521R5100	CR-S048VDC1R	1SVR405501R4010
		gold plated	CR-S048/060VADC1SS	1SVR405521R5100	CR-S048VDC1RG	1SVR405501R4020
	spring	standard	CR-S048/060VADC1SZ	1SVR405521R5200	CR-S048VDC1R	1SVR405501R4010
		gold plated	CR-S048/060VADC1SZ	1SVR405521R5200	CR-S048VDC1RG	1SVR405501R4020
60 V AC/DC	screw	standard	CR-S048/060VADC1SS	1SVR405521R5100	CR-S060VDC1R	1SVR405501R5010
		gold plated	CR-S048/060VADC1SS	1SVR405521R5100	CR-S060VDC1RG	1SVR405501R5020
	spring	standard	CR-S048/060VADC1SZ	1SVR405521R5200	CR-S060VDC1R	1SVR405501R5010
		gold plated	CR-S048/060VADC1SZ	1SVR405521R5200	CR-S060VDC1RG	1SVR405501R5020
110-125 V AC/DC	screw	standard	CR-S110/125VADC1SS	1SVR405521R6100	CR-S060VDC1R	1SVR405501R5010
		gold plated	CR-S110/125VADC1SS	1SVR405521R6100	CR-S060VDC1RG	1SVR405501R5020
	spring	standard	CR-S110/125VADC1SZ	1SVR405521R6200	CR-S060VDC1R	1SVR405501R5010
		gold plated	CR-S110/125VADC1SZ	1SVR405521R6200	CR-S060VDC1RG	1SVR405501R5020
220-240 V AC/DC	screw	standard	CR-S220/240VADC1SS	1SVR405521R7100	CR-S060VDC1R	1SVR405501R5010
		gold plated	CR-S220/240VADC1SS	1SVR405521R7100	CR-S060VDC1RG	1SVR405501R5020
	spring	standard	CR-S220/240VADC1SZ	1SVR405521R7200	CR-S060VDC1R	1SVR405501R5010
		gold plated	CR-S220/240VADC1SZ	1SVR405521R7200	CR-S060VDC1RG	1SVR405501R5020

CR-S optocoupler

CR-S optocoupler range relay assemblies

Control voltage	Connection terminal	Output characteristics	Socket type	Socket order code	Opto type	Opto order code
24 V DC	screw	Transistor 100 mA - 48 V DC	CR-S012/024VADC1SS	1SVR405521R3100	CR-S024VDC1TRA	1SVR405510R3050
	spring		CR-S012/024VADC1SZ	1SVR405521R3200	CR-S024VDC1TRA	1SVR405510R3050
	screw	MOS-FET 2 A - 24 V DC	CR-S012/024VADC1SS	1SVR405521R3100	CR-S024VDC1MOS	1SVR405510R3060
	spring		CR-S012/024VADC1SZ	1SVR405521R3200	CR-S024VDC1MOS	1SVR405510R3060
	screw	Triac 2 A - 240 V AC	CR-S012/024VADC1SS	1SVR405521R3100	CR-S024VDC1TRI	1SVR405510R3070
	spring		CR-S012/024VADC1SZ	1SVR405521R3200	CR-S024VDC1TRI	1SVR405510R3070

Pluggable interface relays
CR-S range

CR-S complete interface relay

The complete versions of the CR-S range comprise of a pluggable interface relay, socket and marker.

CR-S complete versions

		Relay				Socket					
	Order code	1SVR405501R3010	1SVR405501R3020	1SVR405501R5010	1SVR405501R5020	1SVR405521R3100	1SVR405521R3200	1SVR405521R6100	1SVR405521R6200	1SVR405521R7100	1SVR405521R7200
Complete versions	**Type**	CR-S024VDC1R	CR-S024VDC1RG	CR-S060VDC1R	CR-S060VDC1RG	CR-S012/024VADC1SS	CR-S012/024VADC1SZ	CR-S110/125VADC1SS	CR-S110/125VADC1SZ	CR-S220/240VADC1SS	CR-S220/240VADC1SZ
Order code	**Type**										
1SVR405541R3110	CR-S024VADC1CRS	■				■					
1SVR405541R3120	CR-S024VADC1CRGS		■			■					
1SVR405541R3210	CR-S024VADC1CRZ	■					■				
1SVR405541R3220	CR-S024VADC1CRGZ		■				■				
1SVR405541R6110	CR-S110VADC1CRS			■				■			
1SVR405541R6120	CR-S110VADC1CRGS				■			■			
1SVR405541R6210	CR-S110VADC1CRZ			■					■		
1SVR405541R6220	CR-S110VADC1CRGZ				■				■		
1SVR405541R7110	CR-S230VADC1CRS			■						■	
1SVR405541R7120	CR-S230VADC1CRGS				■					■	
1SVR405541R7210	CR-S230VADC1CRZ			■							■
1SVR405541R7220	CR-S230VADC1CRGZ				■						■

Pluggable interface relays and optocouplers

CR-P range

CR-P relay

CR-P pluggable relays

Order code	1SVR405600R4000	1SVR405600R1000	1SVR405600R6000	1SVR405600R8000	1SVR405600R0000	1SVR405600R5000	1SVR405600R7000	1SVR405600R2000	1SVR405600R3000	1SVR405601R4000	1SVR405601R1000	1SVR405601R6000	1SVR405601R8000	1SVR405601R0200	1SVR405601R0000	1SVR405601R5000	1SVR405601R7000	1SVR405601R2000	1SVR405601R3000	1SVR405606R1000	1SVR405606R0000	1SVR405606R7000	1SVR405606R3000
Type	CR-P012DC1	CR-P024DC1	CR-P048DC1	CR-P110DC1	CR-P024AC1	CR-P048AC1	CR-P110AC1	CR-P120AC1	CR-P230AC1	CR-P012DC2	CR-P024DC2	CR-P048DC2	CR-P110DC2	CR-P012AC2	CR-P024AC2	CR-P048AC2	CR-P110AC2	CR-P120AC2	CR-P230AC2	CR-P024DC2G	CR-P024AC2G	CR-P110AC2G	CR-P230AC2G
Input voltage																							
12 V DC	■									■													
24 V DC		■									■									■			
48 V DC			■									■											
110 V DC				■									■										
12 V AC														■									
24 V AC					■										■						■		
48 V AC						■										■							
110 V AC							■										■					■	
120 V AC								■										■					
230 V AC									■										■				■
Output rating																							
250 V 16 A	■	■	■	■	■	■	■	■	■														
250 V 8 A										■	■	■	■	■	■	■	■	■	■	■	■	■	■
Output contacts																							
c/o	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Gold plated contacts																				■	■	■	■

Pluggable interface relays and optocouplers

CR-P range

CR-P complete version

CR-P range complete versions

Order code	1SVR405600R4010	1SVR405600R1010	1SVR405600R1011	1SVR405600R1013	1SVR405600R8010	1SVR405600R0010	1SVR405600R2010	1SVR405600R3110	1SVR405600R3011	1SVR405600R3010	1SVR405601R4010	1SVR405601R1010	1SVR405601R1013	1SVR405601R1011	1SVR405601R1012	1SVR405606R1010	1SVR405606R1013	1SVR405606R1011	1SVR405601R8010	1SVR405601R0010	1SVR405601R2010	1SVR405601R3110	1SVR405601R3011	1SVR405601R3012	1SVR405606R3013	1SVR405606R3012	1SVR405606R3010
Type	CR-P012DC1SS42V	CR-P024DC1SS42V	CR-P024DC1LC42V	CR-P024DC1LC62C	CR-P110DC1SS42CV	CR-P024AC1SS62CV	CR-P120AC1SS92CV	CR-P230AC1SS92CV	CR-P230AC1LS	CR-P230AC1LC92CV	CR-P012DC2SS42V	CR-P024DC2SS42V	CR-P024DC2LS42	CR-P024DC2LS42V	CR-P024DC2LC42	CR-P024DC2GLC42V	CR-P024DC2GLC62C	CR-P024DC2GLC62CV	CR-P110DC2SS42CV	CR-P024AC2SS62CV	CR-P120AC2SS92CV	CR-P230AC2SS92CV	CR-P230AC2LS92CV	CR-P230AC2LC92	CR-P230AC2GLC92	CR-P230AC2GLC92C	CR-P230AC2GLC92CV
Input voltage																											
12 V DC	■										■																
24 V DC		■	■	■								■	■	■	■	■	■	■									
48 V DC																											
110 V DC					■														■								
12 V AC																											
24 V AC						■														■							
48 V AC																											
110 V AC																											
120 V AC							■														■						
230 V AC								■	■	■												■	■	■	■	■	■
Output rating																											
250 V 16 A	■	■	■	■	■	■	■	■	■	■																	
250 V 8 A											■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Output contacts																											
c/o	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Gold plated contacts																■	■	■							■	■	■
Socket type																											
Standard socket	■	■			■	■	■	■			■	■							■	■	■	■					
Logical socket			■	■					■	■			■	■	■	■	■	■					■	■	■	■	■
Additional features																											
LED	■	■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Free-wheeling diode	■	■	■		■						■	■	■	■	■	■			■					■	■		

Pluggable interface relays and optocouplers

CR-P range

CR-P complete version

The complete versions of the CR-P range comprise of a pluggable interface relay, socket, holder, marker and a function module.

CR-P complete versions

		Relay								Socket			Function module								Holder
	Order code	1SVR405601R4000	1SVR405601R1000	1SVR405606R1000	1SVR405601R8000	1SVR405601R0000	1SVR405601R2000	1SVR405601R3000	1SVR405606R3000	1SVR405650R1000	1SVR405650R0000	1SVR405650R0200	1SVR405652R0000	1SVR405652R1000	1SVR405652R9100	1SVR405655R0000	1SVR405655R1000	1SVR405654R0100	1SVR405655R0100	1SVR405655R1100	1SVR405659R0000
	Type	CR-P012DC2	CR-P024DC2	CR-P024DC2G	CR-P110DC2	CR-P024AC2	CR-P120AC2	CR-P230AC2	CR-P230AC2G	CR-PSS	CR-PLS	CR-PLC	CR-P/M 42	CR-P/M 42V	CR-P/M 42CV	CR-P/M 62C	CR-P/M 62CV	CR-P/M 92	CR-P/M 92C	CR-P/M 92CV	CR-PH
Complete versions																					
Order code	**Type**																				
1SVR405601R4010	CR-P012DC2SS42V	■								■				■							■
1SVR405601R1010	CR-P024DC2SS42V		■							■				■							■
1SVR405601R1013	CR-P024DC2LS42		■								■		■								■
1SVR405601R1011	CR-P024DC2LS42V		■								■			■							■
1SVR405601R1012	CR-P024DC2LC42		■									■	■								■
1SVR405606R1010	CR-P024DC2GLC42V			■								■		■							■
1SVR405606R1013	CR-P024DC2GLC62C			■								■				■					■
1SVR405606R1011	CR-P024DC2GLC62CV			■								■					■				■
1SVR405601R8010	CR-P110DC2SS42CV				■					■					■						■
1SVR405601R0010	CR-P024AC2SS62CV					■				■							■				■
1SVR405601R2010	CR-P120AC2SS92CV						■			■										■	■
1SVR405601R3110	CR-P230AC2SS92CV							■		■										■	■
1SVR405601R3011	CR-P230AC2LS92CV							■			■									■	■
1SVR405601R3012	CR-P230AC2LC92							■				■						■			■
1SVR405606R3013	CR-P230AC2GLC92								■			■						■			■
1SVR405606R3012	CR-P230AC2GLC92C								■			■							■		■
1SVR405606R3010	CR-P230AC2GLC92CV								■			■								■	■

Pluggable interface relays and optocouplers

CR-M range

CR-M

CR-M pluggable relays without LED

Type	Order code
CR-M012DC2	1SVR405611R4000
CR-M024DC2	1SVR405611R1000
CR-M048DC2	1SVR405611R6000
CR-M060DC2	1SVR405611R4200
CR-M110DC2	1SVR405611R8000
CR-M125DC2	1SVR405611R8200
CR-M220DC2	1SVR405611R9000
CR-M024AC2	1SVR405611R0000
CR-M048AC2	1SVR405611R5000
CR-M110AC2	1SVR405611R7000
CR-M120AC2	1SVR405611R2000
CR-M230AC2	1SVR405611R3000
CR-M012DC3	1SVR405612R4000
CR-M024DC3	1SVR405612R1000
CR-M048DC3	1SVR405612R6000
CR-M060DC3	1SVR405612R4200
CR-M110DC3	1SVR405612R8000
CR-M125DC3	1SVR405612R8200
CR-M220DC3	1SVR405612R9000
CR-M024AC3	1SVR405612R0000
CR-M048AC3	1SVR405612R5000
CR-M060AC3	1SVR405612R5200
CR-M110AC3	1SVR405612R7000
CR-M120AC3	1SVR405612R2000
CR-M230AC3	1SVR405612R3000
CR-M012DC4	1SVR405613R4000
CR-M024DC4	1SVR405613R1000
CR-M048DC4	1SVR405613R6000
CR-M060DC4	1SVR405613R4200
CR-M110DC4	1SVR405613R8000
CR-M125DC4	1SVR405613R8200
CR-M220DC4	1SVR405613R9000
CR-M024AC4	1SVR405613R0000
CR-M048AC4	1SVR405613R5000
CR-M110AC4	1SVR405613R7000
CR-M120AC4	1SVR405613R2000
CR-M230AC4	1SVR405613R3000

	CR-M012DC2	CR-M024DC2	CR-M048DC2	CR-M060DC2	CR-M110DC2	CR-M125DC2	CR-M220DC2	CR-M024AC2	CR-M048AC2	CR-M110AC2	CR-M120AC2	CR-M230AC2	CR-M012DC3	CR-M024DC3	CR-M048DC3	CR-M060DC3	CR-M110DC3	CR-M125DC3	CR-M220DC3	CR-M024AC3	CR-M048AC3	CR-M060AC3	CR-M110AC3	CR-M120AC3	CR-M230AC3	CR-M012DC4	CR-M024DC4	CR-M048DC4	CR-M060DC4	CR-M110DC4	CR-M125DC4	CR-M220DC4	CR-M024AC4	CR-M048AC4	CR-M110AC4	CR-M120AC4	CR-M230AC4
Input voltage																																					
12 V DC	■												■													■											
24 V DC		■												■													■										
48 V DC			■												■													■									
60 V DC				■												■													■								
110 V DC					■												■													■							
125 V DC						■												■													■						
220 V DC							■												■													■					
24 V AC								■												■													■				
48 V AC									■												■													■			
60 V AC																						■															
110 V AC										■													■												■		
120 V AC											■													■												■	
230 V AC												■													■												■
Output rating																																					
250 V 6 A																										■	■	■	■	■	■	■	■	■	■	■	■
250 V 10 A													■	■	■	■	■	■	■	■	■	■	■	■	■												
250 V 12 A	■	■	■	■	■	■	■	■	■	■	■	■																									
Output contacts																																					
c/o	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4
Gold plated contacts																																					
Additional features																																					
LED																																					
Free-wheeling diode																																					

Pluggable interface relays and optocouplers

CR-M range

CR-M

CR-M pluggable relays with LED

Order code	1SVR405611R4100	1SVR405611R4400	1SVR405611R1100	1SVR405611R1400	1SVR405611R6100	1SVR405611R6400	1SVR405611R4300	1SVR405611R8100	1SVR405611R8400	1SVR405611R8300	1SVR405611R8500	1SVR405611R9100	1SVR405611R9400	1SVR405611R0300	1SVR405611R0300	1SVR405611R5100	1SVR405611R7100	1SVR405611R2100	1SVR405611R3100
Type	CR-M012DC2L	CR-M012DC2LD	CR-M024DC2L	CR-M024DC2LD	CR-M048DC2L	CR-M048DC2LD	CR-M060DC2L	CR-M110DC2L	CR-M110DC2LD	CR-M125DC2L	CR-M125DC2LD	CR-M220DC2L	CR-M220DC2LD	CR-M012AC2L	CR-M024AC2L	CR-M048AC2L	CR-M110AC2L	CR-M120AC2L	CR-M230AC2L
Input voltage																			
12 V DC	■	■																	
24 V DC			■	■															
48 V DC					■	■													
60 V DC							■												
110 V DC								■	■										
125 V DC										■	■								
220 V DC												■	■						
12 V AC														■					
24 V AC															■				
48 V AC																■			
60 V AC																			
110 V AC																	■		
120 V AC																		■	
230 V AC																			■
Output rating																			
250 V 6 A																			
250 V 10 A																			
250 V 12 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Output contacts																			
c/o	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Gold plated contacts																			
Additional features																			
LED	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Free-wheeling diode		■		■		■			■		■		■						

Pluggable interface relays and optocouplers

CR-M range

CR-M

CR-M pluggable relays with LED

Order code	1SVR405612R4100	1SVR405612R4400	1SVR405612R1100	1SVR405612R1400	1SVR405612R6100	1SVR405612R6400	1SVR405612R4300	1SVR405612R8100	1SVR405612R8400	1SVR405612R8300	1SVR405612R8500	1SVR405612R9100	1SVR405612R9400	1SVR405612R0300	1SVR405612R0100	1SVR405612R5100	1SVR405612R7100	1SVR405612R2100	1SVR405612R3100
Type	CR-M012DC3L	CR-M012DC3LD	CR-M024DC3L	CR-M024DC3LD	CR-M048DC3L	CR-M048DC3LD	CR-M060DC3L	CR-M110DC3L	CR-M110DC3LD	CR-M125DC3L	CR-M125DC3LD	CR-M220DC3L	CR-M220DC3LD	CR-M012AC3L	CR-M024AC3L	CR-M048AC3L	CR-M110AC3L	CR-M120AC3L	CR-M230AC3L
Input voltage																			
12 V DC	■	■																	
24 V DC			■	■															
48 V DC					■	■													
60 V DC							■												
110 V DC								■	■										
125 V DC										■	■								
220 V DC												■	■						
12 V AC														■					
24 V AC															■				
48 V AC																■			
60 V AC																			
110 V AC																	■		
120 V AC																		■	
230 V AC																			■
Output rating																			
250 V 6 A																			
250 V 10 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
250 V 12 A																			
Output contacts																			
c/o	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Gold plated contacts																			
Additional features																			
LED	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Free-wheeling diode		■		■		■			■		■		■						

Pluggable interface relays and optocouplers

CR-M range

CR-M

CR-M pluggable relays with LED

Type	CR-M012DC4L	CR-M012DC4LD	CR-M024DC4L	CR-M024DC4LD	CR-M048DC4L	CR-M048DC4LD	CR-M060DC4L	CR-M110DC4L	CR-M110DC4LD	CR-M125DC4L	CR-M125DC4LD	CR-M220DC4L	CR-M220DC4LD	CR-M012AC4L	CR-M024AC4L	CR-M048AC4L	CR-M110AC4L	CR-M120AC4L	CR-M230AC4L
Order code	1SVR405613R4100	1SVR405613R4400	1SVR405613R1100	1SVR405614R1100	1SVR405613R6100	1SVR405613R6400	1SVR405613R4300	1SVR405613R8100	1SVR405613R8400	1SVR405613R8300	1SVR405613R8500	1SVR405613R9100	1SVR405613R9400	1SVR405613R0300	1SVR405613R0100	1SVR405613R5100	1SVR405613R7100	1SVR405613R2100	1SVR405613R3100
Input voltage																			
12 V DC	■	■																	
24 V DC			■	■															
48 V DC					■	■													
60 V DC							■												
110 V DC								■	■										
125 V DC										■	■								
220 V DC												■	■						
12 V AC														■					
24 V AC															■				
48 V AC																■			
60 V AC																			
110 V AC																	■		
120 V AC																		■	
230 V AC																			■
Output rating																			
250 V 6 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
250 V 10 A																			
250 V 12 A																			
Output contacts																			
c/o	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Gold plated contacts																			
Additional features																			
LED	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Free-wheeling diode		■		■		■			■		■		■						

Pluggable interface relays and optocouplers

CR-M range

CR-M

CR-M pluggable relays with gold plated contacts

Order code	1SVR405618R1000	1SVR405618R0000	1SVR405618R7000	1SVR405618R3000	1SVR405618R3000	1SVR405618R4100	1SVR405618R1100	1SVR405618R6100	1SVR405618R4300	1SVR405618R8100	1SVR405618R8300	1SVR405618R9100	1SVR405618R0100	1SVR405618R5100	1SVR405618R7100	1SVR405618R2100	1SVR405618R3100	1SVR405618R4400	1SVR405618R1400
Type	CR-M024DC4G	CR-M024AC4G	CR-M110AC4G	CR-M230AC4G	CR-M230AC4G	CR-M012DC4LG	CR-M024DC4LG	CR-M048DC4LG	CR-M060DC4LG	CR-M110DC4LG	CR-M125DC4LG	CR-M220DC4LG	CR-M024AC4LG	CR-M048AC4LG	CR-M110AC4LG	CR-M120AC4LG	CR-M230AC4LG	CR-M012DC4LDG	CR-M024DC4LDG
Input voltage																			
12 V DC						■												■	
24 V DC	■						■												■
48 V DC								■											
60 V DC									■										
110 V DC										■									
125 V DC											■								
220 V DC												■							
24 V AC		■											■						
48 V AC														■					
60 V AC																			
110 V AC			■												■				
120 V AC																■			
230 V AC				■	■												■		
Output rating																			
250 V 6 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
250 V 10 A																			
250 V 12 A																			
Output contacts																			
c/o	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Gold plated contacts	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Additional features																			
LED							■	■	■	■	■	■	■	■	■	■	■	■	■
Free-wheeling diode																		■	■

Pluggable interface relays and optocouplers

CR-M range

CR-M complete version

CR-M range complete versions

Type	CR-M012DC4LDGSS	CR-M024DC4SS42V	CR-M024DC4LS42V	CR-M024DC4LC42	CR-M024DC4GSS42V	CR-M024DC4GLC62CV	CR-M024DC4LGLC22	CR-M024DC4LDGSS	CR-M024AC4LS62CV	CR-M230AC4SS92CV	CR-M230AC4LS92CV	CR-M230AC4LC92	CR-M230AC4GSS92CV	CR-M230AC4LGLC	CR-M230AC4LGSS
Order code	1SVR405618R4410	1SVR405613R1010	1SVR405613R1011	1SVR405613R1012	1SVR405618R1011	1SVR405618R1010	1SVR405618R1110	1SVR405618R1410	1SVR405613R0010	1SVR405613R3110	1SVR405613R3011	1SVR405613R3012	1SVR405618R3112	1SVR405618R3110	1SVR405618R3111
Input voltage															
12 V DC	■														
24 V DC		■	■	■	■	■	■	■							
48 V DC															
60 V DC															
110 V DC															
125 V DC															
220 V DC															
24 V AC									■						
48 V AC															
60 V AC															
110 V AC															
120 V AC															
230 V AC										■	■	■	■	■	■
Output rating															
250 V 6 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
250 V 10 A															
250 V 12 A															
Output contacts															
c/o	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Gold plated contacts	■				■	■	■	■					■	■	■
Socket type															
Standard socket	■	■			■			■		■			■		■
Logical socket			■	■		■	■		■		■	■		■	
Additional features															
LED	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Free-wheeling diode	■	■	■	■	■		■	■					■		■

Pluggable interface relays and optocouplers

CR-M range

CR-M complete version

The complete versions of the CR-M range comprise of a pluggable interface relay, socket, holder, marker and where applicable a function module.

CR-M complete versions

		Relay									Socket			Function module							Holder
	Order code	1SVR405618R4400	1SVR405613R1000	1SVR405618R1000	1SVR405618R1100	1SVR405618R1400	1SVR405613R0000	1SVR405613R3000	1SVR405618R3000	1SVR405618R3100	1SVR405651R3000	1SVR405651R3100	1SVR405651R3200	1SVR405651R0000	1SVR405652R0000	1SVR405652R1000	1SVR405652R9100	1SVR405655R1000	1SVR405654R0100	1SVR405655R1100	1SVR405659R1000
Complete versions	**Type**	CR-M012DC4LDG	CR-M024DC4	CR-M024DC4G	CR-M024DC4LG	CR-M024DC4LDG	CR-M024AC4	CR-M230AC4	CR-M230AC4G	CR-M230AC4LG	CR-M4SS	CR-M4LS	CR-M4LC	CR-P/M 22	CR-P/M 42	CR-P/M 42V	CR-P/M 42CV	CR-P/M 62CV	CR-P/M 92	CR-P/M 92CV	CR-MH
Order code	**Type**																				
1SVR405618R4410	CR-M012DC4LDGSS	■									■										■
1SVR405613R1010	CR-M024DC4SS42V		■								■					■					■
1SVR405613R1011	CR-M024DC4LS42V		■									■				■					■
1SVR405613R1012	CR-M024DC4LC42		■										■		■						■
1SVR405618R1011	CR-M024DC4GSS42V			■							■					■					■
1SVR405618R1010	CR-M024DC4GLC62CV			■									■					■			■
1SVR405618R1110	CR-M024DC4LGLC22				■								■	■							■
1SVR405618R1410	CR-M024DC4LDGSS					■					■										■
1SVR405613R0010	CR-M024AC4LS62CV						■					■						■			■
1SVR405613R3110	CR-M230AC4SS92CV							■			■									■	■
1SVR405613R3011	CR-M230AC4LS92CV							■				■								■	■
1SVR405613R3012	CR-M230AC4LC92							■					■						■		■
1SVR405618R3112	CR-M230AC4GSS92CV								■		■									■	■
1SVR405618R3110	CR-M230AC4LGLC									■			■								■
1SVR405618R3111	CR-M230AC4LGSS									■	■										■

Pluggable interface relays and optocouplers

CR-P/M range

CR-P/M ...

CR-P/M function modules

Order code	1SVR405651R0000	1SVR405652R0000	1SVR405652R1000	1SVR405652R4000	1SVR405652R4100	1SVR405652R9000	1SVR405652R9100	1SVR405653R0000	1SVR405653R4000	1SVR405653R1000	1SVR405654R0000	1SVR405654R1000	1SVR405654R4000	1SVR405654R4100	1SVR405654R0100	1SVR405654R1100	1SVR405655R0000	1SVR405655R1000	1SVR405655R4000	1SVR405655R4100	1SVR405655R0100	1SVR405655R1100	1SVR405656R0000	1SVR405656R1000	1SVR405656R2000
Type	CR-P/M 22	CR-P/M 42	CR-P/M 42V	CR-P/M 42B	CR-P/M 42BV	CR-P/M 42C	CR-P/M 42CV	CR-P/M 52B	CR-P/M 52D	CR-P/M 52C	CR-P/M 62	CR-P/M 62V	CR-P/M 62E	CR-P/M 62EV	CR-P/M 92	CR-P/M 92V	CR-P/M 62C	CR-P/M 62CV	CR-P/M 62D	CR-P/M 62DV	CR-P/M 92C	CR-P/M 92CV	CR-P/M 72	CR-P/M 72A	CR-P/M 82
Related control supply voltage																									
6-220 V DC	■																								
6-24 V DC		■	■								■	■					■	■							
24-60 V DC			■	■	■								■	■					■	■					
110 V DC						■	■																		
110-230 V DC										■					■	■					■	■			
6-24 V AC								■			■	■					■	■							
24-60 V AC									■				■	■					■	■					
110-230 V AC										■					■	■					■	■			
24 V AC																							■		
115 V AC																								■	
230 V AC																									■
24-240 V AC/DC																									
Function																									
Diode - reverse polarity protection / free-wheeling diode	■																								
Diode and LED - reverse polarity protection / free-wheeling diode		■	■	■	■	■	■																		
RC element - spark quenching								■	■	■															
Diode and LED											■	■	■	■	■	■									
Varistor and LED - overvoltage protection																	■	■	■	■	■	■			
Varistor - overvoltage protection																							■	■	■
LED red		■		■		■					■		■		■		■		■		■				
LED green			■		■		■					■		■		■		■		■		■			

Pluggable interface relays and optocouplers

CR-U range

CR-U

CR-U pluggable relays without LED

Order code	1SVR405621R4000	1SVR405621R1000	1SVR405621R6000	1SVR405621R8000	1SVR405621R9000	1SVR405621R0000	1SVR405621R5000	1SVR405621R7000	1SVR405621R2000	1SVR405621R3000	1SVR405622R4000	1SVR405622R1000	1SVR405622R6000	1SVR405622R8000	1SVR405622R8200	1SVR405622R9000	1SVR405622R0000	1SVR405622R5000	1SVR405622R5200	1SVR405622R7000	1SVR405622R2000	1SVR405622R3000
Type	CR-U012DC2	CR-U024DC2	CR-U048DC2	CR-U110DC2	CR-U220DC2	CR-U024AC2	CR-U048AC2	CR-U110AC2	CR-U120AC2	CR-U230AC2	CR-U012DC3	CR-U024DC3	CR-U048DC3	CR-U110DC3	CR-U125DC3	CR-U220DC3	CR-U024AC3	CR-U048AC3	CR-U060AC3	CR-U110AC3	CR-U120AC3	CR-U230AC3
Input voltage																						
12 V DC	■										■											
24 V DC		■										■										
48 V DC			■										■									
110 V DC				■										■								
125 V DC															■							
220 V DC					■											■						
12 V AC																						
24 V AC						■											■					
48 V AC							■											■				
60 V AC																			■			
110 V AC								■												■		
120 V AC									■												■	
230 V AC										■												■
Output rating																						
250 V 10 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Output contacts																						
c/o	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3
Gold plated contacts																						

Pluggable interface relays and optocouplers

CR-U range

CR-U

CR-U pluggable relays with LED

Order code	1SVR405621R4100	1SVR405621R4400	1SVR405621R1100	1SVR405621R1400	1SVR405621R6100	1SVR405621R6400	1SVR405621R8100	1SVR405621R8400	1SVR405621R9100	1SVR405621R0300	1SVR405621R0100	1SVR405621R5100	1SVR405621R7100	1SVR405621R2100	1SVR405621R3100	1SVR405622R4100	1SVR405622R4400	1SVR405622R1100	1SVR405623R1100	1SVR405622R6100	1SVR405622R6400	1SVR405622R8100	1SVR405622R8400	1SVR405622R9100	1SVR405622R0300	1SVR405622R0100	1SVR405622R5100	1SVR405622R7100	1SVR405622R2100	1SVR405622R3100
Type	CR-U012DC2L	CR-U012DC2LD	CR-U024DC2L	CR-U024DC2LD	CR-U048DC2L	CR-U048DC2LD	CR-U110DC2L	CR-U110DC2LD	CR-U220DC2L	CR-U012AC2L	CR-U024AC2L	CR-U048AC2L	CR-U110AC2L	CR-U120AC2L	CR-U230AC2L	CR-U012DC3L	CR-U012DC3LD	CR-U024DC3L	CR-U024DC3LD	CR-U048DC3L	CR-U048DC3LD	CR-U110DC3L	CR-U110DC3LD	CR-U220DC3L	CR-U012AC3L	CR-U024AC3L	CR-U048AC3L	CR-U110AC3L	CR-U120AC3L	CR-U230AC3L
Input voltage																														
12 V DC	■	■														■	■													
24 V DC			■	■														■	■											
48 V DC					■	■														■	■									
110 V DC							■	■														■								
125 V DC																							■							
220 V DC									■															■						
12 V AC										■															■					
24 V AC											■															■				
48 V AC												■															■			
60 V AC																														
110 V AC													■															■		
120 V AC														■															■	
230 V AC															■															■
Output rating																														
250 V 10 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Output contacts																														
c/o	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Gold plated contacts																														
Additional features																														
LED	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Free-wheeling diode		■		■		■		■									■		■		■		■							

Pluggable interface relays and optocouplers

CR-U range

CR-U...

CR-U T

CR-U function modules

Type	CR-U 21	CR-U 41	CR-U 41V	CR-U 41B	CR-U 41BV	CR-U 41C	CR-U 41CV	CR-U 51B	CR-U 51D	CR-U 51C	CR-U 61	CR-U 61V	CR-U 61E	CR-U 61EV	CR-U 91	CR-U 91V	CR-U 61C	CR-U 61CV	CR-U 61D	CR-U 61DV	CR-U 91C	CR-U 91CV	CR-U 71	CR-U 71A	CR-U 81	CR-U T
Order code	1SVR405661R0000	1SVR405662R0000	1SVR405662R1000	1SVR405662R4000	1SVR405662R4100	1SVR405662R9000	1SVR405662R9100	1SVR405663R0000	1SVR405663R4000	1SVR405663R1000	1SVR405664R0000	1SVR405664R1000	1SVR405664R4000	1SVR405664R4100	1SVR405664R0100	1SVR405664R1100	1SVR405665R0000	1SVR405665R1000	1SVR405665R4000	1SVR405665R4100	1SVR405665R0100	1SVR405665R1100	1SVR405666R0000	1SVR405666R1000	1SVR405666R2000	1SVR405677R0000
Related control supply voltage																										
6-220 V DC	■																									
6-24 V DC		■	■					■			■	■					■	■								
24-60 V DC				■	■				■				■	■					■	■						
110 V DC						■	■																			
110-230 V DC										■					■	■					■	■				
6-24 V AC								■			■	■					■	■								
24-60 V AC									■				■	■					■	■						
110-230 V AC										■					■	■					■	■				
24 V AC																							■			
115 V AC																								■		
230 V AC																									■	
24-240 V AC/DC																										■
Function																										
Diode - reverse polarity protection / free wheeling diode	■																									
Diode and LED - Reverse polarity protection / free-wheeling diode and LED to indicate energized coil		■	■	■	■	■	■																			
RC element - Spark quenching								■	■	■																
Diode and LED - LED to indicate energized coil											■	■	■	■	■	■										
Varistor and LED - Overvoltage protection and LED to indicate energized coil																	■	■	■	■	■	■				
Varistor - Overvoltage protection																							■	■	■	
Multi-function time module																										■
LED red		■		■		■					■		■		■		■		■		■					
LED green			■		■		■					■		■		■		■		■		■				■

Boxed interface relays

R600 range

R600 - 6 mm

R600 - 12 mm

Selection table

Order number	1SNA645034R2300	1SNA645036R2500	1SNA645534R2500	1SNA645073R0000	1SNA645035R2400	1SNA645075R0000	1SNA645535R2600	1SNA645019R0400	1SNA645519R0600	1SNA645014R2700	1SNA645018R0300	1SNA645518R0500	1SNA645514R2100	1SNA645001R0300	1SNA645005R0700	1SNA645501R0500	1SNA645505R0100	1SNA645012R2500	1SNA645512R2700	1SNA645071R0000	1SNA645571R0000	1SNA645072R0000	1SNA645572R0000	1SNA645002R0400	1SNA645006R0000
Type	RB121P-5VDC	RB121PG-5VDC	RBR121P-5VDC	RB121-12VDC	RB121P-12VDC	RB121G-12VDC	RBR121P-12VDC	RB101R-24VUC	RBR101R-24VUC	RB111-24VUC	RB111R-24VUC	RBR111R-24VUC	RBR111-24VUC	RB121-24VUC	RB121G-24VUC	RBR121-24VUC	RBR121G-24VUC	RB122G-24VUC	RBR122G-24VUC	RB121-24VDC	RBR121-24VDC	RB121G-24VDC	RBR121G-24VDC	RB121-48-60VUC	RB121G-48-60VUC
Input voltage																									
5 V DC	■	■	■																						
12 V DC				■	■	■	■																		
24 V DC								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
48-60 V DC																								■	■
115 V DC																									
230 V DC																									
60-230 V DC																									
24 V AC								■	■	■	■	■	■	■	■	■	■	■	■						
48-60 V AC																								■	■
115 V AC																									
230 V AC																									
60-230 V AC																									
Output rating																									
10 mA - 6 A	■		■	■	■		■	■	■	■	■	■	■	■		■				■	■			■	
3 mA - 6 A		■				■									■		■					■	■		■
1 mA - 8 A																		■	■						
Output contacts																									
c/o	1	1	1	1	1	1	1							1	1	1	1	2	2	1	1	1	1	1	1
n/o										1	1	1	1												
n/c								1	1																
Gold plated contacts		■				■									■		■	■	■			■	■		■
Terminal type																									
Screw	■	■		■	■	■		■		■	■			■	■			■		■		■		■	■
Spring			■				■		■			■	■			■	■		■		■		■		

Boxed interface relays

R600 range

R600 - 6 mm

R600 - 12 mm

Selection table

	Order number	1SNA645502R0600	1SNA645506R0200	1SNA645040R1500	1SNA645540R1700	1SNA645003R0500	1SNA645007R0100	1SNA645046R0700	1SNA645503R0700	1SNA645507R0300	1SNA645041R0200	1SNA645541R0400	1SNA645016R2100	1SNA645017R2200	1SNA645004R0400	1SNA645008R1200	1SNA645011R2400	1SNA645504R0000	1SNA645508R1400	1SNA645511R2600	1SNA645013R2600	1SNA645513R2000	1SNA645020R0100	1SNA645520R0300
	Type	RBR121-48-60VUC	RBR121G-48-60VUC	RB122G-48-60VUC	RBR122G-48-60VUC	RB121-115VUC	RB121G-115VUC	RB121R-115VUC	RBR121-115VUC	RBR121G-115VUC	RB122G-115VUC	RBR122G-115VUC	RB111-115VUC	RB111-230VUC	RB121-230VUC	RB121G-230VUC	RB121R-230VUC	RBR121-230VUC	RBR121G-230VUC	RBR121R-230VUC	RB122G-230VUC	RBR122G-230VUC	RB121-60-230VUC	RBR121-60-230VUC
Input voltage																								
5 V DC																								
12 V DC																								
24 V DC																								
48-60 V DC		■	■	■	■																			
115 V DC						■	■	■	■	■	■	■	■											
230 V DC														■	■	■	■	■	■	■	■	■		
60-230 V DC																							■	■
24 V AC																								
48-60 V AC		■	■	■	■																			
115 V AC						■	■	■	■	■	■	■	■											
230 V AC														■	■	■	■	■	■	■	■	■		
60-230 V AC																							■	■
Output rating																								
10 mA - 6 A		■				■		■	■				■	■	■		■	■		■			■	■
3 mA - 6 A			■				■			■						■			■					
1 mA - 8 A				■	■						■	■									■	■		
Output contacts																								
c/o		1	1	2	2	1	1	1	1	1	2	2			1	1	1	1	1	1	2	2	1	1
n/o													1	1										
n/c																								
Gold plated contacts			■	■	■		■			■	■	■				■			■		■	■		
Terminal type																								
Screw				■		■	■	■			■		■	■	■	■	■				■		■	
Spring		■	■		■				■	■		■						■	■	■		■		■

Boxed optocouplers

R600 range

R600 - 6 mm

R600 - 12 mm

Selection table

Order number	1SNA645047R0000	1SNA645547R0200	1SNA645021R2600	1SNA645521R2000	1SNA645049R1200	1SNA645549R1400	1SNA645022R2700	1SNA645522R2100	1SNA645050R1700	1SNA645550R1100	1SNA645051R0400	1SNA645025R2200	1SNA645024R2100	1SNA645551R0600	1SNA645525R2400	1SNA645524R2300	1SNA645053R0600	1SNA645553R0000	1SNA645054R0700	1SNA645058R1300	1SNA645026R2300	1SNA645526R2500	1SNA645559R1600	1SNA645027R2400	1SNA645029R0600	1SNA645527R2600	1SNA645529R0000	1SNA645062R0700	1SNA645028R0500
Type	OBIC0100-5-12VDC	OBRIC0100-5-12VDC	OBIC0100-24VDC	OBRIC0100-24VDC	OBIC0100-48-60VUC	OBRIC0100-48-60VUC	OBIC0100-115-230	OBRIC0100-115-230	OBOC2000-5-12VDC	OBROC2000-5-12VDC	OBOC2000-24VDC	OBOC2000-24VUC	OBOC5000-24VDC	OBROC2000-24VDC	OBROC2000-24VUC	OBROC5000-24VDC	OBOC2000-48-60VUC	OBROC2000-48-60VUC	OBOC2000-115VUC	OBOC5000-115VUC	OBOC2000-230VUC	OBROC2000-230VUC	OBROC5000-230VUC	OBOA1000-24VDC	OBOA2000-24VDC	OBROA1000-24VDC	OBROA2000-24VDC	OBOA1000-115VUC	OBOA1000-230VUC
Input voltage																													
5-12 V DC	■	■							■	■																			
24 V DC			■	■							■	■	■	■	■	■								■	■	■	■		
48-60 V DC					■	■											■	■											
115-230 V DC							■	■																					
115 V DC																			■	■								■	
230 V DC							■	■													■	■	■						■
24 V AC												■			■														
48-60 V AC					■	■											■	■											
115-230 V AC							■	■																					
115 V AC																			■	■								■	
230 V AC																					■	■	■						■
Output rating																													
100 mA	■	■	■	■	■	■	■	■																					
1 A																								■		■		■	■
2 A									■	■	■	■		■	■		■	■	■		■	■			■		■		
5 A													■			■				■			■						
Output voltage																													
58 V DC	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
230 V AC																									■		■		
400 V AC																								■		■		■	■
Terminal type																													
Screw	■		■		■		■		■		■	■	■				■		■	■	■			■	■			■	■
Spring		■		■		■		■		■				■	■	■		■				■	■			■	■		
Kind of output																													
Transistor	■	■	■	■	■	■	■	■																					
MOS-FET									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
Triac																								■	■	■	■	■	■

Limit switches
Overview

Limit switches are electromechanical devices. The contacts are mechanically linked to an actuator for visible operations. By combining different types of actuators and casings, our limit switches are perfectly suited to a large variety of applications.

Prewired LS2..

LS 20 P 24 B 11 - U 01

Limit Switch

2 = Pre-wired limit switch casing width: 30 mm

0 = 1 cable output left / right
1 = 1 cable output bottom

Plastic casing

Actuator
10 ... 92

Snap action
B = Zb Snap

Contact blocks
11 = 1 N.O. + 1 N.C., up to 10 A

U = cable UL 62 - PVC

Cable length
01 = 1 m

Cable inlet LS3.., LS4..

LS 32 M 41 B 11

Limit Switch

3 = Casing width: 30 mm

2 = 1 cable inlet M16 x 1.5 for ISO 16 cable gland
3 = 1 cable inlet M20 x 1.5 for ISO 20 cable gland
5 = 1 cable inlet by 1/2" NPT plastic adaptor delivered not mounted

4 = Casing width: 40 mm

3 = 1 cable inlet M20 x 1.5 for ISO 20 cable gland
5 = 1 cable inlet for 1/2" NPT cable gland

Metal casing

Actuator
10 ... 92

Snap action
B = Zb Snap

Contact types
11 = 1 N.O. + 1 N.C. contacts

This represents an overview of ABB's limit switches offering. Please reference the **Limit Switches catalog** for the complete portfolio.

Limit switches
Overview

Actuators and movements to be detected

Actuator type	Symbol	Actuator number	Comments*
Plungers		10 11 21	Plastic or metal plunger
Roller plungers		12 13 14 15 22 24	Plastic or metal roller Roller or ball at the tip
Roller levers + plunger	or	31 32	For horizontal or vertical movement
Roller levers		41 42 45 46	Plastic, metal or rubber roller Different roller diameters Different lever sizes and shape
Adjustable roller levers		51 52	Plastic, metal or rubber roller Different roller diameters
Rod Levers		71 72	Metal, fiber glass or nylon rod Different rod diameters
Spring rod levers	or	91 92	Plain or insulated spring tip

* NOTE: a same number can be a slightly different actuator from one range to the other. For accurate description of the actuator, please refer to the ordering details pages.
Ex: actuator n°13 is a plastic roller plunger for LS20 and LS30 but a metal roller plunger for LS40 ranges.

This represents an overview of ABB's limit switches offering. Please reference the **Limit Switches catalog** for the complete portfolio.

Limit switches
Overview

IP67 — LS 2 - — 30 mm width — P Plastic — Double insulation; M Metal

Actuators and movements to be detected

11 12 13 14 15 21 22 24 41
42 45 46 51 54 71 91 92

IP66 — LS 3 - 30 mm width; LS 4 - 40 mm width — M Metal

Actuators and movements to be detected

11 12 13 31 32 41 42
51 52 71 72 91 92

IP65 — LS 3 - 30 mm width; LS 4 - 40 mm width — P Plastic — Double insulation

Actuators and movements to be detected

10 11 12 13 31 32 41
42 51 52 71 72 91 92

This represents an overview of ABB's limit switches offering. Please reference the **Limit Switches catalog** for the complete portfolio.

Double insulation ⧈

A **Class II** or **double insulated** electrical appliance does not require a safety connection to electrical earth (ground).

The degree of protection required for electrical equipment depends on the environmental characteristics.

Ingress Protection	First digit solids protection		Second digit liquids protection	
IP	**6**	Dust Tight	**5**	Low pressure water jet
			6	Powerful water jets
			7	Temporary immersion (up to 1 m)

Limit switches

Stocked switches

Limit switches

Casing width	Electrical connection	Casing material	Actuator type	Contact type	Contact block	Ordering code
20mm	Pre-wired	Metal	45mm rubber roller lever	Snap action	1 NC+1NO	LS20M42B11-U02
30mm	1/2" NPT	Plastic	n/a	Slow action	1 NC+1NO	LS35P80D11-S
30mm	1/2" NPT	Plastic	Adj 3mm SS rod lever	Snap action	1 NC+1NO	LS35P71B11
30mm	1/2" NPT	Plastic	18mm plastic roller lever	Snap action	1 NC+1NO	LS35P41B11
30mm	1/2" NPT	Plastic	18mm plastic roller lever	Snap action	2 NC	LS35P41B02-R
30mm	1/2" NPT	Metal	Adj 18mm plastic roller lever	Snap action	1 NC+1NO	LS35M51B11
30mm	1/2" NPT	Plastic	Adj 18mm plastic roller lever	Snap action	1 NC+1NO	LS35P51B11
30mm	1/2" NPT	Plastic	Adj 18mm plastic roller lever	Snap action	2 NC	LS35P51B02
30mm	Pre-wired	Metal	Plain steel plunger	Snap action	1 NC+1NO	LS20M11B11-U03
30mm	1/2" NPT	Plastic	Plain steel plunger	Snap action	1 NC+1NO	LS35P11B11
30mm	1/2" NPT	Plastic	Plastic roller plunger	Snap action	1 NC+1NO	LS35P13B11
30mm	1/2" NPT	Plastic	Plastic roller, steel plunger	Snap action	1 NC+1NO	LS35P31B11
30mm	1/2" NPT	Plastic	Plastic roller, steel plunger	Slow action	1 NC+1NO	LS35P32D11-R
30mm	1/2" NPT	Plastic	Spring rod	Snap action	1 NC+1NO	LS35P91B11
30mm	1/2" NPT	Plastic	Straight key	Snap action	1 NC+1NO	LS35P16B11
40mm	1/2" NPT	Metal	w/out head	Snap action	1 NC+1NO	LS45M00B11
40mm	1/2" NPT	Metal	Adj 3mm SS rod lever	Snap action	1 NC+1NO	LS45M71B11
40mm	1/2" NPT	Plastic	Adj 3mm SS rod lever	Snap action	2 NC+1NO	LS45P71B11
40mm	1/2" NPT	Metal	Adj 18mm plastic roller lever	Snap action	1 NC+1NO	LS45M51B11
40mm	1/2" NPT	Plastic	Adj 18mm plastic roller lever	Snap action	1 NC+1NO	LS45P51B11
40mm	1/2" NPT	Metal	18mm plastic roller lever	Snap action	1 NC+1NO	LS45M41B11
40mm	1/2" NPT	Metal	Adj 22mm SS ball-bearing roller	Snap action	1 NC+1NO	LS45M53B11
40mm	1/2" NPT	Metal	Adj 45mm rubber roller lever	Snap action	1 NC+1NO	LS45M54B11
40mm	1/2" NPT	Metal	Adj 52mm rubber roller lever	Snap action	1 NC+1NO	LS45M52B11
40mm	1/2" NPT	Metal	Plastic roller plunger	Snap action	1 NC+1NO	LS45M13B11
40mm	1/2" NPT	Metal	Spring rod	Snap action	1 NC+1NO	LS45M91B11
40mm	1/2" NPT	Metal	SS lateral plunger	Snap action	1 NC+1NO	LS45M21B11
60mm	1/2" NPT	Metal	Adj 18mm plastic roller lever	Snap action	1 NC+1NO	LS75P41B11
60mm	1/2" NPT	Metal	Pull action w/ring	Snap action	1 NC+1NO	LS75M98B11-A
Yellow free movement IPS footswitch					1 NC+1NO	IPSY1A11

This represents an overview of ABB's limit switches offering. Please reference the **Limit Switches catalog** for the complete portfolio.