

CS8 Industrial Control Relays

The miniature relay system with big advantages



CS8 front mount auxiliaries are positive guidance

Despite increasing complexity, control systems and installations must become increasingly compact. And the CS8 Miniature Relay System packs maximum performance into minimum space.

Small but rugged

Sprecher + Schuh has subjected this relay series to monitored endurance tests that demonstrate their ruggedness. Under normal duty, CS8 contacts have an electrical life of 700,000 operations, while the AC magnet system has a mechanical life of 15,000,000 operations.

The coil is designed for absolute undervoltage reliability. Undervoltages that do not cause the contactor to close can be withstood indefinitely without damage.

The body of the device is sturdy as well. The front housing, containing the phase partitions and screwdriver guides, is manufactured in one piece. Front and rear housing are then joint fitted together.

Superior Contact Reliability

The standard CS8 base relay and auxiliary contacts are bifurcated H-bridge design which divides each movable contact into two sections at the tip of the spanner which provides a higher degree of reliability for low signal applications. Perfect fit for PLC and other electronic circuits operate at signals as low as 15V @ 2mA.

Accessories require no additional panel space

The entire CS8 system is logically engineered. Auxiliary contact blocks are modular and snap-on without increasing the CS8's original width of 45mm. Also, due to its sideways switching movement, the basic relay has the same low profile whether an AC or DC operating magnet is used. This permits the use of enclosures with shallow mount-



ing depths. Once the CS8 is installed, all auxiliary contact blocks can be snapped on or removed without changing any existing wiring.

Auxiliary components provide flexibility


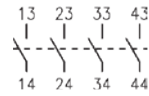
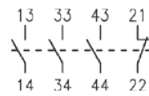
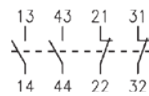
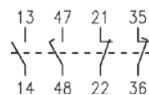
CS8 auxiliary components allow you to convert the basic four pole relay up to an 8 pole relay.

Effortless installation

CS8 relays are DIN-rail mountable for instant installation and modification. Fittings are also included for base mounting. All terminals are clearly marked and shipped in the open position for installation with either manual or power screwdrivers. Using self-adhesive labels, or plastic clip-on tags.

The entire line is cULus Listed and CE Certified and offers finger and back of hand protection to the strictest international standards.

CS8 Complete Assemblies - 4 Pole

CS8 Relay	Contact Arrangement and Numbering	Contacts		AC Operation	DC Operation
		NO	NC	Catalog Number	Catalog Number
		4	0	CS8-40E-*	CS8C-40E-*
		3	1	CS8-31Z-*	CS8C-31Z-*
		2	2	CS8-22Z-*	CS8C-22Z-*
		1+ 1EM	1+ 1LB	CS8-L22Z-*	CS8C-L22Z-*

Contact Ratings (Per UL508/NEMA B600 & Q600) ③

Standard	Circuit Voltage	Make (Amps/VA)	Break (Amps/VA)	Continuous Amps
B600	120AC	30A/3600VA	3.0A/360VA	10
	240AC	15A/3600VA	1.5A/360VA	
	480AC	7.5A/3600VA	0.75A/360VA	
	600AC	6A/3600VA	0.60A/360VA	
Q600	125DC	0.55A/69VA	0.55A/69VA	2.5
	250DC	0.27A/69VA	0.27A/69VA	
	301-600DC	0.1A/69VA	0.1A/69VA	

AC Coil Codes ①

AC Coil Code	Voltage Range	
	50 Hz	60 Hz
12	12V	12V
24Z	24V	24V
48	48V	48V
120	110V	120V
208	200V-220V	200V-220V
240	240V	240V
380	Use Coil Code 400	
400	400V	400V
480	440V	480V
575	Use Coil Code 600	
600	525V	600V

DC Coil Codes

DC Coil Code	Voltage
12D	12V
24D	24V ②
48D	48V
110D	110V
125D	125V
220D	220V

Ordering Instructions

Specify Catalog Number	
Replace (*) with Coil Code	See Coil Codes on this page

① The coil codes shown are for the most commonly stocked items. Contact your Sprecher + Schuh representative to determine if other voltages are on-hand or can be specially ordered in quantity.

② Integrated diode surge suppressor coils available. Order coil code **24DD** and add \$42 to list price.


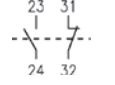
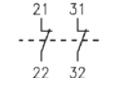
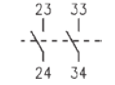
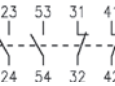
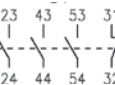
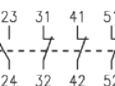
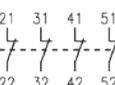

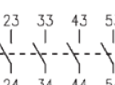
Ex: CS8C-9C-10-**24D** becomes CS8C-9C-10-**24DD**.


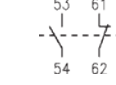
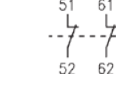
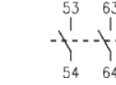
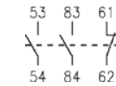
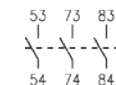
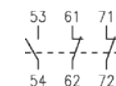
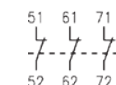

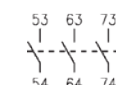
③ Contacts are bifurcated (H-bridge) with a minimum current rating of 2mA @ 15V.

④ The European Community has agreed that 400V is the nominal voltage in lieu of 380V. Use this code when 380V is required.

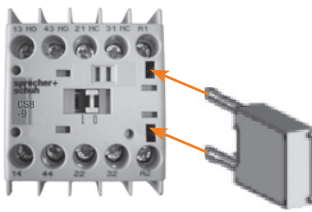
⑤ Use this code for 575V applications.

Auxiliary Contact Blocks (2 & 4 Pole) ①

Auxiliary Contact Blocks	NO	NC	Contact Arrangement	Catalog No.
 <p>2-Pole</p>	1	1		CA8-P11
	0	2		CA8-P02
	2	0		CA8-P20
<p>Typical auxiliary contact block</p>	2	2		CA8-P22
	3	1		CA8-P31
	1	3		CA8-P13
	0	4		CA8-P04
 <p>4-Pole</p>	4	0		CA8-P40

Auxiliary Contact Blocks	NO	NC	Contact Arrangement	Catalog No.
 <p>2-Pole</p>	1	1		CS8-P11E
	0	2		CS8-P02E
	2	0		CS8-P20E
<p>Typical auxiliary contact block</p>	2	2		CS8-P22Z
	3	1		CS8-P31Z
	1	3		CS8-P13E
	0	4		CS8-P04E
 <p>4-Pole</p>	4	0		CS8-P40E

Miscellaneous Accessories

Accessory	Description	Catalog Number
	Surge Suppressor CR_8 - for limiting voltage spikes when switching off coil. Coil itself provides sufficient limitation at voltages over 240V.	
	RC Link (Type CRC8...) for AC Control 24-48VAC 110-280VAC 380-480VAC	CRC8-50 CRC8-280 CRC8-480
	Diode Link (Type CRD8...) for DC Control ② 12-250VDC (diode)	CRD8-250
	Varistor Link (Type CRV8...) for AC/DC Control 12-55VAC/12-77VDC 56-136VAC/78-180VDC 137-277VAC/181-250VDC	CRV8-55 CRV8-136 CRV8-277

① Auxiliary contact ratings per UL 508/NEMA (B600/Q600). Contacts are bifurcated (H-bridge) with a minimum current rating of 15V@2mA.

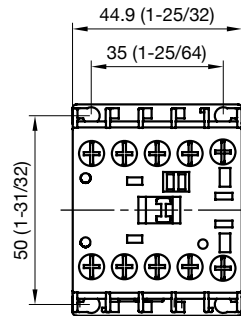
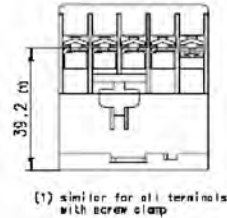
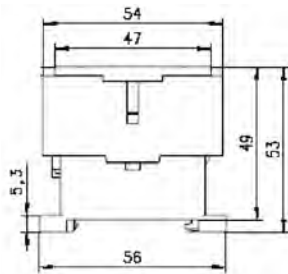
② CS8 relays with 24 VDC coils can be special ordered with integrated diodes (built-in) rather than applying CRD8 to the coil terminals.

Technical Information

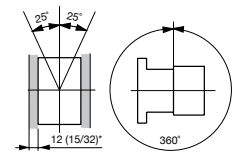
			CS8	Auxiliary Contacts
			B600, Q600	B600, Q600
Electrical				
Contact Ratings — NEMA				
Contact Ratings — IEC				
AC-15 (solenoids, contactors)	24...120V	[A]	3	3
at rated voltage	230...240V	[A]	2	2
IEC 947, EN 60947	400V	[A]	1.2	1.2
NEMA A600	480...500V	[A]	1	1
	600...690V	[A]	0.6	0.6
AC-12 (Rated thermal current)				
Ambient Temperature 40°C	I_{th}	24...690V [A]	10	10
Ambient Temperature 60°C	I_{th}	24...240V [A]	6	6
Low Level Signal Switching				
Contact design			H-bridge bifurcated	H-bridge bifurcated
Minimum switching recommendation			15V 2mA	15V 2mA
Short Circuit Protection				
Coordination Type 2 acc. IEC 947-5-1	Fuse gG	[A]	10	10
Switching DC-13 (Q600)				
1 pole	24V	[A]	2.3	2.3
	48V	[A]	1	1
	110V	[A]	0.55	0.55
	125V	[A]	0.55	0.55
	220V	[A]	0.27	0.27
	250V	[A]	0.27	0.27
	400V	[A]	0.15	0.15
	440V	[A]	0.15	0.15
	600V	[A]	0.1	0.1
Load Carrying Capacity according to UL/CSA				
Rated voltage	AC	[V]	max. 600	max. 600
	DC	[V]	max. 600	max. 600
Continuous rating (40°C)	AC	[A]	10	10
Switching Capacity	AC	[A]	B600	B600
	DC	[A]	Q600	Q600
Continuous rating (general purpose)	300V	[V]	5	5
	600V	[V]	10	10
Resistance and Power Dissipation				
Main current circuit resistance, 1 pole		[mΩ]	6.5	6.5
Power dissipation I_{th} , 4 poles		[W]	2.6	2.6
Total Power dissipation				
I_{th}	AC control, warm	[W]	4.4	4.4
	DC control, warm	[W]	5.2	5.2

Series CS8 Industrial Control Relays

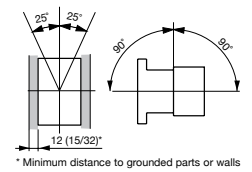
Dimensions are in millimeters (inches). Dimensions not intended for manufacturing purposes.



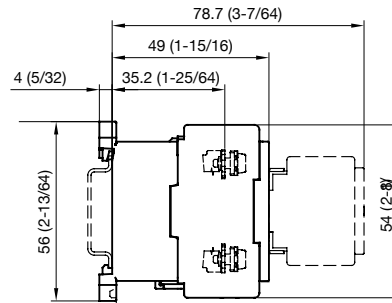
Mounting Position without Accessories



Mounting Position with Accessories



Contactor with...	Dim. [mm]	Dim. [inches]	
with aux. contact block	78.7	3.1	
with timer	on contactor	81.7	3.25
	at side of contactor	66.9	2.63
with neutral terminal	64.9	2.56	
with nameplate	51	2	



With front mount auxiliary