







Specifications

Main Circuits

	193-KA...	193-KB...	193-KC...
Rated Isolation Voltage U_i			
IEC [V]		690	
UL, CSA [V]		600	
Rated surge withstand U_{imp} [kV]		6	
Rated operating voltage U_e [V]		690	
Overvoltage category/pollution degree		II/3	
Safe isolation (between main circuit and auxiliary contacts per DIN, VDE 106, Part 101 and Part 101 A1) [V]		400	
Current setting range	0.1...0.8	0.75...7.5	7.2...12.5
Direct load loss (for 3 current paths)			
min. value of adjustment range [W]	—	—	—
max. value of adjustment range [W]	2.2	2.2	2.2
Wiring cross section Terminal type			
Terminal screws		M4	
 Fine stranded with ferrule [mm ²]		2 x (1.5...4)	
 Solid or coarse stranded [mm ²] [AWG]		2 x (1.5...4) 2 x (16...10)	
Flexible bus [mm]		—	
Recommended tightening torque [Nm] [lb-in]		1.2 11	
Pozidrive screwdriver Size		2	
Slotted screwdriver [mm]		1 x 6	
Hex-head screw [mm]		—	

Control Circuits

		193-K
Rated Isolation Voltage U_i		
IEC [V]		690
UL/CSA [V]		600
Rated surge withstand U_{imp} [kV]		—
Rated operating voltage U_e [V]		—
Overvoltage category/pollution degree		II/3
Rated operating current I_e		
AC-14	24...690V [VA]	50
	24V [A]	4
	240V [A]	2
	415V [A]	1.6
AC-15	690V [A]	0.15
	24V [A]	2
	60V [A]	0.75
DC-13	250V [A]	0.25
Safe isolation (between auxiliary contacts) per DIN, VDE 106, and Part 101 A1 [V]		250
Conventional thermal current I_{th} [A]		—
Short circuit withstand without welding, fuse gL/gG [A]		10
Wiring cross section Terminal type		
Terminal screw		M 3.5
 Fine stranded with ferrule [mm ²]		2 x (1...4)
 Solid or coarse stranded [mm ²] [AWG]		2 x (1...4) 2 x (18...12)
Recommended tightening torque [Nm] [lb-in]		0.8 7
Pozi-driv screwdriver Size		2
Slotted screwdriver [mm]		1 x 6

General

		193-KA...	193-KB...	193-KC...
Weight [kg (lbs)]		0.3	0.3	0.3
Standards		IEC/EN 60947-1, -4-1, -5-1, DIN VDE 0660, IEC 60077-1, -2; NF F 62-000; Requirements for railway applications		
Approvals		CE, UL 508, CSA C22.2 No. 14, (cULus), CCC		
Climatic withstand		IEC 68, Part 2-30		
Ambient temperature	open	-20...+60 °C (...+70 °C with 15% derating) (-4...140 °F) (...+158 °F with 15% derating)		
	enclosed	-20...+40 °C (-4...104 °F)		
Temperature compensation		Continual		
Shock withstand (Sin impact 10 ms) [G]		IEC 60068 service 2.6 G, 1-200 Hz all axes IEC 61373 (vibration railways): category 1, class B IEC 60092-504 (vibration ships): 0.7 G, 2-200 Hz IEC 61373 (shock railways): category 1, class B, 5 G (30 ms) Shock half sinus 11 ms >5 G Shock withstand transport 30 G		
		IP20 when attached (wires connected)		
	Protection class	IP20 when attached (wires connected)		
	Contact protection	Finger- and back of hand protected (VDE 016, Part 100)		

Bulletin 193-K
MCS Miniature Thermal Overload Relays
Specifications

Trip Characteristics

Failure Protection Characteristic

