

Protecting Power Conversion

DC and AC contactors overview

DC



Our power conversion contactor portfolio at a glance

Contactors up to
250 amps



Contactors up to
500 amps



Contactors up to
1,500 amps



Contactors up to
3,000 amps



Contactors up to 250 amps

	C294	C193	C295	AFS
				
Contact configuration	2x SPST-NO	1x SPST-NO	2x SPST-NO	1x SPST-NO
Type of Voltage	DC, uni-directional	DC, uni-directional AC, f ≤ 60 Hz	DC, uni-directional AC, f ≤ 60 Hz	DC, uni-directional AC, f ≤ 60 Hz
Nominal voltage Un / Rated op. voltage Ue	Un = 1,000 V	Un = 1,000 V	Un = 1,200 V	Un = 80 V
Conv. thermal current Ith / Rated operating current Ie	40 A	50 A	120 A	Ith = 100 A / 150 A / 250 A
Pollution degree	PD3	PD3	PD3	PD3
Overvoltage category	OV3	OV3	OV3	OV3
Coil Voltage	24 / 36 / 72 / 110 V DC	24 / 36 / 72 / 110 V DC	24 / 36 / 48 / 60 / 72 / 84 / 96 / 110 V DC	12 ... 130 V DC
Coil suppression	Varistor	Varistor	Varistor	Diode, diode/resistor or varistor
Coil Power (Holding)	13 W	9 W	13.5 W	11 ... 16 W
Aux Contact(s)	1x / SPDT S870	1x / SPDT S870	2x / SPDT S870	1x max. / DPST
Mechanical	> 3.000.000 operating cycles	> 5.000.000 operating cycles	> 3.000.000 operating cycles	> 100.000 operating cycles
Operating temperature	-40° C ... +70° C	-40° C ... +70° C	-40° C ... +70° C	-25° C ... +40° C up to 60° C upon request
Standards	IEC 60947-4-1, IEC 60077-2	IEC 60947-4-1, IEC 60077-2	IEC 60947-4-1, IEC 60077-2	IEC 60947-4-1

Contactors up to 500 amps

	C195	C110B	C300	C303	C310
					
Contact configuration	1x SPST-NO	1x SPST-NO	1x SPST-NO	1x SPST-NO	DC, uni-directional AC, f ≤ 60 Hz
Type of Voltage	DC, uni-directional AC, f ≤ 60 Hz	DC, uni-directional AC, f ≤ 60 Hz	DC, uni-directional AC, f ≤ 60 Hz	DC, uni-directional AC, f ≤ 60 Hz	DC, bi-directional
Nominal voltage Un / Rated op. voltage Ue	Un = 1,500 V	Ue = 48 V	Ue = 1,000 V (1,500 V max. for occasional switching)	Ue = 1,000 V	Ue = 1,000 V
Conv. thermal current Ith / Rated operating current Ie	NO: 320 A / NC: 160 A	Ie = 80 / 120 / 200 / 300 / 400 A	Ith = 500 A	Ith = 350 / 500 A	Ith = 150 / 300 / 500 A
Pollution degree	PD3	PD3	PD3	PD3	PD3
Overvoltage category	OV3	OV3	OV3	OV3	OV3
Coil Voltage	24 / 36 / 48 / 60 / 72 / 84 / 96 / 110 V DC	24, 48 V DC	12 ... 24 V DC	12 / 12 ... 24 / 24 V DC	12 ... 24 / 48 V DC
Coil suppression	Varistor / Diode	---	PWM module	PWM module	PWM module
Coil Power (Holding)	13.5 W	5 ... 13 W	3.5 W	2 W	2.6 W
Aux Contact(s)	1x / SPDT S870	---	1x / NO	1x / SPDT S880	2x / SPDT S880
Mechanical	> 3.000.000 operating cycles	> 1.000.000 operating cycles	> 200.000 operating cycles	> 200.000 operating cycles	> 2.000.000 operating cycles
Operating temperature	-40° C ... +70° C	-25° C ... +40° C up to 60° C upon request	-40° C ... +70° C	-40° C ... +85° C	-40° C ... +85° C
Standards	IEC 60947-4-1, IEC 60077-2	IEC 60947-4-1	IEC 60947-4-1	IEC 60947-4-1	IEC 60947-4-1

Contactors up to 1,500 amps

	CT	C320	C305
			
Contact configuration	1 ... 2x SPST-NO	1x SPST-NO	1x SPST-NO
Type of Voltage	DC, uni-directional AC, f ≤ 60 Hz	DC, uni-directional AC, f ≤ 60 Hz	DC, uni-directional AC, f ≤ 60 Hz
Nominal voltage Un / Rated op. voltage Ue	U _n = 1,500 / 3,000 V	U _e = 1,500 V	U _e = 1,500 V
Conv. thermal current I _{th}	I _{th} = 400 / 800 / 1,100 A	I _{th} = 1,500 A	I _{th} = 1,500 A
Pollution degree	PD3	PD3	PD2
Overvoltage category	OV2	OV3	OV2
Coil Voltage	24 / 36 / 48 / 72 / 110 V DC	24 V DC	12 / 24 V DC
Coil suppression	Double coil controller	PWM module	PWM module
Coil Power (Holding)	27 W	11 W	15 W
Aux Contact(s)	4x max. / SPDT 2x S870 + 2x S826 or 4x S826	4x max. / SPDT S870	1x / NO or NC
Mechanical	> 2.000.000 operating cycles	> 1.000.000 operating cycles	> 200.000 operating cycles
Temp Range	-40° C ... +70° C	-40° C ... +60° C	-40° C ... +85° C
Standards	IEC 60077-2	IEC 60947-1	IEC 60947-1

Contactors up to 3,000 amps

	CP	C330
		
Contact configuration	1x SPST-NO, SPST-NC or SPDT-DB	1x SPST-NO
Type of Voltage	DC, uni-directional AC, f ≤ 60 Hz	DC, uni-directional AC, f ≤ 60 Hz
Nominal voltage Un / Rated op. voltage Ue	U _n = 1,500 / 3,000 V	U _e = 1,000 V
Conv. thermal current	600 / 800 / 1,000 / 1,200 / 1,500 / 2,000 A	2,000 A (3,000 A @ 95° C)
Pollution degree	PD3	PD2
Overvoltage category	OV3	OV2
Coil Voltage	24 / 36 ... 60 / 72 ... 110 V DC	24 V DC
Coil suppression	PWM module	PWM module
Coil Power (Holding)	10 W	14 W
Aux Contact(s)	4x max. / SPDT 2x S870 + 2x S826 or 4x S826	1x / SPDT S880
Mechanical	> 1.000.000 operating cycles	> 200.000 operating cycles
Temp Range	-40° C ... +70° C	-40° C ... +85° C
Standards	IEC 60077-2	IEC 60947-1

Direct utilization of direct current (DC) power from wind and photovoltaic improves overall conversion efficiency, for both energy storage systems and DC loads such as EV charging. Yet safe switching under load places stringent demands on electromechanical components. Leveraging decades of domain expertise, Schaltbau helps control power conversion with high-performance contactors for secure operation in rail and provides Eddicy contactors engineered for compact, high-efficiency, high-reliability applications.

