



EasyPact TVS contactor 3P(3 NO) - AC-3 - <= 440 V 160A - 220 V AC coil

LC1E160M6

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Range	EasyPact
Product name	EasyPact TVS
Product or component type	Contactor
Device short name	LC1E
Contactor application	Resistive load Motor control
Utilisation category	AC-1 AC-3
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit: <= 690 V AC 50/60 Hz
[le] rated operational current	160 A (at <55 °C) at <= 440 V AC AC-3 for power circuit 200 A (at <55 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	45 kW at 220230 V AC 50/60 Hz 75 kW at 380400 V 80 kW at 415 V 80 kW at 440 V 90 kW at 500 V 100 kW at 660690 V
Control circuit type	AC at 60 Hz
[Uc] control circuit voltage	220 V AC 60 Hz
Height	158 mm
Width	120 mm
Depth	132 mm
Net weight	2.3 kg

Complementary

Auxiliary contact composition	1 NO + 1 NC	
[Uimp] rated impulse withstand voltage	8 kV coil not connected to the power circuit conforming to IEC 60947	
[Ui] rated insulation voltage	690 V conforming to IEC 60947-4-1	
Overvoltage category	III	
[Ith] conventional free air thermal current	200 A (at 40 °C)	

Rated brasking capacity 1880 A at 440 V AC for power drout conforming to IEC 60947			
Icw rated short-time withstand current 1400 A 40 °C - 10 s for power circuit	Irms rated making capacity	1600 A at 440 V AC for power circuit conforming to IEC 60947-4-1	
Associated fuse rating 10 A gG at <= 690 V coordination type 1 for control circuit conforming to IEC 69847-5-1 315 A gG at <= 690 V coordination type 1 for power circuit Average impedance 0.8 mOhm - th 200 A 50 Hz for power circuit Average impedance 12 W AC-1 15 W AC-3 Control circuit voltage limits Operational: 0.851, 1 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.3505 Uc at 60 Hz (at <55 °C) Drop-out 0.35	Rated breaking capacity	1280 A at 440 V for power circuit conforming to IEC 60947	
Average impedance 0.6 mOhm - Ith 200 A 50 Hz for power circuit Power dissipation per pole 15 W AC-3 15 W		1400 A 40 °C - 10 s for power circuit	
Power dissipation per pole 24 W AC-1 15 W AC-3 Control circuit voltage limits Operatings: 0.851.1 Uc at 80 Hz (at <55 °C) Drop-out 0.350.55 Uc at 60 Hz (at <55 °C) Operating time 2050 ms on closing 620 ms on opening Mechanical durability 400000 cycles Maximum operating rate 1200 cych 55 °C Inrush power in VA 300 VA 50 Hz cos phi 0.9 (at 20 °C) 300 VA 60 Hz cos phi 0.9 (at 20 °C) 22 VA 60 Hz cos phi 0.9 (at 20 °C) 24 VA 60 Hz cos phi 0.9 (at 20 °C) 42 VA 60 Hz cos phi 0.9 (at 20 °C) 42 VA 60 Hz cos phi 0.9 (at 20 °C) 42 VA 60 Hz cos phi 0.9 (at 20 °C) 43 Minimum switching current 45 mA for control circuit Minimum switching voltage 17 V for control circuit Minimum switching voltage 17.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact Insulation resistance 10 MOhm for control circuit Flate Connections - terminals Control circuit: screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25 mm² - cable stiffness. flexible with cable end Control circuit screw clamp terminals 1 1 25	Associated fuse rating		
Control circuit voltage limits	Average impedance	0.6 mOhm - Ith 200 A 50 Hz for power circuit	
Drop-out 0.350.50 to a 60 Hz (at <55 °C) Operating time 2050 ms on closing 620 ms on opening Mechanical durability 400000 cycles Maximum operating rate 1200 cych 55 °C Inrush power in VA 300 VA 50 Hz cos ph i0.9 (at 20 °C) 300 VA 60 Hz cos ph i0.9 (at 20 °C) Hold-in power consumption in VA 22 VA 50 Hz cos ph i0.9 (at 20 °C) 22 VA 60 Hz cos ph i0.9 (at 20 °C) Heat dissipation 38 W for control circuit Minimum switching current 5 mA for control circuit Minimum switching voltage 17 V for control circuit Non-overlap time 1.5 ms on energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact Insulation resistance > 10 Mohm for control circuit Biounting support Din rail Plate Connections - terminals Control circuit screw damp terminals 2 125 mm² - cable stiffness: flexible with cable end control circuit screw damp terminals 1 10120 mm² - cable stiffness flexible with cable end control circuit screw damp terminals 1 1.25 mm² - cable stiffness flexible with cable end control circuit screw damp terminals 1 1.25 mm² - cable stiffness flexible with cable end control circuit screw damp terminals 1 1.25 mm² - cable stiffness flexible with cable end control circuit screw damp terminals 1 1.25 mm² - cable stiffness flexible with cable end control circuit screw damp terminals 2 1 25 mm² - cable stiffness flexible with cable end control circuit screw damp terminals 2 1 25 mm² - cable stiffness flexible with cable end control circuit screw damp terminals 2 1 25 mm² - cable stiffness flexible with cable end control circuit screw damp terminals 2 1 25 mm² - cable stiffness flexible with cable end control circuit screw clamp terminals 2 1 25 mm² - cable stiffness flexible with cable end control circuit screw clamp terminals 2 1 125 mm² - cable stiffness flexible with cable end control circuit screw clamp terminals 2 1 125 mm² - cable stiffness flexible with cable end control circuit screw clamp terminals 2 1 125 mm²	Power dissipation per pole		
Mechanical durability 400000 cycles Maximum operating rate 1200 cych 55 °C Inrush power in VA 300 VA 50 Hz cos phil 0.9 (at 20 °C) 300 VA 60 Hz cos phil 0.9 (at 20 °C) Hold-in power consumption in VA 22 VA 50 Hz cos phil 0.9 (at 20 °C) 22 VA 50 Hz cos phil 0.9 (at 20 °C) Heat dissipation 38 W for control circuit Minimum switching current 5 mA for control circuit Minimum switching current 1.5 ms on energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact Insulation resistance > 10 MOhm for control circuit Mounting support 20 NO cycles AC-3 250000 cycles AC-3 2500000 cycles AC-3 250000 cycles AC-3 2500000 cycles AC-3 250000 cycles AC-3 250000 cycles AC-3 250000 cycles AC-3	Control circuit voltage limits		
Maximum operating rate 1200 cyc/h 55 °C	Operating time	· ·	
Inrush power in VA 300 VA 50 Hz cos phi 0.9 (at 20 °C) 300 VA 60 Hz cos phi 0.9 (at 20 °C) 420 VC) 22 VA 60 Hz cos phi 0.9 (at 20 °C) 22 VA 60 Hz cos phi 0.9 (at 20 °C) 42 VA 60 Hz c	Mechanical durability	400000 cycles	
Hold-in power consumption in VA 50 Hz cos phi 0.9 (at 20 °C) Heat dissipation 38 W for control circuit Minimum switching current 5 mA for control circuit Minimum switching current 1.5 mS on energisation guaranteed between NC and NO contact 1.5 ms on energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.5 ms on de-energisation guaranteed between NC and NO contact 1.2 mm² - cable siffness: flexible with cable end Control circuit: screw clamp terminals 2 1 1.2 ms ms² - cable siffness: solid without cable end Control circuit: screw clamp terminals 1 1 1.2 ms ms² - cable siffness solid without cable end Control circuit: screw clamp terminals 2 1 1.2 ms² - cable siffness solid without cable end Power circuit: screw clamp terminals 2 1 1.2 ms² - cable siffness solid without cable end Power circuit: screw clamp terminals 2 1 1.2 ms² - cable siffness solid without cable end Power circuit: screw clamp terminals 2 1 1.2 ms² - cable siffness solid without cable end Power circuit: screw clamp terminals 2 1 1.2 ms² - cable siffness	Maximum operating rate	1200 cyc/h 55 °C	
VA 22 VA 60 Hz cos phi 0.9 (at 20 °C)	Inrush power in VA		
Minimum switching current 5 mA for control circuit			
Non-overlap time	Heat dissipation	38 W for control circuit	
Non-overlap time	Minimum switching current	5 mA for control circuit	
1.5 ms on de-energisation guaranteed between NC and NO contact	Minimum switching voltage	17 V for control circuit	
Electrical durability 800000 cycles AC-1 Mounting support DIN rail Plate Connections - terminals Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 125 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 125 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 125 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 125 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 125 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 10125 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 10125 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 125 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 125 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp termi	Non-overlap time		
Mounting support DIN rail Plate Connections - terminals Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 10120 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1.025 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1.0100 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 1.0100 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: solid without cable end Power circuit: 12 N.m Recommended tightening torque Power circuit: 12 N.m Control circuit: 1.2 N.m Max tightening torque Power circuit: 1.3.5 N.m Control circuit: 1.4 N.m Environment Standards IEC 60947-1 IEC 60947-5-1 IEC 60947-6-1 IEC 60947-4-1 Product certifications EAC CE IP degree of protection IP2x conforming to IEC 60529	Insulation resistance	> 10 MOhm for control circuit	
Connections - terminals Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 10120 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 10120 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 10120 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: solid without cable end Power circuit: 12 N.m Recommended tightening torque Power circuit: 12 N.m Control circuit: 1.2 N.m Control circuit: 1.3.5 N.m Control circuit: 1.4 N.m Environment Environment Elec 60947-1 [Ec 60947-5-1 [Ec 60947-4-1] Foduct certifications EAC CE IP degree of protection IP2x conforming to IEC 60529	Electrical durability		
Power circuit: screw clamp terminals 1 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 10120 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 10120 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: solid without cable end Power circuit: 12 N.m Recommended tightening Control circuit: 1.2 N.m Power circuit: 1.2 N.m Control circuit: 1.3.5 N.m Control circuit: 1.4 N.m Environment Standards IEC 60947-1 IEC 60947-1 IEC 60947-4-1 Product certifications EAC CE IP degree of protection IP2x conforming to IEC 60529	Mounting support		
Max tightening torque Power circuit: 1.2 N.m Control circuit: 1.4 N.m Environment Standards IEC 60947-1 IEC 60947-5-1 IEC 60947-4-1 Product certifications EAC CE IP degree of protection IP2x conforming to IEC 60529	Connections - terminals	Power circuit: screw clamp terminals 1 10120 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 10120 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 10120 mm² - cable stiffness: flexible with cable end	
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IP degree of protection IP2x conforming to IEC 60529		IEC 60947-5-1	
	Product certifications		
Protective treatment TH (pollution degree 3) conforming to IEC 60068-2-30 test Db	IP degree of protection	IP2x conforming to IEC 60529	
	Protective treatment	TH (pollution degree 3) conforming to IEC 60068-2-30 test Db	
Pollution degree 3	Pollution degree	3	
Ambient air temperature for -555 °C operation		-555 °C	
Ambient air temperature for -6080 °C storage	•	-6080 °C	

Permissible ambient air	-2070 °C at Uc	
temperature around the device		
Operating altitude	3000 m without derating	
Fire resistance	850 °C conforming to IEC 60695-2-1	
Mechanical robustness	Vibrations contactor open: 1.5 Gn, 5300 Hz Vibrations contactor closed: 3 Gn, 5300 Hz Shocks contactor open: 6 Gn for 11 ms Shocks contactor closed: 7 Gn for 11 ms	
Packing Units		
Unit Type of Package 1	PCE	
Number of Units in Package 1	1	
Package 1 Weight	2.5 kg	
Package 1 Height	13.2 cm	
Package 1 width	12 cm	
Package 1 Length	15.8 cm	
Unit Type of Package 2	S06	
Number of Units in Package 2	1	
Package 2 Weight	2.5 kg	
Package 2 Height	73.5 cm	
Package 2 width	60 cm	
Package 2 Length	80 cm	
Unit Type of Package 3	S03	
Number of Units in Package 3	2	
Package 3 Weight	5.51 kg	
Package 3 Height	30 cm	
Package 3 width	30 cm	
Package 3 Length	40 cm	
Offer Sustainability		
Sustainable offer status	Green Premium product	
REACh Regulation	REACh Declaration	
REACh free of SVHC	Yes	
EU RoHS Directive	Compliant EU RoHS Declaration	
Toxic heavy metal free	Yes	
Mercury free	Yes	
RoHS exemption information	Yes	
China RoHS Regulation	China RoHS declaration	
Environmental Disclosure	Product Environmental Profile	
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins	
Contractual warranty		
Warranty	18 months	