



Product designation				
Contact characteristics Number of poles Nr. 3 Rated insulation voltage Ui IEC/EN V 1000 Rated impulse withstand voltage Uimp kV 8 Operational frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current Ith A 70 Operational current Ie AC-1 (≤40°C) A 60 AC-1 (≤55°C) A 60 AC-3 (5440V ≤55°C) A 50 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 22 440V kW 22 440V kW 22 690V kW 26 400V A 40 415V A 40 416V A 40	Product designation			Power contactor
Number of poles Nr. 3 Rated insulation voltage Ui IEC/EN V 1000 Rated insulation voltage Uimp kV 8 Operational frequency min Hz 25 max Hz 400 400 IEC Conventional free air thermal current lth A 70 70 Operational current le AC-1 (≤40°C) A 60 AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-3 (≤400°V) A 24 AC-4 (400°V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 22 440V kW 22 500V kW 22 690V kW 22 690V kW 30 1000V kW 30 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40	Product type designation			BF40
Rated insulation voltage Ui IEC/EN Rated impulse withstand voltage Uimp Rated Operational frequency Rin Hz 25 max Hz 400 RAC-1 (≤40°C) A 70 RAC-1 (≤55°C) A 60 AC-1 (≤55°C) A 50 AC-1 (≤70°C) A 50 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) Rated operational power AC-3 (T≤55°C) Rated operational current AC-3 (T≤55°C) Rated operational power AC-1 (T≤40°C) Rate	Contact characteristics			
Rated impulse withstand voltage Ulimp Operational frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current lth A 70 Operational current le AC-1 (≤40°C) A 70 AC-1 (55°C) A 60 AC-1 (55°C) A 50 AC-1 (55°C) A 50 AC-3 (≤440∨ ≤55°C) A 40 AC-4 (400∨) A 24 Rated operational power AC-3 (T≤55°C) Rated operational power AC-3 (T≤55°C) Rated operational current AC-3 (T≤40°C) Rated operational power AC-1 (T≤40°C) Rated operational power AC-3 (T≤55°C) Rated operational power AC-3	Number of poles		Nr.	3
Operational frequency min max hz do Hz do 20 do IEC Conventional free air thermal current lth A 70 70 Operational current le AC-1 (\$40°C) A 70 AC-1 (\$55°C) A 60 AC-1 (\$55°C) A 40 AC-3 (\$4400 ×55°C) A 40 AC-3 (\$4400 ×55°C) A 40 AC-4 (4000) A 24 AC-3 (\$4400 × 55°C) A 40 AC-4 (4000) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 A000 kW 18.5 A15V kW 22 A40V kW 30 A40V kW 46 A40V kW 40 A40V kW 46 A40V kW 40 A40V kW 46 A40V kW 40 A40V kW 46 A40V kW 40 A40V kW 46 A40V kW 40	Rated insulation voltage Ui IEC/EN		V	1000
Min Hz 25 max Hz 400 EC Conventional free air thermal current lth	Rated impulse withstand voltage Uimp		kV	8
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	25
Operational current le AC-1 (≤40°C) A 70 AC-1 (≤55°C) A 60 AC-1 (≤55°C) A 50 AC-1 (≤55°C) A 40 AC-1 (≤50°C) A 20 AC-1 (≤50°C) A 40 AC-1 (≤40°C) A 24 AC-1 (≤40°C) AC-1		max	Hz	400
AC-1 (≤40°C) A 70 AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-1 (≤70°C) A 40 AC-3 (≤440V ≤55°C) A 40 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V kW 18.5 415V A 40 440V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 440V A 40 415V A 40 4415V A 40 4415V A 40 500V A 33 690V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	IEC Conventional free air thermal current Ith		Α	70
AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 440V A 40 500V A 33 690V A 32 1000V A 31 Rated operational power AC-1 (T≤40°C) 230V A 40 440V A 40 500V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 440V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A -	Operational current le			
AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 440V A 40 500V A 33 690V A 32 1000V A 31 Rated operational power AC-1 (T≤40°C) 230V A 40 440V A 40 500V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 440V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A -		AC-1 (≤40°C)	Α	70
AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 415V A 40 440V A 40 500V A 32 500V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V KW 26 400V KW 46 500V KW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		•	Α	60
AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 415V A 40 440V A 40 500V A 32 500V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V KW 26 400V KW 46 500V KW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		•	Α	50
Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 415V A 40 415V A 40 415V A 40 440V A 33 690V A 33 690V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			Α	
Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 415V A 40 415V A 40 500V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series \$\frac{\\$\cupe{2}\\$}{2}\\$ \frac{\\$\cupe{2}\\$}{2}\\$ \\$\cu				24
230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 18.5 8 1000V kW 40 415V kW 40 440V kW 46 500V kW 58 690V kW 79 8 1000V kW 58 690V kW 79 1000V kW 58 690V kW 79 1000V 600V 600	Rated operational power AC-3 (T≤55°C)	,		
400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 440V A 40 415V A 40 440V A 40 440V A 33 690V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A − IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		230V	kW	11
415V kW 22 440V kW 22 500V kW 22 500V kW 30 1000V kW 30 1000V kW 18.5		400V	kW	
A40V kW 22			kW	
690V kW 30 1000V kW 18.5		440V	kW	
690V kW 30 1000V kW 18.5		500V	kW	22
Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 440V A 40 500V A 33 690V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A -		690V	kW	30
230V		1000V	kW	18.5
230V	Rated operational current AC-3 (T≤55°C)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		230V	Α	40
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		400V	Α	40
S00V A 33 690V A 32 1000V A 21		415V	Α	40
Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 79		440V	Α	40
Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 79		500V	Α	33
Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		690V	Α	32
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		1000V	Α	21
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Rated operational power AC-1 (T≤40°C)			
	, , ,	230V	kW	26
EC max current le in DC1 with L/R \leq 1ms with 1 poles in series \leq 24V A 40 48V A 35 75V A 30 110V A 8 220V A -				
EC max current le in DC1 with L/R \leq 1ms with 1 poles in series \leq 24V A 40 48V A 35 75V A 30 110V A 8 220V A -		500V	kW	58
		690V	kW	
	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	·	≤24V	Α	40
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				
220V A − IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series				
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series				_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	•	≤24V	Α	48



	48V	Α	48
	75V	Α	45
	110V	Α	42
	220V	Α	5
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		,,	
120 max current to in 201 with 2/102 miles with 5 poics in series	≤24V	Α	48
	≥24 V 48 V		
		A	48
	75V	Α	48
	110V	Α	44
	220V	Α	56
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	_
	48V	Α	_
	75V	Α	_
	110V	Α	_
	220V	Α	70
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	27
	48V	A	23
	75V	A	19
	75V 110V	A	
			3
150	220V	Α	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	32
	48V	Α	30
	75V	Α	27
	110V	Α	22
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
· ·	≤24V	Α	40
	48V	Α	40
	75V	Α	38
	110V	A	27
	220V	A	32
IFC many asymment to in DC2 DC5 with L/D < 45 man with A notes in coming	220 V		32
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	40.41.4		
	≤24V	A	_
	48V	Α	_
	75V	Α	_
	110V	Α	_
	220V	Α	40
Short-time allowable current for 10s (IEC/EN60947-1)		Α	400
Protection fuse			
	gG (IEC)	Α	100
	aM (IEC)	Α	50
Making capacity (RMS value)	\ -/	Α	400
Breaking capacity at voltage		,,	
breaking capacity at voltage	440V	۸	320
		A	
	500V	A	265
	690V	A	256
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)			
	Ith	W	3.9
	AC-3	W	1.3
Tightening torque for terminals			



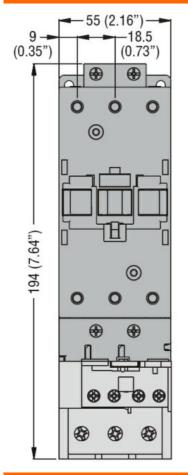
		min	Nm	4
		max	Nm	5
		min	lbin	2.95
		max	Ibin	3.69
Tightoning torque for	ooil tarminal	Пах	10111	0.00
Tightening torque for	con terminal			
		min	Nm	0.8
		max	Nm	1
		min	lbin	0.8
		max	lbin	0.74
Max number of wires	simultaneously connectable		Nr.	2
Conductor section	•			
	AWG/Kcmil			
	AWO/Remiii	may		2
		max		
	Flexible w/o lug conductor section	<u>.</u>		
		min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
	-	min	mm²	1.5
		max	mm²	35
Power terminal protect	ction according to IEC/EN 60529	max		IP20 front
	ction according to IEC/EN 00329			IF ZO HOIR
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Finding at				Screw / DIN rail
Fixing				35mm
Weight			g	1060
Conductor section				
Conductor Section	AWG/kcmil conductor section			
	AVVG/RCMII Conductor Section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1500000
Safety related data				
	0d according to EN/ISO 13489-1			
		rated load	cycles	1500000
		mechanical load	-	
Missas aantata aan 1	in a to IEO/EN 000474 4 4	medianida idad	cycles	15000000
	ing to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 5	50/60Hz, 60Hz			_
-		min	V	100
		max	V	250
AC operating voltage		ших	•	
Ao operating voltage	of EO/GOLIZ and navigated at EOLIZ			
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80 Us min
		max	%Us	110 Us max
	drop-out			
	•	max	%Us	≤70 Us min
				<u> </u>
	of 50/60Hz coil powered at 60Hz			
	of 50/60Hz coil powered at 60Hz			
	of 50/60Hz coil powered at 60Hz pick-up	سن ميد	0/115	90 Ho min
	-	min	%Us	80 Us min

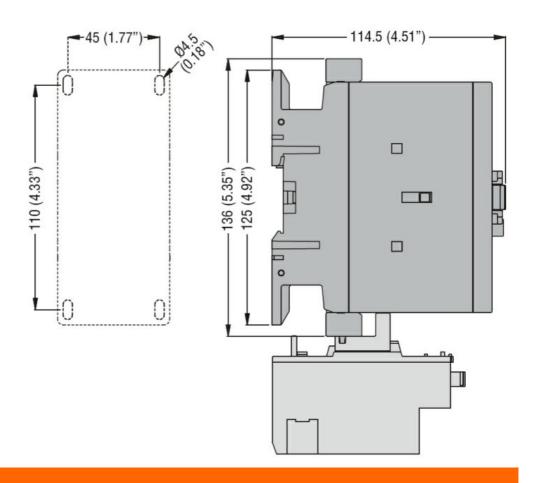


			may	0/116	110 He may
		drop-out	max	%Us	110 Us max
			max	%Us	≤70 Us min
AC average coil consu	•	= 0.1.1			
	of 50/60Hz coil po	wered at 50Hz	ام سیما	١/٨	25 420
			in-rush holding	VA VA	35120 1.53.7
	of 50/60Hz coil po	wered at 60Hz	Holding	٧٨	1.55.1
	01 00/001 12 0011 po	Worlda dt 001 12	in-rush	VA	35120
			holding	VA	1.53.7
Dissipation at holding :	≤20°C 50Hz		<u> </u>	W	12.5
DC coil operating					
DC rated control voltage	ge				
			min	V	100
			max	V	250
DC operating voltage	niek um				
	pick-up		min	%Us	80 Us min
			max	%Us	110 Us max
	drop-out		παλ	,,,,,	110 00 max
	~		max	%Us	≤70 Us min
Average coil consump	tion ≤20°C				
			in-rush	W	2368
			holding	W	1.21,9
Max cycles frequency					
Mechanical operation				cycles/h	1500
Operating times					
Avaraga tima for Ha ac	netral				
Average time for Us co					
Average time for Us co	ontrol in AC	Closing NO			
Average time for Us co		Closing NO	min	ms	12
Average time for Us co		Closing NO	min max	ms ms	12 28
Average time for Us co		Closing NO Opening NO			
Average time for Us co		-			28
Average time for Us co	in AC	-	max	ms	28
Average time for Us co		Opening NO	max min	ms ms	28
Average time for Us co	in AC	-	max min max	ms ms ms	28 8 22
Average time for Us co	in AC	Opening NO	max min max min	ms ms ms	28 8 22 40
Average time for Us co	in AC	Opening NO Closing NO	max min max	ms ms ms	28 8 22
Average time for Us co	in AC	Opening NO	max min max min	ms ms ms	28 8 22 40
Average time for Us co	in AC	Opening NO Closing NO	max min max min max	ms ms ms	28 8 22 40 85
UL technical data	in AC	Opening NO Closing NO Opening NO	max min max min max min max	ms ms ms	28 8 22 40 85 20
	in AC	Opening NO Closing NO Opening NO	max min max min max min max	ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data	in AC	Opening NO Closing NO Opening NO	max min max min max min max at 480V	ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data Full-load current (FLA)	in AC in DC ofor three-phase AC	Opening NO Closing NO Opening NO	max min max min max min max	ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data	in AC in DC of for three-phase AC	Opening NO Closing NO Opening NO motor	max min max min max min max at 480V	ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data Full-load current (FLA)	in AC in DC ofor three-phase AC	Opening NO Closing NO Opening NO motor	min max min max min max at 480V at 600V	ms ms ms ms ms ms	28 8 22 40 85 20 55 40 32
UL technical data Full-load current (FLA)	in AC in DC of for three-phase AC	Opening NO Closing NO Opening NO motor	max min max min max min max at 480V at 600V	ms ms ms ms ms A A	28 8 22 40 85 20 55 40 32
UL technical data Full-load current (FLA)	in AC in DC for three-phase AC erformance for single-phase A	Opening NO Closing NO Opening NO motor	min max min max min max at 480V at 600V	ms ms ms ms ms ms	28 8 22 40 85 20 55 40 32
UL technical data Full-load current (FLA)	in AC in DC of for three-phase AC	Opening NO Closing NO Opening NO motor	max min max min max min max at 480V at 600V	ms ms ms ms ms A A	28 8 22 40 85 20 55 40 32
UL technical data Full-load current (FLA)	in AC in DC for three-phase AC erformance for single-phase A	Opening NO Closing NO Opening NO motor	max min max min max min max at 480V at 600V 110/120V 230V	ms ms ms ms ms ms hs	28 8 22 40 85 20 55 40 32 3 7.5
UL technical data Full-load current (FLA)	in AC in DC for three-phase AC erformance for single-phase A	Opening NO Closing NO Opening NO motor	max min max min max min max at 480V at 600V 110/120V 230V 230V	ms ms ms ms ms ms HP HP	28 8 22 40 85 20 55 40 32 3 7.5



		575/600V	HP	30
General USE				
	Contactor			
		AC current	Α	70
Short-circuit protection	on fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	150
		Fuse class		J
	Standard fault	. 466 61465		
	Claridara radic	Short circuit current	kA	5
		Fuse rating	A	150
		Fuse class	, ,	RK5
Ambient conditions		, ace diaec		1110
Temperature				
Tomporataro	Operating temperature			
	Operating temperature	min	°C	-40
		max	°C	70
	Storage temperature	max		70
	Otorage temperature	min	°C	-50
		max	°C	80
Max altitude		IIIdA	 	3000
Resistance & Protect	tion		111	3000
Pollution degree				3
Dimensions				J

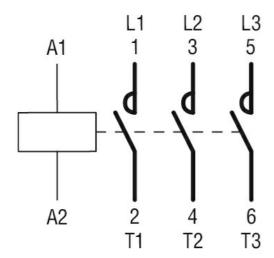




Wiring diagrams

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 40A, AC/DC COIL, 100...250VAC/DC



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching