



Product designation			Power contactor
Product type designation Contact characteristics			B310
Number of poles		Nr.	4
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		А	450
Operational current le			
	AC-1 (≤40°C)	А	450
	AC-1 (≤55°C)	А	370
	AC-1 (≤70°C)	А	300
	AC-3 (≤440V ≤55°C)	А	320
	AC-4 (400V)	А	150
Rated operational power AC-1 (T≤40°C)			
	230V	kW	158
	400V	kW	270
	500V	kW	350
	690V	kW	488
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series			
	75V	А	375
	110V	А	195
	220V	А	
	330V	A	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	75V	A	375
	110V	A	350
	220V	A	300
	330V	A	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			075
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	300
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series	460V	A	
$1 \ge 0$ max current is in DOT with $L/T \ge 1005$ with 4 points in selles	75V	۸	375
	75V 110V	A A	375 350
	220V	A	350
	330V	A	350
	460V	A	300
	400 V	A	300



IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	А	310
	110V	A	170
	220V	A	
	330V	A	
	460V	A	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
· ·	75V	А	310
	110V	А	290
	220V	А	230
	330V	А	
	460V	А	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	А	310
	110V	А	310
	220V	А	290
	330V	А	230
	460V	А	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	А	310
	110V	А	310
	220V	А	310
	330V	А	230
	460V	А	230
Short-time allowable current for 10s (IEC/EN60947-1)		А	2900
Protection fuse			
	gG (IEC)	А	500
	aM (IEC)	Α	400
Making capacity (RMS value)		Α	3150
Breaking capacity at voltage			
	440V	А	3000
	500V	А	2700
	690V	A	2520
Resistance per pole (average value)		mΩ	0.2
Power dissipation per pole (average value)			
	Ith	W	40.5
	AC3	W	20
Tightening torque for terminals			05
	min	Nm	35
	max	Nm	35
	min	lbin Ibin	25.8
Tightoning targue for soil terminal	max	lbin	25.8
Tightening torque for coil terminal		N I.e.	4
	min	Nm	1
	max	Nm	1
	min	lbin Ibin	0.74
Max number of wires simultaneously connectable	max	lbin Nr.	0.74
Max number of wires simultaneously connectable		INI.	۷
Conductor section			
AWG/Kcmil	mov		2x 3/0
Power terminal protection according to IEC/EN 60520	max		 IP00
Power terminal protection according to IEC/EN 60529 Mechanical features			



**11B31040024** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 24VAC/DC

Operating position

Operating position	normal		Vertical plan
	allowable		±30°
Fixing			Screw
Veight		g	1136
Conductor section			
AWG/kcmil conductor section			0.4.0/0
Decretions	max		2x 3/0
Dperations Mechanical life		ovoloo	10000000
Electrical life		cycles cycles	700000
Safety related data		cycles	700000
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	700000
	mechanical load	cycles	1000000
Mirror contats according to IEC/EN 609474-4-1	meenamearidad	Cycles	yes
EMC compatibility			yes
AC coil operating			yes
Rated AC voltage at 50/60Hz		V	24
AC operating voltage		•	
of 50/60Hz coil powered at 50Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	60
of 50/60Hz coil powered at 60Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	60
of 60Hz coil powered at 60Hz			
pick-up		0/11	
	min	%Us	80
	max	%Us	110
drop-out	min	%Us	20
	min max	%Us %Us	20 60
AC average coil consumption at 20°C	IIIdX	/005	00
of 50/60Hz coil powered at 50Hz			
01 00/00112 0011 powered at 00112	in-rush	VA	300
	holding	VA VA	10
of 50/60Hz coil powered at 60Hz	noiding	•7 (	
	in-rush	VA	300
	holding	VA	10
Dissipation at holding ≤20°C 50Hz	lioiang	W	10
DC coil operating			
DC rated control voltage		V	24
DC operating voltage		•	_ ·

pick-up

ENERGY AND AUTOMATION

**11B31040024** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 24VAC/DC

min         %Us         80           drop-out         max         %Us         80           Average coil consumption s20°C         in-rush         W         300           Max cycles frequency         w         10           Average time for Us control         in AC         Closing NO           in DC         Closing NO         min         ms           min< ms<         80         max         ms           Opening NO         min         ms         10           min< ms         75         max         75           UL technical data         max         75         max           Full-load current (FLA) for three-phase AC motor         at 800V						
drop-out         min         %/Us         20           Average coil consumption ≤20°C         in-rush         W         300           Max cycles frequency         W         300           Max cycles frequency         W         10           Max cycles frequency         V         10           Mechanical operation         cycles/h         2400           Operating time for Us control         min         ms         80           Average time for Us control         min         ms         80           Max cycles frequency         Opening NO         min         ms         80           Max cycles frequency         Closing NO         min         ms         80           Max cycles frequency         Closing NO         min         ms         80           min DC         Closing NO         min         ms         80           min ms         30         max         ms         120           Opening NO         min         ms         30         max           Max         120         min         ms         30           Opening NO         min         ms         30         120           Opening NO         at 4800V         A				min	%Us	80
min         %Us         20 max           Average coll consumption \$20°C         in-rush W         300           Average coll consumption \$20°C         in-rush W         300           Max cycles frequency         W         10           Max cycles frequency         cycles/h         2400           Operating times         cycles/h         2400           Average time for Us control         min         ms         80           Max cycles frequency         min         ms         80           Average time for Us control         min         ms         80           Max         ms         75         120           Opening NO         min         ms         30           max         ms         75         120           Opening NO         min         ms         30           max         ms         75         120           Opening NO         min         ms         30           max         ms         75         120           UL technical data         ms         75           Full-load current (FLA) for three-phase AC motor         at 480V         A         301           Vielded mechanical performance         for three-phase AC				max	%Us	110
max         %Us         60           Average coil consumption ≤20°C         in-rush holding         W         300           Max cycles frequency         v         10           Max cycles frequency         cycles/h         2400           Operating times         cycles/h         2400           Average time for Us control         max         ms         80           Max cycles frequency         max         ms         120           Operating times         0         max         ms         120           Max cycles frequency         max         ms         120           Max field         Closing NO         min         ms         80           max         ms         120         0         0           Opening NO         min         ms         30         0           max         ms         120         0		drop-out				
Average coll consumption \$20°C         in-rush holding         W         300 holding           Max cycles fequency         cycles/h         2400           Mechanical operation         cycles/h         2400           Operating times         cycles/h         2400           Average time for Us control         in AC         min         ms         80           Closing NO         min         ms         30         max         ms         120           Opening NO         min         ms         30         max         ms         120           UL technical data         max         ms         120         max         120           Full-load current (FLA) for three-phase AC motor         200/208V         HP         100         220/208V         HP         120           200/208V				min		
in-rush holding         W         300 holding           Max cycles frequency Mechanical operation         cycles/h         2400           Operating times         cycles/h         2400           Average time for Us control in AC         min         ms         80 max           Image: Second control in AC         min         ms         80 max           Image: Second control in DC         min         ms         80 max           Opening NO         min         ms         80 max           Mechanical deta         max         ms         120           Closing NO         min         ms         30 max         ms           Vielded for three-phase AC motor         at 480V         A         301 at 600V         220/203V           Yielded mechanical performance for three-phase AC motor         200/208V         HP         100 220/230V         125           General USE         Contactor         A         450         50         50           General USE         Contactor         A         450         50           Short-circuit protection fuse, 600V         Standard fault         Short circuit current Fuse rating Fuse class         A         800 Fuse class         L           Anbient conditions         C         -50				max	%Us	60
holding         W         10           Max cycles frequency         cycles/h         2400           Operating times	Average coil consump	tion ≤20°C				
Max cycles frequency         cycles/h         2400           Mechanical operating time for Us control in AC         in AC         in AC           Closing NO         min         ms         80           Opening NO         min         ms         30           in DC         Closing NO         min         ms         30           Opening NO         min         ms         30           in DC         Closing NO         min         ms         120           Opening NO         min         ms         30         max         ms         75           UL technical data         rs         75         rs         120         min         ms         30           Full-load current (FLA) for three-phase AC motor         at 480V         A         301         at 600V         A         289         Yielded mechanical performance         rs         75         00         220/208V         HP         100         <						
Mechanical operation         cycles/h         2400           Operating times				holding	W	10
Operating times           Average time for Us control           in AC           Closing NO           max         ms           0pening NO           max         ms           in DC         Closing NO           Closing NO         min           max         ms           in DC         Closing NO           Opening NO         min           max         ms           Opening NO         min           max         ms           0pening NO         min           max         ms           Closing NO         min           min         ms           0pening NO         min           min<						
Average time for Us control         in AC					cycles/h	2400
in AC Closing NO min ms 80 max ms 75 in DC Closing NO min ms 80 max ms 120 0pening NO min ms 80 max ms 120 0pening NO min ms 30 max ms 75 UL technical data Full-load current (FLA) for three-phase AC motor for three-phase AC motor 14 480V A 301 at 600V A 289 Yielded mechanical performance for three-phase AC motor 200/208V HP 125 4660/480V HP 250 575/600V HP 125 4660/480V HP 250 575/600V HP 300 General USE Contactor AC current A 450 Short-circuit protection fuse, 600V Standard fault Short-circuit protection fuse, 600V Standard fault A 80 Fuse class A 80 Fuse class A 80 Fuse class A 80 Fuse class A 80 Fuse class A 80 Fuse class A 80 A 80						
$\begin{tabular}{l l l l l l l l l l l l l l l l l l l $	Average time for Us co					
$\begin{tabular}{ c c c c c } & & & & & & & & & & & & & & & & & & &$		IN AC				
$\begin{array}{c c c c c c } & & & & & & & & & & & & & & & & & & &$			Closing NO			0.0
Opening NO         min         ms         30 max         ms         75           in DC         Closing NO         min         ms         80 max         ms         120           Opening NO         min         ms         30 max         ms         120           Opening NO         min         ms         30 max         ms         30 max           Vielded mechanical performance for three-phase AC motor         at 480V         A         301           Vielded mechanical performance for three-phase AC motor         200/208V         HP         100           220/230V         HP         125         460/480V         HP         250           General USE         Contactor         A         450         50           Short-circuit protection fuse, 600V standard fault         Short circuit current Fuse rating         A         800           Ambient conditions         L         L         L         50           Temperature         Max         Temperature         Max         60           Max altitude         max         °C         -50         -60						
$\begin{tabular}{ c c c c } \hline min & ms & 30 \\ max & ms & 75 \\ \hline min & ms & 80 \\ max & ms & 120 \\ \hline min & ms & 30 \\ max & ms & 120 \\ \hline max & ms & 120 \\ \hline max & ms & 120 \\ \hline max & ms & 30 \\ max & ms & 75 \\ \hline \hline UL technical data & & & & & & & & & & & & & & & & & & $			Opening NO	max	ms	120
max         ms         75           in DC         Closing NO         min         ms         80           max         ms         120           Opening NO         min         ms         30           max         ms         75           UL technical data         ms         30           Full-load current (FLA) for three-phase AC motor         at 480V         A         301           Yielded mechanical performance         at 600V         A         289           Yielded mechanical performance         200/208V         HP         100           220/203V         HP         125         460/480V         HP         300           General USE         Contactor         A         450         575/600V         HP         300           General USE         Contactor         A         450         5			Opening NO			20
in DC         Closing NO         min         ms         80           Opening NO         max         ms         120           Min         ms         30           max         ms         75           UL technical data         read         read           Full-load current (FLA) for three-phase AC motor         at 480V         A         301           Yielded mechanical performance         for three-phase AC motor         200/208V         HP         100           220/230V         HP         125         460/480V         HP         250           General USE         Contactor         A         450           Short-circuit protection fuse, 600V         Standard fault         Short circuit current         kA         18           Fuse rating         A         800         Fuse class         L           Ambient conditions         Temperature         max         °C         -70           Storage temperature         min         °C         -50         max         °C         70           Storage temperature         min         °C         -60         max         °C         80           Max altitude         min         °C         -60         max						
$\begin{array}{c c} \label{eq:constraint} \begin{tabular}{lllllllllllllllllllllllllllllllllll$		in DC		max	ms	()
$\begin{array}{c c c c c c } & & & & & & & & & & & & & & & & & & &$			Closing NO			
Max         max         ms         120           Opening NO         min         ms         30           max         ms         75           UL technical data         ms         75           Full-load current (FLA) for three-phase AC motor         at 480V         A         289           Yielded mechanical performance         at 600V         A         289           Yielded mechanical performance         200/208V         HP         100           220/2030V         HP         125         460/480V         HP         250           General USE         Contactor         200/208V         HP         125           Short-circuit protection fuse, 600V         Standard fault         A         450           Short-circuit protection fuse, 600V         Standard fault         Short circuit current         KA         18           Fuse class         L         Example class         L         Example class         L           Ambient conditions         Example class         L         Example class         L           Temperature         min         °C         70         Storage temperature         Final           Max altitude         min         °C         800         Example class <td></td> <td></td> <td></td> <td></td> <td>me</td> <td>80</td>					me	80
Opening NO         min         ms         30 max         ms         30 max           UL technical data						
$\begin{array}{c ccccc} & & & & & & & & & & & & & & & & &$				Παλ	1115	120
max         ms         75           UL technical data			Opening NO	min	me	30
UL technical data         Full-load current (FLA) for three-phase AC motor         at 480V       A       301 at 600V         A       289         Yielded mechanical performance for three-phase AC motor       200/208V       HP       100 220/230V       HP       125 460/480V         Z00/208V       HP       100 220/230V       HP       125 460/480V       HP       200         General USE       Contactor       A       450         Short-circuit protection fuse, 600V Standard fault       A       450         Short-circuit protection fuse, 600V Standard fault       Short circuit current Fuse rating       A       800 Fuse class         Ambient conditions       Temperature       min       °C       -50 max       °C         More turne       Min       °C       -60 max       °C       80         Max altitude       m       3000       300						
Full-load current (FLA) for three-phase AC motor       at 480V       A       301         At 600V       A       289         Yielded mechanical performance       for three-phase AC motor       200/208V       HP       100         220/230V       HP       100       220/230V       HP       125         460/480V       HP       250       575/600V       HP       300         General USE       Contactor       A       450         Short-circuit protection fuse, 600V       Standard fault       A       450         Short-circuit current       KA       18       Fuse rating       A       800         Fuse class       L       A       450       A       A       A         Ambient conditions       Fuse class       L       A       A       A       A         Temperature       Operating temperature       min       °C       -50       A       °C       70         Storage temperature       min       °C       -50       A       A       A         Max altitude       m       3000       A       A       A       A       A	UL technical data			Παλ	1113	15
at 480V         A         301           at 600V         A         289           Yielded mechanical performance for three-phase AC motor         200/208V         HP         100           220/230V         HP         125         460/480V         HP         250           575/600V         HP         300         300         300         300           General USE         Contactor         AC current         A         450           Short-circuit protection fuse, 600V         Standard fault         Short circuit current         KA         18           Fuse rating         A         800         Fuse class         L           Ambient conditions         T         T         T           Temperature         0         -         -         -           Max altitude         min         °C         -         -		) for three-phase AC mo	tor			
at 600V         A         289           Yielded mechanical performance for three-phase AC motor         200/208V         HP         100           220/230V         HP         125         460/480V         HP         250           200/208V         HP         125         460/480V         HP         300           General USE         Contactor         A         450           Short-circuit protection fuse, 600V         Standard fault         A         450           Short-circuit protection fuse, 600V         Standard fault         KA         18           Fuse rating         A         800         E           Fuse class         L         A         450           Short-circuit protection fuse, 600V         Standard fault         KA         18           Fuse rating         A         800         E         E           Ambient conditions         L         L         A         A         18           Temperature         Operating temperature         min         °C         -50         To           Storage temperature         min         °C         -50         To         -50         To           Max altitude         min         3000         min		,		at 480V	А	301
Yielded mechanical performance for three-phase AC motor       200/208V       HP       100         220/230V       HP       125       460/480V       HP       250         General USE       575/600V       HP       300         General USE       Contactor       AC current       A       450         Short-circuit protection fuse, 600V       Standard fault       Short circuit current       kA       18         Fuse rating       A       800       Fuse class       L         Ambient conditions       Temperature       Min       °C       -50         Temperature       Operating temperature       min       °C       -50         Max altitude       min       °C       -60       max       °C       80						
for three-phase AC motor         200/208V         HP         100           220/230V         HP         125         460/480V         HP         250           General USE         575/600V         HP         300         300           General USE         Contactor         AC current         A         450           Short-circuit protection fuse, 600V         Standard fault         KA         18           Fuse rating         A         800         Fuse class         L           Ambient conditions         X         18         Storage temperature         Temperature         Not circuit current         KA         18           Temperature         Operating temperature         X         70         300         300           Max attitude         min         °C         -60         -60         -60	Yielded mechanical pe	erformance				
200/208V       HP       100         220/230V       HP       125         460/480V       HP       250         575/600V       HP       300         General USE         Contactor         AC current       A         Short-circuit protection fuse, 600V         Standard fault         Short-circuit current       KA       18         Fuse rating       A       800         Fuse class       L         Ambient conditions         Temperature         Operating temperature         Min       °C       -50         Min       °C       -50         min       °C       -60         Max altitude       m       3000			otor			
220/230V         HP         125           460/480V         HP         250           575/600V         HP         300           General USE         Contactor         AC current         A         450           Short-circuit protection fuse, 600V         Standard fault         Short circuit current         KA         18           Fuse rating         A         800         Fuse rating         A         800           Fuse class         L         Ambient conditions         L         Ambient conditions         C         70           Temperature         Operating temperature         min         °C         -50         max         °C         70           Storage temperature         min         °C         -60         max         °C         80           Max attitude         m         3000         m         3000         -60				200/208V	HP	100
460/480V         HP         250           General USE         575/600V         HP         300           General USE         AC current         A         450           Short-circuit protection fuse, 600V         Standard fault         A         450           Short-circuit protection fuse, 600V         Standard fault         KA         18           Fuse rating         A         800         Euse class         L           Ambient conditions         Fuse class         L         A           Temperature         Operating temperature         min         °C         -50           Max altitude         min         °C         -60         max         °C         80						
General USE     Contactor       AC current     A       AC current     A       Short-circuit protection fuse, 600V       Standard fault       Short circuit current     kA       Fuse rating     A       800       Fuse rating     A       800       Fuse class     L   Ambient conditions       Temperature       Operating temperature       min     °C       -50       max     °C       Storage temperature       min     °C       -60       max     °C       800						
General USE       Contactor       AC current       A       450         Short-circuit protection fuse, 600V       Standard fault       Short circuit current       kA       18         Fuse rating       A       800       Fuse rating       A       800         Fuse class       L       L       Ambient conditions       L         Temperature       Operating temperature       min       °C       -50         Max altitude       min       °C       -60       max       °C       80						
Contactor       AC current       A       450         Short-circuit protection fuse, 600V       Standard fault       KA       18         Standard fault       Short circuit current       kA       18         Fuse rating       A       800       800         Fuse class       L       L         Ambient conditions       L       L         Temperature       min       °C       -50         Max altitude       min       °C       -60         Max altitude       min       3000       300	General USE					
AC current     A     450       Short-circuit protection fuse, 600V Standard fault     Short circuit current     kA     18       Fuse rating     A     800       Fuse rating     A     800       Fuse class     L       Ambient conditions     L       Temperature     min     °C       Operating temperature     min     °C       Storage temperature     min     °C       Max altitude     m     3000		Contactor				
Short-circuit protection fuse, 600V         Standard fault         Short circuit current       kA       18         Fuse rating       A       800         Fuse class       L         Ambient conditions       U         Temperature       0         Operating temperature       min       °C         Storage temperature       min       °C         Max altitude       m       3000				AC current	А	450
Standard fault       Short circuit current       KA       18         Fuse rating       A       800         Fuse class       L         Ambient conditions       L         Temperature       0         Operating temperature       min       °C         Max altitude       min       °C         Max altitude       m       3000	Short-circuit protection	n fuse, 600V				
Fuse rating Fuse class     A     800 L       Ambient conditions     L       Temperature     V     V       Operating temperature     min     °C     -50 max       Storage temperature     min     °C     70       Storage temperature     min     °C     -60 max       Max altitude     m     3000						
Fuse rating Fuse class     A     800 L       Ambient conditions     L       Temperature     V     V       Operating temperature     min     °C     -50 max       Storage temperature     min     °C     70       Storage temperature     min     °C     -60 max       Max altitude     m     3000				Short circuit current	kA	18
Fuse class     L       Ambient conditions						
Temperature       Operating temperature         min       °C       -50         max       °C       70         Storage temperature       min       °C       -60         max       °C       80         Max altitude       m       3000						
Operating temperature       min       °C       -50         max       °C       70         Storage temperature       min       °C       -60         max       °C       80         Max altitude       m       3000	Ambient conditions					
min         °C         -50           max         °C         70           Storage temperature         min         °C         -60           max         °C         80           Max altitude         m         3000	Temperature					
max         °C         70           Storage temperature         min         °C         -60           max         °C         80           Max altitude         m         3000		Operating temperature	e			
Storage temperature       min       °C       -60         max       °C       80         Max altitude       m       3000				min		-50
min         °C         -60           max         °C         80           Max altitude         m         3000				max	<u> </u>	70
max         °C         80           Max altitude         m         3000		Storage temperature				
Max altitude m 3000				min		-60
				max	°C	80
Resistance & Protection					m	3000
	Resistance & Protection	on				

11B31040024The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and<br/>functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

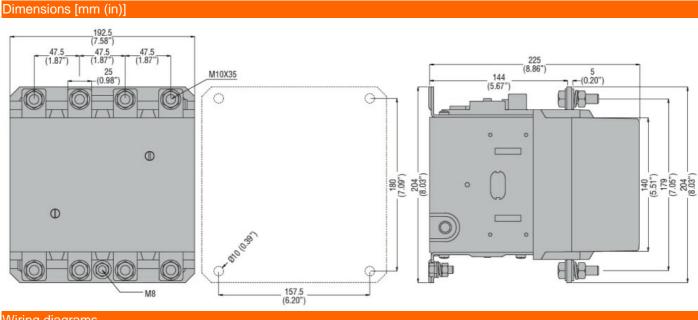


ENERGY AND AUTOMATION

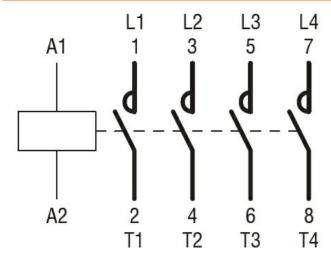
11B31040024 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 24VAC/DC

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### Pollution degree



Wiring diagrams



### Certifications and compliance

Compliance		
	CSA C22.2 n° 60947-1	
	CSA C22.2 n° 60947-4-1	
	IEC/EN 60947-1	
	IEC/EN 60947-4-1	
	UL 60947-1	
	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
ETIM 8.0		EC000066 - Power contactor, AC switching





Product designation			Power contactor
Product type designation			B310
Contact characteristics			
Number of poles		Nr.	4
Rated insulation voltage Ui IEC/EN		<u>V</u>	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			05
	min	Hz	25
IFC Conventional free air thermal aurrent Ith	max	Hz A	400 450
IEC Conventional free air thermal current Ith		A	450
Operational current le	$AC = 1 (< 40^{\circ}C)$	۸	450
	AC-1 (≤40°C) AC-1 (≤55°C)	A A	450 370
	AC-1 (≤33°C) AC-1 (≤70°C)	A	300
	AC-3 (≤440V ≤55°C)	A	320
	AC-4 (400V)	A	150
Rated operational power AC-1 (T≤40°C)	70 + (+007)	Λ	100
	230V	kW	158
	400V	kW	270
	500V	kW	350
	690V	kW	488
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	75V	А	375
	110V	А	195
	220V	А	
	330V	А	
	460V	А	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	75V	А	375
	110V	А	350
	220V	А	300
	330V	А	
	460V	Α	
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	75V	А	375
	110V	А	350
	220V	А	350
	330V	A	300
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series		-	
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300



IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 1 poles in series			
	75V	А	310
	110V	А	170
	220V	А	
	330V	А	
	460V	Α	
EC max current le in DC3-DC5 with $L/R \le 15$ ms with 2 poles in series			
	75V	А	310
	110V	А	290
	220V	А	230
	330V	А	
	460V	Α	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series			
	75V	А	310
	110V	А	310
	220V	А	290
	330V	А	230
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series			
	75V	А	310
	110V	А	310
	220V	А	310
	330V	А	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	А	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage		,,	0100
Stouking oupdoiry at voltago	440V	А	3000
	500V	A	2700
	690V	A	2520
Resistance per pole (average value)	0001	mΩ	0.2
Power dissipation per pole (average value)		11132	0.2
	lth	W	40.5
	AC3	W	20
Tightening torque for terminals	A03	vv	20
nghtening tolque for terminals	min	Nim	35
	min max	Nm Nm	35
			25.8
	min	lbin Ibin	
	max	lbin	25.8
Tightening torque for coil terminal		N I.a.:	4
	min	Nm	1
	max	Nm	1
	min	lbin Ibin	0.74
	max	Ibin	0.74
			2
•		Nr.	
Conductor section		Nr.	
•		Nr.	
Conductor section AWG/Kcmil	max	Nr.	2x 3/0
Max number of wires simultaneously connectable Conductor section AWG/Kcmil Power terminal protection according to IEC/EN 60529 Mechanical features		Nr.	



**11B31040048** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 48VAC/DC

Operating position

Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw
Weight		g	1110
Conductor section			
AWG/kcmil conductor section			
	max		2x 3/0
Operations			
Mechanical life		cycles	1000000
Electrical life		cycles	700000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	700000
	mechanical load	cycles	1000000
Mirror contats according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	48
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	60
of 50/60Hz coil powered at 60Hz			
pick-up		0/11-	
	min	%Us	80
drap out	max	%Us	110
drop-out	min	%Us	20
	min	%Us %Us	20 60
of 60Hz coil powered at 60Hz	max	/005	00
pick-up			
pick-up	min	%Us	80
	max	%Us	110
drop-out	IIIdX	/003	110
	min	%Us	20
	max	%Us	60
AC average coil consumption at 20°C	тах	,	
of 50/60Hz coil powered at 50Hz			
	in-rush	VA	300
	holding	VA	10
of 50/60Hz coil powered at 60Hz			
	in-rush	VA	300
	holding	VA	10
Dissipation at holding ≤20°C 50Hz		W	10
DC coil operating			-
DC rated control voltage		V	48
DC operating voltage			

pick-up

ENERGY AND AUTOMATION

Resistance & Protection

**11B31040048** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 48VAC/DC

			min	%Us	80
			max	%Us	110
	drop-out				
			min	%Us	20
			max	%Us	60
Average coil consum	ption ≤20°C				
			in-rush	W	300
Max avalaa fraguana			holding	W	10
Max cycles frequency Mechanical operation				cycles/h	2400
Operating times	I			Cycles/II	2400
Average time for Us	control				
	in AC				
		Closing NO			
		5	min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
	in DC				
		Closing NO			
			min	ms	80
			max	ms	120
		Opening NO	min	me	30
			max	ms ms	30 75
UL technical data			max	1113	15
	A) for three-phase AC r	notor			
, ,	, ,		at 480V	А	301
			at 600V	А	289
Yielded mechanical p	performance				
	for three-phase AC	motor			
			200/208V	HP	100
			220/230V	HP	125
			460/480V	HP	250
0			575/600V	HP	300
General USE	Contestas				
	Contactor			٨	450
Short-circuit protoctic	an fuse 600V		AC current	A	450
Short-circuit protection	Standard fault				
	Stanuaru idult		Short circuit current	kA	18
			Fuse rating	A	800
			Fuse class		L
Ambient conditions					
Temperature					
	Operating temperat	ure			
	- •		min	°C	-50
			max	°C	70
	Storage temperatur	e			
	Otorage temperatur				
	otorage temperatur		min	°C	-60
Max altitude	otorage temperatur		min max	°C °C m	-60 80 3000

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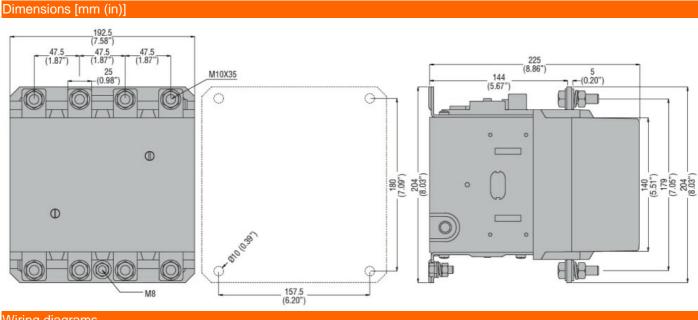


ENERGY AND AUTOMATION

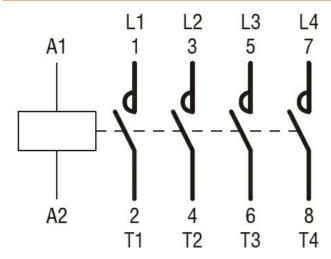
11B31040048 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 48VAC/DC

3

### Pollution degree



Wiring diagrams



### Certifications and compliance

Compliance		
	CSA C22.2 n° 60947-1	
	CSA C22.2 n° 60947-4-1	
	IEC/EN 60947-1	
	IEC/EN 60947-4-1	
	UL 60947-1	
	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
ETIM 8.0		EC000066 - Power contactor, AC switching





Product designation			Power contactor
Product type designation			B310
Contact characteristics			
Number of poles		Nr.	4
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	450
Operational current le			450
	AC-1 (≤40°C)	A	450
	AC-1 (≤55°C)	A	370
	AC-1 (≤70°C)	A	300
	AC-3 (≤440V ≤55°C)	A	320
	AC-4 (400V)	A	150
Rated operational power AC-1 (T≤40°C)	0001/		
	230V	kW	158
	400V	kW	270
	500V	kW	350
	690V	kW	488
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series			
	75V	A	375
	110V	A	195
	220V	A	
	330V	A	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			075
	75V	A	375
	110V	A	350
	220V	A	300
	330V	A	
IFO many summer to in DO4 with 1/D < 4max with 2 males in a miss	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series		^	075
	75V	A	375
	110V	A	350
	220V	A	350
	330V 460V	A	300
IEC may autrant to in DC1 with 1/D < 1mg with 1 nation in action	40UV	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series		^	075
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300



IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 1 poles in series			
	75V	А	310
	110V	А	170
	220V	А	
	330V	А	
	460V	Α	
EC max current le in DC3-DC5 with $L/R \le 15$ ms with 2 poles in series			
	75V	А	310
	110V	А	290
	220V	А	230
	330V	А	
	460V	Α	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series			
	75V	А	310
	110V	А	310
	220V	А	290
	330V	А	230
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series			
	75V	А	310
	110V	А	310
	220V	А	310
	330V	А	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	А	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage		,,	0100
Stouking oupdoiry at voltago	440V	А	3000
	500V	A	2700
	690V	A	2520
Resistance per pole (average value)	0001	mΩ	0.2
Power dissipation per pole (average value)		11132	0.2
	lth	W	40.5
	AC3	W	20
Tightening torque for terminals	A03	vv	20
nghtening tolque for terminals	min	Nim	35
	min max	Nm Nm	35
			25.8
	min	lbin Ibin	
	max	lbin	25.8
Tightening torque for coil terminal		N I.a.:	4
	min	Nm	1
	max	Nm	1
	min	lbin Ibin	0.74
	max	Ibin	0.74
			2
•		Nr.	
Conductor section		Nr.	
•		Nr.	
Conductor section AWG/Kcmil	max	Nr.	2x 3/0
Max number of wires simultaneously connectable Conductor section AWG/Kcmil Power terminal protection according to IEC/EN 60529 Mechanical features		Nr.	



**11B31040060** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 60VAC/DC

Operating position

Operating position	normal		Vertical plan
	allowable		±30°
Fixing			Screw
Weight		g	1110
Conductor section			
AWG/kcmil conductor section			0 0 10
	max		2x 3/0
Dperations			4000000
Mechanical life		cycles	1000000
Electrical life		cycles	700000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	700000
	mechanical load	cycles	1000000
Mirror contats according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
AC coil operating		.,	
Rated AC voltage at 50/60Hz		V	60
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	60
of 50/60Hz coil powered at 60Hz			
pick-up		0/11-	00
	min	%Us	80
dram out	max	%Us	110
drop-out	min	%Us	20
	min	%Us %Us	20 60
of 60Hz coil noward at 60Hz	max	7005	60
of 60Hz coil powered at 60Hz			
pick-up	min	%Us	80
	max	%Us %Us	80 110
drop-out	IIIdX	/005	110
orop-out	min	%Us	20
	max	%Us	60
AC average coil consumption at 20°C	max	/000	
of 50/60Hz coil powered at 50Hz			
	in-rush	VA	300
	holding	VA	10
of 50/60Hz coil powered at 60Hz	Totality	v/ \	
	in-rush	VA	300
	holding	VA	10
Dissipation at holding ≤20°C 50Hz	Totalig	W	10
DC coil operating		• •	
DC rated control voltage		V	60
DC operating voltage		v	

pick-up

ENERGY AND AUTOMATION

Resistance & Protection

**11B31040060** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 60VAC/DC

				0/11-	00
			min max	%Us %Us	80 110
	drop-out		IIIdA	/003	110
			min	%Us	20
			max	%Us	60
Average coil consum	ption ≤20°C				
			in-rush	W	300
			holding	W	10
Max cycles frequency				/	0.400
Mechanical operation Operating times				cycles/h	2400
Average time for Us of	control				
	in AC				
		Closing NO			
		0	min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
	in DC	Closing NO			
			min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
UL technical data					
Full-load current (FLA	<ol> <li>for three-phase AC r</li> </ol>	notor	at (00)/	٨	204
			at 480V at 600V	A A	301 289
Yielded mechanical p	erformance		at 000 v	~	209
noidea moonamoarp	for three-phase AC	motor			
			200/208V	HP	100
			220/230V	HP	125
			460/480V	HP	250
			575/600V	HP	300
General USE	0				
	Contactor			۸	450
Short-circuit protectio	n fuse 600V		AC current	A	450
	Standard fault				
			Short circuit current	kA	18
			Fuse rating	A	800
			Fuse class		L
Ambient conditions					
Temperature					
	Operating temperat	ure			50
			min	°C °C	-50
	Storage tomperature	0	max	°C	70
	Storage temperatur	с	min	°C	-60
			max	°C	80
Max altitude				m	3000

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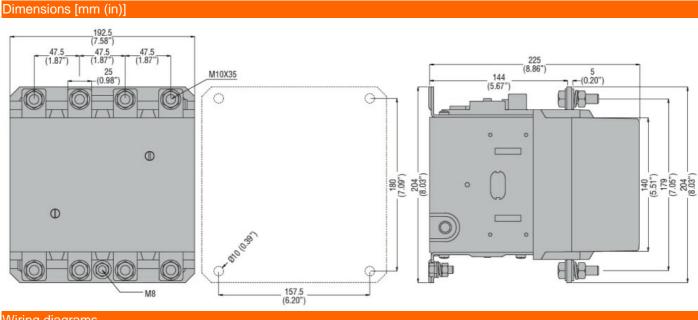


ENERGY AND AUTOMATION

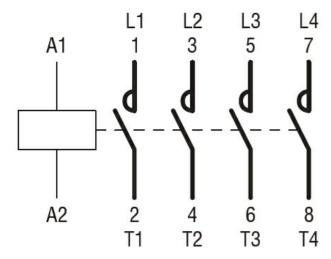
11B31040060 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 60VAC/DC

3

### Pollution degree



Wiring diagrams



### Certifications and compliance

Compliance		
	CSA C22.2 n° 60947-1	
	CSA C22.2 n° 60947-4-1	
	IEC/EN 60947-1	
	IEC/EN 60947-4-1	
	UL 60947-1	
	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
ETIM 8.0		EC000066 - Power contactor, AC switching





Product designation Product type designation			Power contactor B310
Contact characteristics			5310
Number of poles		Nr.	4
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		А	450
Operational current le			
	AC-1 (≤40°C)	А	450
	AC-1 (≤55°C)	А	370
	AC-1 (≤70°C)	А	300
	AC-3 (≤440V ≤55°C)	А	320
	AC-4 (400V)	Α	150
Rated operational power AC-1 (T≤40°C)			
	230V	kW	158
	400V	kW	270
	500V	kW	350
	690V	kW	488
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series			
	75V	A	375
	110V	A	195
	220V	A	
	330V	A	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			075
	75V	A	375
	110V	A	350
	220V	A	300
	330V 460V	A A	
IFC may surrant to in DC1 with $1/D < 1$ may with 2 palas in parise	460 V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	75\/	۸	275
	75V 110V	A A	375 350
	220V	A	350
	330V	A	300
	460V	Ā	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series	1001	Λ	
	75V	А	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300



IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	А	310
	110V	A	170
	220V	A	
	330V	A	
	460V	A	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	1001	7	
	75V	А	310
	110V	A	290
	220V	A	230
	330V	A	
	460V	A	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	400 V	Λ	
	75V	А	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series	400 V	A	
The max current le in DC3-DC3 with L/IX 3 Toms with 4 poles in series	75V	А	310
	110V	A	310
	220V	A	310
	330V	A	230
	460V		230
Short-time allowable current for 10s (IEC/EN60947-1)	400 V	A A	2900
Protection fuse		A	2900
Flotection fuse	gG (IEC)	А	500
	• • •	A	400
Making capacity (RMS value)	aM (IEC)	A	3150
Breaking capacity at voltage		~	3130
Dreaking capacity at voltage	440V	А	3000
	500V	A	2700
	690V	A	2520
Resistance per pole (average value)	090 V	 mΩ	0.2
Power dissipation per pole (average value)		11152	0.2
rower dissipation per pole (average value)	lth	W	40.5
	AC3	W	20
Tightening torque for terminals	A03	vv	20
	min	Nm	35
	max	Nm	35 35
	min	Ibin	25.8
	max	Ibin	25.8 25.8
Tightening torque for coil terminal	Παλ		23.0
	min	Nm	1
	max	Nm	1 1
	min	Ibin	0.74
	max	Ibin	0.74
Max number of wires simultaneously connectable	Παλ	Nr.	2
•		INI.	۷
Conductor section			
AWG/Kcmil			$2\times 2/0$
Dewer terminal protection according to JEO/EN 00500	max		2x 3/0
Power terminal protection according to IEC/EN 60529			IP00
Mechanical features			



**11B310400110** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 110...125VAC/DC

Operating position

Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw
Weight			g	1110
Conductor section				
AWG/k	cmil conductor section			
		max		2x 3/0
Operations				
Mechanical life			cycles	1000000
Electrical life			cycles	700000
Safety related data	diag to EN/ISO 12490 1			
Performance level B10d accord	ang to EN/ISO 13489-1	rated load	ovelee	700000
		mechanical load	cycles cycles	1000000
Mirror contats according to IEC	/EN 600474-4-1		cycles	
EMC compatibility	7 LIN 003777-4-1			yes
AC coil operating				yes
Rated AC voltage at 50/60Hz, 6	50Hz			
		min	V	110
		max	V	125
AC operating voltage				
of 50/6	0Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	60
of 50/6	0Hz coil powered at 60Hz			
	pick-up		0/11-	0.0
		min	%Us	80
	drop out	max	%Us	110
	drop-out	min	%Us	20
		max	%Us	60
of COLI-	z coil powered at 60Hz	IIIdX	/003	00
	pick-up			
	Plot up	min	%Us	80
		max	%Us	110
	drop-out			-
	·	min	%Us	20
		max	%Us	60
AC average coil consumption a	t 20°C			
of 50/6	0Hz coil powered at 50Hz			
		in-rush	VA	300
		holding	VA	10
of 50/6	0Hz coil powered at 60Hz			
		in-rush	VA	300
		holding	VA	10
Dissipation at holding ≤20°C 50			W	10

DC rated control voltage



11B310400110 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL,

110...125VAC/DC

			min	V	110
			max	V	125
DC operating voltage					
	pick-up				
			min	%Us	80
			max	%Us	110
	drop-out				
			min	%Us	20
<u> </u>	1:		max	%Us	60
Average coil consump	tion $\leq 20^{\circ}$ C		ie week	14/	200
			in-rush holding	W W	300 10
Max cycles frequency			noiding	VV	10
Mechanical operation				cycles/h	2400
Operating times				Cycles/II	2400
Average time for Us co	ontrol				
	in AC				
		Closing NO			
			min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
	in DC				
		Closing NO			
			min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
UL technical data			max	ms	75
Full-load current (FLA)	for three phase AC	motor			
Full-load current (FLA)	nor infee-phase AC	motor	at 480V	А	301
			at 600V	A	289
Yielded mechanical pe	orformance		at 000 v	Λ	209
noidea meenamear pe	for three-phase AC	motor			
			200/208V	HP	100
			220/230V	HP	125
			460/480V	HP	250
			575/600V	HP	300
General USE					
	Contactor				
			AC current	А	450
Short-circuit protection					
	Standard fault				
			Short circuit current	kA	18
			Fuse rating	А	800
			Fuse class		L
Ambient conditions					
Temperature					
	Operating tempera	ture			50
			min	°C °°	-50
	Otoro contractor		max	°C	70
	Storage temperatu	re .			

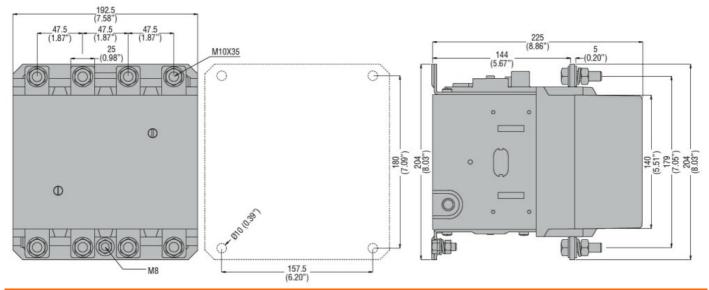


FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL,

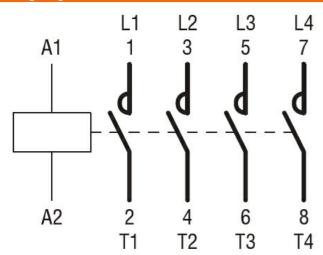
110...125VAC/DC

11B310400110

	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions [mm (in)]			



Wiring diagrams



Certifications and	compliance
Compliance	
	CSA C22.2 n° 60947-1
	CSA C22.2 n° 60947-4-1
	IEC/EN 60947-1
	IEC/EN 60947-4-1
	UL 60947-1
	UL 60947-4-1
Certificates	
	CCC
	cULus
	EAC
ETIM classificatio	n in the second s



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 110...125VAC/DC

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Product type designation			Power contacto B310
Contact characteristics			6310
Number of poles		Nr.	4
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		Α	450
Operational current le			
	AC-1 (≤40°C)	А	450
	AC-1 (≤55°C)	А	370
	AC-1 (≤70°C)	А	300
	AC-3 (≤440V ≤55°C)	А	320
	AC-4 (400V)	А	150
Rated operational power AC-1 (T≤40°C)	,		
	230V	kW	158
	400V	kW	270
	500V	kW	350
	690V	kW	488
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series			
	75V	А	375
	110V	А	195
	220V	А	
	330V	А	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	75V	A	375
	110V	A	350
	220V	A	300
	330V	A	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	<b>_</b>		075
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	300
IFC may aureant to in DC1 with 1/D < 4 and with 4 address in a second	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series	7-14		075
	75V	A	375
	110V	A	350
	220V	A	350 350
	330V	A	350
	460V	A	300



IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 1 poles in series			
	75V	А	310
	110V	A	170
	220V	A	
	330V	A	
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 2 poles in series			
	75V	А	310
	110V	А	290
	220V	А	230
	330V	А	
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series			
	75V	А	310
	110V	А	310
	220V	А	290
	330V	А	230
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series			
	75V	А	310
	110V	А	310
	220V	А	310
	330V	A	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	А	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage			0.00
	440V	А	3000
	500V	A	2700
	690V	A	2520
Resistance per pole (average value)	0001	mΩ	0.2
Power dissipation per pole (average value)			0
	lth	W	40.5
	AC3	W	20
Fightening torque for terminals			-
	min	Nm	35
	max	Nm	35
	min	Ibin	25.8
	max	Ibin	25.8
Tightening torque for coil terminal			
	min	Nm	1
	max	Nm	1
	min	Ibin	0.74
	max	Ibin	0.74
Max number of wires simultaneously connectable	- There	Nr.	2
Conductor section			_
AWG/Kcmil			
	max		2x 3/0
Power terminal protection according to IEC/EN 60529	Παλ		IP00
Mechanical features			



**11B310400220** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 220...240VAC/DC

Operating position

Operating position	normal allowable		Vertical plan ±30°
Fixing	allowable		Screw
Weight		g	1114
Conductor section		9	
AWG/kcmil conductor section			
	max		2x 3/0
Operations			
Mechanical life		cycles	10000000
Electrical life		cycles	700000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	700000
	mechanical load	cycles	1000000
Mirror contats according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz, 60Hz			
	min	V	220
	max	V	240
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	60
of 50/60Hz coil powered at 60Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out		0/11-	20
	min	%Us	20
	max	%Us	60
of 60Hz coil powered at 60Hz			
pick-up	min	%Us	80
		%Us %Us	80 110
drop-out	max	/005	110
urop-our	min	%Us	20
	max	%Us	60
AC average coil consumption at 20°C	max	/000	
of 50/60Hz coil powered at 50Hz			
	in-rush	VA	300
	holding	VA	10
of 50/60Hz coil powered at 60Hz	noiding	., .	. •
	in-rush	VA	300
	holding	VA	10
Dissipation at holding ≤20°C 50Hz		W	10
DC coil operating		••	

DC rated control voltage



11B310400220 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL,

220...240VAC/DC

			min	V	220
			max	V	240
DC operating voltage					
	pick-up				
			min	%Us	80
			max	%Us	110
	drop-out				
			min	%Us	20
			max	%Us	60
Average coil consump	tion ≤20°C				
			in-rush	W	300
			holding	W	10
Max cycles frequency					
Mechanical operation				cycles/h	2400
Operating times					
Average time for Us co	ontrol				
	in AC				
		Closing NO			
			min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
	in DC				
		Closing NO			
			min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
UL technical data					
Full-load current (FLA)	for three-phase AC n	notor			
			at 480V	A	301
			at 600V	A	289
Yielded mechanical pe					
	for three-phase AC	motor			
			200/208V	HP	100
			220/230V	HP	125
			460/480V	HP	250
			575/600V	HP	300
General USE	-				
	Contactor				
			AC current	A	450
Short-circuit protection					
	Standard fault				
			Short circuit current	kA	18
			Fuse rating	А	800
			Fuse class		L
Ambient conditions					
Temperature					
	Operating temperate	ure			
			min	°C	-50
			max	°C	70
	Storage temperature	e			

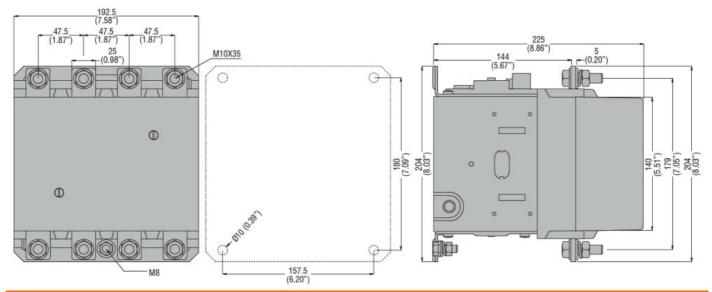


FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL,

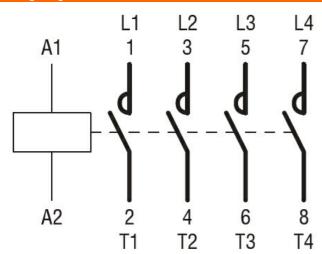
220...240VAC/DC

11B310400220

	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions [mm (in)]			



Wiring diagrams



### Certifications and compliance

Compliance	
	CSA C22.2 n° 60947-1
	CSA C22.2 n° 60947-4-1
	IEC/EN 60947-1
	IEC/EN 60947-4-1
	UL 60947-1
	UL 60947-4-1
Certificates	
	CCC
	cULus
	EAC
ETIM classificatio	on la



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 220...240VAC/DC

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Product type designation			Power contactor B310
Contact characteristics			D310
Number of poles		Nr.	4
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency		ιτν	0
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	max	A	450
Operational current le			
	AC-1 (≤40°C)	А	450
	AC-1 (≤55°C)	А	370
	AC-1 (≤70°C)	А	300
	AC-3 (≤440V ≤55°C)	А	320
	AC-4 (400V)	А	150
Rated operational power AC-1 (T≤40°C)			
	230V	kW	158
	400V	kW	270
	500V	kW	350
	690V	kW	488
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series			
	75V	А	375
	110V	А	195
	220V	А	
	330V	А	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	75V	А	375
	110V	А	350
	220V	A	300
	330V	A	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	300
IFO many automatic in DO4 with 1/D < 4ma with 4 maters in the	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series			075
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300



$\Gamma_{\rm C}$ may surrant le in DC2 DC5 with $1/D < 45$ may with 4 males in equipa			
EC max current le in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series	75V	А	310
	110V	A	170
	220V	A	
	330V	A	
	460V	A	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 2 poles in series			
	75V	Α	310
	110V	Α	290
	220V	Α	230
	330V	А	
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series			
	75V	А	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	
$\Gamma_{\rm C}$ may surrant le in DC2 DC5 with $1/D < 45$ may with 4 nates in action	400 V	A	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series	751/		040
	75V	A	310
	110V	Α	310
	220V	А	310
	330V	Α	230
	460V	Α	230
Short-time allowable current for 10s (IEC/EN60947-1)		А	2900
Protection fuse			
	gG (IEC)	А	500
	aM (IEC)	А	400
Making capacity (RMS value)	× /	Α	3150
Breaking capacity at voltage			
	440V	А	3000
	500V	A	2700
	690V		2520
Desistance per polo (overego volue)	090 V	A	
Resistance per pole (average value)		mΩ	0.2
Power dissipation per pole (average value)			10 5
	lth	W	40.5
	AC3	W	20
Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	lbin	25.8
	max	Ibin	25.8
Tightening torque for coil terminal			
	min	Nm	1
	max	Nm	1
	min	Ibin	0.74
Max number of wires simultaneously connectable	max	lbin Nr	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		2x 3/0
Power terminal protection according to IEC/EN 60529			IP00



**11B310400380** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 380...415VAC/DC

Operating position

	normal		Vertical plan
	allowable		±30°
Fixing			Screw
Weight		g	1112
Conductor section			
AWG/kcmil conductor section	201		0x 2/0
Operations	max		2x 3/0
Mechanical life		oveloc	10000000
Electrical life		cycles cycles	700000
Safety related data		Cycles	700000
Performance level B10d according to EN/ISO 13489-1			
enormance level block according to ENVISO 13403-1	rated load	cycles	700000
	mechanical load	cycles	10000000
Mirror contats according to IEC/EN 609474-4-1	meenamearioau	Cycle3	yes
EMC compatibility			yes
AC coil operating			yes
Rated AC voltage at 50/60Hz, 60Hz			
	min	V	380
	max	v	415
AC operating voltage	Шах	•	110
of 50/60Hz coil powered at 50Hz			
pick-up			
P	min	%Us	80
	max	%Us	110
drop-out			-
	min	%Us	20
	max	%Us	60
of 50/60Hz coil powered at 60Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	60
of 60Hz coil powered at 60Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	60
AC average coil consumption at 20°C			
of 50/60Hz coil powered at 50Hz			
	in-rush	VA	300
	holding	VA	10
of 50/60Hz coil powered at 60Hz	· ·		
	in-rush	VA	300
	holding	VA	10
Dissipation at holding ≤20°C 50Hz DC coil operating		W	10

DC rated control voltage



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL,

380...415VAC/DC

11B310400380

			min	V	380
			max	V	415
DC operating voltage					
	pick-up			0/11-	0.0
			min	%Us	80
			max	%Us	110
	drop-out		an in	0/110	20
			min	%Us %Us	20 60
Average coil consump	tion <20°C		max	/005	00
Average con consump			in-rush	W	300
			holding	Ŵ	10
Max cycles frequency			Holding	••	10
Mechanical operation				cycles/h	2400
Operating times				0,000,11	2100
Average time for Us co	ontrol				
	in AC				
		Closing NO			
			min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
	in DC				
		Closing NO			
			min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
JL technical data					
Full-load current (FLA)	for three-phase AC	motor			
			at 480V	A	301
<u>//</u>			at 600V	A	289
rielded mechanical pe					
	for three-phase AC	, motor	000/0001/		100
			200/208V	HP	100
			220/230V	HP	125
			460/480V	HP HP	250 200
General USE			575/600V	ΠP	300
	Contactor				
	Jonation		AC current	А	450
Short-circuit protection	fuse, 600V				100
	Standard fault				
			Short circuit current	kA	18
			Fuse rating	A	800
			Fuse class		L
Ambient conditions					_
Temperature					
	Operating tempera	ture			
	oporating tempera		min	°C	-50
			max	°C	70
	Storage temperatu	re	тах	Ŭ	
	Storage tomperatu				

The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding 11B310400380

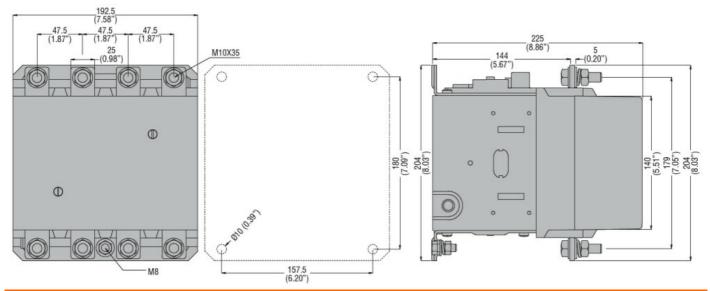


FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL,

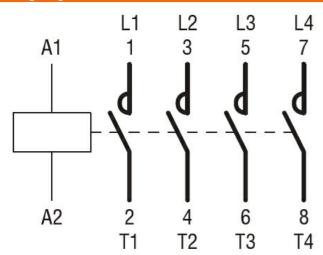
380...415VAC/DC

11B310400380

	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions [mm (in)]			



Wiring diagrams



Certifications and	
Compliance	
	CSA C22.2 n° 60947-1
	CSA C22.2 n° 60947-4-1
	IEC/EN 60947-1
	IEC/EN 60947-4-1
	UL 60947-1
	UL 60947-4-1
Certificates	
	CCC
	cULus
	EAC
ETIM classification	on la



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 380...415VAC/DC

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Product type designation			Power contactor B310
Contact characteristics			5310
Number of poles		Nr.	4
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		А	450
Operational current le			
	AC-1 (≤40°C)	А	450
	AC-1 (≤55°C)	А	370
	AC-1 (≤70°C)	А	300
	AC-3 (≤440V ≤55°C)	А	320
	AC-4 (400V)	Α	150
Rated operational power AC-1 (T≤40°C)			
	230V	kW	158
	400V	kW	270
	500V	kW	350
	690V	kW	488
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series			
	75V	A	375
	110V	A	195
	220V	A	
	330V	A	
	460V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			075
	75V	A	375
	110V	A	350
	220V	A	300
	330V 460V	A A	
IFC may surrant to in DC1 with $1/D < 1$ may with 2 palas in parise	460 V	A	
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	75\/	٨	275
	75V 110V	A A	375 350
	220V	A	350
	330V	A	300
	460V	Ā	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series	1001	Λ	
	75V	А	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300



IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 1 poles in series			
	75V	А	310
	110V	А	170
	220V	А	
	330V	А	
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 2 poles in series			
	75V	А	310
	110V	А	290
	220V	А	230
	330V	А	
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series			
	75V	А	310
	110V	А	310
	220V	А	290
	330V	А	230
	460V	А	
EC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series			
	75V	А	310
	110V	А	310
	220V	А	310
	330V	A	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)	1001	A	2900
Protection fuse		71	2000
	gG (IEC)	А	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage		7.	0100
Sicaking capacity at voltage	440V	А	3000
	500V	A	2700
	690V	A	2520
Resistance per pole (average value)	090 v	mΩ	0.2
Power dissipation per pole (average value)		11152	0.2
ower dissipation per pole (average value)	lth	W	40.5
	AC3	W	20
Tightening torque for terminals	AC3	vv	20
	min	Nim	35
	min	Nm Nm	
	max	Nm Ihin	35
	min	lbin Ibin	25.8
	max	lbin	25.8
Fightening torque for coil terminal		N I.a.:	4
	min	Nm	1
	max	Nm	1
	min	lbin	0.74
	max	Ibin	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section AWG/Kcmil			
	max		2x 3/0
Power terminal protection according to IEC/EN 60529			IP00



**11B310400440** FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 440...480VAC/DC

Operating position

Operating position	normal allowable		Vertical plan ±30°
Fixing	allowable		Screw
Weight		g	1118
Conductor section		9	1110
AWG/kcmil conductor section			
	max		2x 3/0
Operations			
Mechanical life		cycles	10000000
Electrical life		cycles	700000
Safety related data		,	
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	700000
	mechanical load	cycles	1000000
Mirror contats according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz, 60Hz			
	min	V	440
	max	V	415
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
- ( TO (001) - 11 - 001)	max	%Us	60
of 50/60Hz coil powered at 60Hz			
pick-up		0/11-	0.0
	min	%Us	80
drop out	max	%Us	110
drop-out	min	%Us	20
		%Us	60
of 60Hz coil powered at 60Hz	max	/005	00
pick-up			
μικ-αμ	min	%Us	80
	max	%Us	110
drop-out	Шах	,	
	min	%Us	20
	max	%Us	60
AC average coil consumption at 20°C			
of 50/60Hz coil powered at 50Hz			
•	in-rush	VA	300
	holding	VA	10
of 50/60Hz coil powered at 60Hz	<u>0</u>		
•	in-rush	VA	300
	holding	VA	10
Dissipation at holding ≤20°C 50Hz	Ŭ	W	10
DC coil operating			

DC rated control voltage



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL,

11B310400440

440...480VAC/DC

			min	V	440
			max	V	415
DC operating voltage					
	pick-up		min	%Us	80
			max	%Us	110
	drop-out		max	/003	110
			min	%Us	20
			max	%Us	60
Average coil consump	tion ≤20°C				
			in-rush	W	300
			holding	W	10
Max cycles frequency					
Mechanical operation				cycles/h	2400
Operating times					
Average time for Us co					
	in AC				
		Closing NO			0.0
			min	ms	80
			max	ms	120
		Opening NO	min	ms	30
			max	ms	75
	in DC		max	1113	10
		Closing NO			
		0.000.1g 1.0	min	ms	80
			max	ms	120
		Opening NO			
			min	ms	30
			max	ms	75
JL technical data					
Full-load current (FLA)	for three-phase AC	motor			
			at 480V	Α	301
	,		at 600V	Α	289
Yielded mechanical pe					
	for three-phase A0	motor	000/0001		400
			200/208V	HP	100
			220/230V 460/480V	HP HP	125 250
			400/480V 575/600V	HP	300
General USE			010,0001		
	Contactor				
			AC current	А	450
Short-circuit protection	n fuse, 600V				
-	Standard fault				
			Short circuit current	kA	18
			Fuse rating	Α	800
			Fuse class		L
Ambient conditions					
Temperature					
	Operating tempera	ature		~ -	
			min	°C	-50
	<u></u>		max	°C	70
	Storage temperatu	ле			



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 440...480VAC/DC

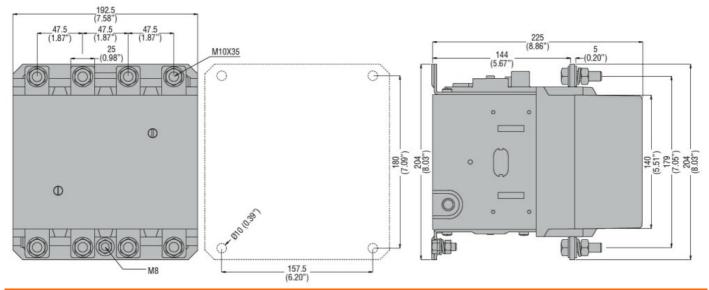
11B310400440

3

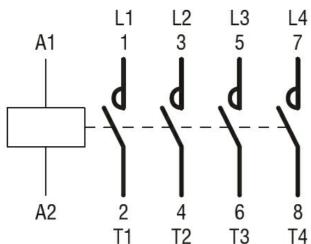
min °C -60 max °C 80 Max altitude m 3000 Resistance & Protection

Pollution degree

Dimensions [mm (in)]



Wiring diagrams



### Certifications and compliance

	compilation
Compliance	
	CSA C22.2 n° 60947-1
	CSA C22.2 n° 60947-4-1
	IEC/EN 60947-1
	IEC/EN 60947-4-1
	UL 60947-1
	UL 60947-4-1
Certificates	
	CCC
	cULus
	EAC
ETIM classificatio	n

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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 440...480VAC/DC

ETIM 8.0

EC000066 -Power contactor, AC switching