



Product designation Power contactor
Product type designation B310

Contact characteristics

Number of poles	Nr.	3
Rated insulation voltage U_i IEC/EN	V	1000
Rated impulse withstand voltage U_{imp}	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I_{th}	A	450
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 450
	AC-1 ($\leq 55^\circ\text{C}$)	A 370
	AC-1 ($\leq 70^\circ\text{C}$)	A 300
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A 320
	AC-4 (400V)	A 150
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW 100
	400V	kW 170
	415V	kW 188
	440V	kW 200
	500V	kW 213
	690V	kW 256
	1000V	kW 180
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 158
	400V	kW 270
	500V	kW 350
	690V	kW 488
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V	A 375
	110V	A 195
	220V	A --
	330V	A --
	460V	A --
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	75V	A 375
	110V	A 350
	220V	A 300
	330V	A --
	460V	A --
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	75V	A 375
	110V	A 350
	220V	A 350

	330V	A	300
	460V	A	--
<hr/>			
IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300
<hr/>			
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
	220V	A	--
	330V	A	--
	460V	A	--
<hr/>			
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
	330V	A	--
	460V	A	--
<hr/>			
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	--
<hr/>			
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	310
	110V	A	310
	220V	A	310
	330V	A	230
	460V	A	230
<hr/>			
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
<hr/>			
Protection fuse			
	gG (IEC)	A	500
	aM (IEC)	A	400
<hr/>			
Making capacity (RMS value)		A	3150
<hr/>			
Breaking capacity at voltage			
	440V	A	3000
	500V	A	2700
	690V	A	2520
<hr/>			
Resistance per pole (average value)		mΩ	0.2
<hr/>			
Power dissipation per pole (average value)			
	I _{th}	W	40.5
	AC3	W	20
<hr/>			
Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	I _{bin}	25.8
	max	I _{bin}	25.8
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Tightening torque for coil terminal			
	min	Nm	1
	max	Nm	1

	min	I _{bin}	0.74
	max	I _{bin}	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
Mechanical features			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw
Weight		g	9690
Conductor section			
		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 mechanical load	cycles 700000 cycles 10000000
Mirror contacts according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	24
AC operating voltage			
		of 50/60Hz coil powered at 50Hz	
		pick-up	
	min	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	60
		of 50/60Hz coil powered at 60Hz	
		pick-up	
	min	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	60
		of 60Hz coil powered at 60Hz	
		pick-up	
	min	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	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		W	10
DC coil operating			
DC rated control voltage		V	24
DC operating voltage			
pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	20
	max	%Us	60

Average coil consumption ≤20°C

in-rush	W	300
holding	W	10

Max cycles frequency

Mechanical operation cycles/h 2400

Operating times

Average time for Us control

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 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	HP	250
575/600V	HP	300

General USE

Contactor

AC current	A	450
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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
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

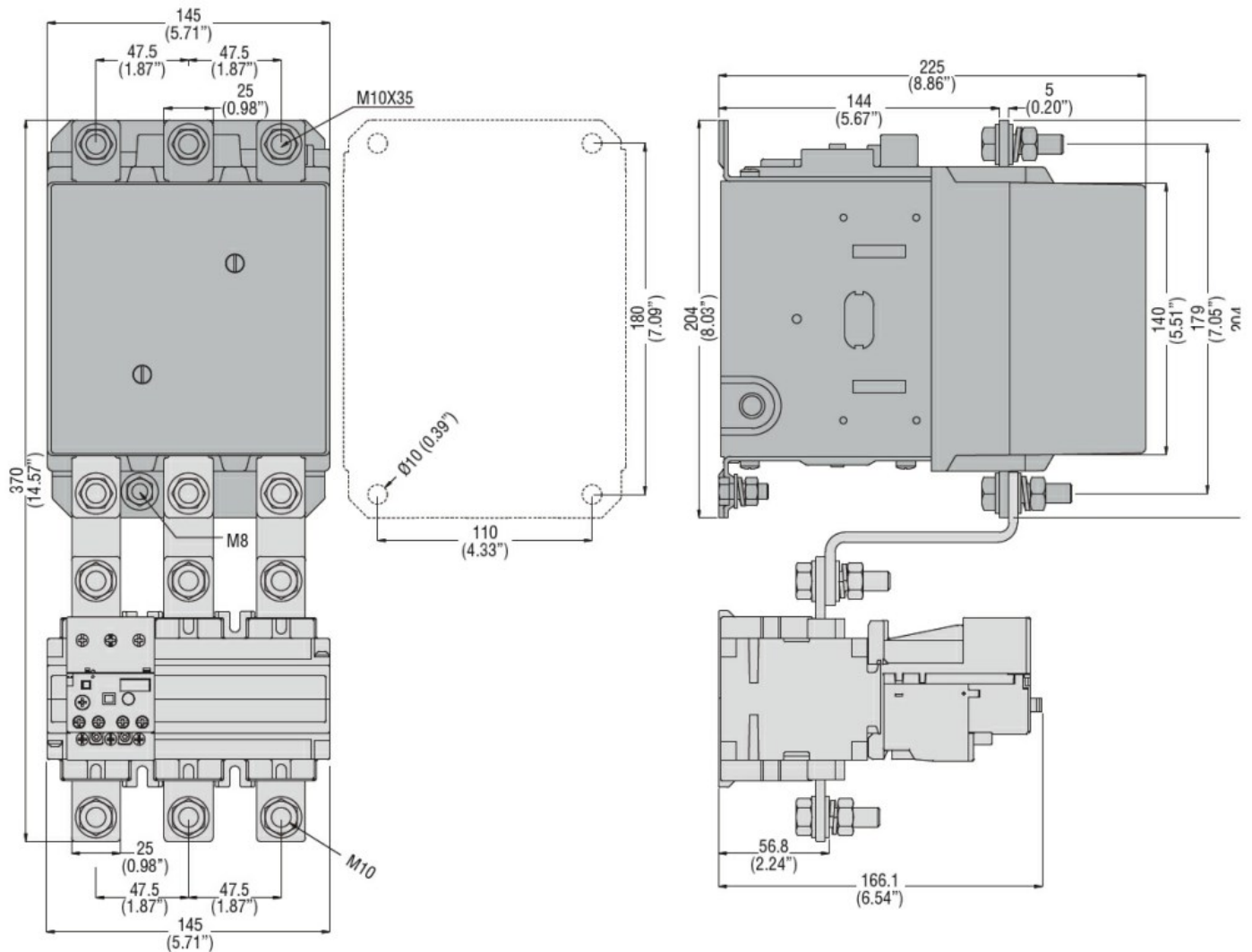
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Resistance & Protection

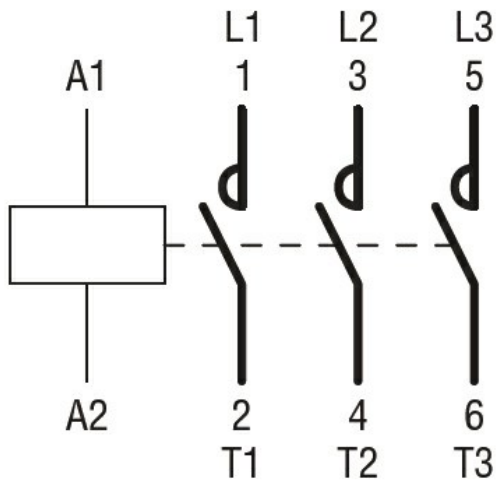
Pollution degree

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 classification

ETIM 8.0

EC000066 -
 Power contactor,
 AC switching



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Product type designation B310

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	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A 320
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	690V	kW 488
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	330V	A --
	460V	A --
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	110V	A 350
	220V	A 350

	330V	A	300
	460V	A	--
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
	220V	A	--
	330V	A	--
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
	330V	A	--
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	310
	110V	A	310
	220V	A	310
	330V	A	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	A	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage			
	440V	A	3000
	500V	A	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			
	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	I _{bin}	0.74
	max	I _{bin}	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
Mechanical features			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw
Weight		g	9490
Conductor section			
		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 mechanical load	cycles 700000 cycles 10000000
Mirror contacts according to IEC/EN 60947-4-1			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	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	60
		of 50/60Hz coil powered at 60Hz	
		pick-up	
	min	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	60
		of 60Hz coil powered at 60Hz	
		pick-up	
	min	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	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		W	10
DC coil operating			
DC rated control voltage		V	48
DC operating voltage			
pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	20
	max	%Us	60

Average coil consumption ≤20°C

in-rush	W	300
holding	W	10

Max cycles frequency

Mechanical operation cycles/h 2400

Operating times

Average time for Us control

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 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	HP	250
575/600V	HP	300

General USE

Contactor

AC current	A	450
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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
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

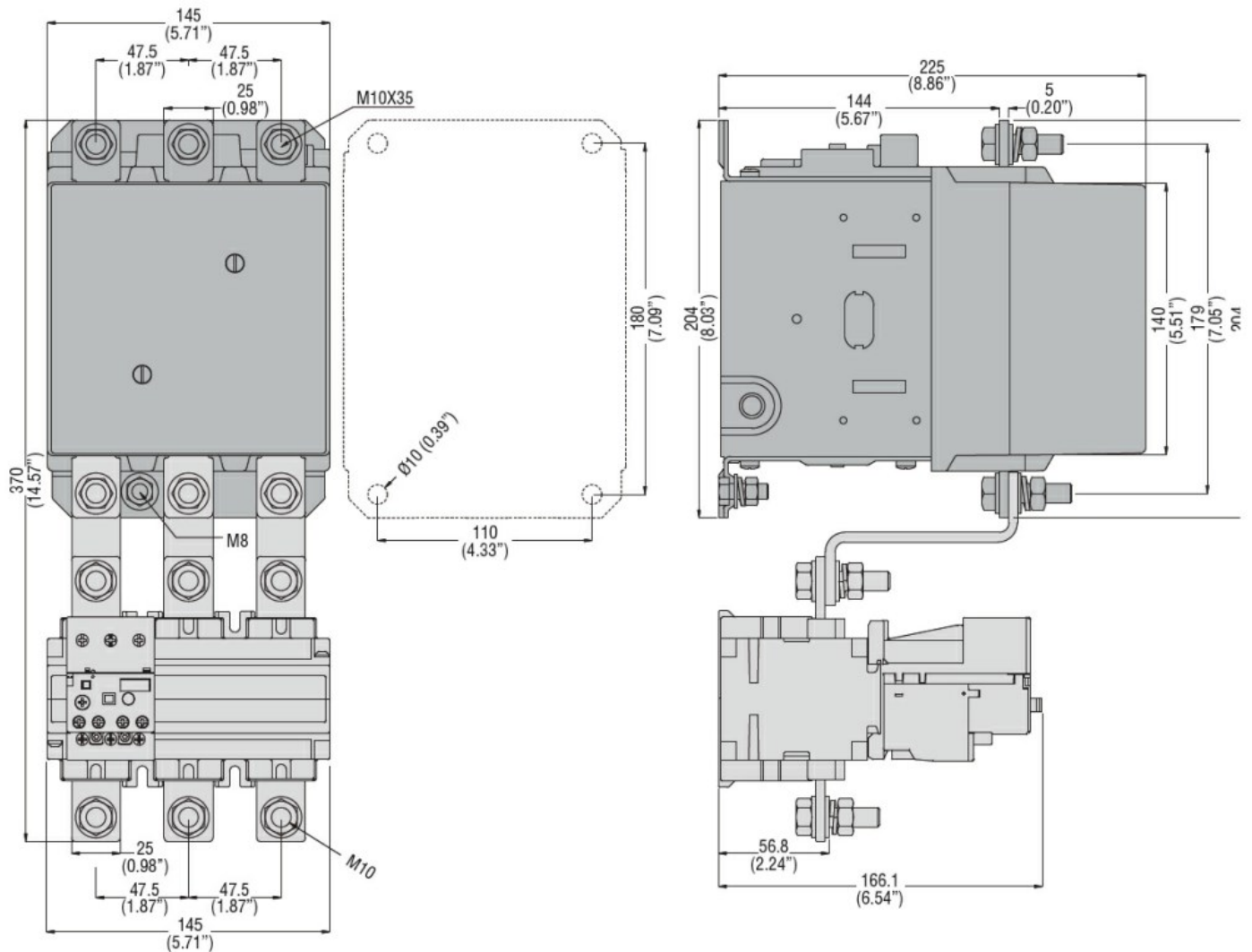
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Resistance & Protection

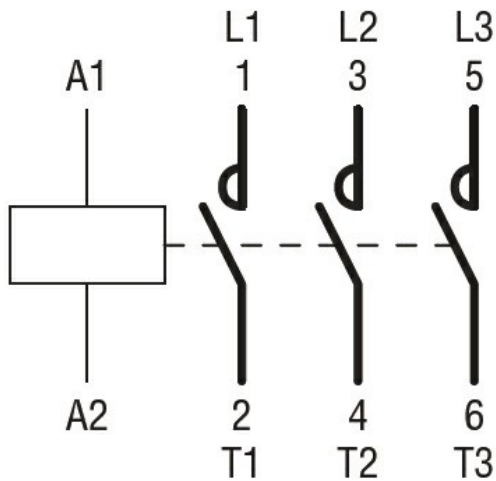
Pollution degree

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 classification

ETIM 8.0

EC000066 -
 Power contactor,
 AC switching



Product designation Power contactor
Product type designation B310

Contact characteristics

Number of poles	Nr.	3
Rated insulation voltage U_i IEC/EN	V	1000
Rated impulse withstand voltage U_{imp}	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I_{th}	A	450
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 450
	AC-1 ($\leq 55^\circ\text{C}$)	A 370
	AC-1 ($\leq 70^\circ\text{C}$)	A 300
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A 320
	AC-4 (400V)	A 150
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW 100
	400V	kW 170
	415V	kW 188
	440V	kW 200
	500V	kW 213
	690V	kW 256
	1000V	kW 180
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 158
	400V	kW 270
	500V	kW 350
	690V	kW 488
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V	A 375
	110V	A 195
	220V	A --
	330V	A --
	460V	A --
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	75V	A 375
	110V	A 350
	220V	A 300
	330V	A --
	460V	A --
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	75V	A 375
	110V	A 350
	220V	A 350

	330V	A	300
	460V	A	--
IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
	220V	A	--
	330V	A	--
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
	330V	A	--
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	310
	110V	A	310
	220V	A	310
	330V	A	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	A	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage			
	440V	A	3000
	500V	A	2700
	690V	A	2520
Resistance per pole (average value)		mΩ	0.2
Power dissipation per pole (average value)			
	I _{th}	W	40.5
	AC3	W	20
Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	I _{bin}	25.8
	max	I _{bin}	25.8
Tightening torque for coil terminal			
	min	Nm	1
	max	Nm	1

	min	I _{bin}	0.74
	max	I _{bin}	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
Mechanical features			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw
Weight		g	9490
Conductor section			
		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 mechanical load	cycles 700000 cycles 10000000
Mirror contacts according to IEC/EN 60947-4-1			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	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	60
		of 50/60Hz coil powered at 60Hz	
		pick-up	
	min	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	60
		of 60Hz coil powered at 60Hz	
		pick-up	
	min	%U _s	80
	max	%U _s	110
		drop-out	
	min	%U _s	20
	max	%U _s	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		W	10
DC coil operating			
DC rated control voltage		V	60
DC operating voltage			
pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	20
	max	%Us	60

Average coil consumption ≤20°C

in-rush	W	300
holding	W	10

Max cycles frequency

Mechanical operation cycles/h 2400

Operating times

Average time for Us control

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 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
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575/600V	HP	300

General USE

Contactor

AC current	A	450
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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
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

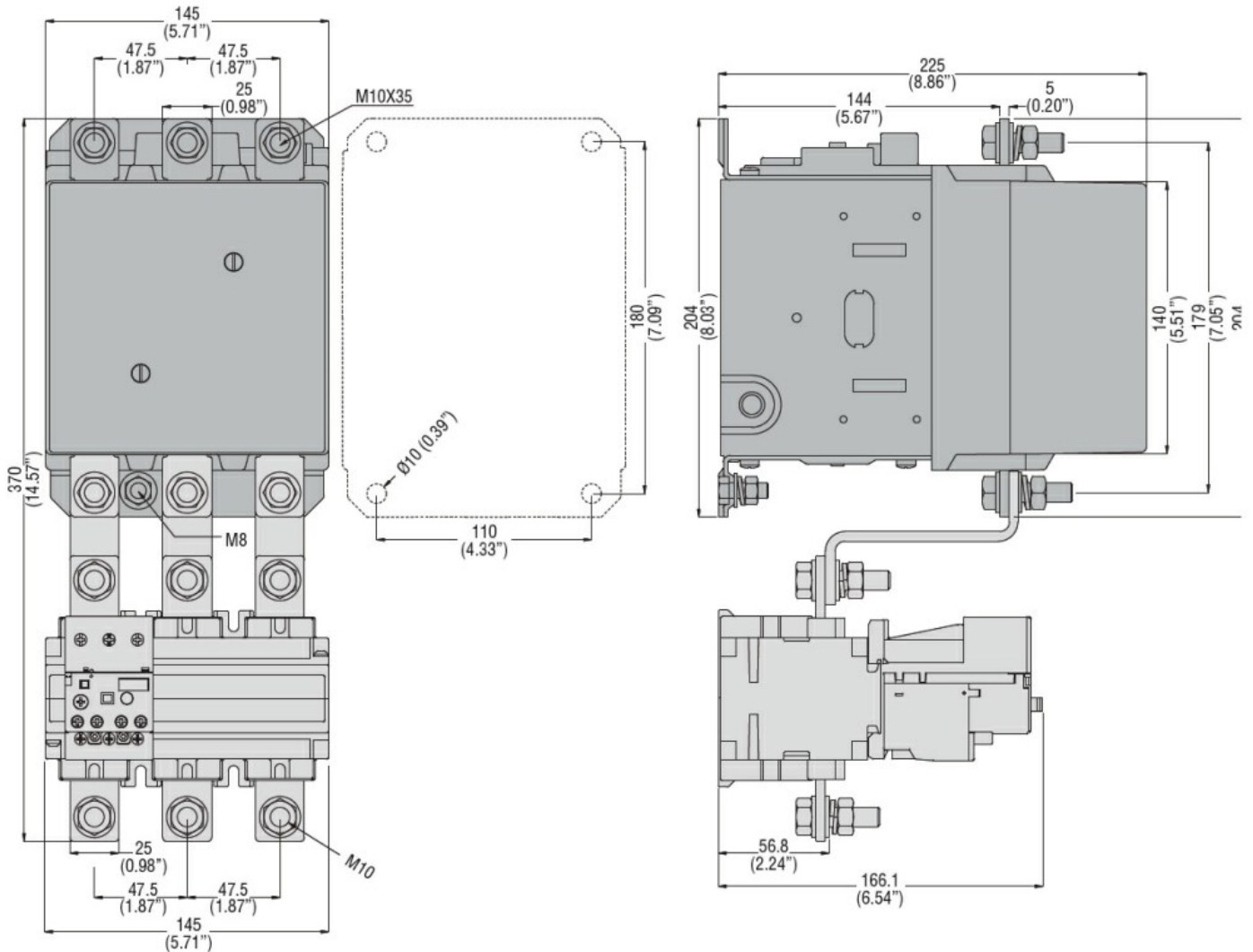
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Resistance & Protection

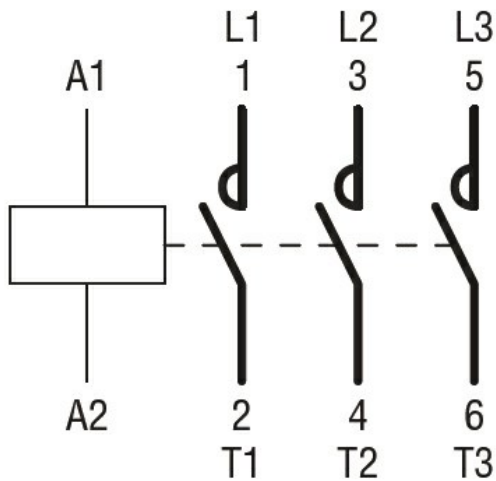
Pollution degree

3

Dimensions [mm (in)]



Wiring diagrams



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UL 60947-1

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Certificates

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Power contactor,
AC switching



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	max	Hz	400	
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	AC-1 ($\leq 70^\circ\text{C}$)	A	300	
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	320	
	AC-4 (400V)	A	150	
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW	100	
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	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
	220V	A	--
	330V	A	--
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
	330V	A	--
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	310
	110V	A	310
	220V	A	310
	330V	A	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	A	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage			
	440V	A	3000
	500V	A	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			
	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	I _{bin}	0.74
	max	I _{bin}	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
Mechanical features			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw
Weight		g	9650
Conductor section			
		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 mechanical load	cycles 700000 cycles 10000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz, 60Hz	min	V	110
	max	V	125
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	
	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 $\leq 20^{\circ}\text{C}$ 50Hz		W	10
DC coil operating			
DC rated control voltage			
	min	V	110
	max	V	125
DC operating voltage			
pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	20
	max	%Us	60
Average coil consumption $\leq 20^{\circ}\text{C}$			
	in-rush	W	300
	holding	W	10
Max cycles frequency			
Mechanical operation		cycles/h	2400
Operating times			
Average time for Us control			
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 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	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 class L

Ambient conditions

Temperature

Operating temperature

min °C -50
max °C 70

Storage temperature

min °C -60
max °C 80

Max altitude

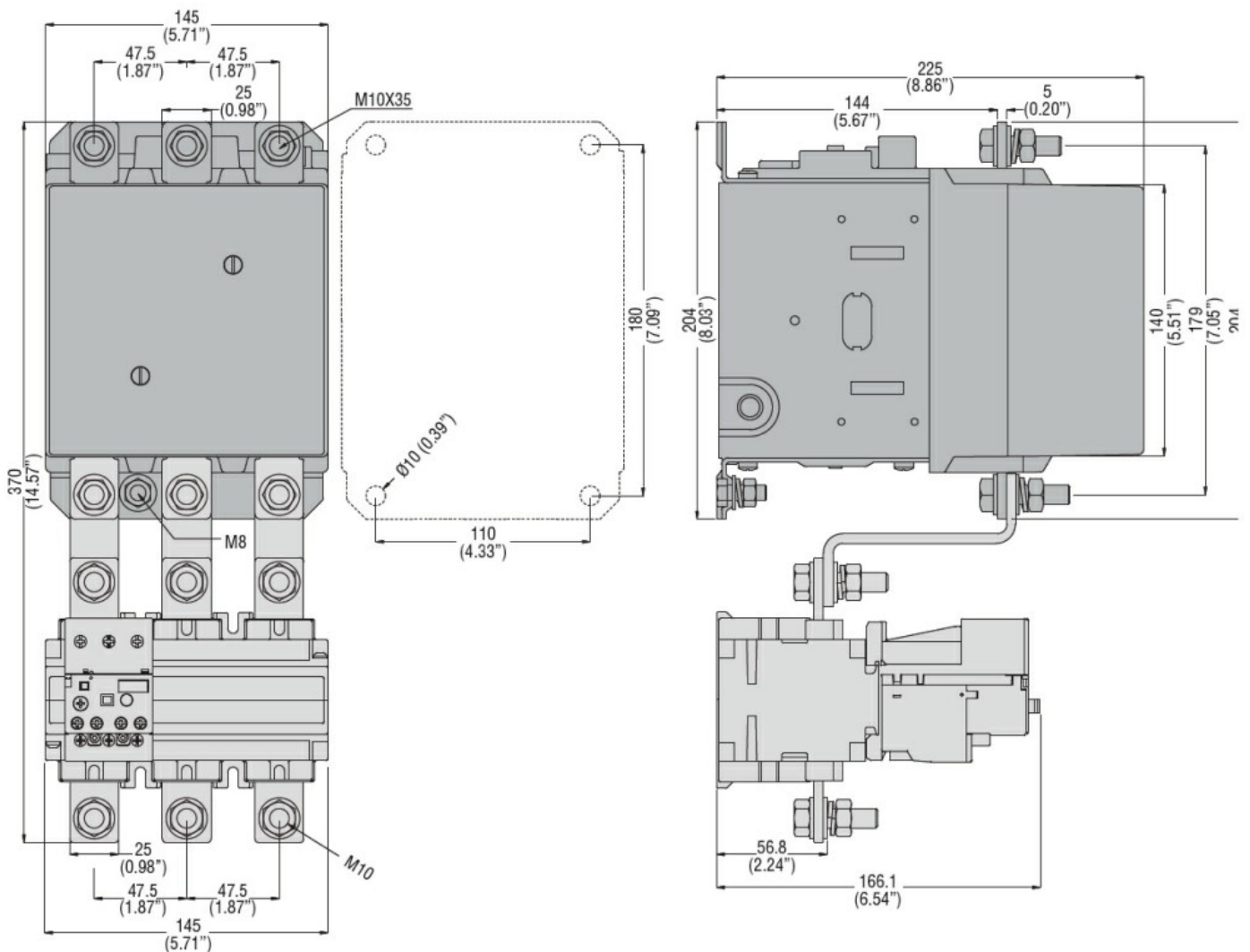
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Resistance & Protection

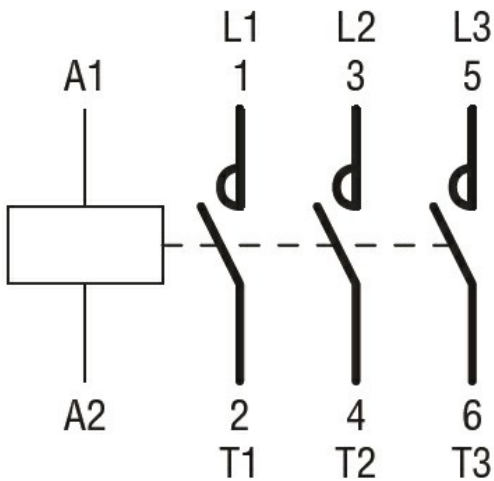
Pollution degree

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 classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation				Power contactor
Product type designation				B310
Contact characteristics				
Number of poles	Nr.			3
Rated insulation voltage U_i IEC/EN	V			1000
Rated impulse withstand voltage U_{imp}	kV			8
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current I_{th}	A			450
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A	450	
	AC-1 ($\leq 55^\circ\text{C}$)	A	370	
	AC-1 ($\leq 70^\circ\text{C}$)	A	300	
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	320	
	AC-4 (400V)	A	150	
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW	100	
	400V	kW	170	
	415V	kW	188	
	440V	kW	200	
	500V	kW	213	
	690V	kW	256	
	1000V	kW	180	
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW	158	
	400V	kW	270	
	500V	kW	350	
	690V	kW	488	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V	A	375	
	110V	A	195	
	220V	A	--	
	330V	A	--	
	460V	A	--	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	75V	A	375	
	110V	A	350	
	220V	A	300	
	330V	A	--	
	460V	A	--	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	75V	A	375	
	110V	A	350	
	220V	A	350	

	330V	A	300
	460V	A	--
IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
	220V	A	--
	330V	A	--
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
	330V	A	--
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	310
	110V	A	310
	220V	A	310
	330V	A	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	A	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage			
	440V	A	3000
	500V	A	2700
	690V	A	2520
Resistance per pole (average value)		mΩ	0.2
Power dissipation per pole (average value)			
	I _{th}	W	40.5
	AC3	W	20
Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	I _{bin}	25.8
	max	I _{bin}	25.8
Tightening torque for coil terminal			
	min	Nm	1
	max	Nm	1

	min	I _{bin}	0.74
	max	I _{bin}	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
Mechanical features			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw
Weight		g	9520
Conductor section			
		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 mechanical load	cycles 700000 cycles 10000000
Mirror contacts 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	
	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 $\leq 20^{\circ}\text{C}$ 50Hz		W	10
DC coil operating			
DC rated control voltage			
	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 consumption $\leq 20^{\circ}\text{C}$			
	in-rush	W	300
	holding	W	10
Max cycles frequency			
Mechanical operation		cycles/h	2400
Operating times			
Average time for Us control			
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 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	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 class L

Ambient conditions

Temperature

Operating temperature

min °C -50
max °C 70

Storage temperature

min °C -60
max °C 80

Max altitude

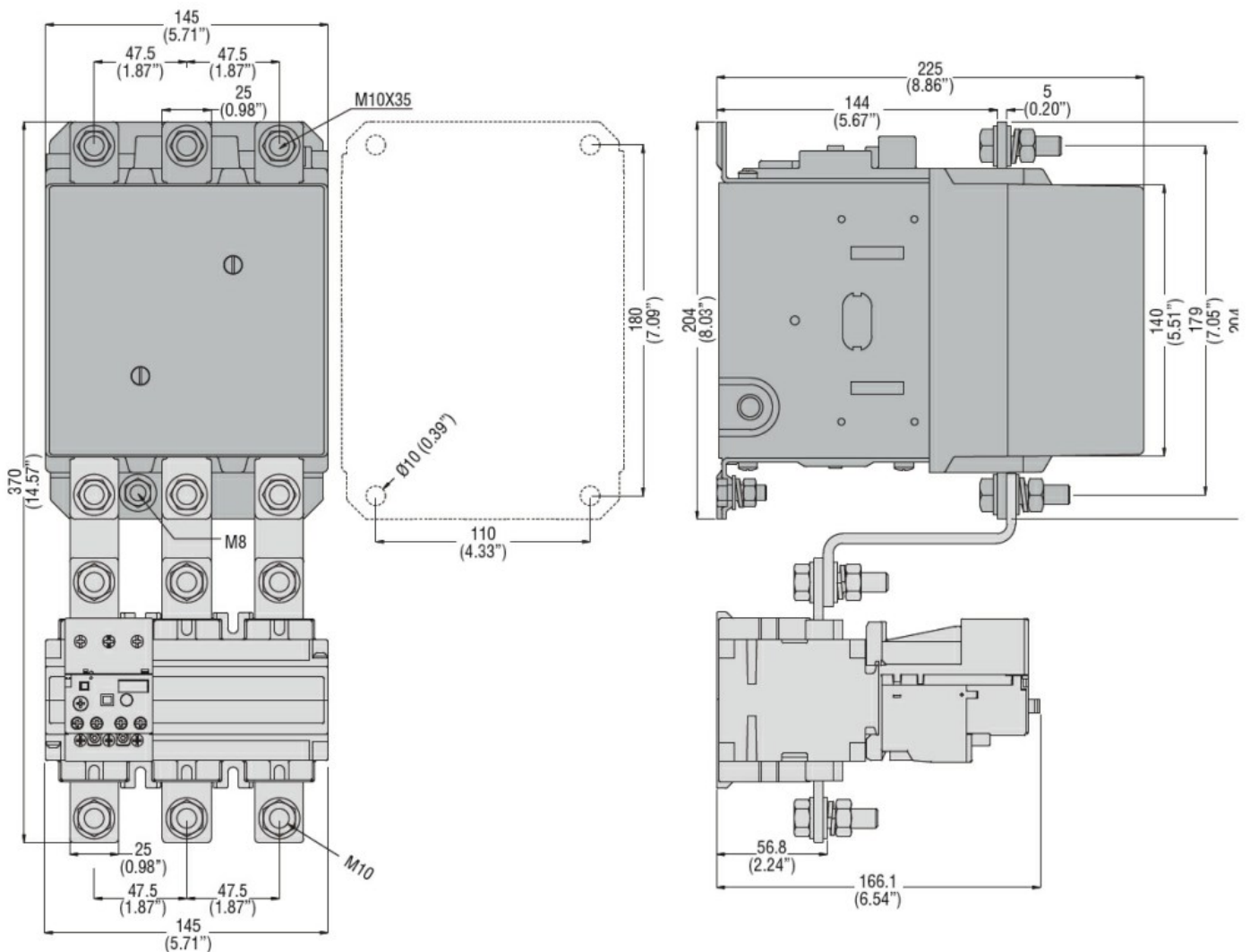
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Resistance & Protection

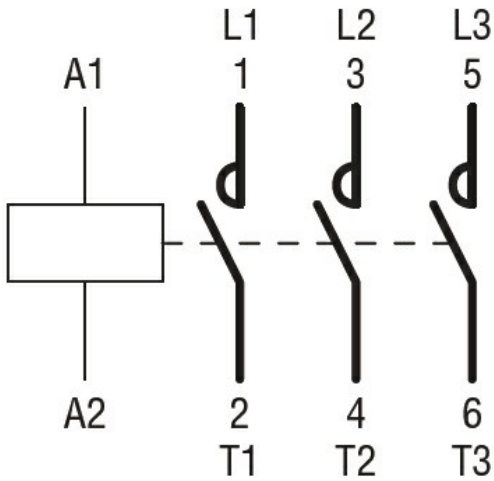
Pollution degree

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 classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation				Power contactor
Product type designation				B310
Contact characteristics				
Number of poles	Nr.			3
Rated insulation voltage U_i IEC/EN	V			1000
Rated impulse withstand voltage U_{imp}	kV			8
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current I_{th}	A			450
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A	450	
	AC-1 ($\leq 55^\circ\text{C}$)	A	370	
	AC-1 ($\leq 70^\circ\text{C}$)	A	300	
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	320	
	AC-4 (400V)	A	150	
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW	100	
	400V	kW	170	
	415V	kW	188	
	440V	kW	200	
	500V	kW	213	
	690V	kW	256	
	1000V	kW	180	
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW	158	
	400V	kW	270	
	500V	kW	350	
	690V	kW	488	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V	A	375	
	110V	A	195	
	220V	A	--	
	330V	A	--	
	460V	A	--	
	IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	75V	A	375
110V		A	350	
220V		A	300	
330V		A	--	
460V		A	--	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	75V	A	375	
	110V	A	350	
	220V	A	350	

	330V	A	300
	460V	A	--
IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
	220V	A	--
	330V	A	--
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
	330V	A	--
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	--
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	310
	110V	A	310
	220V	A	310
	330V	A	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	A	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage			
	440V	A	3000
	500V	A	2700
	690V	A	2520
Resistance per pole (average value)		mΩ	0.2
Power dissipation per pole (average value)			
	I _{th}	W	40.5
	AC3	W	20
Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	I _{bin}	25.8
	max	I _{bin}	25.8
Tightening torque for coil terminal			
	min	Nm	1
	max	Nm	1

	min	I _{bin}	0.74
	max	I _{bin}	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
Mechanical features			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw
Weight		g	9530
Conductor section			
		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 mechanical load	cycles 700000 cycles 10000000
Mirror contacts according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz, 60Hz		min	V 380
		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
	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 $\leq 20^{\circ}\text{C}$ 50Hz		W	10
DC coil operating			
DC rated control voltage			
	min	V	380
	max	V	415
DC operating voltage			
pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	20
	max	%Us	60
Average coil consumption $\leq 20^{\circ}\text{C}$			
	in-rush	W	300
	holding	W	10
Max cycles frequency			
Mechanical operation		cycles/h	2400
Operating times			
Average time for Us control			
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 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	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 class L

Ambient conditions

Temperature

Operating temperature

min °C -50
max °C 70

Storage temperature

min °C -60
max °C 80

Max altitude

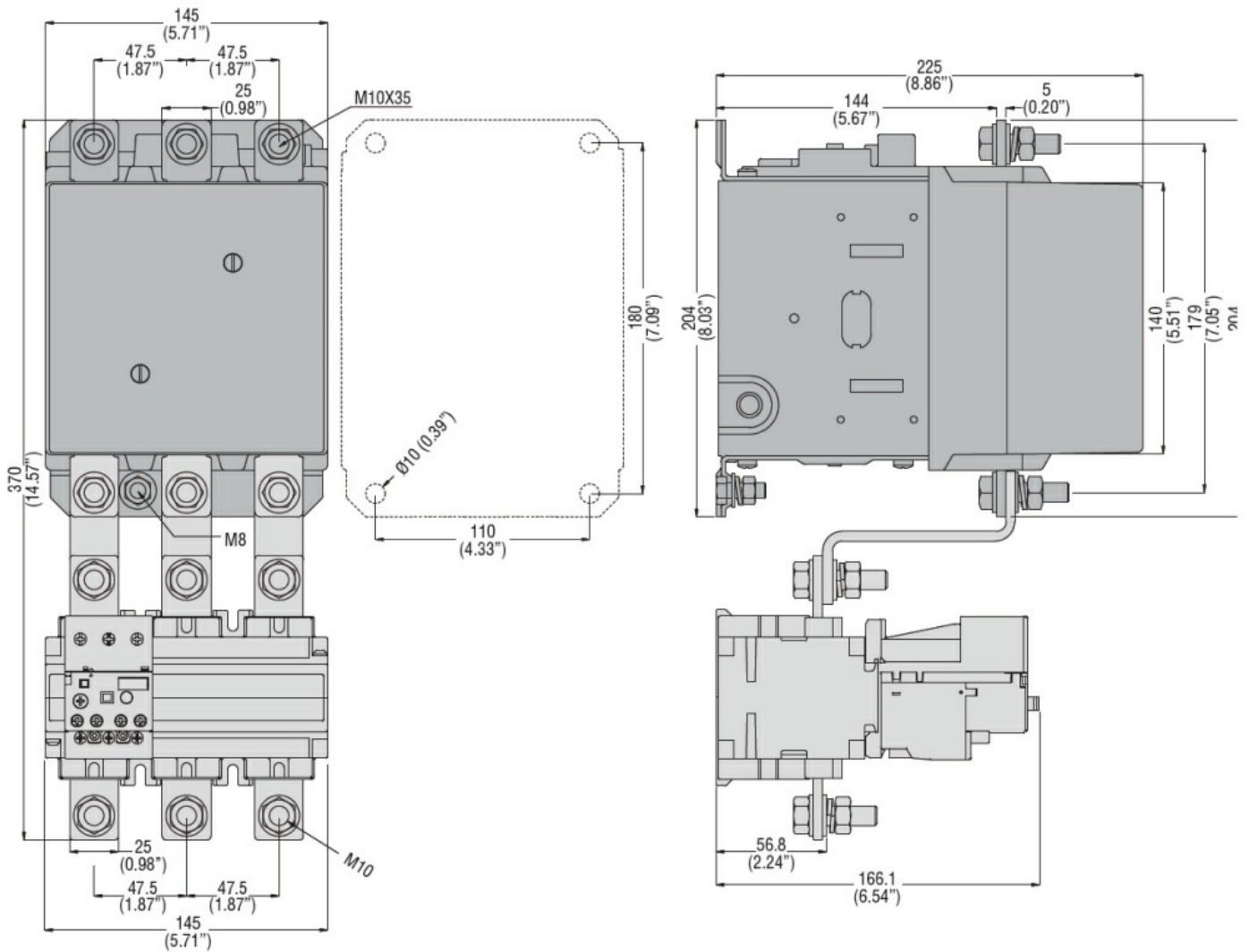
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Resistance & Protection

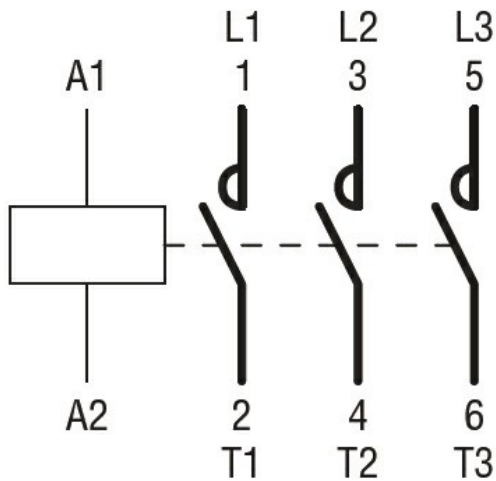
Pollution degree

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 classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation Power contactor
Product type designation B310

Contact characteristics

Number of poles	Nr.	3
Rated insulation voltage U_i IEC/EN	V	1000
Rated impulse withstand voltage U_{imp}	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I_{th}	A	450
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 450
	AC-1 ($\leq 55^\circ\text{C}$)	A 370
	AC-1 ($\leq 70^\circ\text{C}$)	A 300
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A 320
	AC-4 (400V)	A 150
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW 100
	400V	kW 170
	415V	kW 188
	440V	kW 200
	500V	kW 213
	690V	kW 256
	1000V	kW 180
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 158
	400V	kW 270
	500V	kW 350
	690V	kW 488
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V	A 375
	110V	A 195
	220V	A --
	330V	A --
	460V	A --
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	75V	A 375
	110V	A 350
	220V	A 300
	330V	A --
	460V	A --
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	75V	A 375
	110V	A 350
	220V	A 350

	330V	A	300
	460V	A	--
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
	220V	A	--
	330V	A	--
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
	330V	A	--
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
	460V	A	--
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	310
	110V	A	310
	220V	A	310
	330V	A	230
	460V	A	230
Short-time allowable current for 10s (IEC/EN60947-1)		A	2900
Protection fuse			
	gG (IEC)	A	500
	aM (IEC)	A	400
Making capacity (RMS value)		A	3150
Breaking capacity at voltage			
	440V	A	3000
	500V	A	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			
	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	I _{bin}	0.74
	max	I _{bin}	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
Mechanical features			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw
Weight		g	9400
Conductor section			
		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 mechanical load	cycles	700000
		cycles	10000000
Mirror contacts according to IEC/EN 60947-4-1			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
	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 $\leq 20^{\circ}\text{C}$ 50Hz		W	10
DC coil operating			
DC rated control voltage			
	min	V	440
	max	V	415
DC operating voltage			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	60
Average coil consumption $\leq 20^{\circ}\text{C}$			
	in-rush	W	300
	holding	W	10
Max cycles frequency			
Mechanical operation		cycles/h	2400
Operating times			
Average time for Us control			
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 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	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 class		L

Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

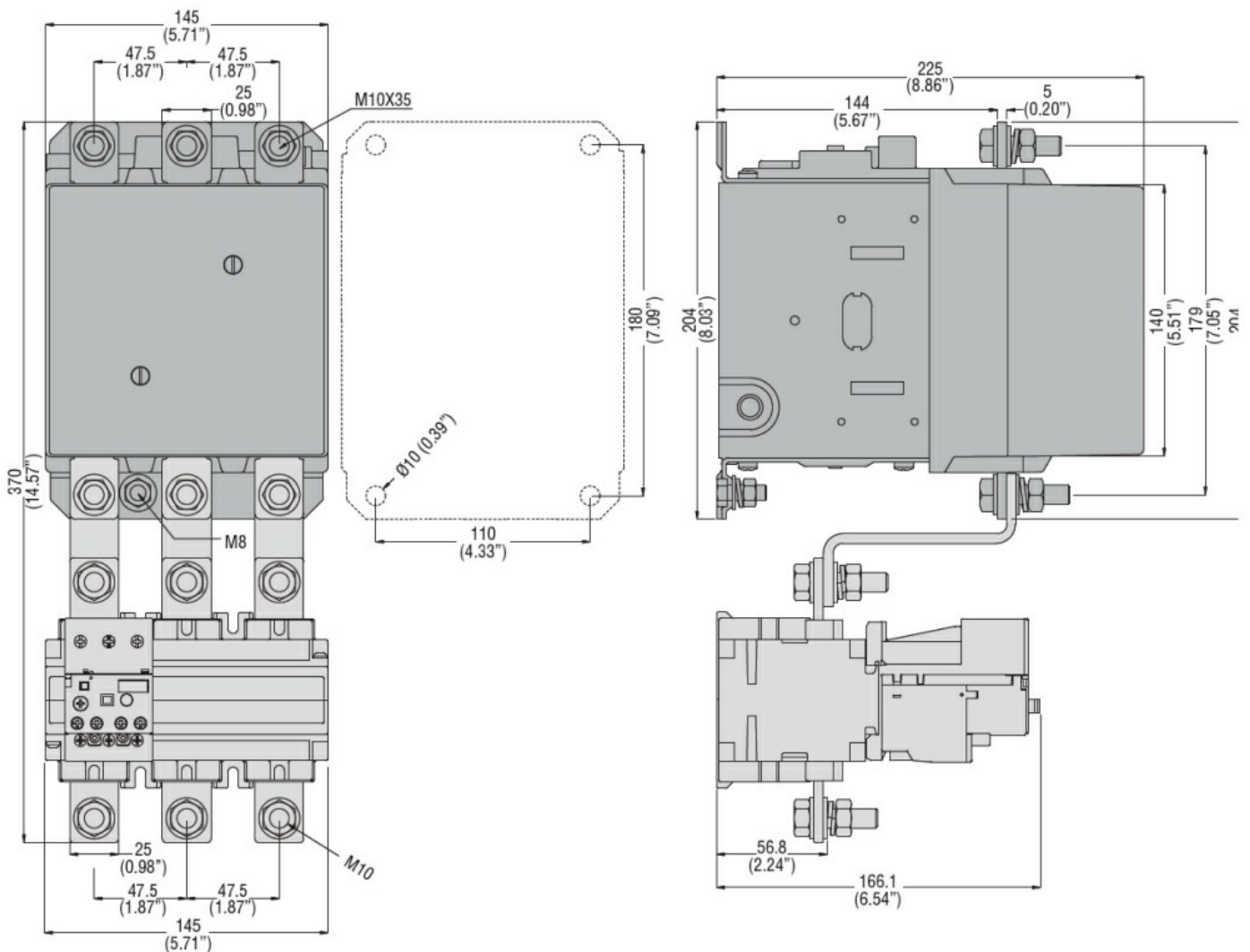
m	3000
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Resistance & Protection

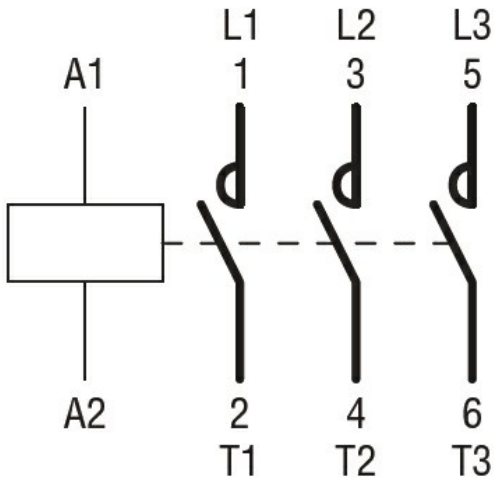
Pollution degree

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 classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching