chanhvinh.com

Lovato electric
ENERGY AND AUTOMATION

BF1801A024

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, AC COIL 50/60HZ, 24VAC, 1NC AUXILIARY CONTACT WITH MIRROR CONTACT FUNCTION



Contact characteristics

Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith ≤ 40°C		A	32
Operational current Ie			
	AC-1 (≤40°C)	A	32
	AC-1 (≤55°C)	A	26
	AC-1 (≤70°C)	A	23
	AC-3 (≤440V ≤55°C)	A	18
	AC-4 (400V)	A	8.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	4
	400V	kW	7.5
	415V	kW	9
	440V	kW	9
	500V	kW	10
	690V	kW	10
Rated operational power AC-1 (T≤40°C)			
	230V	kW	12
	400V	kW	21
	500V	kW	26
	690V	kW	36
IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	A	17
	48V	A	15
	75V	A	15
	110V	A	6
	220V	A	–
IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	A	20
	48V	A	20
	75V	A	20
	110V	A	13
	220V	A	1
IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	A	22
	48V	A	22
	75V	A	20
	110V	A	16
	220V	A	11
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			

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

chanhvinh.com

	≤24V	A	22
	48V	A	22
	75V	A	20
	110V	A	18
	220V	A	13
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	12
	48V	A	11
	75V	A	11
	110V	A	2
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	15
	48V	A	13
	75V	A	13
	110V	A	8
	220V	A	2
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	18
	48V	A	18
	75V	A	16
	110V	A	12
	220V	A	6
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	18
	48V	A	18
	75V	A	16
	110V	A	13
	220V	A	8
Short-time allowable current for 10s (IEC/EN60947-1)		A	200
Protection fuse			
	gG (IEC)	A	32
	aM (IEC)	A	20
Making capacity (RMS value)		A	180
Breaking capacity at voltage			
	440V	A	144
	500V	A	120
	690V	A	94
Resistance per pole (average value)		mΩ	1.5
Power dissipation per pole (average value)			
	Ith	W	1.5
	AC-3	W	0.5
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
	max	Ibin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8
	max	Ibin	0.74
Max number of wires simultaneously connectable		Nr.	2

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

chanhvinh.com

Lovato electric
ENERGY AND AUTOMATION

BF1801A024

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, AC COIL 50/60HZ, 24VAC, 1NC AUXILIARY CONTACT WITH MIRROR CONTACT FUNCTION

Conductor section			
AWG/Kcmil			
	max		10
Flexible w/o lug conductor section			
	min	mm²	1
	max	mm²	6
Flexible c/w lug conductor section			
	min	mm²	1
	max	mm²	4
Flexible with insulated spade lug conductor section			
	min	mm²	1
	max	mm²	6
Power terminal protection according to IEC/EN 60529			IP20 when properly wired
Cable stripping lenght			
	main circuit	mm	10
	command circuit	mm	8
Mechanical features			
Operating position			
	normal		Vertical plan
	allowable		±30°
Fixing			Screw / DIN rail 35mm
Weight		g	365
Auxiliary contact characteristics			
Thermal current Ith		A	10
IEC/EN 60947-5-1 designation			A600 - P600
Operating current AC15			
	230V	A	3
	400V	A	1.9
	500V	A	1.4
Operating current DC12			
	110V	A	5.7
Operating current DC13			
	24V	A	5.7
	48V	A	2.9
	60V	A	2.3
	110V	A	1.25
	125V	A	1.1
	220V	A	0.55
	600V	A	0.2
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	1600000 (Ie AC-3 400V)
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	1600000
	mechanical load	cycles	20000000
Mirror contats according to IEC/EN 609474-4-1 annex F			Yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	24
AC operating voltage			

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

chanhvinh.com

of 50/60Hz coil powered at 50Hz				
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
of 50/60Hz coil powered at 60Hz				
	pick-up			
		min	%Us	85
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
AC average coil consumption at 20°C				
of 50/60Hz coil powered at 50Hz				
		in-rush	VA	75
		holding	VA	9
of 50/60Hz coil powered at 60Hz				
		in-rush	VA	70
		holding	VA	6.5
of 60Hz coil powered at 60Hz				
		in-rush	VA	75
		holding	VA	9
Dissipation at holding ≤20°C 50Hz			W	2.5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us control				
in AC				
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO			
		min	ms	10
		max	ms	20
	Closing NC			
		min	ms	14
		max	ms	28
	Opening NC			
		min	ms	7
		max	ms	18
UL technical data				
Rated operational voltage AC (UL)			V	600
Full-load current (FLA) for three-phase AC motor				
		at 480V	A	14
		at 600V	A	17
Yielded mechanical performance				
for single-phase AC motor				
		110/120V	HP	1
		230V	HP	3
for three-phase AC motor				
		200/208V	HP	5
		220/240V	HP	5

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

chanhvinh.com

		460/480V	HP	10
		575/600V	HP	15
General USE				
	Contactor			
		AC current	A	32
	Auxiliary contacts			
		AC voltage	V	600
		AC current	A	10
		DC voltage	V	250
		DC current	A	1
Short-circuit protection fuse, 600V				
	High fault			
		Short circuit current	kA	100
		Fuse rating	A	60
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	A	80
Contact rating of auxiliary contacts according to UL				A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protection				
Pollution degree				3
Dimensions				

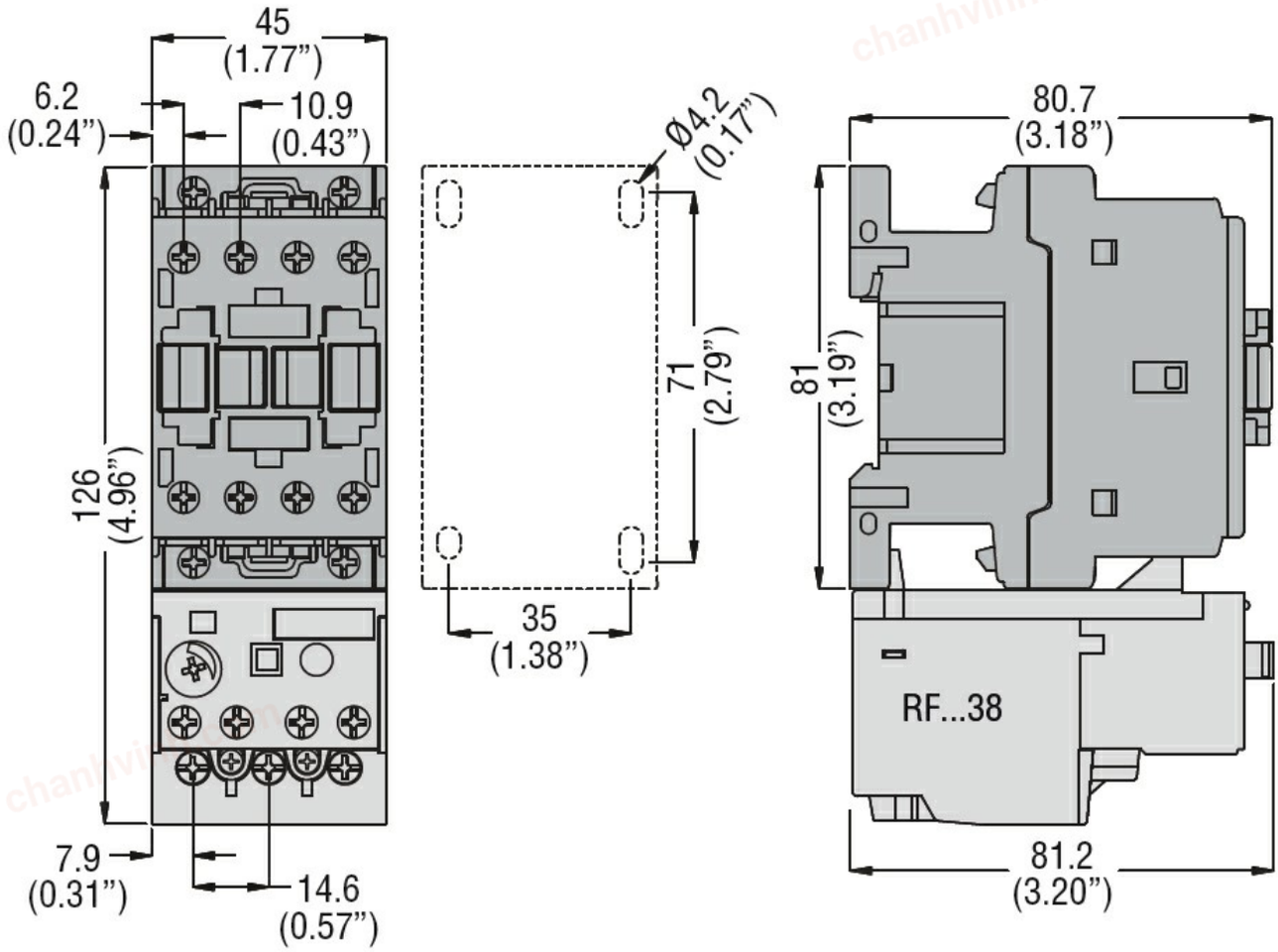
The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

chanhvinh.com

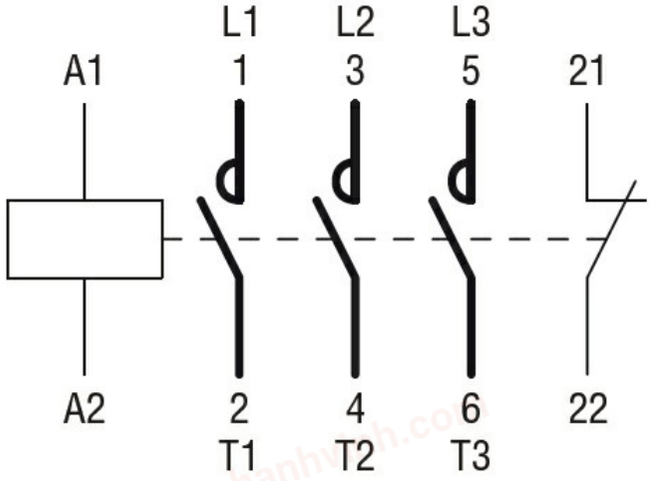
Lovato electric
ENERGY AND AUTOMATION

BF1801A024

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, AC COIL 50/60HZ, 24VAC, 1NC AUXILIARY CONTACT WITH MIRROR CONTACT FUNCTION



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1
CSA C22.2 n° 60947-4-1
IEC/EN 60335-2-89
IEC/EN/BS 60947-1
IEC/EN/BS 60947-4-1
UL 60947-1
UL 60947-4-1

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

chanhvinh.com

BF1801A024

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, AC COIL 50/60HZ, 24VAC, 1NC AUXILIARY CONTACT WITH MIRROR CONTACT FUNCTION

Certificates

CCC
CSA C22.2 n. 60335-2-40:22 LZGH A2L
CSA C22.2 No. 60335-2-89:21 LZGH A2L
cULus
EAC
UL 60335-2-40 LZGH A2L
UL 60335-2-89 LZGH A2L

ETIM classification

ETIM 8.0	EC000066 - Power contactor, AC switching

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