Lovato electric
ENERGY AND AUTOMATION

BF1810A024

SCHÜTZ BF1810A, 3P+1S, 18A AC3, 24V 50/60HZ

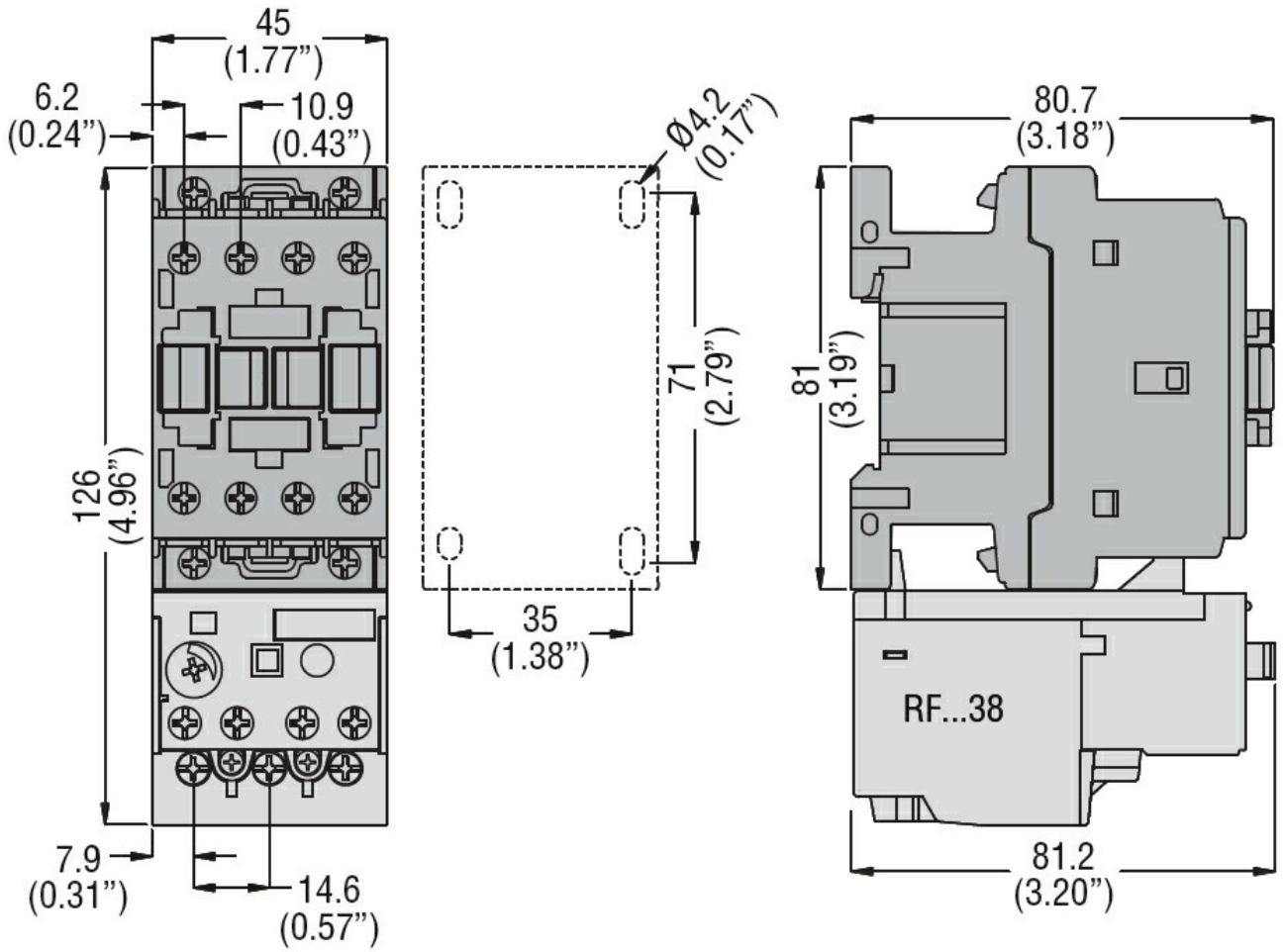
Product designation			Power contactor
Product type designation			BF18
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	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			
	≤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	2.5
Power dissipation per pole (average value)			
	Ith	W	2.6
	AC-3	W	0.8
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8

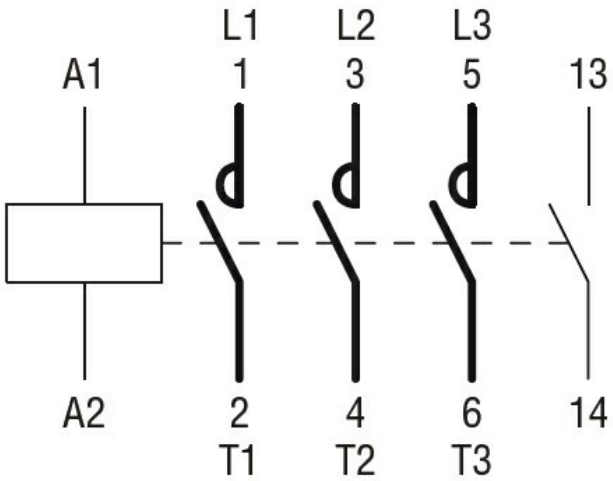
		max	Ibin	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section				
	AWG/Kcmil			
		max		10
	Flexible w/o lug conductor section			
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			
		min	mm²	1
		max	mm²	4
Power terminal protection according to IEC/EN 60529				IP20 when properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	364
Conductor section				
	AWG/kcmil conductor section			
		max		10
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
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				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	%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				
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

		220/230V	HP	5
		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				



Wiring diagrams



Certifications and compliance

Compliance

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

Certificates

CCC

	cULus
	EAC

ETIM classification

ETIM 8.0	EC000066 - Power contactor, AC switching