



Product type designation     BFD65       Contract characteristics     V     3       Rated insulation voltage Ui IEC/EN     V     1000       Rated insulation voltage Uimp     KV     8       Operational frequency     min     Hz     25       max     Hz     400     100       IEC Conventional free air thermal current lth     A     115     115       IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     400V     A     100       600V     A     75     800V     A     45       1000V     A     45     1000V     A     640       Protection fuse     gG (IEC)     A     125     add (IEC)     A     640       Protection fuse     gG (IEC)     A     125     add (IEC)     A     640       Power dissipation per pole (average value)     mQ     0.6     Power dissipation per pole (average value)     mIn     Nm     4       max     Nm     4     max     10in     3.69       Tightening torque for coil terminal     min<	Product designation			Power contactor
Number of poles     Nr.     3       Rated insulation voltage Ui IEC/EN     V     1000       Rated insulation voltage Uimp     KV     8       Operational frequency     min     Hz     25       max     Hz     400     155       IEC Conventional free air thermal current lth     A     115     155       IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     400V     A     100       600V     A     75     800V     A     45       1000V     A     640     75     800V     A     45       1000V     A     640     75     800     A     460       Protection fuse     gG (IEC)     A     125     aM (IEC)     A     80       Resistance per pole (average value)     mQ     0.6     Power dissipation per pole (average value)     min     Nm     4       max     Nm     4     max     Nm     5     min< Ibin	-			BFD65
Rated insulation voltage Ui IEC/EN     V     1000       Rated inpulse withstand voltage Uimp     kV     8       Operational frequency     min     Hz     25       max     Hz     400     115       IEC conventional free air thermal current lth     A     115       IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     400V     A     100       600V     A     75     800V     A     45       1000V     A     35     5     600V     A     125       Short-time allowable current for 10s (IEC/EN60947-1)     A     640     Protection fuse     gG (IEC)     A     125       Protection fuse     gG (IEC)     A     125     aM (IEC)     A     80       Power dissipation per pole (average value)     mmΩ     0.6     Power terminals     min     Nm     5       Tightening torque for coil terminal     min     Nm     4     max     Nm     5       Tightening torque for coil terminal     min     Nm     1     min     10     0.8	Contact characteristics			
Rated impulse withstand voltage Uimp   kV   8     Operational frequency   min   Hz   25     max   Hz   400   400     IEC Conventional free air thermal current lth   A   115     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series   400V   A   100     600V   A   75   800V   A   45     1000V   A   35   A   460     Protection fuse   gG (IEC)   A   125     aM (IEC)   A   80   Resistance per pole (average value)   m0   0.6     Power dissipation per pole (average value)   Ith   W   7.9   Tightening torque for coil terminals   369     Tightening torque for coil terminal   min   Nm   4   369     Tightening torque for coil terminal   min   Nm   1.8   369     Tightening torque for coil terminal   min   Nm   1.8   369     Tightening torque for coil terminal   min   Nm   1.8   363     Max number of wires simultaneously connectable   Nr.   2   2   2   2<	Number of poles		Nr.	3
Rated impulse withstand voltage Uimp   kV   8     Operational frequency   min   Hz   25     max   Hz   400   115     IEC Conventional free air thermal current lth   A   115     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series   400V   A   100     600V   A   75   800V   A   45     1000V   A   36   36   36     Short-time allowable current for 10s (IEC/EN60947-1)   A   640   90     Protection fuse   gG (IEC)   A   125     aM (IEC)   A   80   80     Resistance per pole (average value)   mΩ   0.6     Power dissipation per pole (average value)   min   Nm   4     max   Nm   5   min   10   3.69     Tightening torque for coil terminal   min   Nm   4   3.69     Tightening torque for coil terminal   min   Nm   1   3.69     Tightening torque for coil terminal   min   Nm   1   3.69     Max number of wires simultaneously connectab	Rated insulation voltage Ui IEC/EN		V	1000
Operational frequency   min   Hz   25     max   Hz   400     IEC Conventional free air thermal current lth   A   115     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series   400V   A   100     600V   A   75   800V   A   45     1000V   A   35   5   1000V   A   640     Protection fuse   gG (IEC)   A   125   add (IEC)   A   80     Resistance per pole (average value)   mnQ   0.6   0   0.6   0   0.6     Power dissipation per pole (average value)   ith   W   7.9   1			kV	8
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	· · · · ·			
maxHz400IEC Conventional free air thermal current lthA115IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series400VA100600VA75800VA451000VA35351000VA35Short-time allowable current for 10s (IEC/EN60947-1)A640Protection fuseProtection fusegG (IEC)A125aM (IEC)AResistance per pole (average value)mΩ0.60.6Power dissipation per pole (average value)minNm4maxNm5min1bin2.95Tightening torque for coil terminalsminNm43.69Tightening torque for coil terminalminNm0.8maxMax number of wires simultaneously connectableNr.2Conductor section.74Max number of wires simultaneously connectableNr.2Conductor sectionmax2Flexible v/o lug conductor sectionminmm²1.5maxmax35Power terminal protection according to IEC/EN 60529IP20 front150150150		m	in Hz	25
IEC Conventional free air thermal current lth   A   115     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series   400V   A   100     600V   A   75   800V   A   45     1000V   A   35   35     Short-time allowable current for 10s (IEC/EN60947-1)   A   640     Protection fuse   gG (IEC)   A   125     add (IEC)   A   80   80     Resistance per pole (average value)   mΩ   0.6     Power dissipation per pole (average value)   min   Nm   4     max   Nm   5   min   1bin   2.95     Tightening torque for coil terminals   min   Nm   2.95   max   1bin   3.69     Tightening torque for coil terminal   min   Nm   0.8   max   Nm   1   min   16in   0.8   100   0.4   15 <td< td=""><td></td><td></td><td></td><td></td></td<>				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	IEC Conventional free air thermal current Ith			
400V     A     100       600V     A     75       800V     A     45       1000V     A     35       Short-time allowable current for 10s (IEC/EN60947-1)     A     640       Protection fuse     gG (IEC)     A     125       aM (IEC)     A     80       Resistance per pole (average value)     mΩ     0.6       Power dissipation per pole (average value)     mΩ     0.6       Power dissipation per pole (average value)     mín     Nm     4       Protection fuse     min     Nm     4       Power dissipation per pole (average value)     min     Nm     4       Power dissipation per pole (average value)     min     Nm     4       Tightening torque for terminals     min     Nm     4       max     Nm     5     min     1bin     2.95       max     Ibin     2.95     max     Nm     1       min     Ibin     0.8     max     Nm     1       max     Ibin     0.74<	IEC max current le in DC1 with L/R ≤ 1ms with	n 3 poles in series		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		•	V A	100
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
Short-time allowable current for 10s (IEC/EN60947-1)     A     640       Protection fuse     gG (IEC)     A     125       aM (IEC)     A     80       Resistance per pole (average value)     mΩ     0.6       Power dissipation per pole (average value)     mIn     W     7.9       Tightening torque for terminals     min     Nm     4       max     Nm     5     min     Ibin     2.95       Tightening torque for coil terminal     min     Nm     0.8     max     Nm     1       Tightening torque for coil terminal     min     Nm     0.8     max     Nm     1       Max number of wires simultaneously connectable     Nr.     2     Conductor section     Nr.     2       Max number of wires simultaneously conductor section     max     Ibin     0.74       Max number of wires simultaneously conductor section     max     2     Conductor section       Flexible w/o lug conductor section     min     mmr <sup>2</sup> 1.5     max       Flexible c/w lug conductor section     min     mmr <sup>2</sup> 35				
Protection fuse   gG (IEC)   A   125     alk (IEC)   A   80     Resistance per pole (average value)   mQ   0.6     Power dissipation per pole (average value)   Ith   W   7.9     Tightening torque for terminals   min   Nm   4     max   Nm   5   min   Ibin   2.95     Tightening torque for coil terminal   min   Nm   0.8   max   Ibin   3.69     Tightening torque for coil terminal   min   Nm   0.8   max   Ibin   0.8     Max number of wires simultaneously connectable   Nr.   2   Conductor section   Nr.   2     Flexible w/o lug conductor section   min   mm   mm <sup>2</sup> 1.5   max   mm <sup>2</sup> 35     Flexible c/w lug conductor section   min   mm <sup>2</sup> 35   35   Power terminal protection according to IEC/EN 60529   IP20 front	Short-time allowable current for 10s (IEC/EN6			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		,		
aM (IEC)     A     80       Resistance per pole (average value)     mΩ     0.6       Power dissipation per pole (average value)     Ith     W     7.9       Tightening torque for terminals     min     Nm     4       max     Nm     5     min     Ibin     2.95       max     Ibin     3.69     3.69     3.69       Tightening torque for coil terminal     min     Nm     0.8     max       Max number of wires simultaneously connectable     Nr.     2     2       Conductor section     AWG/Kcmil     max     2     35       Flexible w/o lug conductor section     min     mm²     1.5     max     mm²     35       Power terminal protection according to IEC/EN 60529     IP20 front     IP20 front     IP20 front		aG (IE	C) A	125
Resistance per pole (average value)   mΩ   0.6     Power dissipation per pole (average value)   Ith   W   7.9     Tightening torque for terminals   min   Nm   4     max   Nm   5   min   Ibin   2.95     max   Ibin   2.95   max   Ibin   3.69     Tightening torque for coil terminal   min   Nm   0.8   max   Nm   1     Max number of wires simultaneously connectable   Nr.   2   Conductor section   Nr.   2     If exible w/o lug conductor section   min   mm²   1.5   max   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front   IP20 front   IP20 front				
Power dissipation per pole (average value)   Ith   W   7.9     Tightening torque for terminals   min   Nm   4     max   Nm   5   min   Ibin   2.95     max   Ibin   2.95   max   Ibin   3.69     Tightening torque for coil terminal   min   Nm   0.8   max   Nm   1     Max number of wires simultaneously connectable   Nr   2   Conductor section   Nr.   2     Conductor section   AWG/Kcmil   max   2   1.5   max   mm²   3.5     Flexible c/w lug conductor section   min   mm²   1.5   max   mm²   3.5     Power terminal protection according to IEC/EN 60529   IP20 front   IP20 front   IP20 front	Resistance per pole (average value)		,	
Ith     W     7.9       Tightening torque for terminals     min     Nm     4       max     Nm     5     min     Ibin     2.95       max     Ibin     3.69     3.69     3.69       Tightening torque for coil terminal     min     Nm     0.8     max     Nm     1       min     Num     0.8     max     Nm     1     min     1.6     0.8       Max number of wires simultaneously connectable     Nr.     2     2     2     2       Conductor section     Min     mm     1.5     max     2     35       Flexible v/o lug conductor section     min     mm²     1.5     max     mm²     35       Power terminal protection according to IEC/EN 60529     IP20 front     IP20 front     IP20 front     IP20 front				
Tightening torque for terminals   min   Nm   4     max   Nm   5   min   Ibin   2.95     max   Ibin   3.69     Tightening torque for coil terminal   min   Nm   0.8     max   Nm   1   min   10in   0.8     max   Ibin   0.74   0.74   0.74     Max number of wires simultaneously connectable   Nr.   2   0     Conductor section   max   2   1.5     Max fill   max   mm²   35     Flexible w/o lug conductor section   min   mm²   1.5     max   mm²   35   1.5     Power terminal protection according to IEC/EN 60529   IP20 front			th W	7.9
min   Nm   4     max   Nm   5     min   Ibin   2.95     max   Ibin   3.69     Tightening torque for coil terminal   min   Nm   0.8     max   Nm   1   min   Ibin   0.8     max   Ibin   0.8   max   Nm   1     Max number of wires simultaneously connectable   Nr.   2   Conductor section   Nr.   2     Conductor section   MWG/Kcmil   max   max   2   2     Flexible w/o lug conductor section   min   mm²   1.5   35     Flexible c/w lug conductor section   min   mm²   35   35     Power terminal protection according to IEC/EN 60529   IP20 front   IP20 front	Tightening torgue for terminals			
max     Nm     5       min     lbin     2.95       max     lbin     3.69       Tightening torque for coil terminal     min     Nm     0.8       max     Nm     1     min     1       min     lbin     0.8     max     lbin     0.8       max     lbin     0.8     max     lbin     0.8       Max number of wires simultaneously connectable     Nr.     2     0       Conductor section     Nr.     2     0     0       AWG/Kcmil     max     nmx     2     0       Flexible w/o lug conductor section     min     mm²     1.5       max     mm²     35     0     0       Flexible c/w lug conductor section     min     mm²     1.5       max     mm²     35     0     0       Flexible c/w lug conductor section     min     mm²     1.5       max     mm²     35     0     0       Flexible c/w lug conductor section     min     <	5 · · · · · · · · · · · · · · · · · · ·	m	in Nm	4
min     Ibin     2.95       Tightening torque for coil terminal     3.69       Tightening torque for coil terminal     min     Nm     0.8       max     Nm     1     min     1       min     Ibin     0.8     max     Nm     1       Max number of wires simultaneously connectable     Nr.     2     0.74       Max number of wires simultaneously connectable     Nr.     2     0.74       Conductor section     max     1     1.5       Flexible w/o lug conductor section     min     mm²     1.5       Flexible c/w lug conductor section     min     mm²     3.5       Power terminal protection according to IEC/EN 60529     IP20 front     IP20 front				
maxIbin3.69Tightening torque for coil terminalminNm0.8maxNm1maxNm1minIbin0.8maxIbin0.74Max number of wires simultaneously connectableNr.2Conductor sectionNr.2Conductor sectionMax2Total sectionTotal sectionTotal sectionTotal sectionAWG/Kcmilmax2Total sectionTotal sectionTotal sectionTotal sectionFlexible w/o lug conductor sectionminmm²35Total sectionTotal sectionFlexible c/w lug conductor sectionminmm²1.5Total sectionTotal sectionPower terminal protection according to IEC/EN 60529IP20 frontIP20 frontIP20 front				
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     Conductor section   Max   2     Flexible w/o lug conductor section   min   mm²   1.5     max   mm²   35     Flexible c/w lug conductor section   min   mm²   1.5     max   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front				
min   Nm   0.8     max   Nm   1     min   Ibin   0.8     max   Ibin   0.74     Max number of wires simultaneously connectable   Nr.   2     Conductor section   Nr.   2     AWG/Kcmil   max   2     Flexible w/o lug conductor section   min   mm²     Max   mm²   35     Flexible c/w lug conductor section   min   mm²     Max   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front	Tightening torgue for coil terminal			
max min min maxNm lbin 0.8 0.74Max number of wires simultaneously connectableNr.2Conductor sectionNr.2AWG/Kcmilmax2Flexible w/o lug conductor sectionmin mm²1.5 maxFlexible c/w lug conductor sectionmin mm²1.5 maxFlexible c/w lug conductor sectionmin mm²1.5 maxPower terminal protection according to IEC/EN 60529IP20 front		m	in Nm	0.8
min   Ibin   0.8     Max number of wires simultaneously connectable   Nr.   2     Conductor section   AWG/Kcmil   max   2     Flexible w/o lug conductor section   min   mm²   1.5     Flexible c/w lug conductor section   min   mm²   35     Flexible c/w lug conductor section   min   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front   IP20 front				
max   Ibin   0.74     Max number of wires simultaneously connectable   Nr.   2     Conductor section   Max   2     AWG/Kcmil   max   2     Flexible w/o lug conductor section   min   mm²   1.5     max   mm²   35     Flexible c/w lug conductor section   min   mm²   1.5     Flexible c/w lug conductor section   min   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front   IP20 front		m		
Max number of wires simultaneously connectable   Nr.   2     Conductor section   AWG/Kcmil   max   2     Flexible w/o lug conductor section   min   mm²   1.5     Flexible c/w lug conductor section   min   mm²   35     Flexible c/w lug conductor section   min   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front				
Conductor section   AWG/Kcmil   max   2     Flexible w/o lug conductor section   min   mm²   1.5     max   mm²   35     Flexible c/w lug conductor section   min   mm²   1.5     min   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front	Max number of wires simultaneously connecta	ble		
AWG/Kcmil   max   2     Flexible w/o lug conductor section   min   mm²   1.5     max   mm²   35     Flexible c/w lug conductor section   min   mm²   1.5     Flexible c/w lug conductor section   min   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front				
max 2   Flexible w/o lug conductor section min mm² 1.5   max mm² 35   Flexible c/w lug conductor section min mm² 1.5   Flexible c/w lug conductor section min mm² 35   Power terminal protection according to IEC/EN 60529 IP20 front				
Flexible w/o lug conductor section   min   mm²   1.5     max   mm²   35     Flexible c/w lug conductor section   min   mm²   1.5     max   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front		ma	ax	2
min mm² 1.5   max mm² 35   Flexible c/w lug conductor section min mm² 1.5   max mm² 35   Power terminal protection according to IEC/EN 60529 IP20 front	Flexible w/o lug condu			
max mm² 35   Flexible c/w lug conductor section min mm² 1.5   max mm² 35   Power terminal protection according to IEC/EN 60529 IP20 front			in mm²	1.5
Flexible c/w lug conductor section     min   mm²   1.5     max   mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front				
min mm² 1.5   max mm² 35   Power terminal protection according to IEC/EN 60529 IP20 front	Flexible c/w lug condu			
max mm² 35   Power terminal protection according to IEC/EN 60529 IP20 front			in mm²	1.5
Power terminal protection according to IEC/EN 60529 IP20 front				
	Power terminal protection according to IEC/EI			
	Mechanical features	- 		

Operating position



## BFD6500A024 THREE-POLE CONTACTOR, 35A/1000V DC1, AC COIL, 24VAC 50/60HZ

		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rai 35mm
Weight			g	1240
Conductor section				
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Safety related data	Od according to EN/ISO 12480 1			
Performance level B II	0d according to EN/ISO 13489-1	mechanical load	avalaa	15000000
EMC compatibility		mechanicarioau	cycles	
AC coil operating				yes
Rated AC voltage at 5	0/60Hz		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		o ( 1 1	
		min	%Us	85
		max	%Us	110
	drop-out	min	%Us	20
		min max	%Us %Us	20 55
AC average coil consu	Imption at 20°C	Παλ	/003	55
rie average con conce	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	210
		holding	VA	15
	of 50/60Hz coil powered at 60Hz	3_		
		in-rush	VA	195
		holding	VA	13
	of 60Hz coil powered at 60Hz			
		in-rush	VA	210
		holding	VA	15
Dissipation at holding	≤20°C 50Hz		W	5
Max cycles frequency			en rele - //	2000
Mechanical operation			cycles/h	3600
Operating times Average time for Us co	ontrol			
Average une IUI US CO	in AC			
	Closing NO			
		min	ms	12
		max	ms	28
	Opening NO		-	
		min	ms	8
		max	ms	22
	in DC			

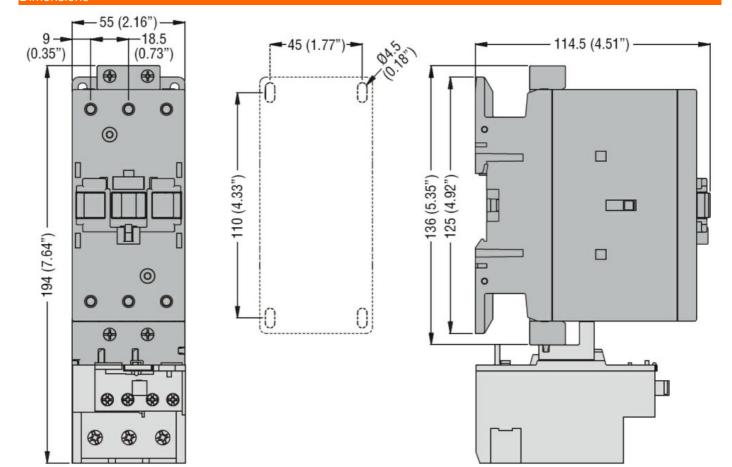
The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding BFD6500A024



BFD6500A024 THREE-POLE CONTACTOR, 35A/1000V DC1, AC COIL, 24VAC 50/60HZ

	Closi	ng NO		
		min	ms	40
		max	ms	85
	Open	ing NO		
		min	ms	20
		max	ms	55
UL technical data				
General USE				
	Contactor			
		AC current	А	115
	4 poles in series DC1			
		600V	А	100
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protecti	ion			
Pollution degree				3

Dimensions



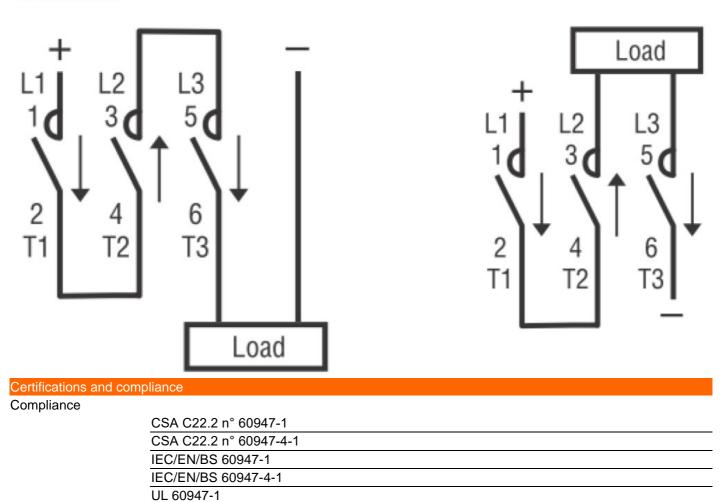
## Wiring diagrams

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## BFD6500A024

THREE-POLE CONTACTOR, 35A/1000V DC1, AC COIL, 24VAC 50/60HZ



ETIM classification

UL 60947-4-1

ETIM 8.0

EC002552 -Power contactor, DC switching