



Product yeak designation contractor expression contractor contractor contractor because and the second seco	Product designation				Auxiliary
Contact characteristics         Nr.         4           Number of poles         Nr.         4           Rated insulation voltage UI IEC/EN         V         690           Rated insulation voltage UI IEC/EN         V         6           Operational frequency         min         Hz         25           max         HZ         400         1         1           IEC Conventional free air thermal current Ith         A         10         0           Operational current Ie         A         0         1         0           Operational current for 10s (IEC/EN60947-1)         A         0         1         1           Protection fuse         gG (IEC)         A         25         1	Product type designat	ion			
Number of poles         Nr.         4           Rated insulation voltage UI IEC/EN         V         690           Rated inguise withstand voltage Uimp         KV         6           Operational frequency         min         Hz         25           max         Hz         400         1					BI 00
Rated insulation voltage Ui IEC/EN         V         690           Rated impulse withstand voltage Uimp         kV         6           Operational frequency         min         Hz         25           max         Hz         400         10           Operational current le         A         10         0           Operational current le         A         0         0           Protection fuse         gG (IEC)         A         25           Tightening torque for terminals         min         Nm         1.5           max         Nm         1.8         min         1.1           max         Ibin         1.5         1.1         1.5           Tightening torque for coil terminals         min         Nm         1.8         min         1.6           Tightening torque for coil terminal         min         Nm         1.8         min         1.0           Tightening torque for coil terminal         min         Nm         1.8         min         1.0           Max number of wires simultaneously connectable         Nr.         2         2         Conductor section         min         mm²         1           Max number of wires simultaneously conductor section         min				Nr.	4
Rated impulse withstand voltage Uimp       kV       6         Operational frequency       min       Hz       25         IEC Conventional free air thermal current lth       A       10         Operational current le       AC-1 (=55°C)       A       0         Short-time allowable current for 10s (IEC/EN60947-1)       A       0         Protection fuse       gG (IEC)       A       25         Tightening torque for terminals       min       Nm       1.5         max       Nm       1.5       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       1.5       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.8         Max number of wires simultaneously connectable       Nr.       2       2       2       2         Conductor section       AWG/Kcmil       max       10       10       10       1	-	ne Ui IEC/EN			
Operational frequency       min       Hz       25         max       Hz       400         IEC Conventional free air thermal current lth       A       10         Operational current le       AC-1 (=55°C)       A       0         Short-time allowable current for 10s (IEC/EN60947-1)       A       0         Protection fuse       gG (IEC)       A       25         Tightening torque for terminals       min       Nm       1.5         max       Nm       1.5       min       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       1bin       0.74         Max number of wires simultaneously connectable       Nr.       2       Conductor section       Nr.       2         AWG/Kcmil       max       10       max       10       1         Flexible c/w lug conductor section       max       mm       mm²       1         max       min       mm²       1       max       mm²       1         Flexible c/w lug conductor section       max       mm²       1       max       mm²       1         Flexible c/w lug conductor section       max       mm²       1       max       mm²					
min         Hz         25           max         Hz         400           IEC Conventional free air thermal current Ith         A         10           Operational current Ie         AC-1 (=55°C)         A         0           Short-time allowable current for 10s (IEC/EN60947-1)         A         0           Protection fuse         gG (IEC)         A         25           Tightening torque for terminals         min         Nm         1.5           max         Nm         1.5         max         Nm         1.5           Tightening torque for coil terminal         min         Nm         1.5         1.5           Tightening torque for coil terminal         min         Nm         0.8         max         Nm         1.5           Tightening torque for coil terminal         min         Nm         0.8         max         Nm         1.5           Tightening torque for coil terminal         min         Nm         0.8         max         Nm         1.5           Conductor section         mix         Nm         1.5         max         10         Flexible w/o lug conductor section         mm         mm²         1         max         1.5         max         10         Flexible w/o lug cond	· · · · · · · · · · · · · · · · · · ·				
max         Hz         400           IEC Conventional recent of the main accurate the main accuration of the main ac			min	Hz	25
IEC Conventional free air thermal current lth       A       10         Operational current le       AC-1 (=55°C)       A       0         Short-time allowable current for 10s (IEC/EN60947-1)       A       0         Protection fuse       gG (IEC)       A       25         Tightening torque for terminals       min       Nm       1.5         max       Nm       1.8       min       Ibin       1.1         max       Ibin       1.1       max       Nm       1.8         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.6         Tightening torque for coil terminal       min       Nm       0.8       max       10       74         Max number of wires simultaneously connectable       Nr.       2       2       2       2         Conductor section       Min       min       mm²       1 <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>					
AC-1 (=55°C)       A       0         Short-time allowable current for 10s (IEC/EN60947-1)       A       0         Protection fuse       gG (IEC)       A       25         Tightening torque for terminals       min       Nm       1.5         max       Nm       1.8       min       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Conductor section       min       max       10       1       max       1       max       1 <td< td=""><td>IEC Conventional free</td><td>air thermal current Ith</td><td></td><td></td><td></td></td<>	IEC Conventional free	air thermal current Ith			
AC-1 (=55°C)       A       0         Short-time allowable current for 10s (IEC/EN60947-1)       A       0         Protection fuse       gG (IEC)       A       25         Tightening torque for terminals       min       Nm       1.5         max       Nm       1.8       min       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1.5         Conductor section       min       max       10       1       max       1       max       1 <td< td=""><td>Operational current le</td><td></td><td></td><td></td><td></td></td<>	Operational current le				
Short-time allowable current for 10s (IEC/EN60947-1)       A       0         Protection fuse       gG (IEC)       A       25         Tightening torque for terminals       min       Nm       1.5         max       Nm       1.8       min       Ibin       1.1         max       Ibin       1.1       max       Ibin       1.5         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         Conductor section       max       10       max       mm²       1         Flexible w/o lug conductor section       min       mm²       1       max       mm²       1         Flexible c/w lug conductor section       min       mm²       1       max       mm²       1         Flexible with insulated spade lug conductor section       min       mm²       1       max       mm²       1         Power terminal protection according to IEC/EN 60529       IP20 when wired       Mechanical features       IP20 when wired <td>·</td> <td></td> <td>AC-1 (=55°C)</td> <td>А</td> <td>0</td>	·		AC-1 (=55°C)	А	0
Protection fuse       gG (IEC)       A       25         Tightening torque for terminals       min       Nm       1.5         max       Nm       1.8       min       Ibin       1.1         max       Nm       1.5       max       Nm       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1         Tightening torque for coil terminal       min       Nm       0.8       max       10       0.74         Max number of wires simultaneously connectable       Nr.       2       2       2       2         Conductor section       min       mm2       1       max       max       10         Flexible w/o lug conductor section       min       mm2       1       max       10         Flexible c/w lug conductor section       min       mm2       1       max       1         Flexible with insulated spade lug conductor section       min       mm7       1       max       1         Power terminal protection according to IEC/EN 60529       IP20 when wired       Machanical features       IP20 when wired         Operating position       normal       Vertical plan       Vertical plan       IPan	Short-time allowable of	current for 10s (IEC/EN60947-1)	. ,		
Tightening torque for terminals       min       Nm       1.5         max       Nm       1.8       min       Ibin       1.1         max       Ibin       1.5       max       Ibin       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1         Max number of wires simultaneously connectable       Nr.       2       0.74       0.74         Max number of wires simultaneously connectable       Nr.       2       0       0.74         Max number of wires simultaneously connectable       Nr.       2       0       0         Conductor section       max       10       10       10       10         Flexible w/o lug conductor section       min       mm²       1       1         Max       mm²       1       1       1       1       1         Flexible c/w lug conductor section       min       mm²       1					
Tightening torque for terminals       min       Nm       1.5         max       Nm       1.8       min       Ibin       1.1         max       Ibin       1.5       max       Ibin       1.5         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1         Max number of wires simultaneously connectable       Nr.       2       0.74       0.74         Max number of wires simultaneously connectable       Nr.       2       0       0.74         Max number of wires simultaneously connectable       Nr.       2       0       0         Conductor section       max       10       10       10       10         Flexible w/o lug conductor section       min       mm²       1       1         Max       mm²       1       1       1       1       1         Flexible c/w lug conductor section       min       mm²       1			gG (IEC)	А	25
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       Nm       1         Max number of wires simultaneously connectable       Nr.       2       Conductor section         Max number of wires simultaneously connectable       Nr.       2       Conductor section         AWG/Kcmil       max       10       Flexible w/o lug conductor section       min       mm²       1         Flexible w/o lug conductor section       min       mm²       1       max       mm²       1         Flexible c/w lug conductor section       min       mm²       1       max       mm²       1         Flexible with insulated spade lug conductor section       min       mm²       1       max       mm²       1         Max       mm²       1       max       mm²       1       1       1       1         Flexible with insulated spade lug conductor section       min       mm²       <	Tightening torque for t	erminals			
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       Nm       1         min       Nm       0.8       max       Nm       1         min       lbin       0.74       Nm       1       0.74         Max number of wires simultaneously connectable       Nr.       2       0         Conductor section       Nr.       2       0         Flexible w/o lug conductor section       max       10       1         Flexible c/w lug conductor section       min       mm²       1         max       mm²       1       max       1         Flexible c/w lug conductor section       min       mm²       1         max       mm²       1       1       1         Flexible with insulated spade lug conductor section       min       mm²       1         max       mm²       1       1       1         Mechanical features       Vertical plan       1P20 when wired         Operating position       Normal       Vertical plan			min	Nm	1.5
max       lbin       1.5         Tightening torque for coil terminal       min       Nm       0.8         max       Nm       1       min       lbin       0.8         max       lbin       0.74       max       lbin       0.74         Max number of wires simultaneously connectable       Nr.       2       Conductor section       Nr.       2         Conductor section       AWG/Kcmil       max       10       Intervention       Intervention         Flexible w/o lug conductor section       min       mm²       1       max       max       6         Flexible c/w lug conductor section       min       mm²       1       max       max       max       1         Flexible c/w lug conductor section       min       mm²       1       max       max       1       max       1       max       max       1       max       max       1       max       1       max       1			max	Nm	
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       AWG/Kcmil       max       10         Flexible w/o lug conductor section       min       mm²       1         Flexible c/w lug conductor section       min       mm²       1         Flexible c/w lug conductor section       min       mm²       1         Flexible c/w lug conductor section       min       mm²       1         Max       mm²       4       1       1         Power terminal protection according to IEC/EN 60529       IP20 when wired       Mechanical features         Operating position       normal       Vertical plan			min	lbin	1.1
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       10         Flexible w/o lug conductor section       min       mm²         Max       mm²       1         Flexible c/w lug conductor section       min       mm²         Flexible c/w lug conductor section       min       mm²       1         max       mm²       4       1         Flexible with insulated spade lug conductor section       min       mm²       1         max       mm²       1       max       mm²       1         Power terminal protection according to IEC/EN 60529       IP20 when wired       IP20 when wired         Mechanical features       Operating position       IP20 when wired			max	lbin	1.5
max       Nm       1         min       lbin       0.8         max       lbin       0.74         Max number of wires simultaneously connectable       Nr.       2         Conductor section       AWG/Kcmil	Tightening torque for a	coil terminal			
min       lbin       0.8         max       lbin       0.74         Max number of wires simultaneously connectable       Nr.       2         Conductor section       AWG/Kcmil       I         max       max       10         Flexible w/o lug conductor section       mm²       1         max       mm²       6         Flexible c/w lug conductor section       mm²       6         Flexible c/w lug conductor section       mm²       1         max       mm²       4         Flexible with insulated spade lug conductor section       mm²       1         max       mm²       4         Power terminal protection according to IEC/EN 60529       IP20 when wired         Mechanical features       Vertical plan			min	Nm	0.8
max       Ibin       0.74         Max number of wires simultaneously connectable       Nr.       2         Conductor section       AWG/Kcmil			max	Nm	1
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       6         Flexible c/w lug conductor section       min       mm²       1         max       mm²       4       1         Flexible with insulated spade lug conductor section       min       mm²       4         Flexible with insulated spade lug conductor section       min       mm²       1         max       mm²       4       1       1         Power terminal protection according to IEC/EN 60529       IP20 when wired       1         Mechanical features       Operating position       Vertical plan			min	lbin	0.8
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       6         Flexible c/w lug conductor section       min       mm²       1         max       mm²       1       max       mm²       4         Flexible with insulated spade lug conductor section       min       mm²       1         max       mm²       4       1       1         Power terminal protection according to IEC/EN 60529       IP20 when wired       IP20 when wired         Mechanical features       Uperating position       Vertical plan			max	lbin	0.74
AWG/Kcmil       max       10         Flexible w/o lug conductor section       min       mm²       1         max       mm²       6       6         Flexible c/w lug conductor section       mm²       1         min       mm²       6       1         Flexible c/w lug conductor section       min       mm²       1         max       mm²       1       1         Power terminal protection according to IEC/EN 60529       mm²       4         Power terminal protection according to IEC/EN 60529       IP20 when wired         Mechanical features       IP20 when wired         Operating position       normal       Vertical plan	Max number of wires	simultaneously connectable		Nr.	2
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       1       1         max       mm²       4       1         Flexible c/w lug conductor section       min       mm²       1         max       mm²       4       4         Flexible with insulated spade lug conductor section       min       mm²       4         Power terminal protection according to IEC/EN 60529       IP20 when wired       IP20 when wired         Mechanical features       Uperating position       Vertical plan	Conductor section				
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       4         Flexible with insulated spade lug conductor section       min       mm²       1         max       mm²       4       4         Power terminal protection according to IEC/EN 60529       IP20 when wired         Mechanical features       IP20 when wired         Operating position       Normal       Vertical plan		AWG/Kcmil			
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       4         Flexible with insulated spade lug conductor section       min       mm²       1         max       mm²       4       1       1         Power terminal protection according to IEC/EN 60529       IP20 when wired       IP20 when wired         Mechanical features       Upperating position       Vertical plan			max		10
max       mm²       6         Flexible c/w lug conductor section       min       mm²       1         max       mm²       4         Flexible with insulated spade lug conductor section       min       mm²       4         Flexible with insulated spade lug conductor section       min       mm²       1         Power terminal protection according to IEC/EN 60529       IP20 when wired         Mechanical features       IP20 when wired         Operating position       Normal       Vertical plan		Flexible w/o lug conductor section			
Flexible c/w lug conductor section       min       mm²       1         max       mm²       4         Flexible with insulated spade lug conductor section       min       mm²       1         max       mm²       1       4         Power terminal protection according to IEC/EN 60529       IP20 when wired         Mechanical features       IP20 when wired         Operating position       Normal       Vertical plan			min	mm²	1
min       mm²       1         max       mm²       4         Flexible with insulated spade lug conductor section       min       mm²       1         min       mm²       1       4         Power terminal protection according to IEC/EN 60529       IP20 when wired         Mechanical features       IP20 when wired         Operating position       Normal       Vertical plan			max	mm²	6
max       mm²       4         Flexible with insulated spade lug conductor section       min       mm²       1         min       mm²       1       4         Power terminal protection according to IEC/EN 60529       IP20 when wired         Mechanical features       IP20 when wired         Operating position       Normal       Vertical plan		Flexible c/w lug conductor section			
Flexible with insulated spade lug conductor section         min       mm²       1         max       mm²       4         Power terminal protection according to IEC/EN 60529       IP20 when wired         Mechanical features       IP20 when wired         Operating position       Normal       Vertical plan			min	mm²	1
min     mm²     1       max     mm²     4       Power terminal protection according to IEC/EN 60529     IP20 when wired       Mechanical features     IP20 when wired       Operating position     normal     Vertical plan			max	mm²	4
maxmm²4Power terminal protection according to IEC/EN 60529IP20 when wiredMechanical featuresVertical planOperating positionNormal		Flexible with insulated spade lug conductor section			
Power terminal protection according to IEC/EN 60529 IP20 when wired Mechanical features Operating position Normal Vertical plan			min		1
Mechanical features Operating position Normal Vertical plan			max	mm²	
Operating position normal Vertical plan		tion according to IEC/EN 60529			IP20 when wired
normal Vertical plan					
	Operating position				
allowable ±30°					
			allowable		±30°

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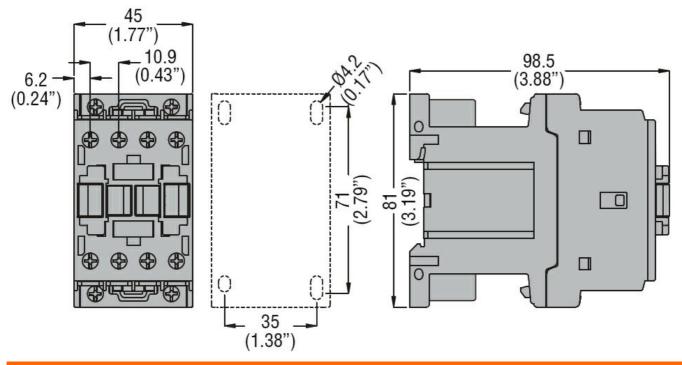
Fixing				Screw / DIN rail 35mm
Weight			g	500
Conductor section				
AWG/kcmil conductor	section			
		max		10
Auxiliary contact characteristics			•	40
Thermal current lth			A	10
IEC/EN 60947-5-1 designation Operating current AC15				A600 - P600
Operating current AC15		230V	А	3
		230V 400V	A	3 1.9
		400V 500V	A	1.4
Operating current DC12		0001	~	
		110V	А	5.7
Operating current DC13				
		24V	А	5.7
		48V	А	2.9
		60V	А	2.3
		110V	А	1.25
		125V	А	1.1
		220V	А	0.55
		600V	А	0.2
Operations				
Mechanical life			cycles	20000000
Safety related data	404004			
Performance level B10d according to EN/ISO	13489-1			
Mirror contate according to JEC/EN CO0474.4	4	mechanical load	cycles	20000000 YES
Mirror contats according to IEC/EN 609474-4- EMC compatibility				
DC coil operating				yes
DC rated control voltage			V	24
DC operating voltage			v	27
pick-up				
L et		min	%Us	70
		max	%Us	125
drop-out				
		min	%Us	10
		max	%Us	40
Average coil consumption =20°C				
		in-rush	W	5.4
		holding	W	5.4
Max cycles frequency				
Mechanical operation			cycles/h	3600
Average time for Us control				
-	Closing NO	min		54
Average time for Us control	Closing NO	min	ms	54
Average time for Us control	-	min max	ms ms	54 66
Average time for Us control	Closing NO Opening NO	max	ms	66
Average time for Us control	-			

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CONTROL RELAY WITH DC COIL, 24VDC, 3NO AND 1NC

	Closing NC			
		min	ms	24
		max	ms	30
	Opening NC			
		min	ms	47
		max	ms	57
UL technical data				
General USE				
	Auxiliary contacts			
		AC current	А	10
Contact rating of au	xiliary 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 & Protect	ction			
Pollution degree				3
Dimensions				

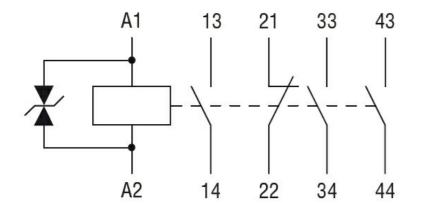


Wiring diagrams

BF0031D024



BF0031D024 CONTROL RELAY WITH DC COIL, 24VDC, 3NO AND 1NC



## Certifications and compliance

Compliance CSA C22.2 n° 60947-1 CSA C22.2 n° 60947-5-1 IEC/EN 60947-1 IEC/EN 60947-5-1 UL 60947-5-1 UL 60947-5-1 Certificates CCC CULus EAC ETIM classification EC000196 -

ETIM 8.0

EC000196 -Contactor relay