

- Two, three and four-pole contactors, 20A to 63A
- Silent during operation or control stage
- Contactors with manual control
- Latching relays
- Add-on auxiliary contacts
- 12VAC or 230VAC bells and buzzers
- 12 to 63VA modular safety transformers
- Modular sockets.

Modular contactors

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Page 16-2

ONE AND TWO-POLE CONTACTORS

- IEC rated current Ith AC1 (400V): 20A and 32A
- IEC rated current AC3 (400V): 9A
- Ideal for domestic and service applications.



Page 16-2

THREE AND FOUR-POLE CONTACTORS

- IEC rated current Ith AC1 (400V): 25A, 32A, 40A and 63A
- IEC rated current AC3 (400V): 8.5A, 22A and 30A
- Ideal for industrial and service applications, such as office buildings, stores, hospitals, hotels, etc.



Page 16-3

ONE AND TWO-POLE CONTACTORS WITH MANUAL CONTROL

- IEC rated current Ith AC1 (400V): 20A and 32A
- IEC rated current AC3 (400V): 9A
- Ideal for functional tests and dual tariff systems in domestic and service applications.



Page 16-3

THREE AND FOUR-POLE CONTACTORS WITH MANUAL CONTROL

- IEC rated current Ith AC1 (400V): 32A
- IEC rated current AC3 (400V): 8.5A
- Ideal for functional tests and dual tariff systems in domestic and service applications.



Page 16-4

LATCHING RELAYS

- IEC rated current Ith AC1 (400V): 20A and 32A
- IEC rated current AC3 (400V): 8.5A and 7A
- 2 position hand toggle actuator
- Coil cut-off selector
- Ideal for lights control.



Page 16-5

BELLS AND BUZZERS

- 12VAC or 230VAC power supply
- Ideal for audible signalling in domestic and service applications.



Page 16-5

MODULAR SAFETY TRANSFORMERS

- Power supply primary: 230VAC
- 12VAC or 24VAC output voltages
- Available powers: 15, 25, 40 and 63VA.



Page 16-5

MODULAR SOCKET

- 16A modular socket Italian and German (Schuko) standard.

Contactors



CN20...
CN3211... - CN3220...



CN25...
CN3210... - CN3201...



CN40...



CN63...

Order code	Rated auxiliary supply voltage	Configuration and number of contacts	Qty per pkg	Wt
	[V] ①	1NO 1NC n°		[kg]

One-pole or two-pole. 1 module. Ith 20A.

CN2011024⑦	24VAC/DC	1 1⑥	10	0.135
CN2011220⑦	220...230VAC⑥	1 1⑥	10	0.135
CN2020012⑦	12VAC/DC	2 —	10	0.135
CN2020024⑦	24VAC/DC	2 —	10	0.135
CN2020220⑦	220...230VAC⑥	2 —	10	0.135
CN2002024⑦	24VAC/DC	— 2	10	0.135
CN2002220⑦	220...230VAC⑥	— 2	10	0.135

One-pole or two-pole. 1 module. Ith 32A.

CN3211024⑦⑧	24VAC/DC	1 1⑥	10	0.135
CN3211220⑦⑧	220...230VAC⑥	1 1⑥	10	0.135
CN3220012⑦⑧	12VAC/DC	2 —	10	0.135
CN3220024⑦⑧	24VAC/DC	2 —	10	0.135
CN3220220⑦⑧	220...230VAC⑥	2 —	10	0.135

Three-pole or four-pole. 2 modules. Ith 25A.

CN2510024⑤	24VAC/DC	4④ —	5	0.260
CN2510220⑤	220...230VAC⑥	4④ —	5	0.260
CN2501024⑤	24VAC/DC	3 1④	5	0.260
CN2501220⑤	220...230VAC⑥	3 1④	5	0.260
CN2522220②	220...230VAC⑥	2 2	5	0.260

Three-pole or four-pole. 2 modules. Ith 32A.

CN3210024⑤	24VAC/DC	4 —	5	0.260
CN3210220⑤	220...230VAC⑥	4 —	5	0.260
CN3201024⑤	24VAC/DC	3 1④	5	0.260
CN3201220⑤	220...230VAC⑥	3 1④	5	0.260

Three-pole or four-pole. 3 modules. Ith 40A.

CN4010024⑤	24VAC/DC	4④ —	5	0.425
CN4010220⑤	220...230VAC⑥	4④ —	5	0.425
CN4001024⑤	24VAC/DC	3 1④	5	0.425
CN4001220⑤	220...230VAC⑥	3 1④	5	0.425
CN4022220⑤	220...230VAC⑥	2 2④	5	0.425

Three-pole or four-pole. 3 modules. Ith 63A.

CN6310024	24VAC/DC	4④ —	5	0.425
CN6310220	220...230VAC⑥	4④ —	5	0.425
CN6301024	24VAC/DC	3 1④	5	0.425
CN6301220	220...230VAC⑥	3 1④	5	0.425
CN6322220	220...230VAC⑥	2 2④	5	0.425

① Other voltages on request. Consult Technical support; see contact details on front cover.

② 2NC version supplied on request.

③ The last (NC) pole has the same characteristics as the power pole. It can therefore be used indifferently as an auxiliary or as a NC power contact.

④ The fourth NO or NC pole has the same characteristics as the power poles; therefore it can be used indifferently as auxiliary or as power contact.

⑤ On request can be supplied: 4NC power poles. Consult Technical support; see contact details on front cover.

⑥ Can also operate at 220VDC.

⑦ No auxiliary contacts can be mounted.

Maximum number of contactors side-by-side

When contactors are mounted side by side and operate in continuous service (1 hour), spacing is needed between equipment to allow appropriate cooling.

9mm spacing is required; there is an accessory, called half-module spacer, order code CNX80, for this specific type of mounting. The following table indicates details of the space needed between each.

Maximum number of contactors to be mounted side-by-side without spacing; the CNX80 spacer is required when the number of pieces is more than the indicated below:

	CN20	CN32	CN25	CN40	CN63
Ambient temperature ≤40°C	3	3	3	3	3
Ambient temperature >40°...55°C	2	2	2	3	2

General characteristics

- DC powered magnetic core system assuring silent operation and noise damping during the control phase
- Overvoltage protection circuit and voltage peak limitation of the magnetic core
- Equipped with 2 or 4 closing contacts of equal capacity permitting use in power or auxiliary circuits
- Operation flag indicator.

Operational characteristics

Type	IEC conventional free-air thermal current Ith, AC1 and AC-7a ≤400V	Operational current AC3 and AC-7b ≤400V	Protection fuse gG (IEC)
	[A]	[A]	[A]

One-pole or two-pole.

CN20...	20	9	20
CN32...	32	9	32

Three-pole or four-pole.

CN25...	25	8.5	25
CN32...	32	8.5	32
CN40...	40	22	63
CN63...	63	30	80

- Noise level:
 - Closed contactor <20dB
 - Making/breaking operation ≤50dB
- IEC degree of protection: IP20
- Mounting on 35mm DIN rail (IEC/EN/BS 60175).

Operational characteristics of contactor-incorporated auxiliary contacts

Type	IEC insulation voltage Ui	IEC rating (AC15 category)	
		230V	400V
	[V]	[A]	[A]
CN20...	440	6	6
CN25...	440	6	4
CN32...	440	6	4
CN40...	500	6	4
CN63...	500	6	4

Utilisation

- Lighting systems
- Electric home heating
- Heat pumps
- Conditioning
- Ventilation
- Civil installations.

Lighting circuit switching

See pages 16-10 and 11.

Special versions

Contactors with Mirror Contact function, as per IEC/EN/BS 60947-4-1 Standard, Annex F, are available on request. Consult Technical support; see contact details on front cover.

RAILWAY APPLICATIONS

Special CN... contactors suitable for railway applications are available upon request thanks to the compliance with standards IEC/BS 61373 shock and vibration (category 1, class B) and EN/BS 45545 fire protection (HL2 / HL3). Consult Technical support; see contact details on front cover.

Certifications and compliance

Certifications obtained: EAC.

Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-4-1, IEC/EN/BS 60947-5-1, IEC/EN/BS 61095.

Contactors with manual control



CNM20... - CNM3220...



CNM3210...

Order code	Rated auxiliary supply voltage	Configuration and number of contacts	Qty per pkg	Wt
	[V] ①	1NO 1NC n°		[kg]
One-pole or two-pole. 1 module. lth 20A.				
CNM2011024②⑤	24VAC/DC	1 1⑤	10	0.135
CNM2011220②⑤	220...230VAC⑤	1 1⑤	10	0.135
CNM2020012②⑤	12VAC/DC	2 —	10	0.135
CNM2020024②⑤	24VAC/DC	2 —	10	0.135
CNM2020220②⑤	220...230VAC⑤	2 —	10	0.135
One-pole or two-pole. 1 module. lth 32A.				
CNM3220012②⑤	12VAC/DC	2 —	10	0.135
CNM3220024②⑤	24VAC/DC	2 —	10	0.135
CNM3220220②⑤	220...230VAC⑤	2 —	10	0.135
Three-pole or four-pole. 2 module. lth 32A.				
CNM3210024②⑤	24VAC/DC	4④ —	5	0.260
CNM3210220②⑤	220...230VAC⑤	4④ —	5	0.260

① Other voltages on request. Consult Technical support; see contact details on front cover.

② 2NC version supplied on request.

③ The last (NC) pole has the same characteristics as the power pole. It can therefore be used indifferently as an auxiliary or as a NC power contact.

④ The fourth NO or NC pole has the same characteristics as the power poles; therefore it can be used indifferently as auxiliary or as power contact.

⑤ Can also operate at 220VDC.

⑥ No auxiliary contacts can be mounted.

Maximum number of contactors side-by-side

When contactors are mounted side by side and operate in continuous service (1 hour), spacing is needed between equipment to allow appropriate cooling. 9mm spacing is required; there is an accessory, called half-module spacer, order code CNX80, for this specific type of mounting. The following table indicates details of the space needed between each.

Maximum number of contactors to be mounted side-by-side without spacing; the CNX80 spacer is required when the number of pieces is more than the indicated below:

	CNM20	CNM32
Ambient temperature ≤40°C	3	3
Ambient temperature >40°...55°C	2	2

Add-on blocks and accessories for contactors and contactors with manual control



CNH...



CNP2

Order code	Characteristics	Max qty per contactor	Qty per pkg	Wt
		n°	n°	[kg]
Auxiliary contacts⑦.				
CNH11⑧	1NO + 1NC	1	1	0.044
CNH20⑧	2NO	1	1	0.044
Set for terminal protection (also sealable).				
CNP0	For CN20..., CNM20... and CNM32...	2	1⑤	0.001
CNP1	For CN25... and CNM32...	2	1⑤	0.002
CNP2	For CN40... and CN63...	2	1⑤	0.003
Spacer.				
CNX80	1/2 mod. wide	1	10	0.013

General characteristics

- DC powered magnetic core system assuring silent operation and noise damping during the control phase
- Overvoltage protection circuit and voltage peak limitation of the magnetic core
- Equipped with 2 or 4 closing contacts of equal capacity permitting use in power or auxiliary circuits
- Operation flag indicator
- Handle functions
 - Position A: contactor function.
 - Position O: contactor permanently switched off, even in case of coil control voltage is present.
 - Position I: contactor closed manually; when the coil is supplied the handle automatically moves to A position.

Operational characteristics

Type	IEC conventional free-air thermal current lth AC1 and AC-7a ≤400V [A]	Operational current AC3 and AC-7b ≤400V [A]	Protection fuse gG (IEC) [A]
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One-pole or two-pole.

CNM20...	20	9	20
CNM32...	32	9	32

Three-pole or four-pole.

CNM32...	32	8.5	32
----------	----	-----	----

- Noise level:
 - Closed contactor <20dB
 - Making/breaking operation ≤50dB
- IEC degree of protection: IP20
- Mounting on 35mm DIN rail (IEC/EN/BS 60175).

Operational characteristics of contactor-incorporated auxiliary contacts

Type	IEC insulation voltage Ui	IEC rating (AC15 category)	
		230V	400V
	[V]	[A]	[A]
CNM20...	440	6	6
CNM32...	440	6	4

Utilisation

- Lighting systems
- Electric home heating
- Heat pumps
- Conditioning
- Ventilation
- Civil installations.

Lighting circuit switching

See pages 16-10 and 11.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-4-1, IEC/EN/BS 60947-5-1, IEC/EN/BS 61095.

Operational characteristics for auxiliary contacts

- IEC rated insulation voltage: 440VAC
- IEC conventional free air thermal current lth: 6A
- Minimum switching capacity: 5mA 12V
- Conductor section: 1...2.5mm²
- Maximum tightening torque: 1Nm.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-4-1, IEC/EN/BS 60947-5-1, IEC/EN/BS 61095.

⑦ Not suitable for CN20..., CN32 11..., CN32 20..., CNM20... and CNM32... modular contactors.

⑧ Set of 2 pieces.

Latching relays



CNB20... - CNB3220...



CNB3210...

Order code	Rated auxiliary supply voltage	Configuration and number of contacts	Qty per pkg	Wt
	[V] ①	1NO 1NC n°		[kg]
One-pole or two-pole. 1 module. lth 20A.				
CNB2010230	230VAC	1 —	8	0.135
CNB2011012	12VAC	1 ②	8	0.135
CNB2011024	24VAC	1 ②	8	0.135
CNB2011230	230VAC	1 ②	8	0.135
CNB2020012	12VAC	2 —	8	0.135
CNB2020024	24VAC	2 —	8	0.135
CNB2020230	230VAC	2 —	8	0.135
One-pole or two-pole. 1 module. lth 32A.				
CNB3220012	12VAC	2 —	8	0.135
CNB3220024	24VAC	2 —	8	0.135
CNB3220230	230VAC	2 —	8	0.135
Three-pole or four-pole. 2 module. lth 32A.				
CNB3210012	12VAC	4 ③ —	4	0.195
CNB3210024	24VAC	4 ③ —	4	0.195
CNB3210230	230VAC	4 ③ —	4	0.195

- ① Other voltages on request. Consult Technical support; see contact details on front cover.
- ② The last (NC) pole has the same characteristics as the power pole. It can therefore be used indifferently as an auxiliary or as a NC power contact.
- ③ The fourth NO or NC pole has the same characteristics as the power poles; therefore it can be used indifferently as auxiliary or as power contact.

General characteristics

- Mechanical system that keeps the contactor in position without the coil being powered
- Includes a manual control system and a switch to lock the coil command
- Equipped with 2 or 4 closing contacts of equal capacity permitting use in power or auxiliary circuits
- Operation flag indicator
- No consumption of the closed electromagnet contactor with considerable advantages in reducing the dissipated heat.

Operational characteristics

Type	IEC conventional free-air thermal current I _{th} , AC1 and AC-7a ≤400V [A]	Operational current AC3 and AC-7b ≤400V [A]	Protection fuse gG (IEC) [A]
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One-pole or two-pole.

CNB20...	20	9	20
CNB32...	32	9	32

Three-pole or four-pole.

CNB32...	32	8.5	32
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- Noise level:
 - Closed contactor 0dB (mechanically closed)
 - Making/breaking operation ≤50dB
- IEC degree of protection: IP20
- Mounting on 35mm DIN rail (IEC/EN/BS 60175).

Operational characteristics of contactor-incorporated auxiliary contacts

Type	IEC insulation voltage U _i	IEC rating (AC15 category)	
		230V	400V
	[V]	[A]	[A]
CNB20...	440	6	6
CNB32...	440	6	4

Utilisation

- Lighting systems
- Electric home heating
- Heat pumps
- Conditioning
- Ventilation
- Civil installations.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-4-1, IEC/EN/BS 60947-5-1, IEC/EN/BS 61095, IEC/EN/BS 60669-1.

Add-on blocks and accessories



CNBX...



CNP3

Order code	Characteristics	Max qty per contactor	Qty per pkg	Wt
		n°	n°	[kg]
Auxiliary contacts.				
CNBX11	1NO + 1NC	1	1	0.032
CNBX20	2NO	1	1	0.032
Set for terminal protection (also sealable).				
CNP3	For CNB...	④	1⑤	0.002

- ④ To cover all the terminals, mount: 2 pieces for one module latching relay; 2 set of 2 pieces for two module latching relay.
- ⑤ Set of 2 pieces.

Operational characteristics for auxiliary contacts

- IEC rated insulation voltage: 440VAC
- IEC conventional free air thermal current I_{th}: 6A
- Minimum switching capacity: 5mA 12V
- Conductor section: 1...2.5mm²
- Maximum tightening torque: 1Nm.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, IEC/EN/BS 61095.

Bells and buzzers



CBE...

CBZ230A



CTRB15VA

new

Order code	Description	Supply voltage	Output voltage	Qty per pkg	Wt
		[VAC]	[VAC]	n°	[kg]
CBE012A	Modular bell	12	—	1	0.077
CBE230A	Modular bell	230	—	1	0.073
CBZ230A	Modular buzzer	230	—	1	0.063
CTRB15VA	Modular transformer for 15VA bell	230	12	1	0.339

General and operational characteristics

- Sound intensity, distance 1m: buzzer 80dB, bells 84dB
- Power consumption: 10VA (5VA for CBE012A)
- Operating temperature: -10...+55°C (-10...+40°C for CTRB15VA)
- Storage temperature: -40...+80°C
- Conductor section (min...max): 0.5...1.5mm²
- Tightening torque: 0.5Nm
- Screw terminals: M3
- DIN modules: CBE... 1 module
CBZ... 1 module
CTRB15VA 2 modules
- CTRB15VA can only be used for bell power supply (intermittent operation)
- CTRB15VA overload and short circuit protection integrated (PTC).

Certifications and compliance

Certifications obtained: EAC (except CTRB15VA).
Compliant with standards: IEC/EN/BS 62080.

Modular safety transformers



CTRS...

new

Order code	Power	Supply voltage	Output voltage	Qty per pkg	Wt
	[VA]	[VAC]	[VAC]	n°	[kg]
CTRS15VA	15	230	12-24	1	0.477
CTRS25VA	25	230	12-24	1	0.582
CTRS40VA	40	230	12-24	1	0.846
CTRS63VA	63	230	12-24	1	1.319

General and operational characteristics

- Safety transformers suitable for continuous operation
- Overload and short circuit protection integrated (PTC)
- Operating temperature: -10...+25°C
- Storage temperature: -40...+70°C
- Conductor section (min...max): 0.5...10mm²
- Tightening torque: 1Nm
- Screw terminals: M4
- DIN modules: CTRS15VA 3 modules
CTRS25VA 3 modules
CTRS40VA 4 modules
CTRS63VA 6 modules.

Reference standards

Compliant with standards: IEC/EN/BS 61558-2-8.

Modular socket



P1X7

Order code	Description	Qty per pkg	Wt
		n°	[kg]
P1X7	Modular socket Italian and German (Schuko) standard; 16A	5	0.123

General and operational characteristics

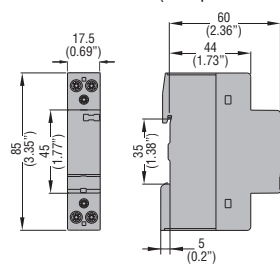
- Operating temperature: -25...+45°C
- Storage temperature: -40...+75°C
- Max. current: 16A
- Connectable section 1.5...10mm²
- Tightening torque: 1.8Nm
- Fixing on 35mm DIN rail (IEC/EN/BS 60715)
- DIN modules: 2.5.

Certifications and compliance

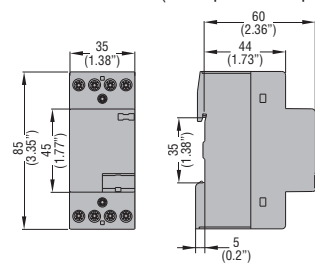
Certifications obtained: EAC.
Compliant with standards: IEC/BS 60884-1.

MODULAR CONTACTORS

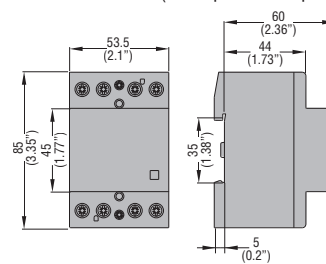
CN20... - CN32... (one-pole - two-pole)



CN25... - CN32... (three-pole - four-pole)

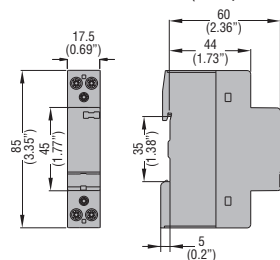


CN40... - CN63... (three-pole - four-pole)

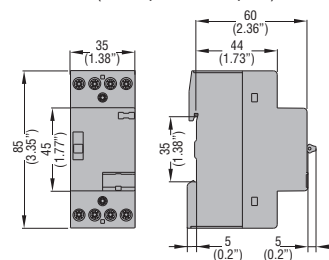


MODULAR CONTACTORS WITH MANUAL CONTROL

CNM20... - CNM32... (one-pole - two-pole)

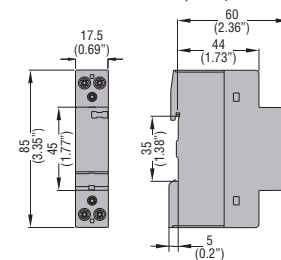


CNM32... (three-pole - four-pole)

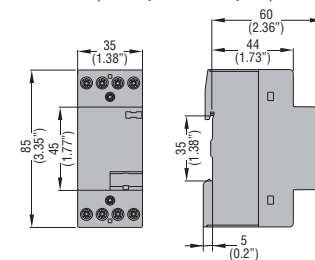


LATCHING RELAYS

CNB20... - CNB32... (one-pole - two-pole)



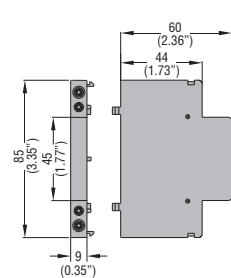
CNB32... (three-pole - four-pole)



ADD-ON BLOCKS AND ACCESSORIES

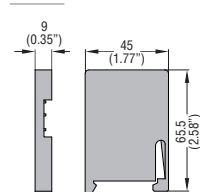
Auxiliary contacts

CNH... - CNBX...



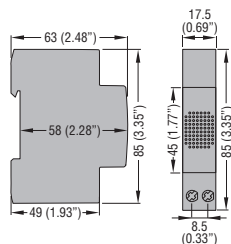
Spacer

CNX80



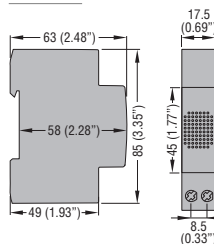
BELLS

CBE...



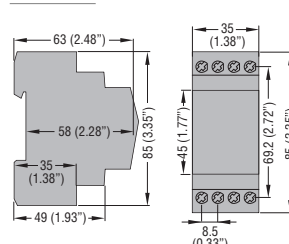
BUZZER

CBZ230A



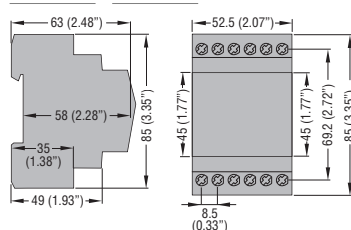
TRANSFORMER FOR BELLS

CTRB15VA

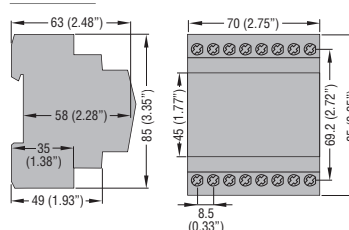


MODULAR SAFETY TRANSFORMERS

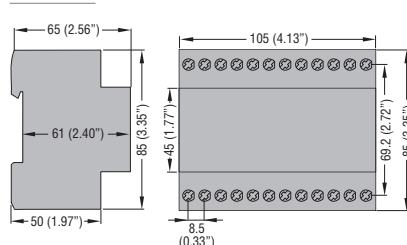
CTRS15VA - CTRS25VA



CTRS40VA

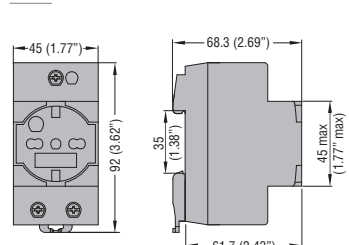


CTRS63VA



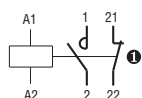
MODULAR SOCKET

P1X7

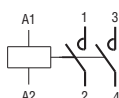


ONE-POLE AND TWO-POLE MODULAR CONTACTORS

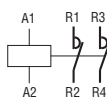
CN2011
CN3211
CNM2011



CN2020
CN3220
CNM2020
CNM3220

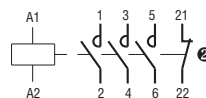


CN2002

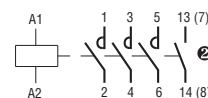


THREE-POLE AND FOUR-POLE MODULAR CONTACTORS

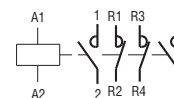
CN2501
CN3201
CN4001
CN6301



CN2510
CN3210
CN4010
CN6310
CNM3210



CN2522
CN4022
CN6322



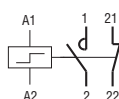
- ❶ The NC contact has the same characteristics as the power pole contact. Therefore, it can be used indifferently as an auxiliary or as a NC power pole contact.
- ❷ The fourth pole NO or NC has the same characteristics as the power poles. Therefore, it can be used indifferently as auxiliary or as power pole contact.

LATCHING RELAYS

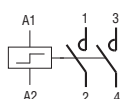
CNB2010



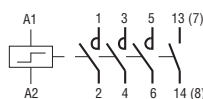
CNB2011



CNB2020
CNB3220



CNB3210



ADD-ON AUXILIARY CONTACTS

CNH11
CNBX11

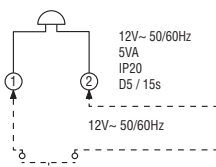


CNH20
CNBX20

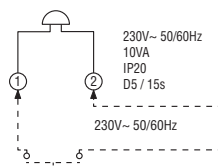


BELLS

CBE012A

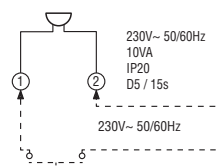


CBE230A



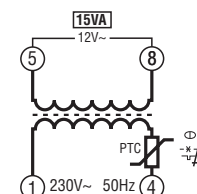
BUZZER

CBZ230A



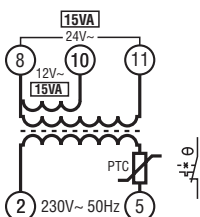
TRANSFORMER FOR BELLS

CTRB15VA

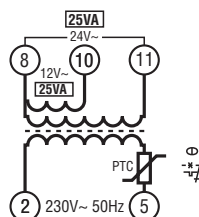


MODULAR SAFETY TRANSFORMERS

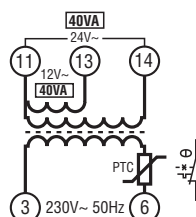
CTRS15VA



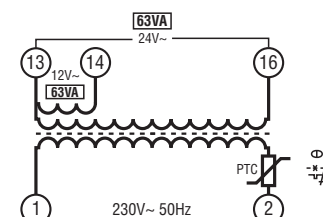
CTRS25VA



CTRS40VA



CTRS63VA



TYPE		CN20... - CNM20...	CN25...	CN32... - CNM32... (one-pole and two-pole)	CN32... - CNM32... (three-pole and four-pole)	CN40...	CN63...
CONTACT CHARACTERISTICS							
IEC conventional free-air thermal current I _{th} (≤40°C)	A	20	25	32	32	40	63
IEC rated insulation voltage U _i	V	230	440	230	440	440	440
IEC rated impulse withstand voltage U _{imp}	kV	4	4	4	4	4	4
Minimum switching capacity		17V ≥50mA	17V ≥50mA	17V ≥50mA	17V ≥50mA	17V ≥50mA	17V ≥50mA
Power dissipation for I _{th} pole	W	1.7	2	2.5	2.5	4	8
Maximum tightening torque for coil terminals	Nm	0.6	0.6	0.6	0.6	0.6	0.6
	lb.in	5.3	5.3	5.3	5.3	5.3	5.3
	Pozidr.	PZ1	PZ1	PZ1	PZ1	PZ2	PZ2
Coil conductor section	min.	mm ² 1					
	max.	mm ² 2.5					
Maximum tightening torque for power terminals	Nm	1.2	1.2	1.2	1.2	2	2
	lb.in	10.6	10.6	10.6	10.6	18	18
	Tool	PZ1	PZ1	PZ1	PZ1	PZ2	PZ2
Power conductor section	min.	mm ² 2.5 2.5 2.5 2.5 1 1					
	max.	mm ² 6 6 6 6 25 25					
AC/DC CONTROL CIRCUIT							
Average coil consumption in-rush and holding	W	2.5	3	2.5	3	5	5
Operating voltage limits	pick-up	% U _s 85...110					
	drop-out	% U _s 20...75					
OPERATING TIMES							
Average time	closing NO	ms	15...45	15...45	15...45	15...45	15...20
	opening NO	ms	25...50	20...70	20...50	20...70	35...45
LIFE							
Mechanical	cycles	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Electrical (in AC3 duty)	cycles	300,000	500,000	500,000	500,000	150,000	150,000
Electrical (in AC1 duty)	cycles	200,000	200,000	150,000	150,000	100,000	100,000
AMBIENT CONDITIONS							
Operating temperature	°C	-5...+55					
Storage temperature	°C	-30...+80					

TYPE			CNB20	CNB32... (one-pole and two-pole)	CNB32... (three-pole and four-pole)
CONTACT CHARACTERISTICS					
IEC conventional free-air thermal current I _{th} (≤40°C)		A	20	32	32
IEC rated insulation voltage U _i		V	440		
IEC rated impulse withstand voltage U _{imp}		kV	4		
Minimum switching capacity			≥10V ≥100mA		
Max fuse size, gG type, for Type 1 coordination, 400V - 3kA		A	20	32	32
Power dissipation for I _{th} pole		W	1.5	3	3
Maximum tightening torque for coil terminals		Nm	0.6	0.6	0.6
		lb.in	5.3	5.3	5.3
		Pozidr.	PZ1	PZ1	PZ1
Coil conductor section	min.	mm ²	1		
	max.	mm ²	4		
Maximum tightening torque for power terminals		Nm	1.2	1.2	1.2
		lb.in	10.6	10.6	10.6
		Pozidr.	PZ2	PZ2	PZ2
Power conductor section	min.	mm ²	1	1	1
	max.	mm ²	10	10	10
CONTROL CIRCUIT					
Coil consumption - In-rush		VA/W	18/13	18/13	7
Max. recommended impulse duration		m/s	50/100		
Min. time between two impulses		m/s	150		
Maximum supply time		h	1		
Operating voltage limits closing		% U _s	85...110		
OPERATING TIMES					
Average time	closing NO	ms	5...20		
	opening NO	ms	25...50		
LIFE					
Mechanical		cycles	1,000,000		
Electrical (in AC3 duty)		cycles	100,000		
Electrical (in AC1 duty)		cycles	100,000		
AMBIENT CONDITIONS					
Operating temperature		°C	-25...+55		
Storage temperature		°C	-30...+80		

LIGHTING CIRCUIT SWITCHING

Lamp features	Lamp power	Rated current	Capacitor power	Maximum number [n] of lamps each contactor pole 230V 50Hz				
	[W]	[A]	[μF]	CN20... - CNM20... CNB20...	CN25...	CN32... - CNM32... CNB32...	CN40	CN63
LED LIGHTING BALLAST	N = number of controlled ballasts❶ In = ballast rated current in mA			N = 2400 / In	N = 3800 / In	N = 4000A / In	N = 11000 / In	N = 18000 / In
INCANDESCENT AND TUNGSTEN HALOGEN	60	0.26	-	33	37	42	67	83
	100	0.44	-	20	22	25	40	50
	500	2.17	-	4	4	5	8	10
	1000	4.35	-	2	2	3	4	5
COMPACT FLUORESCENT (ENERGY SAVING)	3	0.04	-	150	200	250	550	700
	5	0.06	-	90	120	150	330	420
	6	0.07	-	75	100	125	275	350
	7	0.08	-	64	86	107	236	300
	8	0.09	-	56	75	94	206	263
	9	0.1	-	50	67	83	183	233
	10	0.11	-	45	60	75	165	210
	11	0.12	-	41	55	68	150	191
	12	0.13	-	38	50	63	138	175
	13	0.14	-	35	46	58	127	162
	14	0.15	-	32	43	54	118	150
	15	0.16	-	30	40	50	110	140
	16	0.18	-	28	38	47	103	131
	17	0.19	-	26	35	44	97	124
	18	0.2	-	25	33	42	92	117
	20	0.21	-	23	30	38	83	105
	21	0.22	-	21	29	36	79	100
	22	0.23	-	20	27	34	75	95
	23	0.24	-	20	26	33	72	91
	24	0.25	-	19	25	31	69	88
	25	0.26	-	18	24	30	66	84
	26	0.27	-	17	23	29	63	81
	27	0.124	-	17	22	28	61	78
	30	0.15	-	15	20	25	55	70
	50	0.24	-	9	12	15	33	42
	70	0.312	-	6	9	11	24	30
FLUORESCENT not corrected	18	0.37	-	24	30	35	54	86
	25	0.29	-	30	39	45	69	110
	36	0.43	-	20	26	30	47	74
	58	0.67	-	13	17	19	30	48
FLUORESCENT corrected	18	0.19	4.5	7	8	9	49	73
	25	0.15	3.5	9	10	11	63	94
	36	0.29	4.5	7	8	9	49	73
	58	0.46	7	4	5	6	31	47
ELECTRONIC FLUORESCENT BALLAST	14	0.08	-	44	59	64	156	225
	2x14	0.15	-	23	32	34	83	120
	18	0.09	-	39	53	57	139	200
	2x18	0.17	-	21	28	30	74	106
	21	0.11	-	32	43	46	114	164
	2x21	0.22	-	16	22	23	57	82
	28	0.14	-	25	34	36	89	129
	2x28	0.27	-	13	18	19	46	67
	36	0.16	-	22	30	32	78	113
	2x36	0.31	-	11	15	16	40	58
	40	0.21	-	17	23	24	60	86
	2x40	0.42	-	8	11	12	30	43
	58	0.25	-	14	19	20	50	72
	2x58	0.48	-	7	10	11	26	38
	70	0.3	-	12	16	17	42	60
	2x70	0.57	-	6	8	9	22	32
HIGH-PRESSURE MERCURY VAPOUR not corrected	50	0.6	-	14	18	20	38	55
	80	0.8	-	10	13	15	29	42
	125	1.2	-	7	9	10	20	29
	250	2.2	-	4	5	6	10	15
	400	3.3	-	2	3	4	7	10
	700	5.4	-	1	2	3	4	6
	1000	7.5	-	1	1	2	3	4

❶ Usually each LED lamp has one ballast.

In event of one ballast supplies several lamps, the calculation has to consider the number of supplied ballasts.

E.G. If the LED lamp ballast input current is 500mA, (consider CN40=11,000/500=22), the maximum number of ballasts admitted per each pole of CN40 contactor is 22.

LIGHTING CIRCUIT SWITCHING

Lamp features	Lamp power	Rated current	Capacitor power	Maximum number [n] of lamps each contactor pole 230V 50Hz				
	[W]	[A]	[μF]	CN20... - CNM20... CNB20...	CN25...	CN32... - CNM32... CNB32...	CN40	CN63
HIGH-PRESSURE MERCURY VAPOUR corrected	50	0.3	7	4	5	6	31	47
	80	0.4	8	4	5	5	27	41
	125	0.6	10	3	4	4	22	33
	250	1.2	18	1	2	2	12	18
	400	1.8	25	1	1	1	9	13
	700	3.4	40	0	0	1	5	7
METAL HALIDE not corrected	1000	4.8	60	0	0	0	4	5
	35	0.5	-	18	22	28	43	60
	70	1	-	10	12	14	23	32
	100	1.2	-	8	10	11	19	26
	150	1.8	-	5	7	7	12	18
	250	3	-	3	4	4	7	10
	400	4.6	-	3	3	3	6	9
	600	6.2	-	1	2	2	3	4
METAL HALIDE corrected	1000	9.7	-	1	1	1	2	3
	2000	12.2	-	0	0	1	1	2
	35	0.23	6	5	6	6	36	50
	70	0.42	12	2	3	3	18	25
	100	0.55	12	2	3	3	18	25
	150	0.77	20	1	1	1	11	15
	250	1.26	32	0	1	1	6	9
	400	2	45	0	0	0	5	7
HIGH-PRESSURE SODIUM VAPOUR not corrected	600	3	65	0	0	0	3	5
	1000	5	85	0	0	0	2	3
	2000	10.5	125	0	0	0	1	2
	100	1.2	-	7	8	9	25	30
	150	1.8	-	5	6	6	17	22
	250	3	-	3	4	4	10	13
HIGH-PRESSURE SODIUM VAPOUR corrected	400	4.4	-	2	2	2	6	8
	600	6.2	-	1	1	1	4	5
	1000	10.3	-	0	1	1	3	3
	100	0.55	12	2	3	3	18	27
	150	0.77	20	1	1	2	11	16
	250	1.26	32	0	1	1	6	10
LOW-PRESSURE SODIUM VAPOUR not corrected	400	2	45	0	0	0	4	6
	600	2.9	65	0	0	0	3	5
	1000	5.1	100	0	0	0	2	3
	18	0.4	-	22	27	30	71	90
	35	0.6	-	7	9	10	23	30
	55	0.6	-	7	9	10	23	30
LOW-PRESSURE SODIUM VAPOUR corrected	90	0.9	-	4	5	6	14	19
	135	0.9	-	3	4	5	10	13
	180	0.9	-	3	4	5	10	13
	18	0.35	5	6	7	8	44	66
	35	0.28	20	1	1	2	11	16
	55	0.35	20	1	1	2	11	16
LOW-PRESSURE SODIUM VAPOUR with electronic ballast	90	0.55	26	1	1	1	8	12
	135	0.8	40	0	0	1	4	7
	180	1	40	0	0	1	5	8
	35	0.16	-	13	18	21	35	44
	55	0.25	-	8	11	13	22	28