

## Industrial mini Contactors CTX<sup>3</sup> mini 3P and 4P

Cat. N°(s) : 4 170 00..01/04/06/09..11/14/16/19..21/24/26/  
4 170 29..31/34/36/39..41/44/46/49..51/54/56/59..61/64/66/  
4 170 69..71/74/76/79/ 4 171 40..41/44/46/49



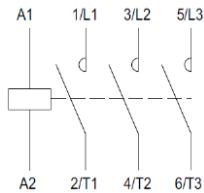
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### 1. DESCRIPTION - USE

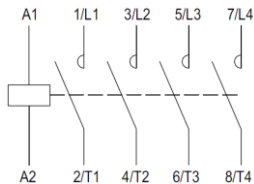
. Remote control of a load by the mean of a switch.

#### Symbol:

. For CTX<sup>3</sup> mini 3P.



. For CTX<sup>3</sup> mini 4P.



#### Technology:

. Electromagnetic contactor.

### 2. RANGE

#### Number of Poles:

- . Triple pole (3P).
- . Four pole (4P).

#### Rated current I<sub>e</sub>:

- . 6 [A], 9 [A], 12 [A] and 16 [A] AC-3 for CTX<sup>3</sup> mini 3P.
- . 20 [A] AC-1 for CTX<sup>3</sup> mini 4P.

#### Rated Voltage / Frequency:

- . 690 V, 50 / 60 [Hz].

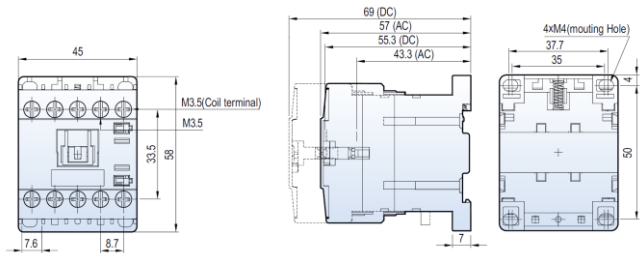
#### Control voltage:

- . 24 [V~], 24 [V=], 110 [V~], 230 [V~], 415 [V~].

### 3. OVERALL DIMENSIONS

. CTX<sup>3</sup> mini 3P and 4P.

- Type AC and type DC:



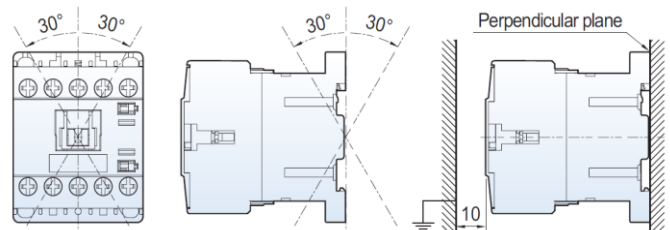
### 4. INSTALLATION - CONNECTION

#### Fixing:

. Mounting on DIN rail or plate.

#### Operating position:

- . ± 30 [°] possible, in relation to normal vertical mounting plane.
- . Keep the distance more than 10 [mm] front panel.



#### Supply:

. Either from the top or the bottom.

#### Size of wire connecting torque:

Screw	Wire	Torque
M3.5	1.25 to 2 [mm <sup>2</sup> ]	0.8 [Nm]

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### 5. GENERAL CHARACTERISTICS

#### Connection:

- . Terminals protected against direct contact (IP20).
- . Terminals with release and captive screws.
- . Screw head : slotted and pozidriv n°2.

#### Tools required:

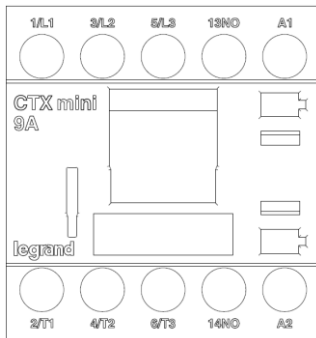
- . Pozidriv N°2 screwdriver recommended.
- . Flat screwdriver Ø5 to Ø6 [mm] Maximum.

#### Front side:

- . By dark grey laser:
  - Brand: Legrand
  - Range: CTX mini
  - Rated current (in A)
  - Coil terminals
  - Control terminals
  - Marking power terminals (3P or 4P)
  - Marking auxiliary contact terminals (when required)

#### CTX<sup>3</sup> mini Contactor : (Example of marking)

- . CTX<sup>3</sup> mini Contactor 3P 9 [A].



#### Left side:

- . By identification label (referring to IEC and UL standard)

legrand CTX <sup>3</sup> mini 9A	
Uc	24VAC 24VDC 110VAC 230VAC 415V
Ue	20.4-26.4V 20.4-26.4V 83.5-121V 195.5-253V 352.8-456.5V
3P 1NO	4170 20 4170 21 4170 24 4170 26 4170 29
3P 1NC	4170 30 4170 31 4170 34 4170 36 4170 39
	V AC   120   240   480   600
	1PH.HP   0.5   1.5
	Continuous current: 20A
	When protected by 20A time delay fuses. Short circuit 5kA
AC V 230	400   690
AC3 kW 2.2	4   4
A 9	9   5
AC15 A 6	3   1
AC1=11h:20A Aux.HI=10A Uimp=6kV Ui=690V	
MADE IN KOREA	79611621122

#### Upper side:

- . By dark grey laser or pad printing:
  - Control voltage (Uc)

### 5. GENERAL CHARACTERISTICS (continued)

#### Rated operational voltage:

- . Ue = 690 [V] for all products.

#### Rated impulse voltage and rated insulation voltage:

Type of products	Rated impulse voltage (Uimp)	Rated insulation voltage (Ui)
CTX <sup>3</sup> mini 3P	6 [kV]	690 [V]
CTX <sup>3</sup> mini 4P		

#### Mechanical and electrical endurance:

Type of products	Mechanical endurance (in millions of operations)	Electrical endurance (in millions of operations)	Maxi operating rate in operating cycles per hour (At 440 [V~])
CTX <sup>3</sup> mini (3P)	12	1	1800
CTX <sup>3</sup> mini (4P)			

#### Ambient operating temperature: (standard +20°C)

- . Min. = -5°C. Max. = +40°C.

#### Ambient storage temperature:

- . Min. = -30°C. Max. = +65°C.

#### Max. temperature inside a panel:

- . +55°C.

#### Weight:

Type of products	AC Control	DC Control
CTX <sup>3</sup> mini 3P	0.17 [kg]	0.23 [kg]
CTX <sup>3</sup> mini 4P		

#### Degree of protection:

- . IP20.

#### Flame resistance:

- . Conforming to UL = V0.
- . Conforming to IEC 695-2-1 = 960 [°C].

#### Maximum operating altitude:

- . 2000 [m].

#### Relative humidity:

- . 45 ~ 85% RH.

#### Shock resistance:

- . 5 [g].

#### Vibration resistance:(10 - 55 [Hz])

- . 2 [g].

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### 5. GENERAL CHARACTERISTICS *(continued)*

#### Control coil characteristics:

CTX <sup>3</sup> mini 3P & 4P			
<b>AC Coil</b>			
Control voltage (U <sub>c</sub> ) 50/60 [Hz]		[V]	24, 110, 230, 415
Operating voltage	Closing	[%]	85~110
	Opening	[%]	30~40
Thermal dissipation		[W]	2
Coil consumption	inrush	[VA]	32
	Holding	[VA]	6
Operating time	Closing	[ms]	10~20
	Opening	[ms]	35~45
<b>DC Coil</b>			
Control voltage (U <sub>c</sub> )		[V]	24
Operating voltage	Closing	[%]	80~125
	Opening	[%]	10~30
Coil consumption	inrush	[W]	2
	Holding	[W]	2
Operating time	Closing	[ms]	40~50
	Opening	[ms]	35~45

#### Lifetime of the coil supplied permanently:

. No limit.

#### Rated control supply voltage U<sub>s</sub>:

. U<sub>s</sub> = 85% - 110% U<sub>c</sub>.

**Rating:** In accordance with IEC 60 947-4-1

. For Contactor CTX<sup>3</sup> mini 3P 6 to 16 [A] & CTX<sup>3</sup> mini 4P 20 [A]

- Rated making capacity - (440 [V~])
- Rated breaking capacity - (440 [V~])

Contactor type	CTX <sup>3</sup> mini 3P 6 [A]	CTX <sup>3</sup> mini 3P 9 [A]	CTX <sup>3</sup> mini 3P 12 [A]	CTX <sup>3</sup> mini 3P 16 [A]	CTX <sup>3</sup> mini 4P 20 [A]
Operation current	6 [A]	9 [A]	12 [A]	16 [A]	20 [A] (AC1)
Rated making capacity (AC-3)	72 [A]	108 [A]	144 [A]	180 [A]	180 [A]
Rated breaking capacity (AC-3)	60 [A]	90 [A]	120 [A]	150 [A]	150 [A]

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### 5. GENERAL CHARACTERISTICS *(continued)*

**Rating:** In accordance with IEC 60947-4 and UL 508 certifications -  $\theta \leq 55$  [°C] *(continued)*

. For contactors CTX<sup>3</sup> mini 3P from 6 to 16 [A].

Contactor type - (Type AC and DC)			CTX <sup>3</sup> mini 3P 6 [A]		CTX <sup>3</sup> mini 3P 9 [A]		CTX <sup>3</sup> mini 3P 12 [A]		CTX <sup>3</sup> mini 3P 16 [A]	
			[kW]	[A]	[kW]	[A]	[kW]	[A]	[kW]	[A]
AC duty	AC3	200 / 240 [V]	1.5	7	2.2	9	3	12	4	18
		380 / 440 [V]	2.2	6	4	9	5.5	12	7.5	16
		500 / 550 [V]	3	5	3.7	6	4	7	5.5	9
		690 [V]	3	4	4	5	4	5	4	5
AC1	lth	-	20	-	20	-	20	-	20	

Contactor type - (Type AC and DC)			CTX <sup>3</sup> mini 3P 6 [A]		CTX <sup>3</sup> mini 3P 9 [A]		CTX <sup>3</sup> mini 3P 12 [A]		CTX <sup>3</sup> mini 3P 16 [A]	
			[hp]	[A]	[hp]	[A]	[hp]	[A]	[hp]	[A]
UL rating (50 / 60 [Hz])	Single phase	120 [V]	1/2	-	1/2	-	1	-	-	-
		230 / 240 [V]	1	-	1.5	-	2	-	-	-
	Three phase	240 [V]	1.5	-	3	-	3	-	-	-
		480 [V]	3	-	5	-	7.5	-	-	-
		600 [V]	3	-	5	-	7.5	-	-	-
	lth		-	20	-	20	-	20	-	20

. For contactors CTX<sup>3</sup> mini 4P 20 [A].

Contactor type - (Type AC and DC)			CTX <sup>3</sup> mini 4P 20 [A]	
			[kW]	[A]
AC duty	AC3	200 / 240 [V]	4	18
		380 / 440 [V]	7.5	16
		500 / 550 [V]	5.5	9
		690 [V]	4	5
	AC1	lth	-	20

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### 6. CONFORMITIES AND APPROVALS

#### Compliance to standards:

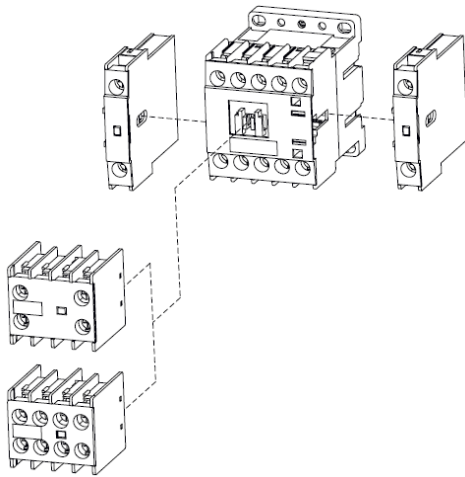
- . Reference standards: IEC/EN 60 947-4 and UL 508.
- . Certifications: CE, UL.

### 7. AUXILIARIES AND ACCESSORIES

#### Auxiliaries:

Frame size	Type	Extended amount of Auxiliary contacts
CTX <sup>3</sup> mini	AC	6
	DC	2

. Installation principle:



#### Rated operational voltage:

. U<sub>e</sub> = 600 [V].

#### Rated insulation voltage:

. U<sub>i</sub> = 690 [V].

#### Rated impulse voltage:

. U<sub>imp</sub> = 6 [kV].

#### Mechanical and electrical endurance:

Type of products	Mechanical endurance (in millions of operations)	Electrical endurance (in millions of operations)
Auxiliary contacts	10	0.25

#### Conventional free air thermal current:

. I<sub>th</sub> = 10 [A].

### 7. AUXILIARIES AND ACCESSORIES (continued)

#### Auxiliaries: (continued)

#### Contacts sensibility:

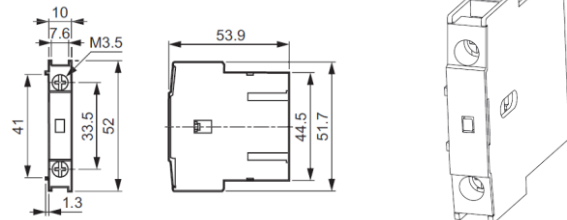
. DC 24 [V] - 10 [mA].

**Rating:** In accordance with IEC 60947-4 and UL 508 certifications

Auxiliary contacts block			
Current and Power	AC 15	120 [V]	6 [A]
		240 [V]	3 [A]
		380 [V]	1.9 [A]
		480 [V]	1.5 [A]
		500 [V]	1.4 [A]
		600 [V]	1.2 [A]
	DC 13	125 [V]	0.55 [A]
		250 [V]	0.27 [A]
		400 [V]	0.15 [A]
		500 [V]	0.13 [A]
		600 [V]	0.1 [A]

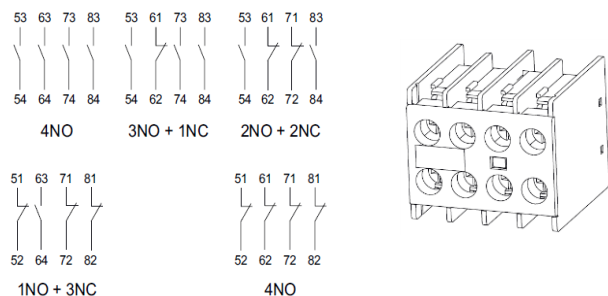
#### CTX<sup>3</sup> mini auxiliary contact side: weight = 0.02 [kg]

- 1NO (cat n° 4 171 58)
- 1NC (cat n° 4 171 59)



#### CTX<sup>3</sup> mini auxiliary contact front: weight = 0.04 [kg]

- 4NO (cat n° 4 171 53).
- 3NO + 1NC (cat n° 4 171 54)
- 2NO + 2NC (cat n° 4 171 55)
- 1NO + 3NC (cat n° 4 171 56)
- 4NC (cat n° 4 171 57)



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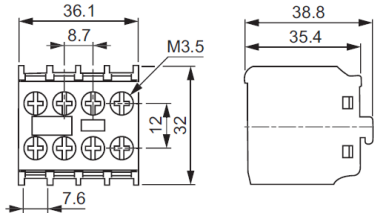
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### 7. AUXILIARIES AND ACCESSORIES (continued)

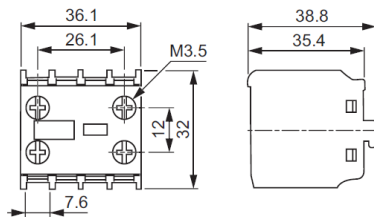
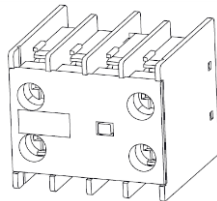
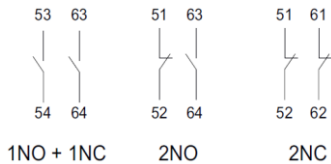
Auxiliaries: (continued)

CTX<sup>3</sup> mini auxiliary contact front: (continued)



CTX<sup>3</sup> mini auxiliary contact front: weight = 0.03 [kg]

- 1NO + 1NC (cat n° 4 171 50)
- 2NO (cat n° 4 171 51)
- 2NC (cat n° 4 171 52)

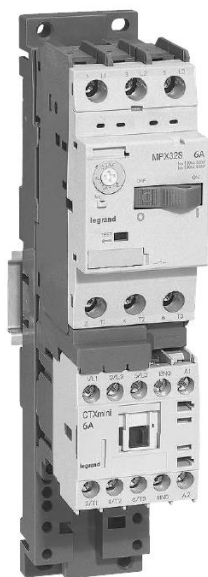


Combined devices:

. Installation principle:

- Contactor CTX<sup>3</sup> mini with MPCB MPX<sup>3</sup>

Mounting Unit



MPX<sup>3</sup>

Direct Connector

CTX<sup>3</sup> mini

### 7. AUXILIARIES AND ACCESSORIES (continued)

Auxiliaries: (continued)

Combined devices: (continued)

. Installation principle:

- Contactor CTX<sup>3</sup> mini with MPCB MPX<sup>3</sup>

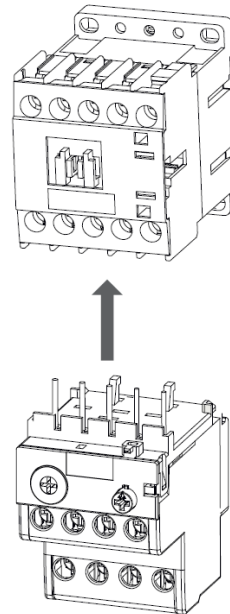
Direct connector	Mounting Unit	MPX <sup>3</sup>	CTX <sup>3</sup>
4 174 40	Mounting Unit MPX <sup>3</sup> 32S / 32H / 32MA 4 174 60	MPX <sup>3</sup> 32S	CTX <sup>3</sup> mini AC
4 174 41			CTX <sup>3</sup> mini DC
4 174 42	MPX <sup>3</sup> 32H / 32MA	MPX <sup>3</sup> 32H / 32MA	CTX <sup>3</sup> mini AC
4 174 43			CTX <sup>3</sup> mini DC

Combined devices:

. For more information, refer to the technical data sheet of RTX<sup>3</sup> mini.

Installation principle:

- CTX<sup>3</sup> mini with RTX<sup>3</sup> mini



Type of products	Directly mountable Overload relay
CTX <sup>3</sup> mini (3P only)	RTX <sup>3</sup> mini

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### 7. AUXILIARIES AND ACCESSORIES *(continued)*

#### Accessories:

##### Interlock CTX<sup>3</sup> mini:

- CTX<sup>3</sup> mini mechanical Interlock (cat n° 4 171 60)



. For use with two contactors CTX<sup>3</sup> mini. Electrical interlocking through the auxiliary contacts.

#### Installation software:

. XL PRO<sup>3</sup>.