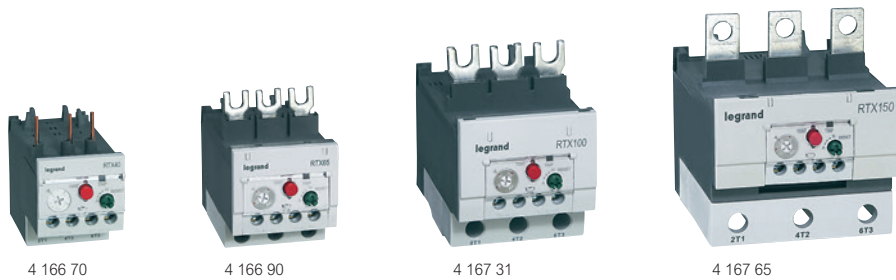


# Thermal relays RTX<sup>3</sup>

for CTX<sup>3</sup> 3-pole industrial contactors



Technical characteristics **p. 188**  
 Dimensions and coordination with circuit breakers **see e-catalogue**

Thermal protection against overloads, long starting times and lasting stalling of the motor  
 Differential type ensures a better protection in case of one phase failure thanks to faster tripping  
 Conform to IEC 60 947-1, IEC 60 947-4-1

Pack	Cat.Nos		Thermal overload relays	
			Class 10A Integrated auxiliary contacts 1 NO + 1 NC	
			<b>RTX<sup>3</sup> 40</b>	
			For CTX <sup>3</sup> 22 and 40 With screw terminals	
			Adjustment range	
	Type		I min. (A)	I max. (A)
	standard   diff.			
1	4 166 40   4 166 60		0.1	0.16
1	4 166 41   4 166 61		0.16	0.25
1	4 166 42   4 166 62		0.25	0.4
1	4 166 43   4 166 63		0.4	0.63
1	4 166 44   4 166 64		0.63	1
1	4 166 45   4 166 65		1	1.6
1	4 166 46   4 166 66		1.6	2.5
1	4 166 47   4 166 67		2.5	4
1	4 166 48   4 166 68		4	6
1	4 166 49   4 166 69		5	8
1	4 166 50   4 166 70		6	9
1	4 166 51   4 166 71		7	10
1	4 166 52   4 166 72		9	13
1	4 166 53   4 166 73		12	18
1	4 166 54   4 166 74		16	22
1	4 166 55   4 166 75		18	25
1	4 166 56   4 166 76		22	32
1	4 166 57   4 166 77		28	40
			<b>RTX<sup>3</sup> 65</b>	
			For CTX <sup>3</sup> 65 Standard type with screw terminals Differential type with cage terminals	
1	4 166 83   4 167 03		9	13
1	4 166 84   4 167 04		12	18
1	4 166 85   4 167 05		16	22
1	4 166 86   4 167 06		18	25
1	4 166 87   4 167 07		24	36
1	4 166 88   4 167 08		28	40
1	4 166 89   4 167 09		34	50
1	4 166 90   4 167 10		45	65


















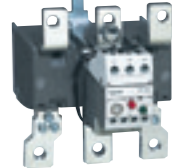
Pack	Cat. Nos		Thermal overload relays (continued)	
			Class 10A Integrated auxiliary contacts 1 NO + 1 NC	
			<b>RTX<sup>3</sup> 100</b>	
			For CTX <sup>3</sup> 100 Standard type with screw terminals Differential type with cage terminals	
			Adjustment range	
	Type		I min. (A)	I max. (A)
	standard   diff.			
1	4 167 23   4 167 43		18	25
1	4 167 24   4 167 44		24	36
1	4 167 25   4 167 45		28	40
1	4 167 26   4 167 46		34	50
1	4 167 27   4 167 47		45	65
1	4 167 28   4 167 48		54	75
1	4 167 29   4 167 49		63	85
1	4 167 30   4 167 50		70	95
1	4 167 31   4 167 51		80	100
			<b>RTX<sup>3</sup> 150</b>	
			For CTX <sup>3</sup> 150 Standard type with screw terminals Differential type with cage terminals	
1	4 167 60   4 167 70		45	65
1	4 167 61   4 167 71		54	75
1	4 167 62   4 167 72		63	85
1	4 167 63   4 167 73		80	105
1	4 167 64   4 167 74		95	130
1	4 167 65   4 167 75		110	150
			<b>Separate mounting units</b>	
			To mount the relays separately from contactors, on DIN rail or panel by fixing screws	
1	4 165 91		For RTX <sup>3</sup> 40 up to 32 A	
1	4 165 92		For RTX <sup>3</sup> 40 40 A	
1	4 165 93		For RTX <sup>3</sup> 65 with screw terminals	
1	4 165 94		For RTX <sup>3</sup> 65 with cage terminals	
1	4 165 95		For RTX <sup>3</sup> 100 with screw terminals	
1	4 165 96		For RTX <sup>3</sup> 100 with cage terminals	
1	4 165 97		For RTX <sup>3</sup> 150 with screw terminals	
1	4 165 98		For RTX <sup>3</sup> 150 with cage terminals	

For dimensions and coordination with circuit breakers **see e-catalogue**



### 3-pole contactors CTX<sup>3</sup> and thermal overload relays RTX<sup>3</sup>

#### technical characteristics

																													
Contactor		CTX <sup>3</sup> mini	CTX <sup>3</sup> 22	CTX <sup>3</sup> 40	CTX <sup>3</sup> 65	CTX <sup>3</sup> 100	CTX <sup>3</sup> 150	CTX <sup>3</sup> 225	CTX <sup>3</sup> 400	CTX <sup>3</sup> 800																			
Size		-	2	3	4	5	6	7	8	9																			
Terminals type		screw	screw	screw	screw or cage	screw or cage	screw or cage	screw	screw	screw																			
Rated operational voltage, U <sub>e</sub>		690 V	690 V	690 V	690 V	690 V	690 V	690 V	690 V	690 V																			
Rated insulation voltage, U <sub>i</sub>		690 V	690 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V																			
Rated frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz																			
Rated impulse withstand voltage, U <sub>imp</sub>		6 kV	6 kV	8 kV	8 kV	8 kV	8 kV	8 kV	8 kV	8 kV																			
Max. operating rate in operation cycle per hour (AC-3)		1800	1800	1800	1800	1800	1200	1200	1200	1200																			
Durability in millions of operations	Mechanical	12	15	12	12	12	5	5	5	2.5																			
	Electrical	1	2.5	2	2	2	1	1	1	0.5																			
Current and power	Type	6 A	9 A	12 A	16 A	9 A	12 A	18 A	22 A	32 A	40 A	50 A	65 A	75 A	85 A	100 A	130 A	150 A	185 A	225 A	265 A	330 A	400 A	500 A	630 A	800 A			
	AC-1	Thermal current (A)	20	20	20	20	25	25	40	40	50	60	70	100	110	135	160	160	210	230	275	300	350	450	580	660	900		
		200/240 V (kW)	1.5	2.2	3	4	2.5	3.5	4.5	5.5	7.5	11	15	18.5	22	25	30	37	45	55	75	80	90	125	147	190	220		
	AC-3	(A)	7	9	12	15	11	13	18	22	32	40	55	65	75	85	105	130	150	185	225	265	330	400	500	630	800		
		380/440 V (kW)	2.2	4	5.5	7.5	4	5.5	7.5	11	15	18.5	22	30	37	45	55	60	75	90	132	147	160	200	265	330	440		
	500/550 V (kW)	(A)	3	3.7	4	5.5	4	7.5	7.5	15	18.5	22	30	33	37	45	55	60	70	110	132	147	160	225	265	330	500		
		690 V (kW)	3	4	4	4	4	7.5	7.5	15	18.5	22	30	33	37	45	55	55	55	110	140	160	200	250	300	400	500		
	1000 V (kW)	(A)	4	5	5	5	5	9	9	18	20	23	28	35	42	45	65	60	60	120	150	185	225	300	380	420	630		
		(A)	-	-	-	-	-	-	-	-	22	22	30	30	37	27	37	75	75	132	132	147	147	147	220	220	220		
	UL rating 50/60 Hz	Continuous current (A)		20	20	20	20	25	25	40	40	50	60	70	100	110	135	160	160	210	230	275	300	350	450	580	660	900	
Single phase		110/220 V (HP)	1/2	1/2	1	-	0.5	0.75	1	2	2	3	3	5	5	7.5	10	10	15	15	15	15	-	-	-	-	-	-	
		220/240 V (HP)	1	1.5	2	-	1.5	2	3	3	5	7.5	10	15	15	15	20	20	25	30	40	40	-	-	-	-	-		
Three phase		200/208 V (HP)	-	-	-	-	2	3	5	7.5	7.5	15	20	25	25	30	30	40	40	60	60	75	100	125	150	200	200		
		220/240 V (HP)	1.5	3	3	-	3	5	7.5	10	10	15	25	30	30	40	40	40	50	60	75	100	125	150	200	250	300		
		440/480 V (HP)	3	5	7.5	-	5	7.5	10	15	20	30	40	50	50	60	75	75	100	125	150	200	250	300	400	500	600		
		550/600 V (HP)	3	5	7.5	-	7.5	10	15	20	25	30	50	60	60	75	75	75	75	125	150	200	250	300	400	500	600		
NEMA size		00	00	00	0	00	00	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	7			
Weight and size	AC control	Weight (kg)	0.17				0.34				0.4		0.9			1.6			2.4		5.4		9.2			22.4			
		Size (W x H x D) (mm)	45 x 58 x 57				45 x 73.5 x 87.4				45 x 83 x 90		55 x 106 x 119			70 x 140 x 135.8			95 x 158 x 130.3		138 x 203 x 185.1		163 x 243 x 204.4			285 x 312 x 245.3			
	DC control	Weight (kg)	0.23				0.41				0.6		1.2			2.6			2.4		5.4		9.2			22.4			
		Size (W x H x D) (mm)	45 x 58 x 69				45 x 73.5 x 103.6				45 x 83 x 117.1		55 x 106 x 146.4			70 x 140 x 172.3			95 x 158 x 130.3		138 x 203 x 185.1		163 x 243 x 204.4			285 x 312 x 245.3			
Integrated auxiliary contacts		1 NO or 1 NC				1 NO + 1 NC				2 NO + 2 NC		2 NO + 2 NC			2 NO + 2 NC			2 NO + 2 NC		2 NO + 2 NC		2 NO + 2 NC			2 NO + 2 NC				
Add on auxiliary block	Side mounting	Yes				Yes				Yes		Yes			Yes			Yes		Yes		Yes			Yes				
	Front mounting	Yes				Yes				Yes		Yes			Yes			Yes		No		No			No				
Thermal overload relay		RTX <sup>3</sup> mini	RTX <sup>3</sup> 40	RTX <sup>3</sup> 40	RTX <sup>3</sup> 65	RTX <sup>3</sup> 100	RTX <sup>3</sup> 150	RTX <sup>3</sup> 225	RTX <sup>3</sup> 400	RTX <sup>3</sup> 800																			
																													
Terminals type	Standard RTX <sup>3</sup>	-									screw			screw			screw		-		-			-					
	Differential RTX <sup>3</sup>	screw				screw				screw		cage			cage			screw		screw			screw						
Rated operational voltage, U <sub>e</sub>		690 V									690 V			690 V			690 V		690 V		690 V			690 V					
Rated insulation voltage, U <sub>i</sub>		690 V									690 V			690 V			690 V		690 V		690 V			690 V					
Rated impulse withstand voltage, U <sub>imp</sub>		6 kV									6 kV			6 kV			6 kV		6 kV		6 kV			6 kV					
Trip class		10 A									10 A			10 A			10 A		10 A		10 A			10 A					
Setting		0.1 to 16 A				0.1 to 40 A				0.1 to 40 A		9 to 65 A			18 to 100 A			45 to 150 A		65 to 240 A		85 to 400 A			200 to 800 A				
Weight and size	Weight (kg)	0.1									0.17			0.17			0.31/0.33			0.48/0.5			0.67		2.5		11.5		
	Size (W x H x D) (mm)	45 x 73 x 63				45 x 75 x 90				45 x 75 x 90		55 x 81 x 100			70 x 97 x 110			95 x 109 x 113		147 x 141 x 184		151 x 171 x 198			360 x 530 x 212				

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

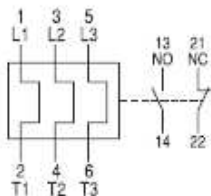


CONTENTS	PAGES
1. Description - Use .....	1
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8. Auxiliaries and accessories .....	18

## 1. DESCRIPTION - USE

They ensure the thermal protection of circuits, against overload and long starting times.

### Symbol:



## 2. RANGE

### Number of Poles:

. Triple pole (3P).

### Setting range:

RTX <sup>3</sup> 40	0.1 to 40 [A]
RTX <sup>3</sup> 65	9 to 65 [A]
RTX <sup>3</sup> 100	18 to 100 [A]
RTX <sup>3</sup> 150	45 to 150 [A]
RTX <sup>3</sup> 225	65 to 240 [A]
RTX <sup>3</sup> 400	85 to 400 [A]
RTX <sup>3</sup> 800	200 to 800 [A]

### Rated operational voltage:

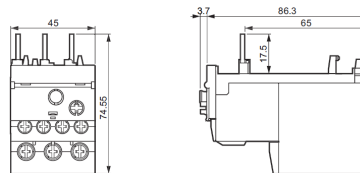
. U<sub>e</sub> = 690 [V] for all products.

### Rated frequency:

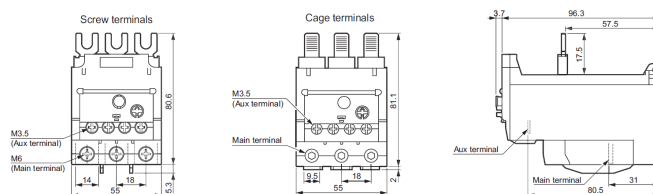
. 50 / 60 [Hz].

## 3. OVERALL DIMENSIONS

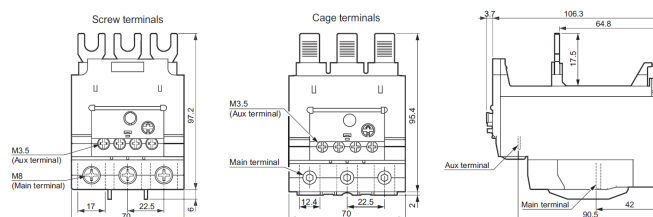
### RTX<sup>3</sup> 40:



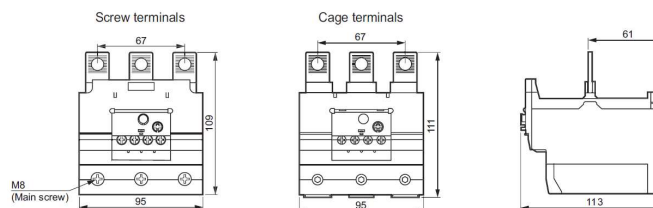
### RTX<sup>3</sup> 65:



### RTX<sup>3</sup> 100:



### RTX<sup>3</sup> 150:

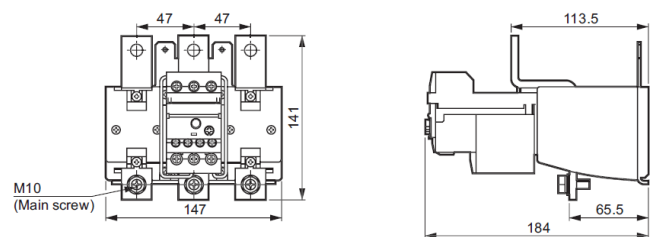


# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

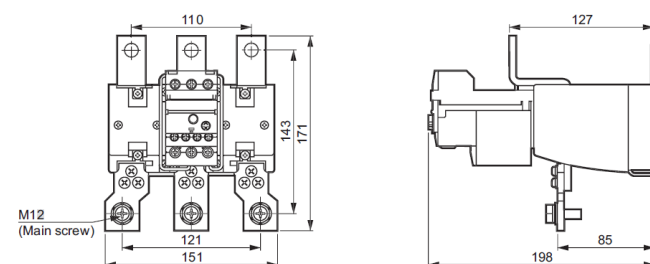
Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

## 3. OVERALL DIMENSIONS (continued)

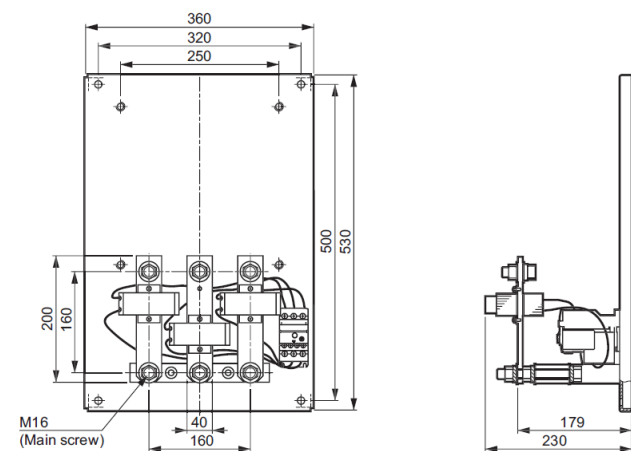
### RTX<sup>3</sup> 225:



### RTX<sup>3</sup> 400:



### RTX<sup>3</sup> 800:



## 4. INSTALLATION - CONNECTION

### Mounting position:

- . Vertical plane.
- . Direct connection beneath CTX<sup>3</sup> contactors.

### Operating position:

- .  $\pm 30$  [°] possible, in relation to normal vertical mounting plane.

### Supply:

- . Either from the top or the bottom.

## 4. INSTALLATION - CONNECTION (continued)

### Connection : (until RTX<sup>3</sup> 150)

- . 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.
- . Pozidriv N°3 screwdriver for RTX<sup>3</sup> 65 / 100 and 150.
- . Flat screwdriver  $\varnothing 5$  to  $\varnothing 6$  [mm] Maximum.
- . Hexagonal key (for RTX<sup>3</sup> 65 with cage terminals).
- . Hexagonal key (for RTX<sup>3</sup> 100 / 150 with cage terminals).
- . Flat spanner for M10 bolt (for RTX<sup>3</sup> 225).
- . Flat spanner for M12 bolt (for RTX<sup>3</sup> 400).
- . Flat spanner for M16 bolt (for RTX<sup>3</sup> 800).

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/4 167 43..51/60..65/70..75/80..84/86..95

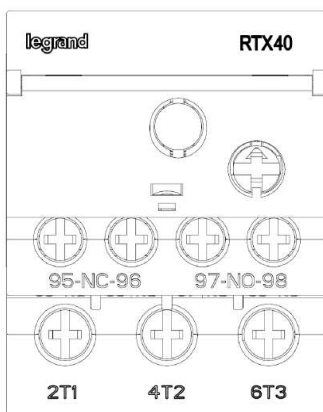
## 5. GENERAL CHARACTERISTICS

### Front side:

. By dark grey laser or pad printing:

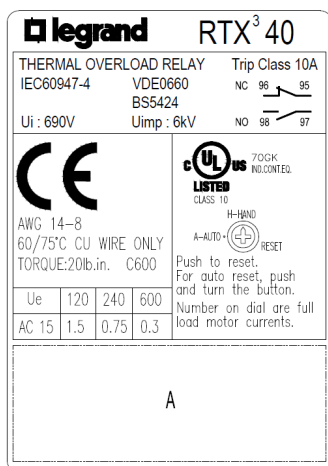
- Brand: Legrand
- Range: RTX + frame
- Rated current (in A)
- Marking power terminals

**RTX<sup>3</sup> 40:** (Example of marking)



### Left side:

. By identification label.



. Example area "A":

- Catalog number
- Rating
- Approval marks
- Made in
- Production date

## 5. GENERAL CHARACTERISTICS (continued)

### Rated impulse voltage and rated insulation voltage:

Type of products	Rated impulse voltage (Uimp)	Rated insulation voltage (Ui)
RTX <sup>3</sup> 40	6 [kV]	Up to 690 [V]
RTX <sup>3</sup> 65	6 [kV]	Up to 690 [V]
RTX <sup>3</sup> 100	6 [kV]	Up to 690 [V]
RTX <sup>3</sup> 150	6 [kV]	690 [V]
RTX <sup>3</sup> 225	6 [kV]	690 [V]
RTX <sup>3</sup> 400	6 [kV]	690 [V]
RTX <sup>3</sup> 800	6 [kV]	690 [V]

### Ambient operating temperature:

. Min. = -5°C. Max. = +40°C.

### Ambient storage temperature:

. Min. = -55°C. Max. = +80°C.

### Temperature compensation:

. Min. = -5°C. Max. = +40°C.

### Weight:

RTX <sup>3</sup> 40	0.17 [kg]
RTX <sup>3</sup> 65	0.31/ 0.33 [kg]
RTX <sup>3</sup> 100	0.48 / 0.5 [kg]
RTX <sup>3</sup> 150	0.67 [kg]
RTX <sup>3</sup> 225	2.5 [kg]
RTX <sup>3</sup> 400	2.6 [kg]
RTX <sup>3</sup> 800	11.5 [kg]

### Degree of protection: (In accordance with IEC 60 529 standard)

. IP20.

### Flame resistance:

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

### Shock resistance: (Conforming to IEC 68-2-7)

. 15 [gn] - 11 [ms].

### Vibration resistance: (Conforming to IEC 68-2-6)

. 6 [g].

### Trip class:

. Class 10A.

### Functions:

- . Trip indicating.
- . Stop.
- . Test.
- . Manual / Automatic reset.

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

## 5. GENERAL CHARACTERISTICS *(continued)*

### Coordination:

- . Trip class 10A.
- . Terminal type: screw.

Setting range - [A]	Thermal Overload Relay - RTX <sup>3</sup>	Contactor - CTX <sup>3</sup>	Separate Mounting unit
0.1 to 0.16	RTX <sup>3</sup> 40	CTX <sup>3</sup> 22 CTX <sup>3</sup> 40	4 165 91
0.16 to 0.25			
0.25 to 0.4			
0.4 to 0.63			
0.63 to 1			
1 to 1.6			
1.6 to 2.5			
2.5 to 4			
4 to 6			
5 to 8			
6 to 9			
7 to 10			
9 to 13			
12 to 18			
16 to 22			
28 to 25			
22 to 32			
28 to 40			
			4 165 92

- . Terminal type: screw and cage.

Setting range - [A]	Thermal Overload Relay - RTX <sup>3</sup>	Contactor - CTX <sup>3</sup>	Separate Mounting unit
9 to 13	RTX <sup>3</sup> 65	CTX <sup>3</sup> 65	4 165 93 (Screw) 4 165 94 (Cage)
12 to 18			
16 to 22			
18 to 25			
24 to 36			
28 to 40			
34 to 50			
45 to 65			

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

## 5. GENERAL CHARACTERISTICS *(continued)*

### Coordination: *(continued)*

- . Trip class 10A.
- . Terminal type: screw and cage.

Setting range - [A]	Thermal Overload Relay - RTX <sup>3</sup>	Contactor - CTX <sup>3</sup>	Separate Mounting unit
18 to 25	RTX <sup>3</sup> 100	CTX <sup>3</sup> 100	4 165 95 (Screw) 4 165 96 (Cage)
24 to 36			
28 to 40			
34 to 50			
45 to 65			
54 to 75			
63 to 85			
70 to 95			
80 to 100			

Setting range - [A]	Thermal Overload Relay - RTX <sup>3</sup>	Contactor - CTX <sup>3</sup>	Separate Mounting unit
45 to 65	RTX <sup>3</sup> 150	CTX <sup>3</sup> 150	4 165 97 (Screw) 4 165 98 (Cage)
54 to 75			
63 to 85			
80 to 105			
95 to 130			
110 to 150			

- . Terminal type: screw and cage.

Setting range - [A]	Thermal Overload Relay - RTX <sup>3</sup>	Contactor - CTX <sup>3</sup>	Separate Mounting unit
65 to 100	RTX <sup>3</sup> 225	CTX <sup>3</sup> 225	-
85 to 125			
100 to 160			
120 to 185			
160 to 240			

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

## 5. GENERAL CHARACTERISTICS *(continued)*

### Coordination: *(continued)*

- . Trip class 10A.
- . Terminal type: screw.

Setting range - [A]	Thermal Overload Relay - RTX <sup>3</sup>	Contactactor - CTX <sup>3</sup>	Separate Mounting unit
85 to 125	RTX <sup>3</sup> 400	CTX <sup>3</sup> 400	-
100 to 160			
120 to 185			
160 to 240			
200 to 330			
260 to 400			

Setting range - [A]	Thermal Overload Relay - RTX <sup>3</sup>	Contactactor - CTX <sup>3</sup>	Separate Mounting unit
200 to 330	RTX <sup>3</sup> 800	CTX <sup>3</sup> 800	-
260 to 400			
400 to 630			
520 to 800			



# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

## 5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2

Motor		Circuit-breaker				Contactor	Thermal relay			Test	
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Rated conditionnal short-circuit current I <sub>q</sub> (kA)	Voltage (V)
0,37	1,10	DX <sup>3</sup> -MA	1,6	20	4 098 76	CTX <sup>3</sup> 22 9A	RTX <sup>3</sup> 40	1- 1,6	4 166 45/65	15	400
0,55	1,5	DX <sup>3</sup> -MA	1,6	20	4 098 76	CTX <sup>3</sup> 22 9A	RTX <sup>3</sup> 40	1- 1,6	4 166 45/65	15	400
0,75	1,9	DX <sup>3</sup> -MA	2,5	32	4 098 77	CTX <sup>3</sup> 22 9A	RTX <sup>3</sup> 40	1,6 - 2,5	4 166 46/66	15	400
1,1	2,7	DX <sup>3</sup> -MA	4	50	4 098 78	CTX <sup>3</sup> 22 9A	RTX <sup>3</sup> 40	2,5 - 4	4 166 47/67	15	400
1,5	3,5	DX <sup>3</sup> -MA	4	50	4 098 78	CTX <sup>3</sup> 22 9A	RTX <sup>3</sup> 40	2,5 - 4	4 166 47/67	15	400
2,2	5	DX <sup>3</sup> -MA	6,3	80	4 098 79	CTX <sup>3</sup> 22 9A	RTX <sup>3</sup> 40	4 - 6	4 166 48/68	15	400
2,5	5,7	DX <sup>3</sup> -MA	6,3	80	4 098 79	CTX <sup>3</sup> 22 9A	RTX <sup>3</sup> 40	4 - 6	4 166 48/68	15	400
3	6,7	DX <sup>3</sup> -MA	10	125	4 098 80	CTX <sup>3</sup> 22 12A	RTX <sup>3</sup> 40	5 - 8	4 166 49/69	15	400
3,7	8	DX <sup>3</sup> -MA	10	125	4 098 80	CTX <sup>3</sup> 22 12A	RTX <sup>3</sup> 40	6 - 9	4 166 50/70	15	400
4	8,5	DX <sup>3</sup> -MA	10	125	4 098 80	CTX <sup>3</sup> 22 12A	RTX <sup>3</sup> 40	7 - 10	4 166 51/71	15	400
5,5	11	DX <sup>3</sup> -MA	12,5	160	4 098 81	CTX <sup>3</sup> 22 22A	RTX <sup>3</sup> 40	9 - 13	4 166 52/72	15	400
6,3	13	DX <sup>3</sup> -MA	16	200	4 098 82	CTX <sup>3</sup> 22 22A	RTX <sup>3</sup> 40	12 - 18	4 166 53/73	15	400
7,5	15	DX <sup>3</sup> -MA	16	200	4 098 82	CTX <sup>3</sup> 22 22A	RTX <sup>3</sup> 40	12 - 18	4 166 53/73	15	400
10	20	DX <sup>3</sup> -MA	25	320	4 098 83	CTX <sup>3</sup> 22 22A	RTX <sup>3</sup> 40	16 - 22	4 166 54/74	15	400
11	22	DX <sup>3</sup> -MA	25	320	4 098 83	CTX <sup>3</sup> 22 22A	RTX <sup>3</sup> 40	18 - 25	4 166 55/75	15	400
12,5	25	DX <sup>3</sup> -MA	25	320	4 098 83	CTX <sup>3</sup> 40 32A	RTX <sup>3</sup> 40	22 - 32	4 166 56/76	15	400
15	29	DX <sup>3</sup> -MA	40	500	4 098 84	CTX <sup>3</sup> 40 32A	RTX <sup>3</sup> 40	22 - 32	4 166 56/76	10	400
16	31	DX <sup>3</sup> -MA	40	500	4 098 84	CTX <sup>3</sup> 40 32A	RTX <sup>3</sup> 40	22 - 32	4 166 56/76	10	400
18,5	35	DX <sup>3</sup> -MA	40	500	4 098 84	CTX <sup>3</sup> 40 40A	RTX <sup>3</sup> 40	28 - 40	4 166 57/77	10	400
20	38	DX <sup>3</sup> -MA	40	500	4 098 84	CTX <sup>3</sup> 40 40A	RTX <sup>3</sup> 40	28 - 40	4 166 57/77	10	400
22	41	DX <sup>3</sup> -MA	63	880	4 098 85	CTX <sup>3</sup> 65 50A	RTX <sup>3</sup> 65	34 - 50	4 166 89 4 167 09	10	400
25	47	DX <sup>3</sup> -MA	63	880	4 098 85	CTX <sup>3</sup> 65 50A	RTX <sup>3</sup> 65	34 - 50	4 166 89 4 167 09	10	400
30	57	DX <sup>3</sup> -MA	63	880	4 098 85	CTX <sup>3</sup> 65 65A	RTX <sup>3</sup> 65	45 - 65	4 166 90 4 167 10	10	400
31,5	59	DX <sup>3</sup> -MA	63	880	4 098 85	CTX <sup>3</sup> 65 65A	RTX <sup>3</sup> 65	45 - 65	4 166 90 4 167 10	10	400

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

## 5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2 *(continued)*

Motor		Circuit-breaker				Contactor	Thermal relay			Test	
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current I <sub>q</sub> (kA)	Voltage (V)
15	29	DPX <sup>3</sup> 160	40	400	4 200 82	CTX <sup>3</sup> 100 85A	RTX <sup>3</sup> 100	24 – 36	4 167 24/44	36	400
16	31	DPX <sup>3</sup> 160	40	400	4 200 82	CTX <sup>3</sup> 100 85A	RTX <sup>3</sup> 100	24 – 36	4 167 24/44	36	400
18,5	35	DPX <sup>3</sup> 160	40	400	4 200 82	CTX <sup>3</sup> 100 85A	RTX <sup>3</sup> 100	28 – 40	4 167 25/45	36	400
20	38	DPX <sup>3</sup> 160	40	400	4 200 82	CTX <sup>3</sup> 100 85A	RTX <sup>3</sup> 100	34 – 50	4 167 26/46	36	400
22	41	DPX <sup>3</sup> 160	63	630	4 200 83	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	34 – 50	4 167 26/46	36	400
25	47	DPX <sup>3</sup> 160	63	630	4 200 83	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	45 – 65	4 167 27/47	36	400
30	57	DPX <sup>3</sup> 160	63	630	4 200 83	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	45 – 65	4 167 27/47	36	400
31,5	59	DPX <sup>3</sup> 160	63	630	4 200 83	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	54 – 75	4 167 28/48	36	400
37	68	DPX <sup>3</sup> 160	100	1000	4 200 85	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	54 – 75	4 167 61/71	36	400
40	74	DPX <sup>3</sup> 160	100	1000	4 200 85	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	63 – 85	4 167 62/72	36	400
45	82	DPX <sup>3</sup> 160	100	1000	4 200 85	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	63 – 85	4 167 62/72	36	400
50	92	DPX <sup>3</sup> 160	100	1000	4 200 85	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	80 - 105	4 167 63/73	36	400
55	102	DPX <sup>3</sup> 160	125	1250	4 200 86	CTX <sup>3</sup> 150 150A	RTX <sup>3</sup> 150	95 - 130	4 167 64/74	36	400
63	115	DPX <sup>3</sup> 160	125	1250	4 200 86	CTX <sup>3</sup> 150 150A	RTX <sup>3</sup> 150	95 - 130	4 167 64/74	36	400

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

## 5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2 *(continued)*

Motor		Circuit-breaker				Contactor	Thermal relay			Test	
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Référence	Type	Type	Setting range (A)	Reference	Conditional short-circuit current I <sub>q</sub> (kA)	Voltage (V)
15	29	DPX <sup>3</sup> 160	40	140 - 400	4 201 22	CTX <sup>3</sup> 65 50A	RTX <sup>3</sup> 65	24 - 36	4 166 87 4 167 07	50	400
16	31	DPX <sup>3</sup> 160	40	140 - 400	4 201 22	CTX <sup>3</sup> 65 50A	RTX <sup>3</sup> 65	24 - 36	4 166 87 4 167 07	50	400
18,5	35	DPX <sup>3</sup> 160	40	140 - 400	4 201 22	CTX <sup>3</sup> 65 50A	RTX <sup>3</sup> 65	28 - 40	4 166 88 4 167 08	50	400
20	38	DPX <sup>3</sup> 160	40	140 - 400	4 201 22	CTX <sup>3</sup> 65 50A	RTX <sup>3</sup> 65	34 - 50	4 166 89 4 167 09	50	400
22	41	DPX <sup>3</sup> 160	63	220 - 630	4 201 23	CTX <sup>3</sup> 65 65A	RTX <sup>3</sup> 65	34 - 50	4 166 89 4 167 09	50	400
25	47	DPX <sup>3</sup> 160	63	220 - 630	4 201 23	CTX <sup>3</sup> 100 85A	RTX <sup>3</sup> 100	34 - 50	4 167 26/46	50	400
30	57	DPX <sup>3</sup> 160	63	220 - 630	4 201 23	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	45 - 65	4 167 27/47	50	400
31,5	59	DPX <sup>3</sup> 160	63	220 - 630	4 201 23	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	54 - 75	4 167 28/48	50	400
37	68	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	63 - 85	4 167 29/49	50	400
40	74	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	63 - 85	4 167 62/72	50	400
45	82	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	63 - 85	4 167 62/72	50	400
50	92	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	80 - 105	4 167 63/73	50	400
55	102	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 150 150A	RTX <sup>3</sup> 150	95 - 130	4 167 64/74	50	400
63	115	DPX <sup>3</sup> 250	160	560 - 1600	4 206 07	CTX <sup>3</sup> 150 150A	RTX <sup>3</sup> 150	95 - 130	4 167 64/74	50	400
75	137	DPX <sup>3</sup> 250	160	560 - 1600	4 206 07	CTX <sup>3</sup> 225 185A	RTX <sup>3</sup> 225	100 - 160	4 167 82	50	400
90	164	DPX <sup>3</sup> 250	250	900 - 2500	4 206 09	CTX <sup>3</sup> 225 185A	RTX <sup>3</sup> 225	120 - 185	4 167 83	50	400
110	204	DPX <sup>3</sup> 250	250	900 - 2500	4 206 09	CTX <sup>3</sup> 225 225A	RTX <sup>3</sup> 225	160 - 240	4 167 84	50	400
132	238	DPX <sup>3</sup> 250	250	900 - 2500	4 206 09	CTX <sup>3</sup> 400 265A	RTX <sup>3</sup> 400	200 - 330	4 167 90	50	400
150	262	DPX <sup>3</sup> 630	320	1600 - 3200	4 220 29	CTX <sup>3</sup> 400 330A	RTX <sup>3</sup> 400	200 - 330	4 167 90	50	400
160	282	DPX <sup>3</sup> 630	320	1600 - 3200	4 220 29	CTX <sup>3</sup> 400 330A	RTX <sup>3</sup> 400	260 - 400	4 167 91	50	400
200	350	DPX <sup>3</sup> 630	400	2000 - 3200	4 220 30	CTX <sup>3</sup> 400 400A	RTX <sup>3</sup> 400	260 - 400	4 167 91	50	400
220	387	DPX <sup>3</sup> 630	400	1600 - 3200	4 220 30	CTX <sup>3</sup> 400 400A	RTX <sup>3</sup> 400	260 - 400	4 167 91	50	400
250	440	DPX <sup>3</sup> 630	500	1600 - 3200	4 220 31	CTX <sup>3</sup> 800 630A	RTX <sup>3</sup> 800	400 - 630	4 167 94	50	400

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

## 5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2 *(continued)*

Motor		Circuit-breaker				Contactor	Thermal relay			Test	
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Référence	Type	Type	Setting range (A)	Reference	Conditional short-circuit current I <sub>q</sub> (kA)	Voltage (V)
15	27	DPX <sup>3</sup> 160	40	140 - 400	4 201 22	CTX <sup>3</sup> 65 50A	RTX <sup>3</sup> 65	24 - 36	4 166 87 4 167 07	30	440
16	29	DPX <sup>3</sup> 160	40	140 - 400	4 201 22	CTX <sup>3</sup> 65 50A	RTX <sup>3</sup> 65	24 - 36	4 166 87 4 167 07	30	440
18,5	34	DPX <sup>3</sup> 160	40	140 - 400	4 201 22	CTX <sup>3</sup> 65 65A	RTX <sup>3</sup> 65	28 - 40	4 166 88 4 167 08	30	440
20	37	DPX <sup>3</sup> 160	40	140 - 400	4 201 22	CTX <sup>3</sup> 65 65A	RTX <sup>3</sup> 65	28 - 40	4 166 88 4 167 08	30	440
22	40	DPX <sup>3</sup> 160	40	140 - 400	4 201 23	CTX <sup>3</sup> 100 75A	RTX <sup>3</sup> 100	34 - 50	4 167 26/46	30	440
25	45	DPX <sup>3</sup> 160	63	220 - 630	4 201 23	CTX <sup>3</sup> 100 85A	RTX <sup>3</sup> 100	34 - 50	4 167 26/46	30	440
30	53	DPX <sup>3</sup> 160	63	220 - 630	4 201 23	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	45 - 65	4 167 27/47	30	440
31,5	56	DPX <sup>3</sup> 160	63	220 - 630	4 201 23	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	45 - 65	4 167 27/47	30	440
37	65	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 100 100A	RTX <sup>3</sup> 100	54 - 75	4 167 28/48	50	440
40	71	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	63 - 85	4 167 62/72	50	440
45	78	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	63 - 85	4 167 62/72	50	440
50	88	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 150 130A	RTX <sup>3</sup> 150	80 - 105	4 167 63/73	50	440
55	98	DPX <sup>3</sup> 250	100	350 - 1000	4 206 05	CTX <sup>3</sup> 150 150A	RTX <sup>3</sup> 150	80 - 105	4 167 63/73	50	440
63	110	DPX <sup>3</sup> 250	160	560 - 1600	4 206 07	CTX <sup>3</sup> 150 150A	RTX <sup>3</sup> 150	95 - 130	4 167 64/74	50	440
75	129	DPX <sup>3</sup> 250	160	560 - 1600	4 206 07	CTX <sup>3</sup> 225 185A	RTX <sup>3</sup> 225	100 - 160	4 167 82	50	440
90	157	DPX <sup>3</sup> 250	160	560 - 1600	4 206 07	CTX <sup>3</sup> 225 225A	RTX <sup>3</sup> 225	120 - 185	4 167 83	50	440
110	188	DPX <sup>3</sup> 250	250	900 - 2500	4 206 09	CTX <sup>3</sup> 400 265A	RTX <sup>3</sup> 400	160 - 240	4 167 89	50	440
132	218	DPX <sup>3</sup> 250	250	900 - 2500	4 206 09	CTX <sup>3</sup> 400 265A	RTX <sup>3</sup> 400	160 - 240	4 167 89	50	440
150	244	DPX <sup>3</sup> 630	320	1600 - 3200	4 220 29	CTX <sup>3</sup> 400 400A	RTX <sup>3</sup> 400	200 - 330	4 167 90	50	440
160	260	DPX <sup>3</sup> 630	320	1600 - 3200	4 220 29	CTX <sup>3</sup> 400 400A	RTX <sup>3</sup> 400	200 - 330	4 167 90	50	440
200	330	DPX <sup>3</sup> 630	400	1600 - 3200	4 220 30	CTX <sup>3</sup> 800 630A	RTX <sup>3</sup> 800	260 - 400	4 167 93	50	440
220	355	DPX <sup>3</sup> 630	400	1600 - 3200	4 220 30	CTX <sup>3</sup> 800 630A	RTX <sup>3</sup> 800	260 - 400	4 167 93	50	440
250	405	DPX <sup>3</sup> 630	500	1600 - 3200	4 220 31	CTX <sup>3</sup> 800 800A	RTX <sup>3</sup> 800	400 - 600	4 167 94	50	440

## 6. CONFORMITIES AND APPROVALS

### Compliance to standards:

- . Standards references: IEC/EN 60 947-1, IEC/EN 60 947-4-1.
- . Certifications: CE, UL.

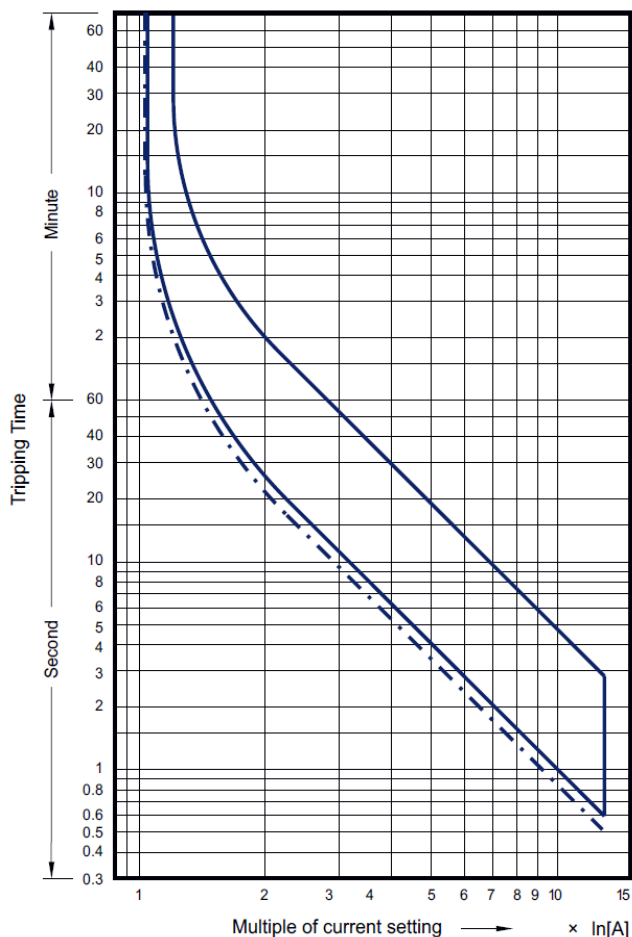
## 7. CURVES

Time / Current tripping curve:

**RTX<sup>3</sup> 40:**

. Class 10A.

- Cold starting:



. Open phase: - - - - -

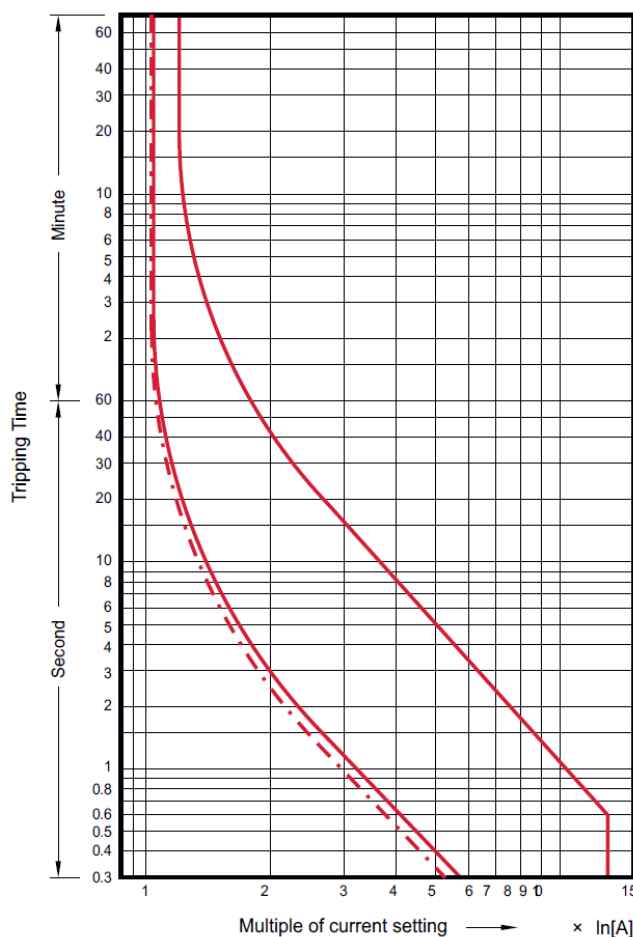
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 40: (continued)**

. Class 10A.

- Hot starting:



. Open phase: - - - - -

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

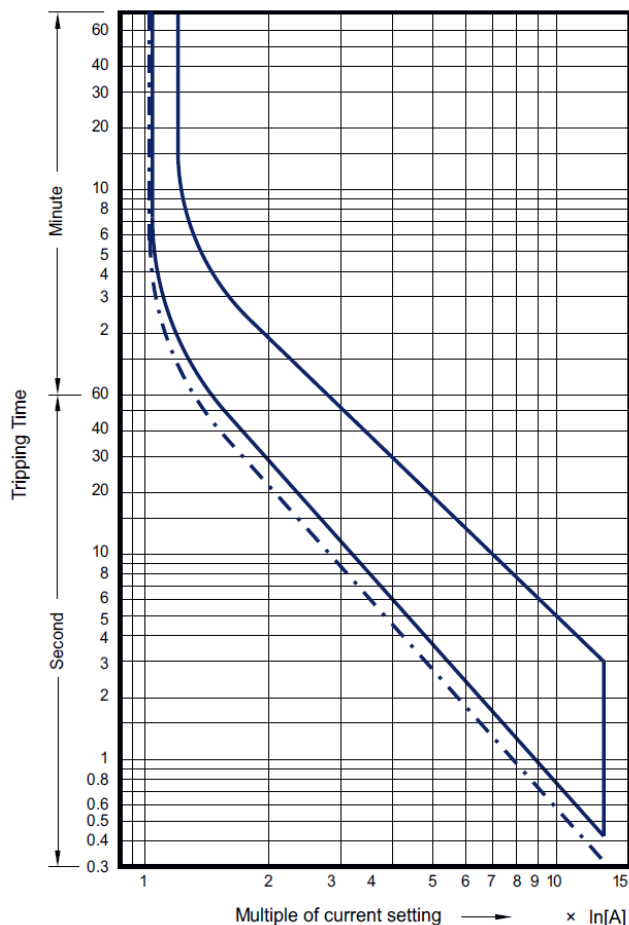
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 65:**

. Class 10A.

- Cold starting:



. Open phase: - - - - -

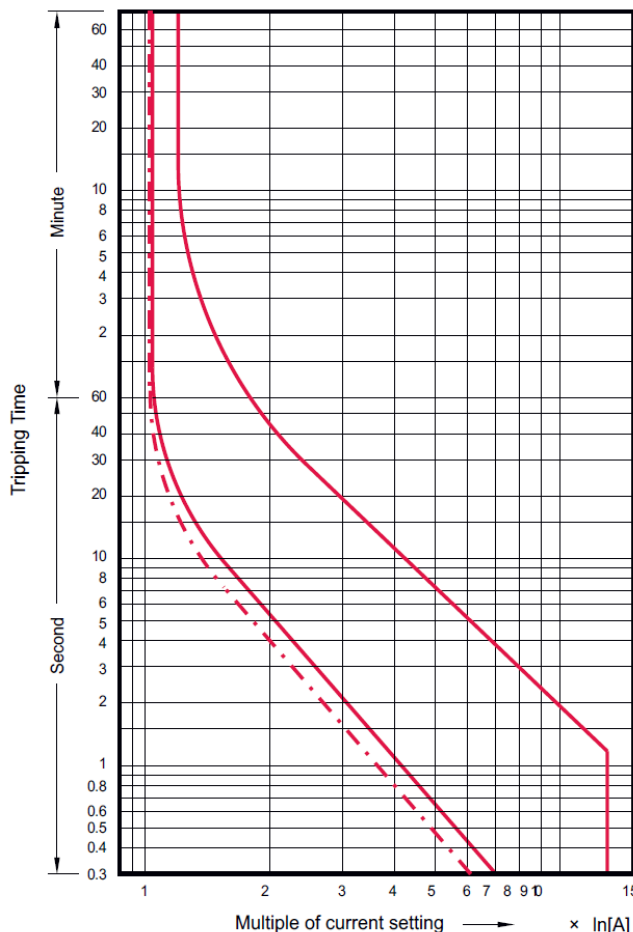
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 65: (continued)**

. Class 10A.

- Hot starting:



. Open phase: - - - - -



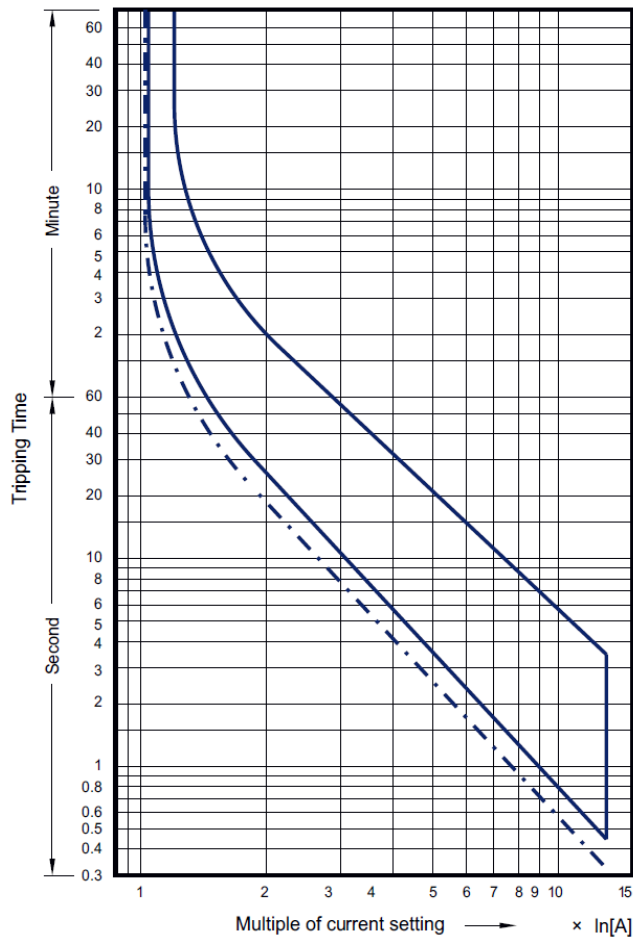
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 100:**

. Class 10A.

- Cold starting:



. Open phase: - - - - -

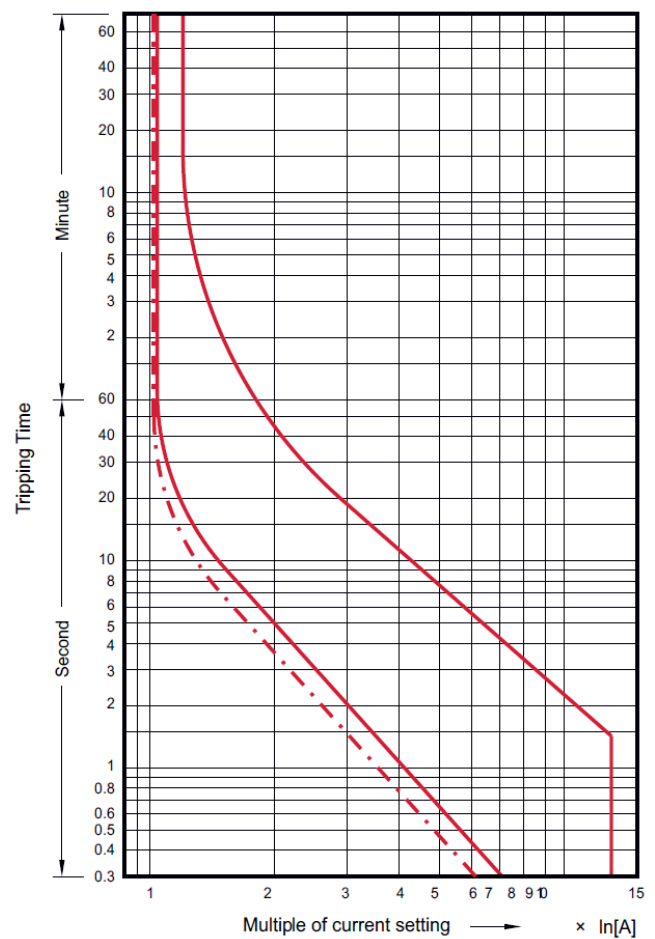
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 100: (continued)**

. Class 10A.

- Hot starting:



. Open phase: - - - - -

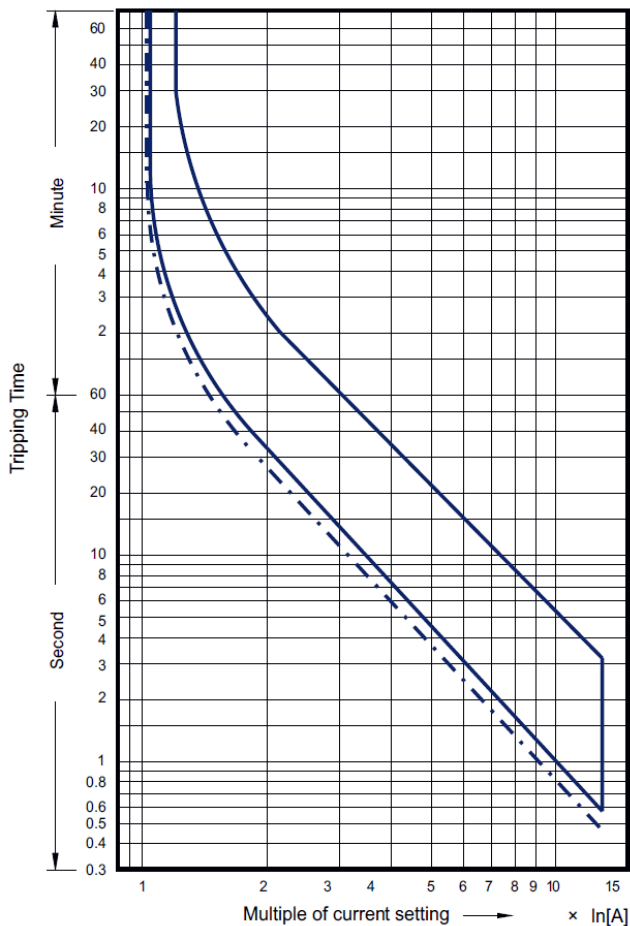
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 150:**

. Class 10A.

- Cold starting:



. Open phase: - - - - -

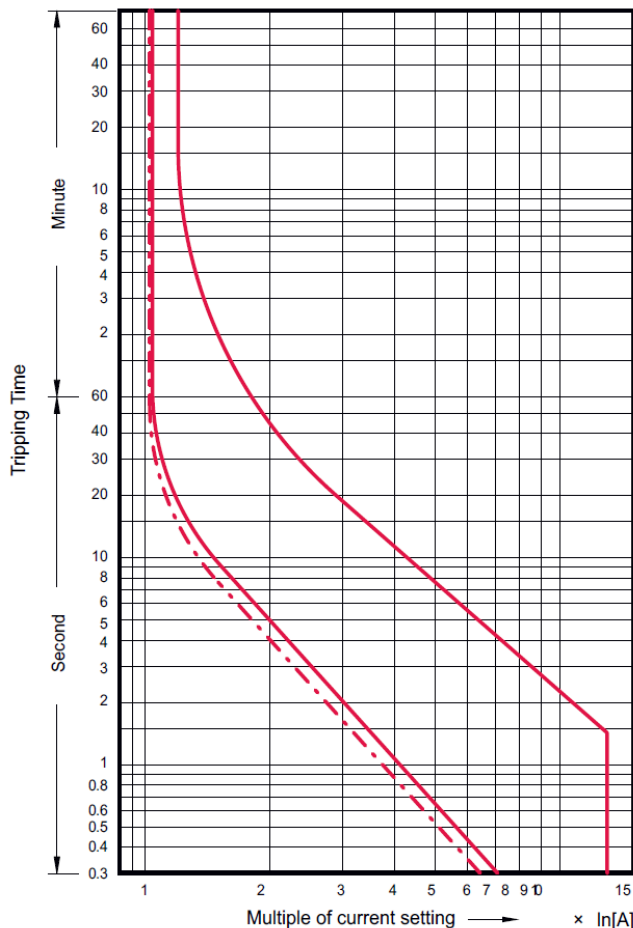
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 150: (continued)**

. Class 10A.

- Hot starting:



. Open phase: - - - - -



# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

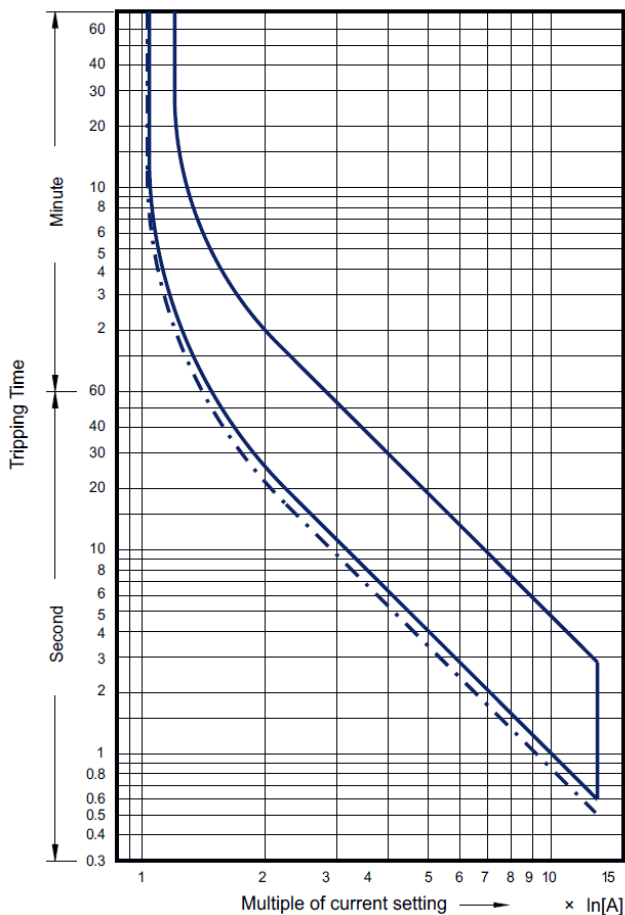
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 225:**

. Class 10A.

- Cold starting:



. Open phase: - - - - -

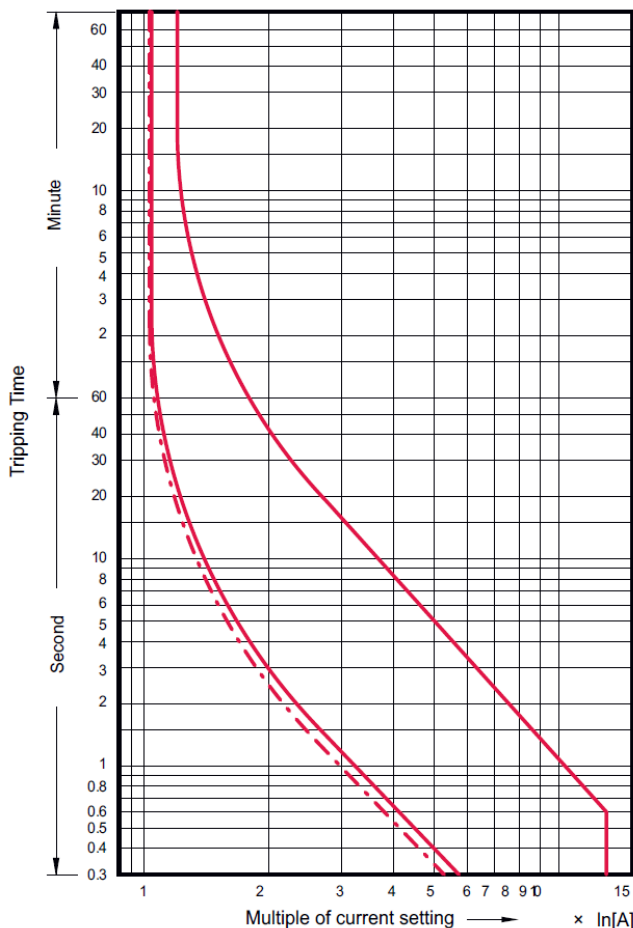
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 225: (continued)**

. Class 10A.

- Hot starting:



. Open phase: - - - - -

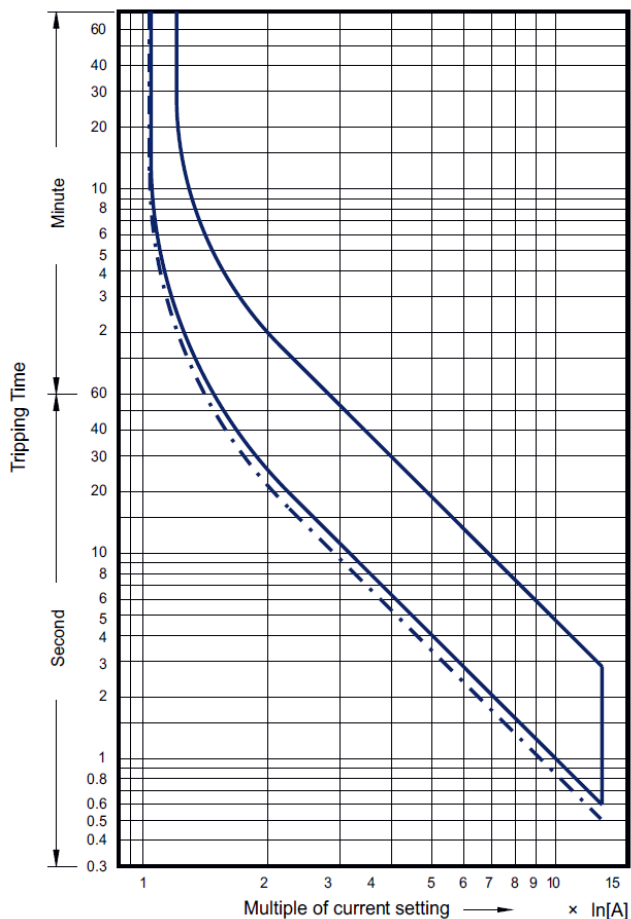
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 400:**

. Class 10A.

- Cold starting:



. Open phase: - - - - -

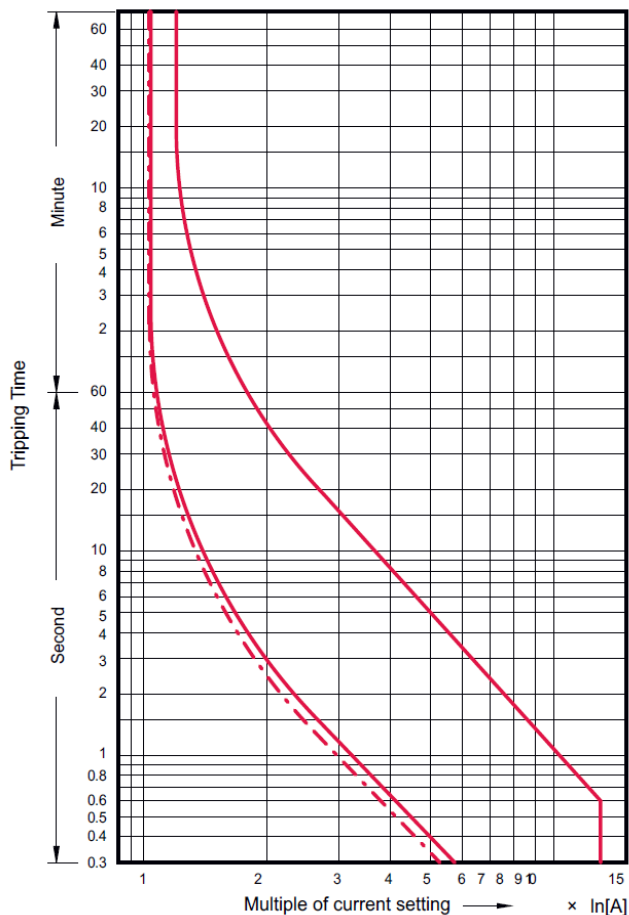
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 400: (continued)**

. Class 10A.

- Hot starting:



. Open phase: - - - - -

# Thermal Overload Relays - RTX<sup>3</sup> and Mounting units

Cat. N°(s) : 4 166 40..57/60..77/83..90/4 167 03..10/23..31/  
4 167 43..51/60..65/70..75/80..84/86..95

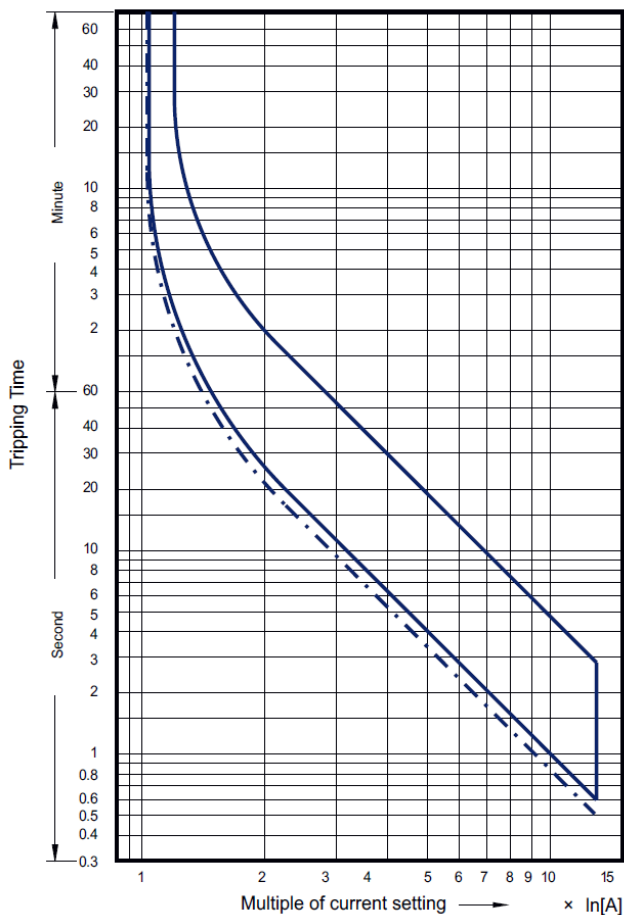
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 800:**

. Class 10A.

- Cold starting:



. Open phase: - - - - -

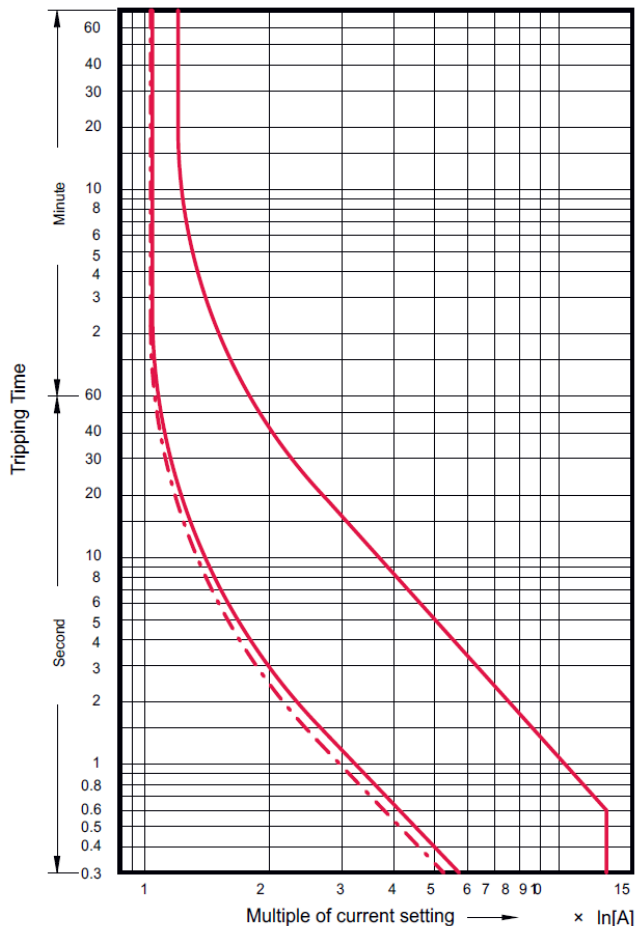
## 7. CURVES (continued)

Time / Current tripping curve:

**RTX<sup>3</sup> 800: (continued)**

. Class 10A.

- Hot starting:



. Open phase: - - - - -

## 8. AUXILIARIES AND ACCESSORIES

### Accessories: *(continued)*

#### RTX<sup>3</sup> remote reset cable:

- . RTX<sup>3</sup> remote reset cable L400 [mm] (cat. 4 168 92).
- . RTX<sup>3</sup> remote reset cable L500 [mm] (cat. 4 168 93).
- . RTX<sup>3</sup> remote reset cable L600 [mm] (cat. 4 168 94).



#### Separate mounting unit:

- . Separate mounting unit for RTX<sup>3</sup> 40.(cat. 4 165 91).
- . Separate mounting unit for RTX<sup>3</sup> 40.(cat. 4 165 92).
- . Separate mounting unit for RTX<sup>3</sup> 65 - screw (cat. 4 165 93).
- . Separate mounting unit for RTX<sup>3</sup> 65 - cage (cat. 4 165 94).
- . Separate mounting unit for RTX<sup>3</sup> 100 - screw (cat. 4 165 95).
- . Separate mounting unit for RTX<sup>3</sup> 100 - cage (cat. 4 165 96).
- . Separate mounting unit for RTX<sup>3</sup> 150 - screw (cat. 4 165 97).
- . Separate mounting unit for RTX<sup>3</sup> 150 - cage (cat. 4 165 98).



#### Installation software:

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