

## DX<sup>3</sup> RCCBs

RCCBs for AC applications 80-100 A



## DX<sup>3</sup> RCBOs

RCBOs assembled for AC applications upto 63 A



4115 08



4117 05



4117 15



4113 24



4113 79

Technical characteristics p. 46-51

Integrated label holder  
Ergonomic Grey color dolly  
Color coded On/Off indication on dolly  
IP 20 protected terminals  
35 sq mm terminals  
Sliding shutters

Pack	Cat.Nos	DX <sup>3</sup> RCCBs	Nominal rating In (A)	Number of modules
		<b>2 pole 240 V<math>\sim</math></b>		
		<b>30 mA</b>		
1/5/60	<b>4115 07</b>		80	2
1/5/60	<b>4115 08</b>		100	2
		<b>100 mA</b>		
1/5/60	<b>4115 17</b>		80	2
1/5/60	<b>4115 18</b>		100	2
		<b>300 mA</b>		
1/5/60	<b>4115 27</b>		80	2
1/5/60	<b>4115 28</b>		100	2
		<b>4 pole 415 V<math>\sim</math></b>		
		<b>30 mA</b>		
1/32	<b>4117 05</b>		80	4
1/32	<b>4117 06</b>		100	4
		<b>100 mA</b>		
1/32	<b>4117 15</b>		80	4
1/32	<b>4117 16</b>		100	4
		<b>300 mA</b>		
1/32	<b>4117 25</b>		80	4
1/32	<b>4117 26</b>		100	4
		<b>2 pole 240 V<math>\sim</math>, HPI</b>		
		<b>30 mA</b>		
1/5/60	<b>4118 74</b>		80	2
		<b>4 pole 415 V<math>\sim</math>, HPI</b>		
		<b>30 mA</b>		
1/32	<b>4118 99</b>		80	4
		<b>4 pole 415 V<math>\sim</math>, A-S</b>		
		<b>300 mA</b>		
1/5/60	<b>4118 94</b>		80	4

Technical characteristics p. 46-51

ISI marked as per IS 12640-2  
Integrated label holder  
Ergonomic design  
Color coded On/Off indication on dolly  
Front face indication for earth leakage fault  
IP 20 protected terminals  
35 sq mm terminals  
Sliding shutters

Pack	Cat.Nos	DX <sup>3</sup> RCBOs	Nominal rating In (A)	Number of modules
		<b>2 pole 240 V<math>\sim</math>, AC Type</b>		
		<b>30 mA</b>		
1/32	<b>4113 22</b>		6	4
1/32	<b>4113 23</b>		10	4
1/32	<b>4113 24</b>		16	4
1/32	<b>4113 25</b>		25	4
1/32	<b>4113 26</b>		32	4
1/32	<b>4113 27</b>		40	4
1/32	<b>4113 28</b>		63	4
		<b>100 mA</b>		
1/32	<b>4113 29</b>		6	4
1/32	<b>4113 30</b>		10	4
1/32	<b>4113 31</b>		16	4
1/32	<b>4113 32</b>		25	4
1/32	<b>4113 33</b>		32	4
1/32	<b>4113 34</b>		40	4
1/32	<b>4113 35</b>		63	4
		<b>300 mA</b>		
1/32	<b>4113 36</b>		16	4
1/32	<b>4113 37</b>		25	4
1/32	<b>4113 38</b>		32	4
1/32	<b>4113 39</b>		40	4
1/32	<b>4113 40</b>		63	4
		<b>4 pole 415 V<math>\sim</math>, AC Type</b>		
		<b>30 mA</b>		
1/16	<b>4113 88</b>		6	7
1/16	<b>4113 89</b>		10	7
1/16	<b>4113 65</b>		16	7
1/16	<b>4113 66</b>		25	7
1/16	<b>4113 67</b>		32	7
1/16	<b>4113 68</b>		40	7
1/16	<b>4113 69</b>		63	7
		<b>100 mA</b>		
1/16	<b>4113 70</b>		16	7
1/16	<b>4113 71</b>		25	7
1/16	<b>4113 72</b>		32	7
1/16	<b>4113 73</b>		40	7
1/16	<b>4113 74</b>		63	7
		<b>300 mA</b>		
1/16	<b>4113 75</b>		16	7
1/16	<b>4113 76</b>		25	7
1/16	<b>4113 77</b>		32	7
1/16	<b>4113 78</b>		40	7
1/16	<b>4113 79</b>		63	7

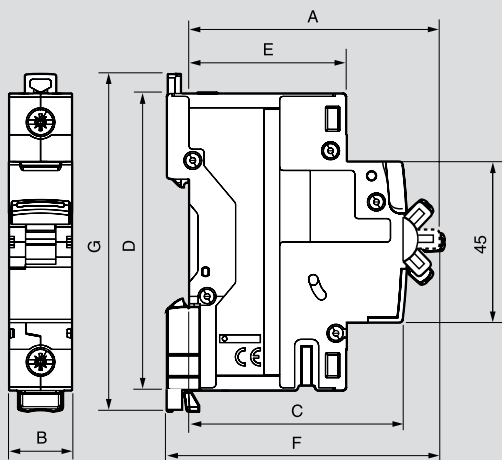
## DX<sup>3</sup> RCDS

technical data for DX<sup>3</sup> RCDs

	RCCB		
	Type AC	Type A-S	Type Hpi
<b>Specification</b>	IS 12640 (part 1) 2008 IEC 61008 - 1	IEC 61008 - 1 EN 61008 - 1	EN 61008 - 1 IEC 61008 - 1
<b>No. of modules</b>	- Double pole - Four pole	2 4	2 4
<b>Electrical characteristics</b>			
<b>Nominal rating I<sub>n</sub> (A)</b>	- Double pole - Four pole	25, 40, 63, 80, 100 25, 40, 63, 80, 100	63, 80 25, 40, 63, 80
<b>Rated sensitivity (mA)</b>	- Double pole - Four pole	30, 100, 300 30, 100, 300	300 300
<b>Rated frequency (Hz)</b>		50 / 60	50 / 60
<b>Rated operating voltage U<sub>e</sub> (V AC)</b>	- Double pole - Four pole	230 230 / 415	230 400
<b>Minimum operating voltage (V AC)</b>		12	12
<b>Minimum operating voltage for test button (V AC)<sup>(1)</sup></b>			
	- Double pole - Four pole	170 196	170 196
<b>Rated insulation voltage U<sub>i</sub> (V AC)</b>	- Double pole - Four pole	250 500	250 500
<b>Rated impulse withstand voltage U<sub>imp</sub> (kV)</b>		6	6
<b>Breaking capacity</b>	As per IS 12640 (part 1) 2008, IEC 61008 - 1		
<b>Rated making &amp; breaking capacity (I<sub>m</sub>)</b>			
	- Up to 40 A - From 63 A and above	500 A 10 x I <sub>n</sub>	- 630 A
<b>Rated residual making &amp; breaking capacity (I<sub>Δm</sub>)</b>			
	- Up to 40 A - From 63 A and above	1000 A 1000 A	- 1000 A
<b>Rated conditional short circuit current (I<sub>nc</sub>)</b>		10000 A	10000 A
<b>Rated conditional residual short circuit current (I<sub>Δc</sub>)</b>		10000 A	10000 A
<b>Rated service short circuit capacity (I<sub>cs</sub>)</b>		-	-
<b>Rated short circuit capacity (I<sub>cn</sub>)</b>		-	-
<b>Operating temperature (°C)</b>		- 25 to 70	- 25 to 70
<b>Endurance (0.C cycle)</b>	- Mechanical - On load at in x cos φ 0.9 - Via test button - By fault current (sensitivity)	20,000 10,000 2,000 2,000	20,000 10,000 2,000 2,000
<b>Testing</b>	By pressing test button grey dolly will come to OFF position It is recommended to test RCCB once a month	By pressing test button grey dolly will come to OFF position It is recommended to test RCCB once a month	By pressing test button, grey dolly will come to OFF position It is recommended to test RCCB once a month
<b>Fault indication</b>	- Earth leakage  - Overload and shortcut	Grey dolly will come to OFF position  -	Grey dolly will come to OFF position  -
<b>Resetting</b>		Switch on grey dolly	Switch on grey dolly
<b>Terminals</b>	- Rigid - Flexible	1 - 35 sq. mm 1 - 25 sq. mm	1 - 35 sq. mm 1 - 25 sq. mm
<b>Type of protection</b>			
Earth leakage		•	•
Overload		-	-
Short circuit		-	-
<b>Add on electrical accessories*</b>			
Auxiliary		•	•
Fault signaling		•	•
Shunt trip		•	•
Under voltage		•	•
Over voltage		•	•

\* - Accessories are mounted on the left hand side of the product.  
At a time a maximum of three accessories can be mounted.  
<sup>(1)</sup> - Between phase and neutral



**Dimensions**


Products	A	B						C	D	E	F	G
		SP	SPN	DP	TP	TPN	FP					
DX <sup>3</sup> MCBs (0.5 to 63A)	70	17.7	35.6	35.6	53.4	71.2	71.2	60	83	44	76	94
DX <sup>3</sup> MCBs (80 - 125A)	70	26.7	-	53.4	80.1	-	106.8	60	83	44	76	89
DX <sup>3</sup> Isolators	70	-	-	35.6	53.4	-	71.2	60	83	44	76	94
DX <sup>3</sup> RCCB - type AC (DP)	70	-	-	35.6	-	-	-	60	83	44	76	94
DX <sup>3</sup> RCCB - type AC (FP)	71.5	-	-	-	-	-	71.2	60	83	44	77.5	94
DX <sup>3</sup> RCCB - type A - S (DP)	70	-	-	35.6	-	-	-	60	83	44	76	94
DX <sup>3</sup> RCCB - type A - S (FP)	71.5	-	-	-	-	-	71.2	60	83	44	77.5	94
DX <sup>3</sup> RCCB - type Hpi (DP)	70	-	-	35.6	-	-	-	60	83	44	76	94
DX <sup>3</sup> RCCB - type Hpi (FP)	71.5	-	-	-	-	-	71.2	60	83	44	77.5	94
DX <sup>3</sup> RCBO - type AC	70	-	-	71.2	-	-	142.4	60	83	44	76	94
DX <sup>3</sup> RCBO - type AC (DP 2 mod.)	70	-	-	35.6	-	-	-	60	83	44	76	94
DX <sup>3</sup> RCBO - type Hpi (DP 2 mod.)	70	-	-	35.6	-	-	-	60	83	44	76	94
Auxiliary contacts	70				8.7			60	83	44	76	83
Auxiliary contacts	70				17.7			60	83	44	76	83
Shunt trip	70				17.7			60	83	44	76	83
Minimum voltage trip	70				17.7			60	83	44	76	83
POP over voltage	74				54			74	83	44	80.5	89
Remote control for MCB / RCBO	74				54			74	83	44	80.5	89
Lexic contactors 20 A	62				17.8			60	83	44	67.5	-
Lexic contactors 40 A (2 mod.)	60				35.6			61	80	44	67	-
Lexic contactors 40 A / 63 A (3 mod.)	60				54			61	80	44	67	-

**DX<sup>3</sup> RCCBs - ID**  
**4P up to 100 A**

Cat. N°(s): 4 117 02, 03, 04, 05, 12, 13, 14, 15, 22, 23, 24,  
 4 117 25, 32, 33, 34, 35, 45, 46, 59, 60, 61, 62, 63, 69, 70,  
 4 117 71, 72, 73, 79, 80, 81, 82, 83, 89, 90, 91, 92, 93,  
 4 118 00, 01

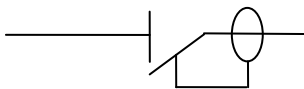


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**1. DESCRIPTION - USE**

RCCBs with positive contact indication for control, protection and isolation of electrical circuits, protecting people from direct and indirect contact and protecting installations from insulation faults.

**Symbol:**



**Technology:**

. Electromagnetic residual current function with current-sensing relay

**2. RANGE**

**Polarity:**

. 4-pole

**Width:**

. 4 modules (4 x 17.8 mm)

**Nominal rating In:**

. 25 / 40 / 63 / 80 / 100 A

**Residual current types:**

- . AC (sinusoidal differential alternating currents)
- . A (residual currents with a DC component)
- . AC-S and A-S (discriminating)

**Sensitivity:**

. 30 / 100 / 300 / 500 mA

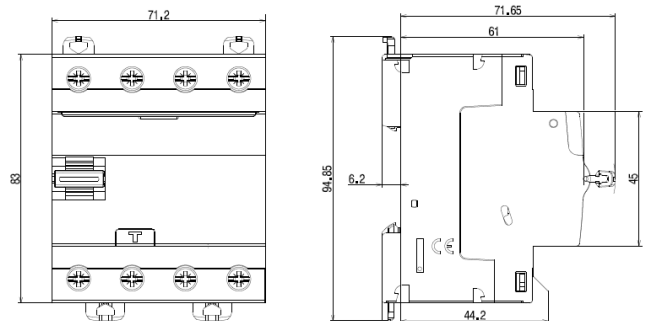
**Nominal voltage and frequency:**

. 400 V~ / 415 V~, 50 Hz with standard tolerances

**Maximum operating voltage:**

. 440 V ~, 50 Hz

**3. OVERALL DIMENSIONS**

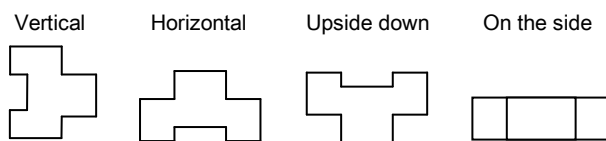


**4. PREPARATION - CONNECTION**

**Mounting:**

. On symmetrical rail EN 60715 or DIN 35 rail

**Operating positions:**



**Power supply:**

. From the top or the bottom

**Connection:**

- . Inputs and outputs via screw terminals
- . Neutral on right

**Terminal arrangement:**

- . Cage terminals, with disengageable and captive screws (fitted with flaps preventing a cable being placed under the terminal, with the terminal partly open or closed)
- . Terminals protected against direct finger contact IP20, wired

# DX<sup>3</sup> RCCBs - ID

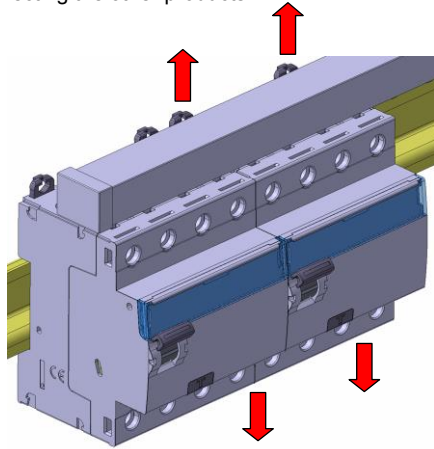
## 4P up to 100 A

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4 117 25, 32, 33, 34, 35, 45, 46, 59, 60, 61, 62, 63, 69, 70,  
4 117 71, 72, 73, 79, 80, 81, 82, 83, 89, 90, 91, 92, 93,  
4 118 00, 01

### 4. PREPARATION - CONNECTION *(continued)*

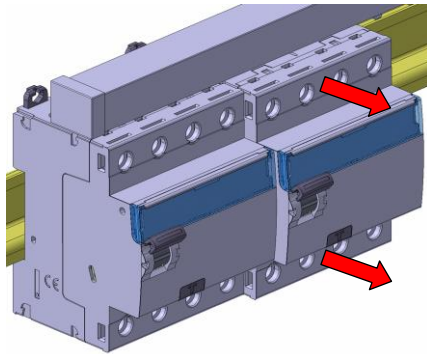
. A RCCB may be replaced in the middle of a row supplied with busbars without disconnecting the other products

Put the lugs in the unlocking position

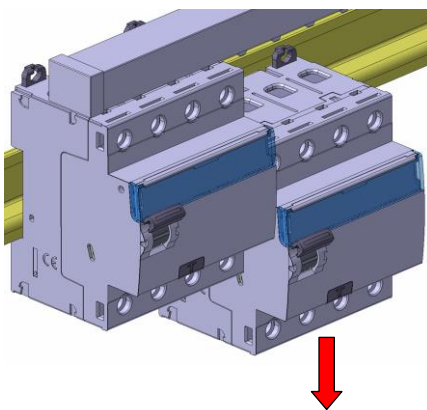


Put the latch clips in the unlocking position

Unscrew the four upper terminals completely



Pull the device forward in order to release it from the rail



Pull the device downward in order to release it completely from the prongs of the busbar

#### Connection:

- . Terminals protected against direct finger contact IP20, wired device
- . Cage terminals, with disengageable or captive screws
- . Terminals fitted with flaps preventing a cable being placed under the terminal, with the terminal partly open or closed
- . Alignment and spacing of the terminals permitting connection with the other products in the range via toothed supply busbars

### 4. PREPARATION - CONNECTION *(continued)*

#### Terminal arrangement: *(continued)*

- . Alignment and spacing of the terminals permitting shutters with the other products via toothed supply busbars
- . Terminal depth: 14 mm
- . Terminal capacity: 60 mm<sup>2</sup>
- . Screw head: mixed head, slotted head and Philips / Pozidriv no. 2
- . Tightening torques:
  - Minimum / Maximum: 1.2 Nm / 3.5 Nm
  - Recommended: 2.5 Nm

#### Conductor types:

- . Copper cables at the top and bottom of the product
- Cable cross-section:

	Without ferrule	With ferrule
Rigid cable	1 x 0.75 to 50 mm <sup>2</sup> or 2 x 0.75 to 16 mm <sup>2</sup>	/
Flexible cable	1 x 0.75 to 35 mm <sup>2</sup> or 2 x 0.75 to 16 mm <sup>2</sup>	1 x 0.75 to 25 mm <sup>2</sup>

#### Required tools:

- . For the terminals:
  - 5.5 mm / 6.5 mm blade screwdriver recommended
  - Pozidriv n°2 / Philips N°2 screwdriver recommended
- . For the latching:
  - 5.5 mm blade screwdriver recommended / 6 mm maximum
  - Pozidriv n°2 / Philips N°2 screwdriver recommended

#### Device handling:

- . Manual action via ergonomic 2 position handle:
  - I-On, device closed O-Off, device open

#### Contact status display:

- . By marking of the handle:
  - I-On, in white on a red background: closed contacts
  - O-Off, in white on a green background: contacts open

#### Residual current trip display:

- . Handle at the bottom position, the residual current is released

#### Lockout:

- . Padlocks possible in the open or closed positions with padlock support (Cat. No. 4 063 03) and Ø5 mm padlock (Cat. No. 4 063 13) or Ø6 mm padlock (Cat. No. 0 227 97)

#### Sealing:

- . Possible in the open or closed positions

# DX<sup>3</sup> RCCBs - ID

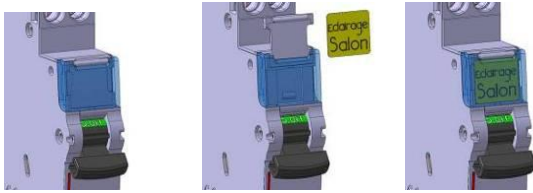
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4 118 00, 01

### 4. PREPARATION - CONNECTION *(continued)*

#### Labelling:

. Circuit identification by way of a label inserted in the label holder situated on the front of the product



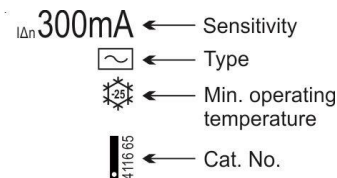
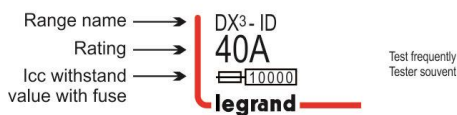
### 5. GENERAL CHARACTERISTICS

#### Neutral earthing system:

. IT, TT and TN

#### Marking:

. "N" marking of the neutral  
. Marking on the "front side": (by permanent ink pad printing)



#### Marking on the upper panel:

. By permanent ink pad printing



#### Test operating voltage:

- . 30 mA AC/A types: from 320 V to 440 V~
- . 100 mA AC/A types: from 220 V to 440 V~
- . 300 mA AC/A types: from 220 V to 440 V~
- . 300 mA S type: from 220 V to 440 V~
- . 500 mA AC/A types: from 220 V to 440 V~

#### Rated conditional short-circuit current:

. Inc = 10 kA, in accordance with EN/IEC 61008-1

#### Rated conditional short-circuit residual current:

. IΔc = 10 kA, in accordance with EN/IEC 61008-1

#### Rated residual breaking capacity:

. IΔm = 1000 A, in accordance with EN/IEC 61008-1

#### Rated breaking and making capacity:

In accordance with EN/IEC 61008-1,

- . In = 25 / 40 A : Im = 500 A
- . In = 63 A : Im = 630 A
- . In = 80 A : Im = 800 A
- . In = 100 A : Im = 1,000 A

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4 118 00, 01

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

#### Protection against overloads:

. The RCCB must be protected against overloads (either upstream or downstream) by a circuit breaker or a fuse which has a maximum of the same nominal current as the residual current switch

#### Protection against short-circuits:

. The RCCB must be protected upstream against short circuits using a circuit breaker or a fuse. Its resistance to short circuits when associated with a Legrand circuit breaker or fuse is compliant with the values stated in the tables below:

. Association with a circuit breaker:

		Upstream circuit breaker				
		DX <sup>3</sup> 4500 / 6 kA 3P / 4P 3 mod	DX <sup>3</sup> 6000 / 10 kA	DX <sup>3</sup> 10000 / 16 kA	DX <sup>3</sup> 25 kA	DX <sup>3</sup> 36 kA
Downstream RCCB	Curves	C	B, C & D	B, C & D	B, C & D	C
	In	≤ 32 A	≤ 63 A	≤ 125 A	≤ 125 A	≤ 80 A
4P - 400 V~	25 A to 100 A	<b>6 kA</b>	<b>10 kA</b>	<b>16 kA</b>	<b>25 kA</b>	<b>36 kA</b>

		Upstream circuit breaker				
		DX <sup>3</sup> 50 kA	DPX <sup>3</sup> 160 / DPX <sup>3</sup> 160 + residual current			
			16 kA	25 kA	36 kA	50 kA
Downstream RCCB	Curves	B, C & D				
	In	≤ 63 A	≤ 160 A	≤ 160 A	≤ 160 A	≤ 160 A
4P - 400 V~	25 A to 100 A	<b>50 kA</b>	<b>16 kA</b>	<b>25 kA</b>	<b>25 kA</b>	<b>25 kA</b>

. Association with circuit breakers: case of a double fault, in IT system – Resistance to the Icc of a single pole

Downstream RCCB	Circuit breaker upstream		
	DX <sup>3</sup> 3P / 4P 3 mod	DX <sup>3</sup> 3P / 4P 3 mod	DX <sup>3</sup> 1P / 2P / 3P / 4P
	4500 A / 6 kA	6000 A / 10 kA	
At 230 V	<b>4.5 kA</b>	<b>6 kA</b>	<b>10 kA</b>
At 400 V	<b>3 kA</b>	<b>3 kA</b>	<b>3 kA</b>

Downstream RCCB	Circuit breaker upstream			
	DX <sup>3</sup> 1P / 2P / 3P / 4P	DX <sup>3</sup> 1P / 2P / 3P / 4P	DX <sup>3</sup> 1P / 2P / 3P / 4P	DX <sup>3</sup> 1P / 2P / 3P / 4P
	10,000 A / 16 kA	25 kA	36 kA	36 kA
At 230 V	<b>16 kA</b>	<b>25 kA</b>	<b>36 kA</b>	<b>50 kA</b>
At 400 V	<b>4 kA</b>	<b>6.25 kA</b>	<b>9 kA</b>	<b>12.5 kA</b>

. Association with a fuse:

Downstream RCCB	Upstream gG or aM type fuse			
	Rating	≤ 50 A	63 A	80 A
25 A to 100 A	<b>100 kA</b>	<b>50 kA</b>	<b>15 kA</b>	<b>10 kA</b>



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4 118 00, 01

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

#### Power dissipated by the device:

RCCB		Power dissipated by the device (In)			
Rating	Sensitivity	AC type	A type	AC-S type	A-SI type
25 A	30 mA	<b>6 W</b>	<b>6 W</b>		
25 A	100 mA	<b>1.9 W</b>	<b>1.9 W</b>		
25 A	300 mA	<b>1.9 W</b>	<b>1.9 W</b>		
25 A	500 mA	<b>1.9 W</b>	<b>1.9 W</b>		
40 A	30 mA	<b>15.3 W</b>	<b>15.3 W</b>		
40 A	100 mA	<b>4.8 W</b>	<b>4.8 W</b>		
40 A	300 mA	<b>4.8 W</b>	<b>4.8 W</b>	<b>4.5 W</b>	<b>4.5 W</b>
40 A	500 mA	<b>4.8 W</b>	<b>4.8 W</b>		
63 A	30 mA	<b>11.8 W</b>	<b>11.8 W</b>		
63 A	100 mA	<b>11.8 W</b>	<b>11.8 W</b>		
63 A	300 mA	<b>11.8 W</b>	<b>11.8 W</b>	<b>11.3 W</b>	<b>11.3 W</b>
63 A	500 mA	<b>11.8 W</b>	<b>11.8 W</b>		
80 A	30 mA	<b>19.1 W</b>	<b>19 W</b>		
80 A	100 mA	<b>19.1 W</b>	<b>19 W</b>		
80 A	300 mA	<b>19.1 W</b>	<b>19 W</b>		
80 A	500 mA	<b>19.1 W</b>	<b>19 W</b>		
100 A	30 mA		<b>28.3 W</b>		
100 A	100 mA		<b>28.3 W</b>		
100 A	300 mA		<b>28.3 W</b>		
100 A	500 mA		<b>28.3 W</b>		

#### Temperature derating:

. Reference temperature: 30°C in accordance with standard IEC/EN 60947-2

In (A)	Ambient Temperature/In								
	- 25°C	- 10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
25 A	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	25	<b>25</b>	<b>25</b>	<b>25</b>
40 A	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	40	<b>40</b>	<b>25</b>	<b>25</b>
63 A	<b>63</b>	<b>63</b>	<b>63</b>	<b>63</b>	<b>63</b>	63	<b>63</b>	<b>40</b>	<b>40</b>
80 A	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	80	<b>80</b>	<b>63</b>	<b>63</b>
100 A	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	100	<b>100</b>	<b>80</b>	<b>80</b>

# DX<sup>3</sup> RCCBs - ID

## 4P up to 100 A

Cat. N°(s): 4 117 02, 03, 04, 05, 12, 13, 14, 15, 22, 23, 24,  
4 117 25, 32, 33, 34, 35, 45, 46, 59, 60, 61, 62, 63, 69, 70,  
4 117 71, 72, 73, 79, 80, 81, 82, 83, 89, 90, 91, 92, 93,  
4 118 00, 01

### 5. GENERAL CHARACTERISTICS (continued)

#### Weight per device:

Catalogue Number	Description	Weight (kg)
4 117 02	25 A AC type 30 MA	0.36
4 117 03	40 A AC type 30 MA	0.36
4 117 04	63 A AC type 30 MA	0.38
4 117 05	80 A AC type 30 MA	0.38
4 117 12	25 A AC type 100 MA	0.36
4 117 13	40 A AC type 100 MA	0.36
4 117 14	63 A AC type 100 MA	0.36
4 117 15	80 A AC type 100 MA	0.36
4 117 22	25 A AC type 300 MA	0.35
4 117 23	40 A AC type 300 MA	0.35
4 117 24	63 A AC type 300 MA	0.35
4 117 25	80 A AC type 300 MA	0.35
4 117 32	25 A AC type 500 MA	0.35
4 117 33	40 A AC type 500 MA	0.35
4 117 34	63 A AC type 500 MA	0.35
4 117 35	80 A AC type 500 MA	0.35
4 117 45	40 A AC-S type 300 MA	0.39
4 117 46	63 A AC-S type 300 MA	0.39
4 117 59	25 A A type 30 MA	0.36
4 117 60	40 A A type 30 MA	0.36
4 117 61	63 A A type 30 MA	0.38
4 117 62	80 A A type 30 MA	0.38
4 117 63	100 A A type 30 MA	0.38
4 117 69	25 A A type 100 MA	0.36
4 117 70	40 A A type 100 MA	0.36
4 117 71	63 A A type 100 MA	0.36
4 117 72	80 A A type 100 MA	0.36
4 117 73	100 A A type 100 MA	0.36
4 117 79	25 A A type 300 MA	0.36
4 117 80	40 A A type 300 MA	0.35
4 117 81	63 A A type 300 MA	0.35
4 117 82	80 A A type 300 MA	0.35
4 117 83	100 A A type 300 MA	0.35
4 117 89	25 A A type 500 MA	0.35

### 5. GENERAL CHARACTERISTICS (continued)

#### Weight per device: (continued)

Catalogue Number	Description	Weight (kg)
4 117 90	40 A A type 500 MA	0.35
4 117 91	63 A A type 500 MA	0.35
4 117 92	80 A A type 500 MA	0.35
4 117 93	100 A A type 500 MA	0.35
4 118 00	40 A A-S type 300 MA	0.39
4 118 01	63 A A-S type 300 MA	0.39

#### Packaged volume and quantity:

	Volume (dm <sup>3</sup> )	Packaging
For all catalogue numbers	0.70	per unit

#### Isolation distance: (distance between the contacts)

- . Handle in open position - O-Off:
  - Neutral pole: greater than 4.5 mm
  - Phase pole: greater than 5.5 mm

#### Rated insulation voltage:

- . U<sub>i</sub> = 500 V

#### Insulation resistance:

- . 2 MΩ

#### Degree of pollution:

- . 2

#### Dielectric strength:

- . 2000 V - 50 Hz

#### Impulse withstand voltage:

- . U<sub>imp</sub> = 4 kV

#### Protection from false tripping:

- . 0.5 μs/100 kHz damped recurring wave = 200 A
- . 8/20 μs wave:
  - A - AC type = 250 A
  - S type = 3000 A

#### Protection classes:

- . Terminals protected against direct contact:
  - IP20 (wired device)
- . Front side protected against direct contact:
  - IP40
- . Class II in relation to metallic conductive parts
- . Protection against impacts:
  - IK04

#### Plastic materials used:

- . Parts made of polyamide and P.B.T.

# DX<sup>3</sup> RCCBs - ID

## 4P up to 100 A

Cat. N°(s): 4 117 02, 03, 04, 05, 12, 13, 14, 15, 22, 23, 24,  
4 117 25, 32, 33, 34, 35, 45, 46, 59, 60, 61, 62, 63, 69, 70,  
4 117 71, 72, 73, 79, 80, 81, 82, 83, 89, 90, 91, 92, 93,  
4 118 00, 01

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

#### Enclosure heat and fire resistance:

- . Resistance to incandescent wire tests at 960°C, in accordance with standard IEC/EN 61008-1
- . Classification V2, in accordance with standard UL94

#### Device's upper heating value:

- . Estimated heating value of a 40A 30mA AC device: 4.30 MJ

#### Handle opening and closing forces:

- . Force of 42 N for closing - (all ratings)
- . Force of 13 N for opening - (all ratings)

#### Mechanical endurance:

- . Conforms to standard NF EN 61008-1
- . Tested with 20,000 operations with no load

#### Electrical endurance:

- . Conforms to standard NF EN 61008-1
- . Tested with 10,000 operations with load (at  $\ln x \cos \varphi 0.9$ )
- . Tested with 2,000 residual current trip operations using the test button or the fault current

#### Operating ambient temperature:

- . - 25°C / + 60°C

#### Storage temperature:

- . - 40°C / + 70°C

#### Derating of RCCBs function of the number of devices placed side by side:

When several RCCBs are installed side by side and operate simultaneously, the heat dissipation of one pole is limited. This results in an increased operating temperature for the RCCBs which may cause false tripping. Applying the following coefficients to the operating currents is recommended.

Number of circuit breakers side by side	Coefficient
2 - 3	<b>0.9</b>
4 - 5	<b>0.8</b>
6 - 9	<b>0.7</b>
≥ 10	<b>0.6</b>

These values are provided by recommendation IEC 60439-1 and the standards NF C 63421 and EN 60439-1.

In order to avoid having to use these coefficients there must be good ventilation and the devices must be kept apart using the spacing elements Cat. No. 4 063 07 (0.5 module).

#### Impact of height:

	2000m	3000m	4000m	5000m
Dielectric strength	<b>2000V</b>	<b>2000V</b>	<b>2000V</b>	<b>1500V</b>
Maximum operating voltage	<b>400V</b>	<b>400V</b>	<b>400V</b>	<b>400V</b>
Derating at 30°	<b>none</b>	<b>none</b>	<b>none</b>	<b>none</b>

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

#### Specific use:

- . Appropriate to operate in humid atmosphere and polluted by a chlorinated environment (pool-type)

#### DC operation:

- . Cannot be used with DC

#### Operation at 400 Hz:

- . Cannot be used at 400 Hz

#### Operation at 60 Hz:

- . Can be used at 60Hz, except ratings 40A/63A/80A, A and AC types, with sensitivity 30mA.

#### Resistance to sinusoidal vibrations: (in accordance with IEC 68.2.6)

- . Axes: x / y / z
- . Frequency: 10 to 55 Hz
- . Acceleration: 3 g (1 g = 9.81 m.s<sup>-2</sup>)

#### Resistance to tremors :

- . Conforms to standard NF EN 61008-1

### 6. COMPLIANCE AND APPROVALS

#### Reference product standards:

- . NF EN 61008-1/IEC 61008-1
- . EN/IEC 60 529 (IP)

#### Approvals obtained:

- . France: NF

#### Environment:

- . Compliance with European Union Directives
- . Compliance with Directive 2002/95/EC of 27/01/03 known as "RoHS" which provides for a restriction on the use of dangerous substances such as lead, mercury, cadmium, hexavalent chromium and polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) brominated flame retardants from 1st July 2006
- . Compliance with the Directive 91/338/EEC of 18/06/91 and decree 94-647 of 27/07/94

#### Usage in special conditions:

- . Category C compliant (testing temperature of -25°C to +70°C, resistant to salt spray) in accordance with the classification defined in Appendix Q of standard IEC/EN 60947-1

#### Plastic materials:

- . Zero halogen plastic materials.
- . Labelling compliant with ISO 11469 and ISO 1043.

#### Packaging:

- . Design and manufacture of packaging compliant with decree 98-638 of 20/07/98 and Directive 94/62/EC

# DX<sup>3</sup> RCCBs - ID

## 4P up to 100 A

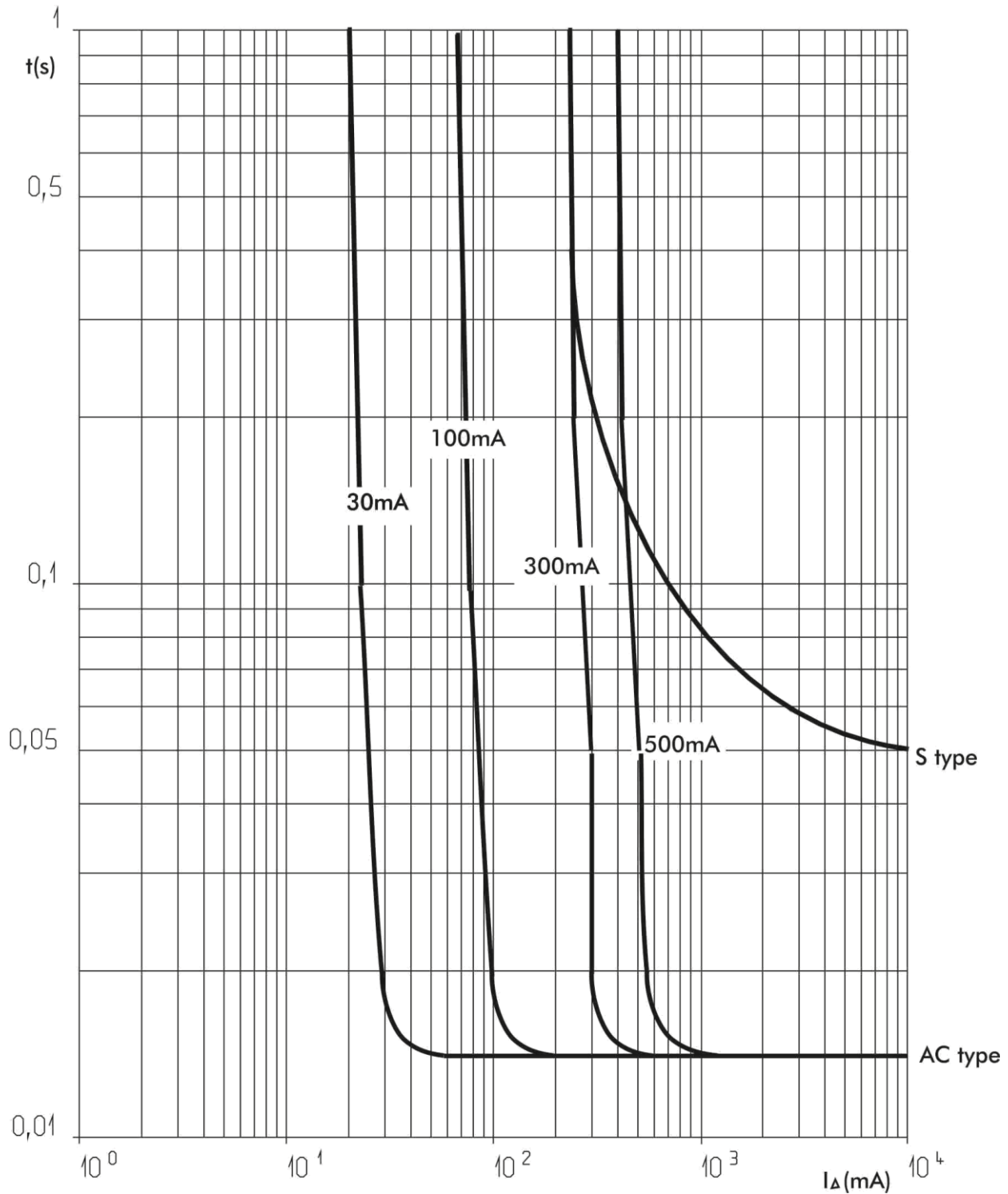
Cat. N°(s): 4 117 02, 03, 04, 05, 12, 13, 14, 15, 22, 23, 24,  
4 117 25, 32, 33, 34, 35, 45, 46, 59, 60, 61, 62, 63, 69, 70,  
4 117 71, 72, 73, 79, 80, 81, 82, 83, 89, 90, 91, 92, 93,  
4 118 00, 01

### 7. CURVES

#### Tripping current curves:

. Tripping time curve depending on the value of the fault current:

AC TYPE



# DX<sup>3</sup> RCCBs - ID

## 4P up to 100 A

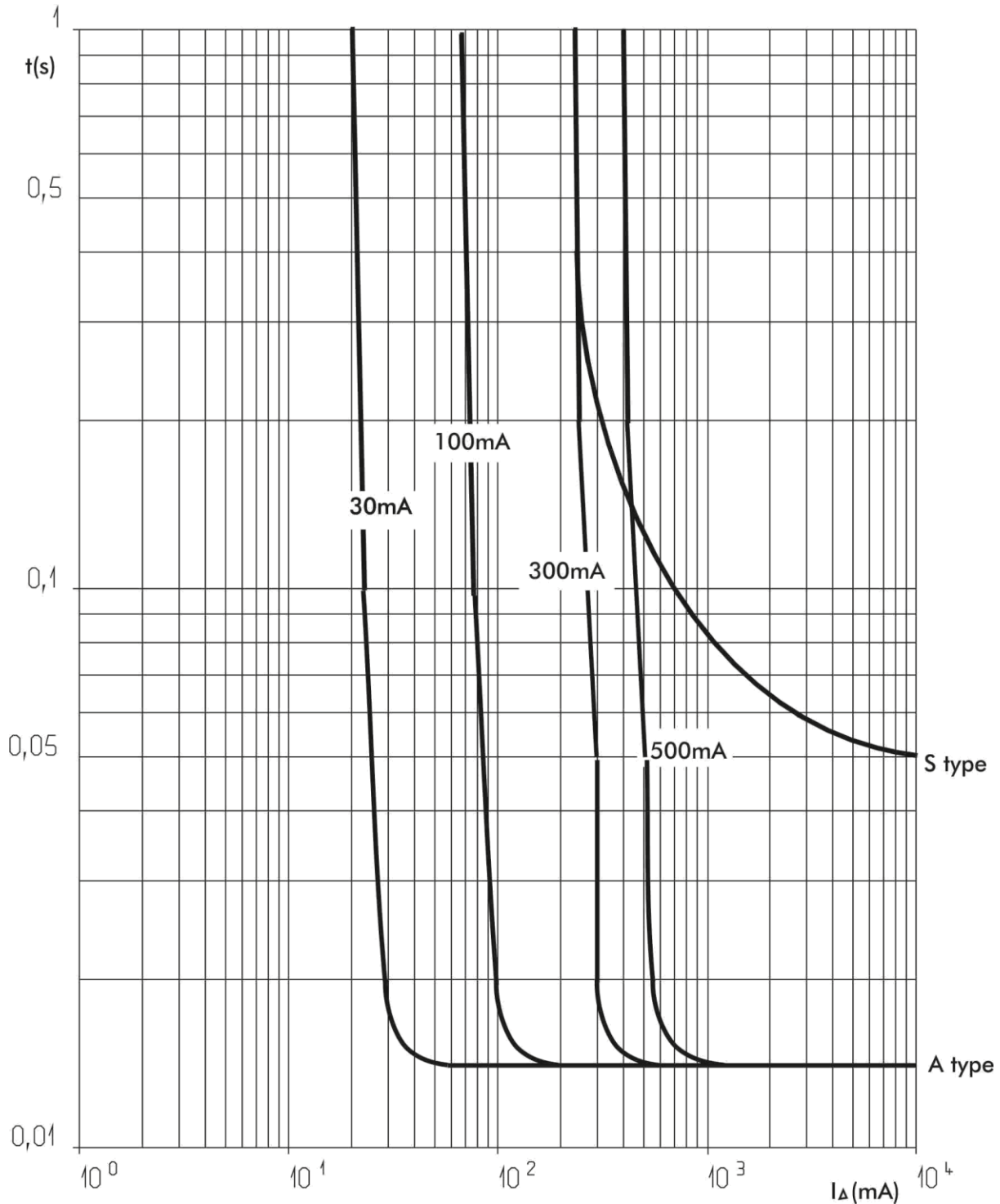
Cat. N°(s): 4 117 02, 03, 04, 05, 12, 13, 14, 15, 22, 23, 24,  
 4 117 25, 32, 33, 34, 35, 45, 46, 59, 60, 61, 62, 63, 69, 70,  
 4 117 71, 72, 73, 79, 80, 81, 82, 83, 89, 90, 91, 92, 93,  
 4 118 00, 01

### 7. CURVES (continued)

#### Tripping current curves:

. Tripping time curve depending on the value of the fault current:

**A TYPE**



# DX<sup>3</sup> RCCBs - ID

## 4P up to 100 A

Cat. N°(s): 4 117 02, 03, 04, 05, 12, 13, 14, 15, 22, 23, 24,  
4 117 25, 32, 33, 34, 35, 45, 46, 59, 60, 61, 62, 63, 69, 70,  
4 117 71, 72, 73, 79, 80, 81, 82, 83, 89, 90, 91, 92, 93,  
4 118 00, 01

### 8. AUXILIARIES AND ACCESSORIES

#### Wiring accessories:

- . Sealable screw cover (Cat. No. 4 063 04)
- . Supply busbar:
  - HX<sup>3</sup> 2-pole supply busbar
- . Terminal for aluminium cable with max. 50 mm<sup>2</sup> cross-section (Cat. No. 4 063 10)

#### Signalling auxiliaries:

- . Auxiliary contact (0.5 module, Cat. No. 4 062 58)
- . Fault signalling contact (0.5 module, Cat. No. 4 062 60)
- . Auxiliary contact that can be changed into fault signalling contact (0.5 module, Cat. No. 4 062 62)
- . Auxiliary contact + fault signalling contact that can be changed into 2 auxiliary contacts (1 module, Cat. No. 4 062 66)

#### Control auxiliaries:

- . Shunt trip (1 module, Cat. No. 4 062 76, 2 78)
- . Undervoltage release (1 module, Cat. No. 4 062 80, 2 82)
- . Stand-alone release for N/C push-button (1.5 module, Cat. No. 4 062 87)

#### Motorised controls:

- . Motor-driven control (1 module, Cat. No. 4 062 91)
- . Motor-driven control with integrated automatic reset (2 modules, Cat. Nos. 4 062 93, 95)

#### Possible combinations of auxiliaries and RCCBs:

- . The auxiliaries are installed on the left of the RCCBs
- . Maximum number of auxiliaries = 3
- . Maximum number of 1 module signalling auxiliaries = 2
- . Maximum number of control auxiliaries (Cat. Nos. 4 062 76 to 4 062 87) = 1
- . The control auxiliary (trip Cat. Nos. 4 062 76 to 4 062 87) must mandatorily be placed to the left of the signalling auxiliaries (Cat. Nos. 4 062 58 to 4 062 66) where the auxiliaries from these 2 families are connected to the same RCCB

#### Sealing:

- . Possible in the open or closed positions

#### Lockout possibilities:

- . Via Ø 5 mm padlock (Cat. No. 4 063 13) or Ø 6 mm padlock (Cat. Nos. 0 227 97) and padlock support (Cat. No. 4 063 03)

#### Installation software:

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

### 9. SAFETY

. For your safety your electrical installation is equipped with residual current protection and this must be tested periodically. In the absence of any national regulations on the time period required for this, Legrand recommends that this test be carried out every month: press the "T" test button, the device should trip. Please call an electrician immediately if this does not happen as your installation's safety level has been reduced

. The presence of residual current protection does not remove the need to observe all the precautions associated with using electrical energy