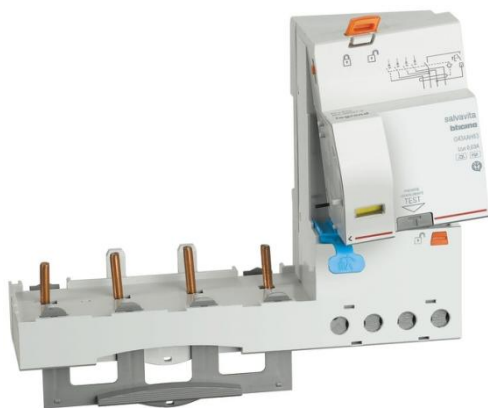


**Btdin RCD Add-on modules 63A for
MCBs 1,5 modules per pole****Cat N° (s):**

G23XA63 - G23XF63 - G23XAC63 – G24XA63 – G24XAC63
G27XF63
G43XA63 - G43XF63 - G43XAC63 – G44XA63 – G44XF63
G44XAC63
G47XF63

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Btdin RCD Add-on modules 63A for MCBs 1,5 modules per pole

Cat N° (s):

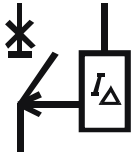
G23XA63 - G23XF63 - G23XAC63 - G24XA63 - G24XAC63
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 G47XF63

1. DESCRIPTION - USE

RCD Add-on module, for MCBs. $\leq 63A$, 1,5 modules per pole width, breaking capacity 16kA, 25kA or 50kA.

Assure the protection of people against direct and indirect electric shocks and protection of installations against insulation faults.

Symbol:



Technology:

. Electromagnetic residual current operating by sensitive relay

2. RANGE

Number of poles:

- . Double pole (2P).
- . Four pole (4P).

Width:

- . Fixed threshold version
 - Double pole – 2 modules (2 x 17,8 mm = 35,6 mm).
 - Four pole – 3 modules (3 x 17,8 mm = 53,4 mm).
- . Adjustable threshold version
 - Double pole – 4 modules (4 x 17,8 mm = 71,2 mm).
 - Four pole – 6 modules (6 x 17,8 mm = 106,8 mm).

Rated current:

- . $I_n = 63A$.

Types :

- . AC (sinusoidal AC fault currents).
- . A (Same as the AC type + currents with or without DC component).
- . F: (Same as the A type + Composite currents applied both suddenly and slowly, pulsed unidirectional currents overlapped with continuous currents without ripple and immunity against unwanted tripping).

Sensitivities and Tripping time:

- . 30 mA instantaneous.
- . 300 mA instantaneous.
- . Adjustable sensitivity from 300 mA to 1000 mA with instantaneous or delayed tripping of 60 ms or 150 ms.

Rated Voltage / Frequency:

- . 230 / 400 V ~, 50 Hz standard tolerances.
- . 240 / 415 V ~, 50 Hz standard tolerances.

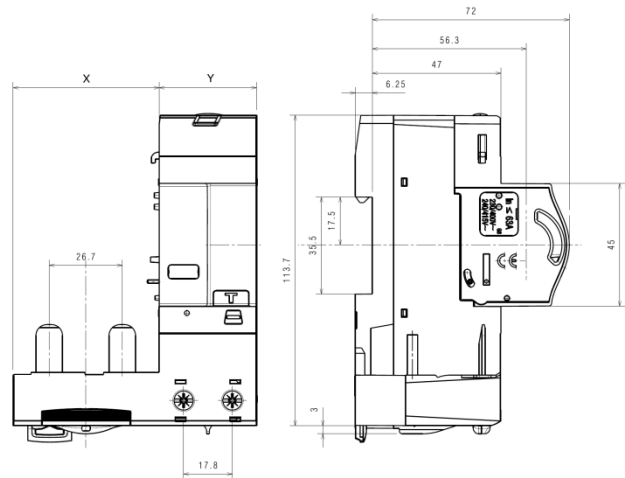
Maximum operating voltage:

- . 440 V ~, 50 Hz with standard tolerances.

Minimum operating voltage:

- . 170 V ~, 50 Hz with standard tolerances.

3. OVERALL DIMENSIONS:



N° of poles	"X"	"Y" Fixed version	« Y » Adjustable version
2P	53,4 mm	35,6 mm	71,2 mm
4P	106,8 mm	53,4 mm	106,8 mm

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G44XAC63
G47XF63

4. FIXING - CONNECTION

Assembling:

. On the right side of the MCBs \leq 63 A. Clipped on the device by mean of plastic clamps and tightening of connections in the downstream terminals of the MCBs.

Mounting :

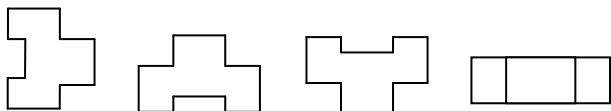
. On symmetrical IEC/EN 60715 rail or DIN 35 rail

Power Supply:

. From the top trough the associated MCB or from the bottom directly on the add-on module.

Operating positions:

. Vertical Horizontal Upside down On the side



Upstream connection :

. To the terminals of the associated MCB
. Cage terminals, with release and captive screw
. Terminal depth: 19 mm.
. MCB upstream terminals separated by integrated insulating shields (IP20).

Downstream connection :

. By the terminals of differential block.
. Cage terminals, with release and captive screw
. Terminals depth:
14 mm fixed version
19 mm adjustable version
. Stripping length :
12 mm fixed version
17 mm adjustable version
. Downstream terminals separated by integrated insulating shields (IP20).

Screw head :

. Mixed, slotted and Pozidriv n°2

Recommended tightening torque:

. 3 Nm.

4. FIXING – CONNECTION (continued)

Connectable section:

. In the power terminals in the lower part of the product.
. Copper cable.

Fixed version

	Without ferrule	With ferrule
Rigid cable	1 x 35 mm ²	-
Flexible cable	1 x 25 mm ²	1 x 25 mm ²

Adjustable version

	Without ferrule	With ferrule
Rigid cable	1 x 50 mm ²	-
Flexible cable	1 x 35 mm ²	1 x 35 mm ²

Recommended tools:

. For the terminals: Pozidriv n°2 screwdriver or flat screwdriver 5,5 mm (6,5 mm maxi).
. For fixing on the DIN rail: flat screwdriver 5.5 mm (from 4 to 6 mm).

Manual actuation of the Add-on module:

. By the 2-positions ergonomic handle of the associated MCB
- I / ON : Closed circuit.
- O / OFF : Open circuit.

Display of contacts status:

. By marking of the associated MCB handle:
- "O-Off" white on a green background = contacts opened.
- "I-On" white on a red background = contacts closed.

Display of differential-fault:

. Yellow mechanical signaller on front-side marking zone.

Labelling:

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

Btdin RCD Add-on modules 63A for MCBs 1,5 modules per pole

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G44XAC63
G47XF63

5. GENERAL CHARACTERISTICS

Front side marking :

- . By permanent ink pad printing showing:
- . Cat No: G23XF63.
- . Trade name: ground fault interrupter
- . Differential rated current.
- . Electrical diagram.
- . Bticino mark.

Code structure:

G	2	3
---	---	---

- . Initial code root composed of three elements:

- Letter "G" shows the device type:
Add-on module (BDA).
- Numbers of poles :
"2" = Two.
"3" = Three.
"4" = Four.
- Sensitivity, $I_{\Delta n}$ (mA):
N "3" = 30mA.
N "4" = 300mA.
N "7" = adjustable.

X	F
---	---

- . Central part composed by two elements:

- Letter "X" is the modularity (1,5 moduls for pole).
- Indication of the type:
"F" = F type.
"AC" = AC type.
"A" = A type.

63

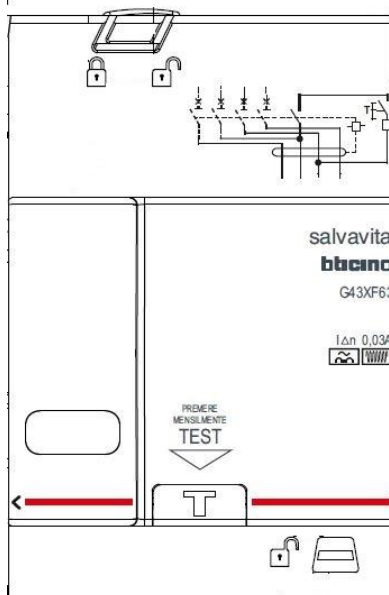
- . Numerical part composed of one element:

- Rated current of RCD., I_n (A).

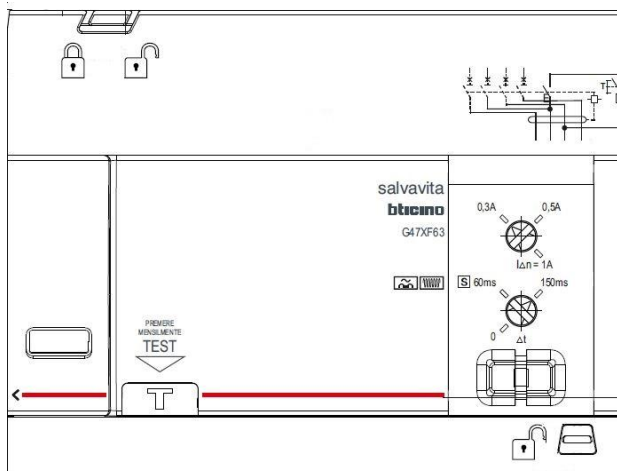
5. GENERAL CHARACTERISTICS (continued)

. Marking example :

Fixed threshold version



Adjustable threshold version



Btdin RCD Add-on modules 63A for MCBs 1,5 modules per pole

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G44XAC63
G47XF63

5. GENERAL CHARACTERISTICS (continued)

"Test" key operating voltages:

U min	170 V ~
U max	440 V ~

This voltage range gives the possibility to use double-pole differential blocks in 230 V or 400 V, and triple / four pole differential blocks in three phase network with or without neutral 230 V and 400 V. For the wiring of a four-pole differential block in a three phase network without neutral, make sure to properly wired three consecutive poles to supply the test key (connected on the two central poles)

Neutral system:

. IT – TT – TN.

Residual breaking capacity I Δ m:

. In accordance with standard IEC/EN 61009-1 and IEC/EN 60947-2 (I Δ m: short-circuit to ground)
I Δ m = 60% of I_{cu} of the associated MCB.

Insulation rated voltage:

. U_i = 500 V according to IEC/EN 61009-1 and IEC/EN 60947-2.

Pollution degree:

. 3.

Dielectric strength:

. 2500 V.

Pulse rated voltage:

. U_{imp} = 6 kV (wave 1.5 / 50 μ s).

Protection against unwanted tripping:

. Damped recurrent wave – 0.5 μ s/100kHz : 200A for all types
. Held to the wave 8/20 μ s :

Type	AC	A	F	F Adjustable
Corrent	250 A	250 A	3000 A	5000 A

Protection class :

. Protection index of terminals against solid and liquid bodies: IP 20 (in accordance with standards IEC/EN 60529 et NF C 20-010).
. Protection index of the box against solid and liquid bodies: IP 40 (in accordance with standards, IEC/ EN 60529 et NF C 20-010).
. Class II compared to conductive parts.
. Protection index against mechanical shocks: IK 02 (in accordance with standards EN 50102 et NF C 20-015).

Mechanical endurance: (with MCB associated) :

. 20000 operations without load.
. 10000 operations with load.
. 750 differential tripping operations by the Test key.
. 750 differential tripping operations for fault current.

5. GENERAL CHARACTERISTICS (continued)

Power dissipated and impedance per pole at In:

In \leq 63A

In	Double-Pole		Four-Pole	
	Z(m Ω)	P(W)	Z(m Ω)	P(W)
6	0.43	0.02	0.55	0.02
10	0.43	0.04	0.55	0.06
16	0.43	0.11	0.55	0.14
20	0.43	0.17	0.55	0.22
25	0.43	0.27	0.55	0.34
32	0.43	0.44	0.55	0.56
40	0.43	0.69	0.55	0.88
50	0.43	1.08	0.55	1.38
63	0.43	1.71	0.55	2.18

Note: to obtain total power dissipated by the assembly Add-on module + MCB, these powers should be added to those of the associated MCB

Enclosure material:

. Parts of polycarbonate.

. Characteristics of this material: self extinguishing, heat and fire resistant in accordance with standard IEC/EN 61009-1, glow-wire test at 960°C for external parts made of insulating material necessary to retain in position current-carrying parts and parts of protective circuit (650°C for all other external parts made of insulating material).

Calorific value :

. Adjustable version

	Double-pole	Four-pole
MJ	4.73	6.64

. Fixed version

	Double-pole	Four-pole
MJ	3.2	4.3

Average weight per device:

. Adjustable version
. Double pole 0,39 kg.
. Triple pole 0,42 kg.
. Four pole 0,52 kg.

. Fixed version
. Double pole 0,25 kg.
. Triple pole 0,30 kg.
. Four pole 0,35 kg.

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G44XAC63
G47XF63

5. GENERAL CHARACTERISTICS *(continued)*

Volume and quantity when packed:

- . Adjustable version
- . Double pole 2,4 dm³ per device.
- . Four pole 3,7 dm³ per device.
- . Fixed version
- . Double pole 1,8 dm³ per device.
- . Four pole 2,9 dm³ per device.

Ambient operating temperature:

- . Min. = -25°C. Max. = +70°C

Ambient storage temperature:

- . Min. = -40°C. Max. = +70°C

Specific use:

- . Appropriate to be used in humid environment and polluted by chlorine (pool-type)

Derating according ambient temperature:

- . Reference temperature: 40 °C in accordance with standards IEC/EN 60947-2.
- . No derating of the differential block depending on the ambient temperature between - 25 ° C and +40 ° C.
- . Derating between + 40 ° C and + 70 ° C :

Temperature	40 °C	50 °C	60 °C	70 °C
% In	100 %	95 %	90 %	85 %

Resistance to sinusoidal vibrations:

- . In accordance with standard IEC 60068-2-6.
- . Axis : x, y, z.
- . Frequency range: 5÷100 Hz ; duration 90 minutes
- . Displacement (5÷13,2 Hz) : 1mm
- . Acceleration (13,2÷100 Hz) : 0,7g (g=9,81 m/s²).

Influence of the altitude :

	2000 m	3000 m	4000 m	5000 m
Dielectric strength	3000 V	2500 V	2000 V	1500 V
Max operating voltage	400 V	400 V	400 V	400 V
Derating at 30°C	none	none	none	none

6. COMPLIANCE AND APPROVALS

In accordance with standards:

- . IEC/EN 61009-1.
- . IEC/EN 60947-2.
- . IEC/EN 62423 (F type)
- . Compliance with Directives 2014/35/UE (LVC), subsequent modifications and additions.
- . Compliance with Directives 2014/30/UE (EMC), subsequent modifications and additions.

Environment respect – Compliance with CEE directives:

- . Compliance with Directive 2011/65/UE called "RoHS" provides the banishment of hazardous substances, subsequent modifications and additions.
- . Compliance with Directives 91/338/CEE of 18/06/91 and decree 94-647, subsequent modifications and additions.

Plastic materials :

- . Halogen-free plastic materials.
- . Marking of parts according to ISO 11469 and ISO 1043.

Packaging:

- . Design and manufacture of packaging in accordance with decree 98-638 and Directive 94/62/EC, subsequent modifications and additions.

Btdin RCD Add-on modules 63A for MCBs 1,5 modules per pole

Cat N° (s):

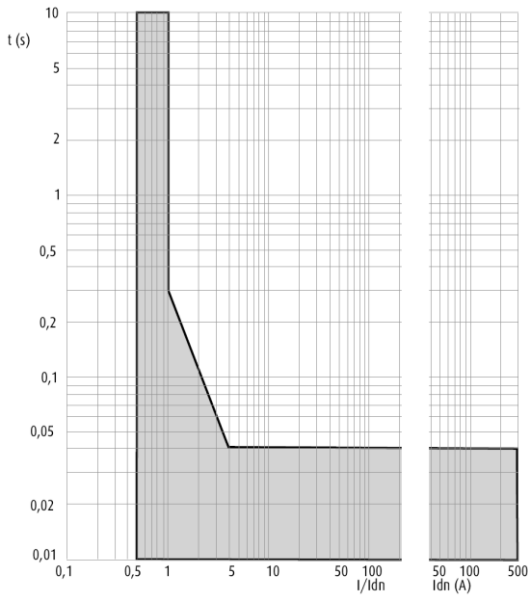
G23XA63 - G23XF63 - G23XAC63 - G24XA63 - G24XAC63
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 G43XA63 - G43XF63 - G43XAC63 - G44XA63 - G44XF63
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 G47XF63

7. CURVES

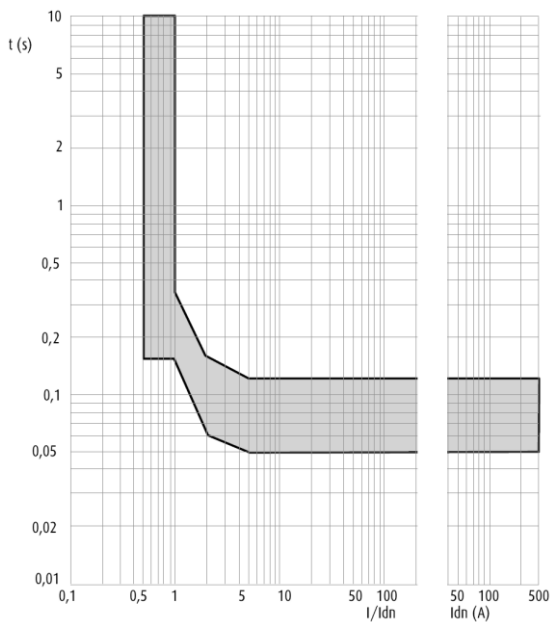
Residual current operating characteristic

. Average tripping time depending on the intensity of the fault current.

. Sensitivities 30 mA, 300 mA, 500mA et 1000 mA instantaneous (A, AC and F types)

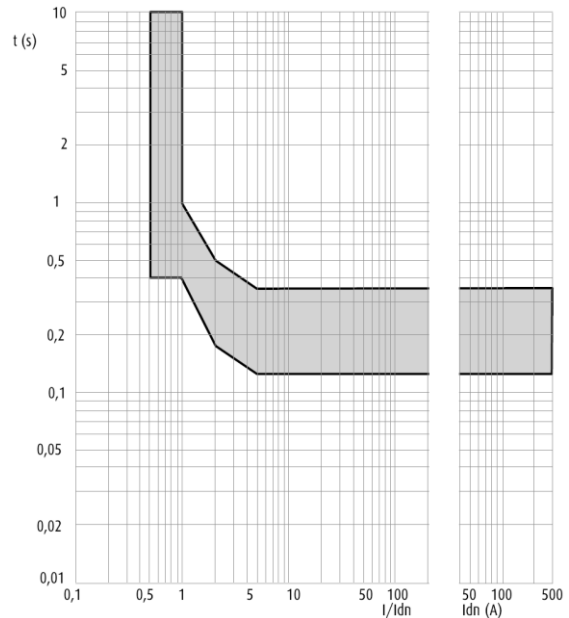


. Sensitivities 300 mA, 500mA et 1000 mA F type with a time delay of 60 ms (selective).



7. CURVES (continued)

. Sensitivities 300 mA, 500mA et 1000 mA F type with a time delay of 150 ms.



8. AUXILIARIES AND ACCESSORIES

Installation software:

. TiQuadri

Wiring accessories:

. Terminal for Aluminium cable 50mm²(F80ALU63) only for type adjustable.