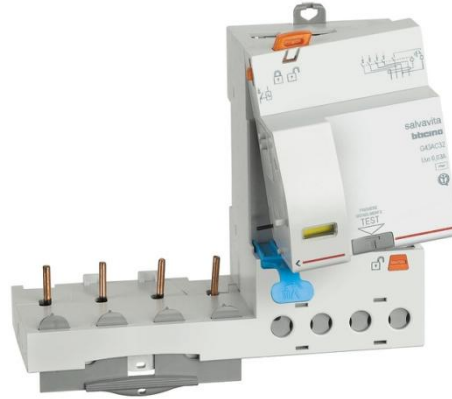


**Btdin RCD Add-on Modules 32A - 63A
for M.C.B.s 1 module per pole****Cat N° (s):**

G23A32 - G23A63 - G23AC32 - G23AC63 - G23F32 - G23F63 - G24A32 -
G24A63 - G24AC32 - G24AC63 - G24AS32 - G24AS63 - G24F32 - G24F63 -
G25A32 - G25A63 - G25AC32 - G25AC63 - G26AS32 - G26AS63
G33A63 - G33AC63 - G33F63 - G34A63 - G34AC63 - G35A63 - G35AC32 -
G35AC63
G43A32 - G43A63 - G43AC32 - G43AC63 - G43F32 - G43F63 - G44A32 -
G44A63 - G44AC32 - G44AC63 - G44AS32 - G44AS63 - G44F32 - G44F63 -
G45A32 - G45AC32 - G45AC63 - G46AS32 - G46AS63



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Btdin RCD Add-on Modules 32A - 63A for M.C.Bs 1 module per pole

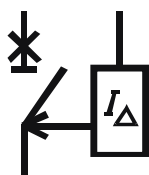
Cat N° (s):

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1. DESCRIPTION

Add-on module, for MCBs Btdin ≤ 63 A, 1 module per pole width, breaking capacity 4500A, 6000A, 10000A, 16kA, or 25kA. For 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. PRODUCT RANGE:

Number of poles:

- . Double pole (2P), 2 modules.
- . Triple / Four pole (3P/4P), 3 modules.
- . Four pole (4P), 2 modules – (only 32 A).

Width:

- Two poles - 2 modules (2 x 17,8 mm = 35,6 mm).
- Triple and Four poles - 3 modules (3 x 17,8 mm = 53,4 mm).
- Four poles - 2 modules (2 x 17,8 mm = 35,6 mm).

Rated current at 30°C:

- . 32 / 63A

Types :

- . AC (sinusoidal AC fault currents).
- . A (Same as the AC type + currents with or without DC component).
- . A-S: differential selective or delayed: operates with intentional delay. (Same as the A type).
- . 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 i instantaneous.
- . 300 mA instantaneous or selective
- . 500 mA i instantaneous.
- . 1A selective

2. PRODUCTRANGE (continued):

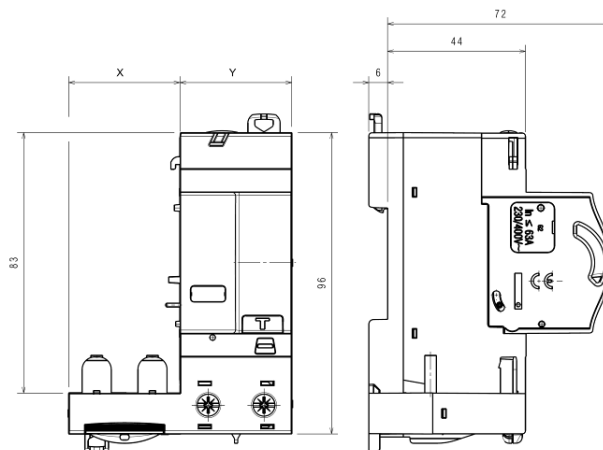
Rated Voltage / Frequency:

- . Double pole 230 V ~, 50 Hz with standard tolerances.
- . Triple and four pole 400 V ~, 50 Hz with standard tolerances.

Operating voltage ~ 50 Hz with standard tolerances :

U	Double pole	Triple and four pole
U mini	170 V ~	250 V ~
U maxi	253 V ~	440 V ~

3. OVERALL DIMENSIONS



N° of poles	"X"	"Y"
2P	35,6 mm	35,6 mm
3P	53,4 mm	53,4 mm
4P	71,2 mm	53,4 mm
4P(32A)	71,2mm	35,6mm

Btdin RCD Add-on Modules 32A - 63A for M.C.Bs 1 module per pole

Cat N° (s):

G23A32 - G23A63 - G23AC32 - G23AC63 - G23F32 - G23F63 - G24A32 - G24A63 - G24AC32 - G24AC63 - G24AS32 - G24AS63 - G24F32 - G24F63 - G25A32 - G25A63 - G25AC32 - G25AC63 - G26AS32 - G26AS63 - G33A63 - G33AC63 - G33F63 - G34A63 - G34AC63 - G35A63 - G35AC32 - G35AC63 - G43A32 - G43A63 - G43AC32 - G43AC63 - G43F32 - G43F63 - G44A32 - G44A63 - G44AC32 - G44AC63 - G44AS32 - G44AS63 - G44F32 - G44F63 - G45A32 - G45AC32 - G45AC63 - G46AS32 - G46AS63

4. FIXING - CONNECTION

Assembling:

. On the right side of the MCBs DX³ up to 63 A. Joins to the circuit breaker by plastic clamps and tightening of connections in the downstream terminals of the MCB.

Fixing:

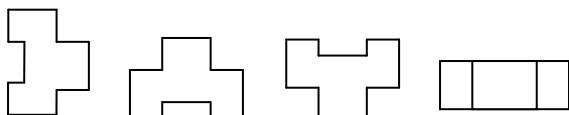
. On symmetrical IEC/EN 60715 rail or DIN 35 rail.

Power supply:

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

Operating position :

. *Vertical, Horizontal, Flat.*



Upstream connection :

. To the terminals of the associated MCB
. Terminal depth: 14mm.

Downstream connection :

. By the terminals of differential block.
. Terminal depth: 14mm.
. Downstream terminals separated by integrated insulating shields (IP20).

Screw head :

. Mixed, slotted and Pozidriv n°2

Recommended tightening torque:

. 3 Nm.
. 1.6 Nm ÷ 2 Nm (for 4P in 2 modules)

4. FIXING - CONNECTION (continued):

Connectable section:

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

	Copper cables	
	Without ferrule	With ferrule
Rigid cable	1 x 35 mm ²	-
Flexible cable	1 x 25 mm ²	1 x 25 mm
Rigid cable (for 4P in 2 modules)	1 x 16 mm ²	-
Flex. cable. (for 4P in 2 modules)	1 x 16 mm ²	1 x 10 mm ²

Recommended tools:

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

Manual actuation of the add-on module:

. By the 2-position ergonomic handle of the associated MCB:
I / ON: Closed circuit.
0 / OFF: Opened circuit.

Contacts status display:

. 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 trip:

. Yellow mechanical signaller into the window on front-side marking zone.

Labelling:

. Circuit identification by insertion of a label in the label holder of the associated MCB.

Btdin RCD Add-on Modules 32A - 63A for M.C.B.s 1 module per pole

Cat N° (s):

G23A32 - G23A63 - G23AC32 - G23AC63 - G23F32 - G23F63 - G24A32 - G24A63 - G24AC32 - G24AC63 - G24AS32 - G24AS63 - G24F32 - G24F63 - G25A32 - G25A63 - G25AC32 - G25AC63 - G26AS32 - G26AS63 - G33A63 - G33AC63 - G33F63 - G34A63 - G34AC63 - G35A63 - G35AC32 - G35AC63 - G43A32 - G43A63 - G43AC32 - G43AC63 - G43F32 - G43F63 - G44A32 - G44A63 - G44AC32 - G44AC63 - G44AS32 - G44AS63 - G44F32 - G44F63 - G45A32 - G45AC32 - G45AC63 - G46AS32 - G46AS63

5. GENERAL CHARACTERISTICS :

Front side marking :

- . By permanent ink pad printing showing:
- . Cat No: G23AC32
- . 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° 5 = 500mA.
N° 6 = 1000mA.

AC

- . Central part composed of one element that identify the type:

- Indication of the type
"A" = A type.
"AC" = AC type.
"AS" = A-S type.
"F" = F type.

32

- . Numerical part composed of one element:
- Rated current of RCD., I_n (A).

5. GENERAL CHARACTERISTICS (continued):

Marking exemple :



Test key operating voltages :

U test	Duble pole	Triple and four pole
U mini	170 V ~	250 V ~
U maxi	253 V ~	440 V ~

Nel caso di cablaggio di un blocco differenziale tetrapolare in trifase senza neutro, bisogna assicurarsi di cablare tre poli consecutivi per alimentare il tasto test (collegato ai due poli centrali)

Neutral system :

- . IT – TT – TN.

Residual breaking capacity $I_{\Delta m}$:

- . In accordance with standard IEC/EN 61009-1 ($I_{\Delta m}$: short-circuit to ground)
.Btdin 45/60 $I_{\Delta m} = I_{cn}$
.Btdin 100/160/250 $I_{\Delta m} = 60\% I_{cn}$

Insulation rated voltage:

- . $U_i = 500$ V in accordance with standard IEC/EN 61009-1

Pollution degree:

- . 2.

Electric strength:

- . 2500 V

Pulse rated voltage:

- . $U_{imp} = 4$ kV (wave 1.2 / 50 μ s).

Btdin RCD Add-on Modules 32A - 63A for M.C.Bs 1 module per pole

Cat N° (s):

G23A32 - G23A63 - G23AC32 - G23AC63 - G23F32 - G23F63 - G24A32 - G24A63 - G24AC32 - G24AC63 - G24AS32 - G24AS63 - G24F32 - G24F63 - G25A32 - G25A63 - G25AC32 - G25AC63 - G26AS32 - G26AS63 - G33A63 - G33AC63 - G33F63 - G34A63 - G34AC63 - G35A63 - G35AC32 - G35AC63 - G43A32 - G43A63 - G43AC32 - G43AC63 - G43F32 - G43F63 - G44A32 - G44A63 - G44AC32 - G44AC63 - G44AS32 - G44AS63 - G44F32 - G44F63 - G45A32 - G45AC32 - G45AC63 - G46AS32 - G46AS63

5. GENERAL CHARACTERISTICS (continued):

Protection against unwanted tripping :

- . Damped recurrent wave – 0.5 μ s/10kHz : 200A for all types
- . Held to the wave 8/20 μ s :

Type	AC	A	A-S	F
Corrent	250A	250A	5000A	3000A

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.

Specific use:

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

Power dissipated and impedance average per pole at In :

In \leq 32A

In	Double-pole		Triple/four-pole	
	Z (m Ω)	P (W)	Z (m Ω)	P (W)
6 A	1.03	0.04	1.95	0.07
10 A	1.03	0.1	1.95	0.19
16 A	1.03	0.26	1.95	0.5
20 A	1.03	0.41	1.95	0.78
25 A	1.03	0.64	1.95	1.2
32 A	1.03	1.06	1.95	2

5. GENERAL CHARACTERISTICS (continued):

Power dissipated and impedance average per pole at In :

In \leq In \leq 63A

In	Double-pole		Triple/four-pole	
	Z (m Ω)	P (W)	Z (m Ω)	P (W)
6 A	0.43	0.02	0.55	0.02
10 A	0.43	0.04	0.55	0.06
16 A	0.43	0.11	0.55	0.14
20 A	0.43	0.17	0.55	0.22
25 A	0.43	0.27	0.55	0.34
32 A	0.43	0.44	0.55	0.56
40 A	0.43	0.68	0.55	0.88
50 A	0.43	1.07	0.55	1.37
63 A	0.43	1.7	0.55	2.17

Beware, to have the total power dissipated by the RCD these powers are to be added to those of the associated MCB.

Enclosure material :

- . 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 :

	Double-pole	Triple-pole	Four-pole	Four-pole until 32A
MJ	2.30	2.54	3.11	2.44

Btdin RCD Add-on Modules 32A - 63A for M.C.Bs 1 module per pole

Cat N° (s):

G23A32 - G23A63 - G23AC32 - G23AC63 - G23F32 - G23F63 - G24A32 -
G24A63 - G24AC32 - G24AC63 - G24AS32 - G24AS63 - G24F32 - G24F63 -
G25A32 - G25A63 - G25AC32 - G25AC63 - G26AS32 - G26AS63
G33A63 - G33AC63 - G33F63 - G34A63 - G34AC63 - G35A63 - G35AC32 -
G35AC63
G43A32 - G43A63 - G43AC32 - G43AC63 - G43F32 - G43F63 - G44A32 -
G44A63 - G44AC32 - G44AC63 - G44AS32 - G44AS63 - G44F32 - G44F63 -
G45A32 - G45AC32 - G45AC63 - G46AS32 - G46AS63

5. GENERAL CHARACTERISTICS (continued):

Average weight per device :

$I_n \leq 32A$

- . Double pole : 0,17 kg
- . Triple pole : 0,21 kg
- . Four pole: 0,20 kg

$I_n \leq 63A$

- . Double pole : 0,21 kg
- . Triple pole : 0,25 kg
- . Four pole : 0,29 kg

Packed volume :

- . Double pole : 0,9 dm³
- . Triple pole : 1,3 dm³
- . Four pole : 1,3(32A) / 1,5(63A) dm³

Ambient operating temperature :

- . Min. = -25°C – Max. = +70°C

Ambient storage temperature :

- . Min. = -40°C – Max. = +70°C

Derating according to ambient temperature :

- . Reference temperature: 30 °C in accordance with standard IEC/EN 61009-1.
- . No derating of the differential block depending on the ambient temperature between - 25 ° C and +30 ° C.
- . Derating between + 30 °C to + 70 °C :

Temperature	30 °C	40 °C	50 °C	60 °C	70 °C
% I_n	100 %	95 %	90 %	85 %	80 %

Resistance to sinusoidal vibrations:

- . in accordance with standard IEC 60068-2-35.
- . Axis: x, y, z.
- . Frequency range: 5÷100 Hz ; duration 90 min.
- . Displacement (5÷13,2 Hz) : 1mm
- . Acceleration (13,2÷100 Hz) : 0,7g ($g=9,81 \text{ m/s}^2$).

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	nessuno	nessuno	nessuno	nessuno

6. COMPLIANCE- APPROVALS :

In accordance with standards:

- . IEC/EN 61009-1. IEC/EN 62423 (F type)
- Communautaires directives :
. 73/23/CEE + 93/68/CEE (DBT) , 83/336/CEE + 92/31CE + 93/68/CEE (EMC) e 91/338 / CEE of 06/18/91 e of 27/07/04 decree 94-647.

Environment respect – Compliance with CEE directives:

- . Compliance with Directive 2002/95/CE called "RoHS" Which prohibits the use of hazardous substances such as lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenylethers (PBDE) from 1 July 2006.

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 32A - 63A for M.C.B.s 1 module per pole

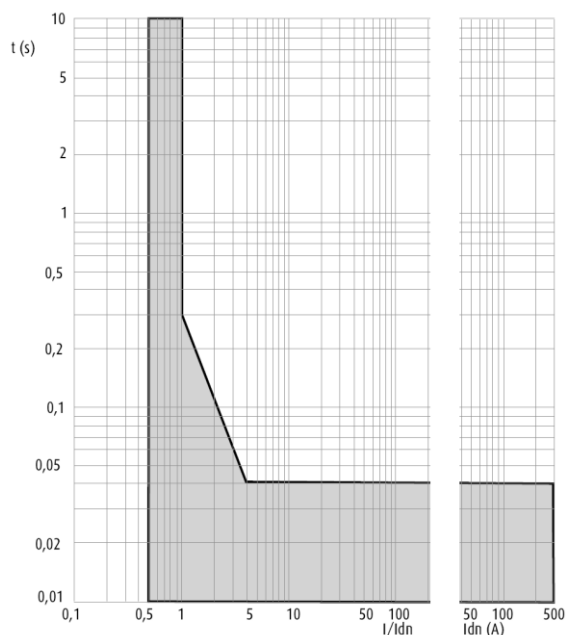
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G45A32 - G45AC32 - G45AC63 - G46AS32 - G46AS63

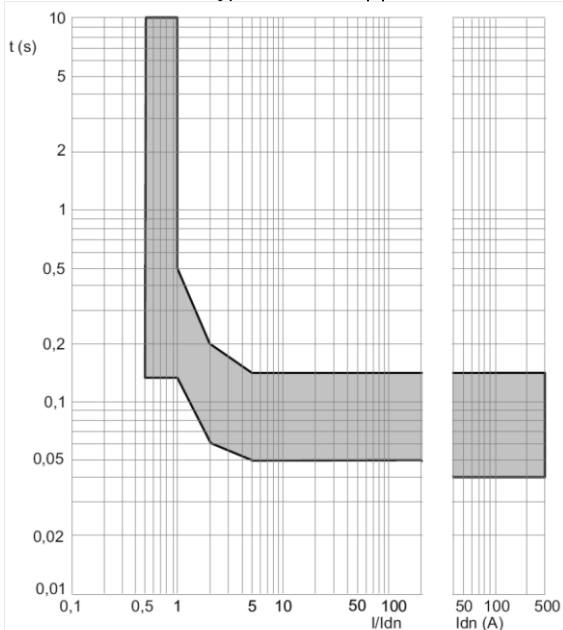
7. CURVES :

Residual current operating characteristic :

- . Average tripping time depending on the intensity of the fault current.
- . Sensitivities 30 mA, 300mA et 500 mA instantaneous for all types).



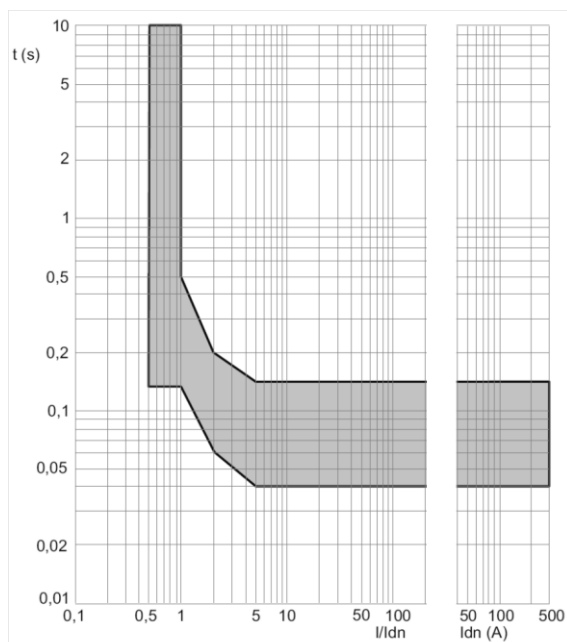
- . Sensitivities 300 mA, type A selective S_1 .



7. CURVE CARTTERISTICHE (continua)

Caratteristica di funzionamento Differenziale :

- . Average tripping time depending on the intensity of the fault current.
- . Sensitivities 1000 mA type A selective S_1 .



8. AUXILIARIES - ACCESSORIES

Installation software:

- . TiQuadri