

# Residual current protection circuit breakers

## 90 RCD

MDC - MONOBLOC COMPACT RCBO'S



**MDC 60 - A TYPE - B CURVE - 6000 A (EN 61009-1) - 6 KA (EN 60947-2)**

BREAKING CAPACITY 1P+N-2P			
230V	EN61009-1	EN60947-2	
Icn	Icu	Icu	
In=6÷32 A	6000 A	10 KA	

BREAKING CAPACITY 3-4P			
400V	EN61009-1	EN60947-2	
Icn	Icu	Icu	
In=6÷32 A	6000 A	6 KA	



GW 95 168

**COMPACT RESIDUAL CURRENT CIRCUIT BREAKERS WITH OVERCURRENT PROTECTION**



Code	I <sub>dn</sub>	Rated current	Rated voltage	No. of modules EN 50022	Pack Carton
<b>No. of poles: 1P+N</b>					
GW 95 105	30 mA	6 A	230 V	2	1/6
GW 95 106	30 mA	10 A	230 V	2	1/6
GW 95 111	30 mA	13 A	230 V	2	1/6
GW 95 107	30 mA	16 A	230 V	2	1/6
GW 95 108	30 mA	20 A	230 V	2	1/6
GW 95 109	30 mA	25 A	230 V	2	1/6
GW 95 110	30 mA	32 A	230 V	2	1/6
GW 95 115	300 mA	6 A	230 V	2	1/6
GW 95 116	300 mA	10 A	230 V	2	1/6
GW 95 117	300 mA	16 A	230 V	2	1/6
GW 95 118	300 mA	20 A	230 V	2	1/6
GW 95 119	300 mA	25 A	230 V	2	1/6
GW 95 120	300 mA	32 A	230 V	2	1/6
<b>No. of poles: 2P</b>					
GW 95 125	30 mA	6 A	230 V	2	1/6
GW 95 126	30 mA	10 A	230 V	2	1/6
GW 95 131	30 mA	13 A	230 V	2	1/6
GW 95 127	30 mA	16 A	230 V	2	1/6
GW 95 128	30 mA	20 A	230 V	2	1/6
GW 95 129	30 mA	25 A	230 V	2	1/6
GW 95 130	30 mA	32 A	230 V	2	1/6
GW 95 135	300 mA	6 A	230 V	2	1/6
GW 95 136	300 mA	10 A	230 V	2	1/6
GW 95 137	300 mA	16 A	230 V	2	1/6
GW 95 138	300 mA	20 A	230 V	2	1/6
GW 95 139	300 mA	25 A	230 V	2	1/6
GW 95 140	300 mA	32 A	230 V	2	1/6
<b>No. of poles: 3P</b>					
GW 95 145	30 mA	6 A	400 V	3	1/4
GW 95 146	30 mA	10 A	400 V	3	1/4
GW 95 151	30 mA	13 A	400 V	3	1/4
GW 95 147	30 mA	16 A	400 V	3	1/4
GW 95 148	30 mA	20 A	400 V	3	1/4
GW 95 149	30 mA	25 A	400 V	3	1/4
GW 95 150	30 mA	32 A	400 V	3	1/4
GW 95 155	300 mA	6 A	400 V	3	1/4
GW 95 156	300 mA	10 A	400 V	3	1/4
GW 95 157	300 mA	16 A	400 V	3	1/4
GW 95 158	300 mA	20 A	400 V	3	1/4
GW 95 159	300 mA	25 A	400 V	3	1/4
GW 95 160	300 mA	32 A	400 V	3	1/4
<b>No. of poles: 4P</b>					
GW 95 165	30 mA	6 A	400 V	4	1/3
GW 95 166	30 mA	10 A	400 V	4	1/3
GW 95 171	30 mA	13 A	400 V	4	1/3
GW 95 167	30 mA	16 A	400 V	4	1/3
GW 95 168	30 mA	20 A	400 V	4	1/3
GW 95 169	30 mA	25 A	400 V	4	1/3
GW 95 170	30 mA	32 A	400 V	4	1/3
GW 95 175	300 mA	6 A	400 V	4	1/3
GW 95 176	300 mA	10 A	400 V	4	1/3
GW 95 177	300 mA	16 A	400 V	4	1/3
GW 95 178	300 mA	20 A	400 V	4	1/3
GW 95 179	300 mA	25 A	400 V	4	1/3
GW 95 180	300 mA	32 A	400 V	4	1/3

# 90 RCD

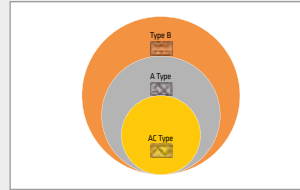


## MAXIMUM PROTECTION IN MINIMUM SPACE



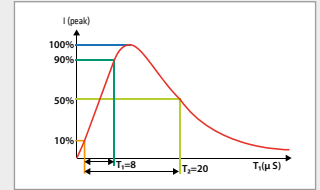
In the same application, the use of compact RCBO's guarantees a saving of the number of modules used which allows the installation of smaller distribution boards and therefore the cost is cheaper.

## A CIRCUIT BREAKER FOR EVERY NEED



The 90 RCD range allows to meet all the needs of protection in electrical circuit with different types of earth fault currents, from sinusoidal alternating shape (AC type) and pulsating (A type), up to smooth DC shape (B type).

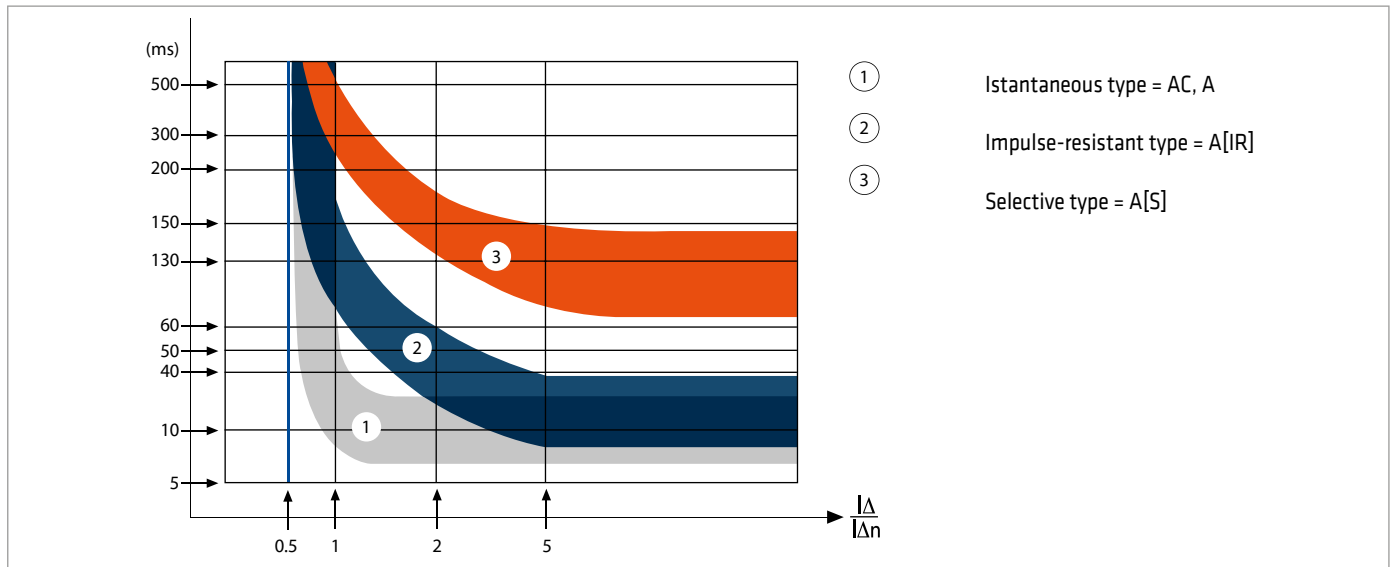
## WITHOUT INTERRUPTION



The 90 RCD range also includes Impulse Resistant IR versions with high resistance to untimely tripping due to overvoltage impulses. These versions are particularly suitable for installations where the continuity of service is extremely important.

## Residual current circuit breaker tripping characteristics

The following diagram shows the tripping range (relation between leakage current and tripping time) of the different type of RCCBs:



RCD TYPE	AC	A	B	Level of immunity (8/20μs)
RESIDUAL FAULT CURRENT TYPE	 • sinusoidal alternating	 • sinusoidal alternating • pulsating	 • sinusoidal alternating • pulsating • smooth DC	
<b>1. INSTANTANEOUS</b> First level of residual-current protection against direct and indirect contacts	✓	✓		250A
<b>2. IMPULSE RESISTANT</b> Prevention of untimely tripping caused by: • overvoltages due to indirect lightning strikes (8/20 μs impulse current waveform up to 3000A) • overvoltages due to manoeuvres on electrical network • overvoltages due to earth fault on three-phase system • permanent harmonics due electronic devices (immunity to currents with frequency higher than 50Hz) • starting current (immunity to the ring wave waveform)		✓	✓	3000A
<b>3. SELECTIVE</b> Second level of residual-current protection for total or chronometric selectivity with downstream RCDs		✓	✓	3000A 5000A