Comar Benelux NV – Brugzavel 8 – B-9690 Kluisbergen
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AUTOMATIC CAPACITOR BANKS AAR/5 FOR OUTSTANDING PERFORMANCE AND LONG-TERM VALUE

The automatic capacitor banks type **AAR/5** offers a unique combination of abilities to give you more convenience, reliability and cost-effectiveness across a broad range of applications.

This is the ideal solution for compensating in a **"HEAVY POLLUTED"** network.

A long experience of 26 years, in combination with a quality production and the use of high quality components,

Comar Benelux offers you this new scale of automatic capacitor banks with a long term value!

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SIMPLICITE

- Easy installation for all cabling also current measurement
- Compact enclosure
- Manuals of the PF controllers (QSR4, BMR6 et BMR12) clearly presented
- Communication option through RS gate 486

RELIABILITY AND DURABILITY

- Long life performance due to the high quality components
- Over heating protection and alarm
- Step switching with special designed contactors
  (Cyclic using of all steps)
- Optimized ventilation and cooling

SAFETY

- The unit can be equipped with main protection device or switch or complete polycarbonate protection
- Cabinet can only be opened after interruption
- Step protection with circuit breaker
- Robust envelop; protection against mechanical shocks
- Direct and accidental contact protection

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TYPE AAR/5

Gamma AAR/5 :

Automatic capacitor bank appropriate for a **heavy** polluted network

THD (I) % > 60 % in the network

Type	Order Code	Power	Steps (kVar)	I nom	PF Controller	Protection	Dimensions
EE AAR/5 22,5-415	ACCB540022	22,5 kVar	3 x 7,5	33 A	QSR 4	125 A	1000 x 800 x 400 mm
EE AAR/5 30-415	ACCB540030	30 kVar	4 x 7,5	42 A	QSR 4	125 A	1000 x 800 x 400 mm
EE AAR/5 37,5-415	ACCB540037	37,5 kVar	5 x 7,5	52 A	QSR 4	125A	1000 x 800 x 400 mm
EE AAR/5 45-415	ACCB540045	45 kVar	6 x 7,5	63 A	QSR 4	125 A	1000 x 800 x 400 mm
EE AAR/5 52,5-415	ACCB540052	52,5 kVar	7 x 7,5	73 A	QSR 4	125 A	1000 x 800 x 400 mm
EE AAR/5 60-415	ACCB540060	60 kVar	4 x 15	84 A	QSR 4	125 A	1000 x 800 x 400 mm
G4M Kit AAR/5 75-415	ACCB540075	75 kVar	5 x 15	105 A	QSR 4	160 A	1300 x 800 x 600 mm
G4M Kit AAR/5 90-415	ACCB540090	90 kVar	6 x 15	125 A	QSR 4	200 A	1300 x 800 x 600 mm
G4M Kit AAR/5 105-415	ACCB540105	105 kVar	7 x 15	146 A	QSR 4	200 A	1300 x 800 x 600 mm
G4M Kit AAR/5 120-415	ACCB540120	120 kVar	4 x 30	167 A	QSR 4	250 A	1300 x 800 x 600 mm
G4M Kit AAR/5 135-415	ACCB540135	135 kVar	9 x 15	188 A	QSR 4	250 A	1300 x 800 x 600 mm
G4M Kit AAR/5 150-415	ACCB540150	150 kVar	5 x 30	209 A	QSR 4	315 A	1300 x 800 x 600 mm
G7M Kit AAR/5 165-415	ACCB570165	165 kVar	11 x 15	230 A	BMR 6	315 A	2100 x 800 x 600 mm
G7M Kit AAR/5 180-415	ACCB570180	180 kVar	6 x 30	251 A	QSR 4	315 A	2100 x 800 x 600 mm
G7M Kit AAR/5 195-415	ACCB570195	195 kVar	13 x 15	271 A	BMR 6	400 A	2100 x 800 x 600 mm
G7M Kit AAR/5 210-415	ACCB570210	210 kVar	7 x 30	292 A	QSR 4	400 A	2100 x 800 x 600 mm
G7M Kit AAR/5 225-415	ACCB570225	225 kVar	15 x 15	313 A	BMR 6	400 A	2100 x 800 x 600 mm
G7M Kit AAR/5 240-415	ACCB570240	240 kVar	8 x 30	334 A	BMR 6	500 A	2100 x 800 x 600 mm
G7M Kit AAR/5 270-415	ACCB570270	270 kVar	9 x 30	376 A	BMR 6	500 A	2100 x 800 x 600 mm
G7M Kit AAR/5 300-415	ACCB570300	300 kVar	5 x 60	417 A	BMR 6	500 A	2100 x 800 x 600 mm
G7M Kit AAR/5 300-415	ACCB570301	300 kVar	10 x 30	417 A	BMR 6	500 A	2100 x 800 x 600 mm
G7M Kit AAR/5 330-415	ACCB570330	330 kVar	11 x 30	459 A	BMR 6	630 A	2100 x 800 x 600 mm
G7M Kit AAR/5 360-415	ACCB570360	360 kVar	6 x 60	501 A	BMR 6	630 A	2100 x 800 x 600 mm
G8M Kit AAR/5 330-415	ACCB580330	330 kVar	11 x 30	459 A	BMR 12	630 A	2100 x 1000 x 800 mm
G8M Kit AAR/5 360-415	ACCB580360	360 kVar	6 x 60	501 A	BMR 12	630 A	2100 x 1000 x 800 mm
G8M Kit AAR/5 360-415	ACCB580361	360 kVar	12 x 30	501 A	BMR 12	630 A	2100 x 1000 x 800 mm
G8M Kit AAR/5 390-415	ACCB580390	390 kVar	13 x 30	543 A	BMR 12	630 A	2100 x 1000 x 800 mm
G8M Kit AAR/5 420-415	ACCB580420	420 kVar	7 x 60	585 A	BMR 12	800 A	2100 x 1000 x 800 mm
G8M Kit AAR/5 450-415	ACCB580450	450 kVar	15 x 30	627 A	BMR 12	800 A	2100 x 1000 x 800 mm
G8M Kit AAR/5 480-415	ACCB580480	480 kVar	8 x 60	668 A	BMR 12	800 A	2100 x 1000 x 800 mm
G8M Kit AAR/5 510-415	ACCB580510	510 kVar	17 x 30	710 A	BMR 12	800 A	2100 x 1000 x 1000 mm
G8M Kit AAR/5 540-415	ACCB580540	540 kVar	9 x 60	752 A	BMR 12	1000 A	2100 x 1000 x 1000 mm
G8M Kit AAR/5 600-415	ACCB580600	600 kVar	10 x 60	835 A	BMR 12	1000 A	2100 x 1000 x 1000 mm

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GENERAL CHARACTERISTICS

ENCLOSURE	
Dimensions (mm)	1000 x 800 x 400 – 2100 x 800 x 600 – 2100 x 1000 x 800 mm 2100 x 1000 x 1000 mm
Degree of Protection	IP 40/55
Colour	RAL 7035
Degree of Protection – Open door	IP 20

ELECTRICAL CHARACTERISTICS	
Ventilation	Forced ventilation
Operating voltage	230 V (built-in transformer)
Protection	Internal general protection / general switch
Capacitors	Reinforced capacitors
Isolation voltage = Maximum admissible voltage 24 H/24 H	600 V
Contactor	Special contactors for capacitive charges Static contactors (reaction time < 1 sec) on demand
Anti – harmonic reactor	AAR/5 = 14 % (135 Hz) – T 40/B

ENVIRONMENT	
Installation	Indoor
Ambient temperature	-25°C to + 40°C
Average temperature	35°C
	45°C with derating (On demand D/65° derating)
Humidity	Up to 95 %
Maximum altitude	2000 m

STANDARDS	
	IEC 60831 - 1/2
	IEC 61439 - 1/2

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COMPONENTS

Single phase capacitors

Single-phase capacitors

The single phase capacitor is especially designed and engineered for long life use .

Features :

- High life expectancy
- High overload capabilities with good thermal and mechanical properties
- Self-healing with discharge resistors
- Pressure sensitive disconnector
- Special film resistivity and metallization profile for higher thermal efficiency


Contactors for capacitors with self limitation

Contactors for capacitors with self limitation

- **Unique technology contactors :**

The contactors used in our devices are specifically designed for capacitor control. They are fitted with a contact block allowing the current to pass on closing and with damping resistors that limit the current on energisation.

- **Personal safety :**

The contactors cannot be operated manually. The contactors are fitted with covers to protect them from direct contact.

- **Safety of installations :**

Damping resistors are used to reduce transient voltage surges.

- **Long life service :**

These contactors are a ready-to-use solution that avoids the installation of shock coils. Their service life is far longer than that of conventional solutions.

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Anti harmonic reactor 14 % (135 Hz)

Anti harmonic reactor 14 % (135 Hz)

- Detuned reactors enable the protection of capacitors against harmonic pollution.
- They are recommended for usage in highest polluted networks.
- They are equipped with thermal protection device for step disconnection.
- Temperature class T40/B

Power factor controller BMR 12

Power factor controller BMR 6/12

- High performance micro-processor developed for controlling a high quality automatic capacitor bank.
- A full range of programmable settings to create optimal compensation in all kinds of network.
- 144 x 144 x 85 mm
- Alarm contacts and possibility for communication with RS486.