



Technologies for Data Centres

## BlueNet product catalogue

**BlueNet**  
*Efficient Power Management*

**BACH  
MANN**

# Bachmann IT POWER SOLUTIONS

## Systematic power distribution

BACHMANN have 40 years of experience in developing, manufacturing and distributing power distribution solutions. True to this history, BACHMANN is synonymous with high-quality and innovative electronics and precise measuring accuracy, protected within rigid aluminium housings.

We provide solutions in IT energy distribution. Our intelligent and modular product range provide great peace of mind.

The PDU Basic IT POWER SOLUTIONS unit and Bachmann's BlueNet products meet all key requirements for future-proof, highly efficient energy distribution, especially for data centres.

Bachmann IT POWER SOLUTIONS provides various solutions for this sector:

New and intelligent energy distribution systems

Upgrading of existing energy distribution systems

Combination of existing PDUs and Bachmann IT POWER SOLUTIONS products



# Bachmann – quality that connects

## Research & development

- Company sites in Germany and China
- Company labs for running function and safety tests
- Certification in line with the strictest standards (e.g. DIN EN ISO 9001)
- Strong development network

## Sales

### SUBSIDIARIES:

- Bachmann Romania S.R.L., Medias / Romania
- Bachmann Hong Kong Ltd., Hong Kong/China
- Bachmann SARL Tremblay / France
- Bachmann Electrical Engineering Ltd. Milton, Keynes / UK
- Bachmann S.A., Barcelona / Spain

### REPRESENTATIONS:

Spain / Portugal / Switzerland / Belgium / Luxembourg / Netherlands / Italy / France / Sweden / Norway  
Denmark / Finland / United Kingdom / Ireland / Austria / Hungary / Russia / Czech Republic / Poland / Asia / Romania

- Close partnership with national and international electrical retailers
- Key account management
- Customer-specific OEM solutions
- Individual project solutions

## Production

- Production sites in Germany, Romania and China
- 100 % function testing in production





## A passion for innovation

Little characterises our industrial progress more than information technology. High-performance data centres form the core of any business.

The power network plays a significant role in ensuring high-availability and resource-conserving operations. Those wishing to meet the highest data centre standards must pay equal attention to structuring, management and monitoring. At BACHMANN, this approach is deeply rooted in the company philosophy.

We support your business with intelligent solutions for modern energy management and we do everything to ensure that you will continue to use the latest and most advanced technology in future. To do this, we develop standardised and customised products and systems. Professional engineering and modern process management combine to meet this goal. Judge us by our results.

### The new BlueNet generation

An excellent example is the new generation of our BlueNet products. Whether you're using Power Distribution Units (PDUs) that can be cascaded via modbus, integrated AC/DC-sensitive residual current monitoring, command line tools, or a rotating OLED display - these BlueNet features are pure high-tech.

And there's more: Our features represent safety and efficiency; and can be integrated with DCIM systems. From a single workstation, you can monitor and control your data centre's complex power network locally or remotely.

Join BACHMANN on this journey to a future of low resource consumption, minimum downtime and reduced operating costs.

# BlueNet

# Rapid identification

For PDUs in the data centre to be distinguished between faster and with greater ease, the new BlueNet PDUs are available in ten different colours. Users can quickly distinguish between A and B supply, 16 and 32 A or single- and three-phase systems. Different areas in the data centre can also be equipped with different coloured PDUs.

The following colours are available:



## Continuous monitoring

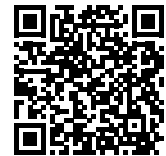


The safety, maximum availability and economic viability of data centres and servers are absolutely essential for businesses these days. A faultless power supply to the racks is also important. Despite complying with the standards, modern consumers increasingly cause problems in the electrical systems used, presenting a growing challenge to safe operations. Potential risks include operational interruptions, unexplained functional faults, unexpected tripping of protective devices, fire and even personal injury.

The use of RCMs helps to prevent problems, detect them at an early stage and ensure smooth data centre operation. If this monitoring is thorough enough, the time needed to localise and rectify the error can be further reduced and in a best-case scenario, intervention can take place before serious problems arise.

BlueNet helps here with a thorough type B residual current monitoring, jointly developed with Bender GmbH & Co. KG. As required, these modules can be integrated by supply cable, by phase or even for a group of socket outlets.

You will find more information about residual current in data centres and how to avoid them in our white paper, which can be downloaded free of charge from [www.bachmann.com](http://www.bachmann.com).



## Safe connections

BlueNet provides various ways of safely connecting servers with PDUs. In addition to slide-on locking clips, which secure two C13 ports, there is also the height-adjustable universal interlock, which can be used to lock both C13 and C19 ports. With the aid of SecureSleeves, the plugs can also be not only secured but also colour coded – without additional, special cables having to be bought.



Locking clips



Universal interlock C19




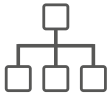





Universal interlock C13



SecureSleeves

# Overview of BlueNet features

	 Measurement per phase	 Measurement per port	 Switch	 Ethernet	 Modbus RTU / TCP	 Sensors	 RCM
BN7500	•	•	•	•	•	•	(•)
BN7000	•		•	•	•	•	(•)
BN5000			•	•	•	•	
BN3500	•	•		•	•	•	(•)
BN3000	•			•	•	•	(•)

(•) The indicated feature is optionally available

## Other features

### Measurement

- Current (A)
- Effective power (kW)
- Voltage (V)
- Frequency (Hz)
- Power factor
- Effective energy (kWh)
- Apparent power (VA)
- Reactive power (var)
- Apparent energy (kVAh)
- Reactive energy (kVARh)

### Sensors

- Temperature sensor
- Temperature / air humidity sensor

### Communication

- 10/100 MBit/s Ethernet
- IPv4 / IPv6
- DHCP
- DNS
- HTTP / HTTPS
- SSH
- SNMPv2 / v3
- SNMP TRAPS / SETS / GETS
- SMTP
- Syslog
- NTP
- FTP
- Modbus TCP
- Daisy Chain (Modbus RTU)

### Equipment options


- C13 / C19 / socket outlets with earthing contact
- Supply cable with CEE plug-in connector or end sleeves
- 230 / 400 V
- 16 / 32 A
- Circuit breakers
- Overvoltage protection
- Type B residual current measurement (RCM)


### Display


- Organic LED display (OLED)
- Operation via four soft buttons
- Can be rotated in 90° steps using software


BlueNet BN3000


3.0 m H05VV-F supply cable with CEE plug / including fitting set

**Measurement per phase** 

**Measurement per port** 

**Switch** 

**RCM** 

**Sensors** 

Article number	Article number Slave variant	C13	C19	Socket outlet with earthing contact	Outlets in total	Dimensions
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**16 A / 230 V**

802.3004	802.3004-S	16	4		20	1102 x 44 x 65 mm
802.3006		16		4	20	1102 x 44 x 65 mm
802.3041		24	4		28	1533 x 44 x 65 mm

**16 A / 400 V**

802.3010		18	3		21	1234 x 44 x 65 mm
802.3011		18		3	21	1234 x 44 x 65 mm
802.3012	802.3012-S	24	6		30	1533 x 44 x 65 mm
802.3014		24		6	30	1533 x 44 x 65 mm
802.3016		24	6	6	36	1762 x 44 x 65 mm
802.3018	802.3018-S	36	6		42	1873 x 44 x 65 mm
802.3020		36		6	42	1873 x 44 x 65 mm

**32 A / 230 V**

802.3005	802.3005-S	16	4		20	1234 x 44 x 65 mm
802.3007		16		4	20	1234 x 44 x 65 mm
802.3042		24	4		28	1533 x 44 x 65 mm

**32 A / 400 V**

802.3013	802.3013-S	24	6		30	1762 x 44 x 65 mm
802.3015		24		6	30	1817 x 44 x 65 mm
802.3019	802.3019-S	36	6		42	2037 x 44 x 65 mm

46 U



802.3004



802.3005



802.3010



802.3012



802.3013



802.3018



BlueNet BN3500

3.0 m H05VV-F supply cable with CEE plug / including fitting set

Article number	Article number Slave variant	C13	C19	Socket outlet with earthing contact	Outlets in total	Dimensions
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16 A / 230 V

802.3500	802.3500-S	18	4		22	1234 x 44 x 65 mm
802.3502		18		4	22	On request
802.3519		24	4		28	1533 x 44 x 65 mm

16 A / 400 V

802.3504			6		6	On request
802.3506		18	3		21	1234 x 44 x 65 mm
802.3507		18		3	21	On request
802.3508	802.3508-S	24	6		30	1533 x 44 x 65 mm
802.3510		24		6	30	On request
802.3514	802.3514-S	36	6		42	1945 x 44 x 65 mm

46 U

32 A / 230 V

802.3501	802.3501-S	16	4		20	1234 x 44 x 65 mm
802.3503		16		4	20	On request
802.3520		24	4		28	1533 x 44 x 65 mm

32 A / 400 V

802.3505			6		6	On request
802.3509	802.3509-S	24	6		30	1762 x 44 x 65 mm
802.3511		24		6	30	On request



802.3500



802.3501



802.3506








802.3508



802.3509





802.3514


- 
Measurement per phase
- 
Measurement per port
- 
Switch
- 
RCM
- 
Sensors


BlueNet BN3000 RCM


3.0 m H05VV-F supply cable with CEE plug / including fitting set

**Measurement per phase** 

**Measurement per port** 

**Switch** 

**RCM** 

**Sensors** 

Article number	Article number Slave variant	C13	C19	Socket outlet with earthing contact	Outlets in total	Dimensions
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Residual current monitoring per supply cable

16 A/400 V

802.3030	802.3030-S	24	12		36	1762 x 44 x 65 mm
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32 A/400 V

802.3031	802.3031-S	24	12		36	2037 x 44 x 65 mm	<b>46 U</b>
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Residual current monitoring per phase

16 A/230 V

802.3032		12	2		14	891 x 44 x 65 mm
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16 A/400 V

802.3022		18	3		21	1234 x 44 x 65 mm
802.3023		18		3	21	1533 x 44 x 65 mm
802.3024	802.3024-S	24	6		30	1533 x 44 x 65 mm

32 A/400 V

802.3025	802.3025-S	24	6		30	1817 x 44 x 65 mm
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White paper on monitoring residual currents in data centres



Operators and managers consider outages, operational faults and interruptions to a data centre nightmare scenarios. If they occur as a result of avoidable mistakes, it's even more annoying. Residual currents are one of these avoidable mistakes and can be detected at an early stage with BlueNet RCM PDUs.

You will find more information about residual currents in data centres and how to avoid them in our white paper, which can be downloaded free of charge from [www.bachmann.com](http://www.bachmann.com).

BlueNet BN5000

3.0 m H05VV-F supply cable with CEE plug / including fitting set

Article number	Article number Slave variant	C13	C19	Socket outlet with earthing contact	Outlets in total	Dimensions
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16 A / 230 V

802.5001*				6	6	On request
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16 A / 400 V

802.5002		18	3		21	On request
802.5003		24	6		30	On request
802.5005		36	6		42	On request

32 A / 400 V

802.5004		24	6		30	On request
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802.5002








802.5003



802.5004




802.5005


- 
Measurement per phase
- 
Measurement per port
- 
Switch
- 
RCM
- 
Sensors


\* = 3.0 m H05VV-F supply cable with earthing contact plug


BlueNet BN7000


3.0 m H05VV-F supply cable with CEE plug / including fitting set

**Measurement per phase** 

**Measurement per port** 

**Switch** 

**RCM** 

**Sensors** 

Article number	Article number Slave variant	C13	C19	Socket outlet with earthing contact	Outlets in total	Dimensions
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**16 A / 230 V**

802.7000	802.7000-S	18	4		22	1234 x 44 x 65 mm
802.7002		18		4	22	On request
802.7021		24	4		28	1533 x 44 x 65 mm

**16 A / 400 V**

802.7004			6		6	On request
802.7006		18	3		21	1533 x 44 x 65 mm
802.7007		18		3	21	On request
802.7008	802.7008-S	24	6		30	1533 x 44 x 65 mm
802.7010		24		6	30	On request
802.7014	802.7014-S	36	6		42	1943 x 44 x 65 mm

46 U

**32 A / 230 V**

802.7001	802.7001-S	16	4		20	1234 x 44 x 65 mm
802.7003		16		4	20	On request
802.7022		24	4		28	1533 x 44 x 65 mm

**32 A / 400 V**

802.7005			6		6	On request
802.7009	802.7009-S	24	6		30	1762 x 44 x 65 mm
802.7011		24		6	30	On request



802.7000



802.7001



802.7006



802.7008



802.7009



802.7014

BlueNet BN7500

3.0 m H05VV-F supply cable with CEE plug / including fitting set

Article number	Article number Slave variant	C13	C19	Socket outlet with earthing contact	Outlets in total	Dimensions
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16 A / 230 V

802.7500	802.7500-S	18	4		22	1234 x 44 x 65 mm
802.7502		18		4	22	On request
802.7523		24	4		28	1533 x 44 x 65 mm

16 A / 400 V

802.7504			6		6	On request
802.7506		18	3		21	1533 x 44 x 65 mm
802.7507		18		3	21	On request
802.7508	802.7508-S	24	6		30	1533 x 44 x 65 mm
802.7510		24		6	30	On request
802.7514	802.7514-S	36	6		42	1943 x 44 x 65 mm

46 U

32 A / 230 V

802.7501	802.7501-S	16	4		20	1234 x 44 x 65 mm
802.7503		16		4	20	On request
802.7524		24	4		28	1533 x 44 x 65 mm

32 A / 400 V

802.7505			6		6	On request
802.7509	802.7509-S	24	6		30	1762 x 44 x 65 mm
802.7511		24		6	30	On request



802.7500



802.7501



802.7506








802.7508



802.7509



802.7514

- 
Measurement per phase
- 
Measurement per port
- 
Switch
- 
RCM
- 
Sensors

BlueNet BN7000 RCM

3.0 m H05VV-F supply cable with CEE plug / including fitting set

- Measurement per phase
- Measurement per port
- Switch
- RCM
- Sensors

Article number	Article number Slave variant	C13	C19	Socket outlet with earthing contact	Outlets in total	Dimensions
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32 A / 400 V / residual current monitoring per group

802.7018		18	6		24	1846 x 44 x 65 mm
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BlueNet BN7500 RCM

3.0 m H05VV-F supply cable with CEE plug / including fitting set

- Measurement per phase
- Measurement per port
- Switch
- RCM
- Sensors

Article number	Article number Slave variant	C13	C19	Socket outlet with earthing contact	Outlets in total	Dimensions
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16 A / 230 V / residual current monitoring per supply line

802.7519		18	4		22	1234 x 44 x 65 mm
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802.7519

# Accessories

## BlueNet BN3000 - BN7000 sensors

Including 2.0m CAT 5e supply cable with RJ45 plug on both ends

Art. no.	Description
802.0101	Temperature sensor
802.0102	Temperature / air humidity sensor



802.0101



802.0102

## Plug interlocks

Art. no.	Description
940.103	2x locking clips C13 (set for 12 C13 outlets)
802.0010	Interlock C13 / C19 universal height (6x)
940.191	SecureSleeve C14 red (6x)
940.192	SecureSleeve C14 black (6x)
940.193	SecureSleeve C20 red (6x)
940.194	SecureSleeve C20 black (6x)



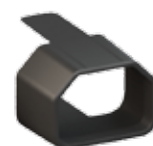
940.103



940.191



802.0010



940.192

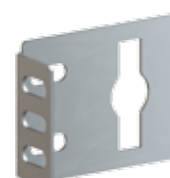
## Replacement mounting accessories

All mounting sets are included in the scope of delivery for the PDUs

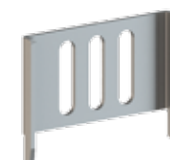
Art. no.	Description
802.0001	Universal mounting set
802.0002	Mounting set, rear
802.0003	Mounting set, side



802.0001



802.0002



802.0003

## Mounting options



802.0003



802.0002



802.0001

## Connecting cables



Cable cross-section mm <sup>2</sup>	Cable length (m)	Plug	Coupling
1.0	0.50	C14	C13
1.0	0.75	C14	C13
1.0	1.00	C14	C13
1.0	1.50	C14	C13
1.0	2.00	C14	C13
1.5	0.50	ECP*	C13
1.5	0.75	ECP*	C13
1.5	1.00	ECP*	C13
1.5	1.50	ECP*	C13
1.5	2.00	ECP*	C13
1.5	0.50	C20	C19
1.5	0.75	C20	C19
1.5	1.00	C20	C19
1.5	1.50	C20	C19
1.5	2.00	C20	C19
1.5	0.50	ECP*	C19
1.5	0.75	ECP*	C19
1.5	1.00	ECP*	C19
1.5	1.50	ECP*	C19
1.5	2.00	ECP*	C19

Article number	Cable colour
356.119	Black
356.169	Black
356.120	Black
356.127	Black
356.171	Black
356.172	Black
356.1721	Black
356.1722	Black
356.1723	Black
354.127	Black
356.1731	Black
356.1732	Black
356.1733	Black
356.183	Black
356.1735	Black
356.1971	Black
356.1972	Black
356.1973	Black
356.1974	Black
356.1975	Black

Article number	Cable colour
356.900	grey
356.901	grey
356.902	grey
356.903	grey
356.904	grey
356.905	grey
356.906	grey
356.907	grey
356.908	grey
356.909	grey
356.910	grey
356.911	grey
356.918	grey
356.935	grey
356.936	grey
356.937	grey
356.938	grey
356.939	grey
356.940	grey
356.941	grey

\*ECP = earthing contact plug





# The Bachmann portfolio

## IT Basic PDU 1 U

With its Basic IT PDUs, Bachmann provides a huge choice of multiple-socket outlets in a high-quality aluminium profile. With their compact size of just 1 height unit and depth of 44 mm, the PDUs can be easily integrated in your IT rack.

Alongside the extensive standard range, Bachmann also has custom-built PDUs, offering a large number of potential equipment combinations of socket outlets, protective devices and supply cables.



## BlueNet BN2000 PLC

The PDUs of the BN2000 PLC series are a cost-saving way of recording power, energy and ambient data in the data centre. With their integrated Powerline Communication module (PLC), the PDUs communicate directly with the PLC Concentrator via the mains supply. The PLC Concentrator communicates with up to 1000 PDUs and is the interface to the Ethernet. Dispensing with an extra Ethernet structure for PDUs massively cuts the ongoing costs for operating the infrastructure in the data centre.



Powerline Concentrator



Powerline PDU



Powerline PDU

A series of horizontal dotted lines for taking notes.

A series of horizontal dotted lines for writing notes, spanning the width of the page.



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