

# Rittal – The System.

Faster – better – everywhere.

▶ **World's first – The e+ principle**



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# Rittal – The System.

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# The whole is more than the sum of its parts

The same is true of “Rittal – The System.” With this in mind, we have bundled our innovative enclosure, power distribution, climate control and IT infrastructure products together into a single system platform. Complemented by our extensive range of software tools and global service, we create unique added value for trade and industry: Production plant, test equipment, facility management and data centers. In accordance with our simple principle, “Faster – better – everywhere”, we are able to combine innovative products and efficient service to optimum effect.

**Faster** – with our “Rittal – The System.” range of modular solutions, which guarantees fast planning, assembly, conversion and commissioning with its system compatibility.

**Better** – by being quick to translate market trends into products. In this way, our innovative strength helps you to secure competitive advantages.

**Everywhere** – thanks to global networking:

- 13 production facilities with almost 250,000 m<sup>2</sup> production space worldwide
- 58 subsidiaries
- Around 90 warehouse facilities with more than 180,000 pallet locations and over 260,000 m<sup>2</sup> storage space worldwide

IT INFRASTRUCTURE

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# Rittal – The System.

Faster – better – everywhere.

## World's first

The Blue e+ cooling unit series – the ultimate in efficiency. Worldwide.

### The principle

- Efficiency – 75% energy saved due to speed-regulated components and heat pipe technology
- Versatility – Suitable for international use due to unique multi-voltage capability
- Longevity – Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- User-friendliness – Intuitive operation due to touch display and intelligent interfaces

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# A revolution in energy efficiency through innovative hybrid technology

## Unbelievably efficient

- Let hybrid technology take your cooling units' energy efficiency to a whole new level
- Active cooling circuit with speed-regulated components for demand-based cooling
- Integral heat pipe for passive cooling. Dissipates heat from the enclosure as soon as the ambient temperature falls below the setpoint

## Transparent efficiency comparisons

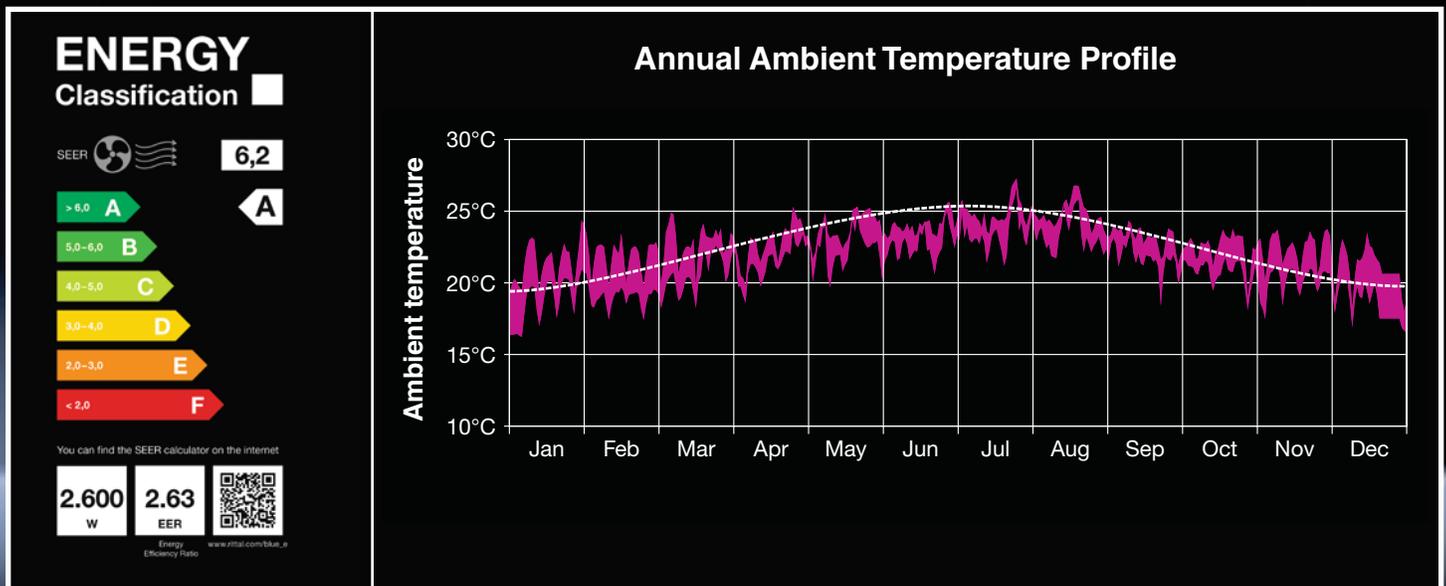
- Energy Efficiency Ratio: The standardized efficiency ratio
- Seasonal Energy Efficiency Ratio: The seasonal efficiency ratio for actual energy consumption

## Amazingly economical

- Energy savings of up to 75%
- Component-friendly cooling for a longer service life
- A constant temperature inside the enclosure is ensured – with three control modes
- High operational reliability

## Easier to calculate

- Determine your energy savings with the efficiency calculator
- TCO calculation includes all costs arising in the product's lifecycle
- Precise amortization calculation



Rittal specifies the SEER to indicate the actual efficiency of a cooling unit, since a precise calculation must also consider the seasonal temperature variation. The standard point for determining the EER does not make allowance for actual fluctuations in hall temperatures.



## Simple operation with touch display and intelligent interfaces

### Get information faster

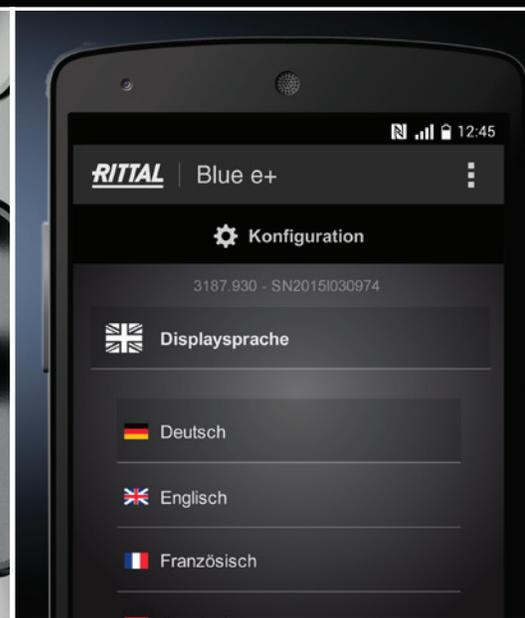
- Fast device analysis with RiDiag software via the USB interface
- Remote monitoring via Ethernet

### Blue e+ app

- Contactless information exchange and rapid, direct on-site analysis via a Near Field Communication, NFC, interface
- Simple repair, maintenance and spare parts inquiries may be sent directly via your smartphone
- Save device data directly on the unit

### Easier to operate

- Fast parameterization, data reading and plain-text system messages on the intelligent, multi-lingual, industrial-grade display





# Versatility through standard assembly

## Easy Assembly

- One version for external mounting, partial internal mounting and full internal mounting
- One mounting cut-out for external mounting, partial internal mounting and full internal mounting in multiple output categories
- Maintenance-friendly, tool-less filter mat replacement

## Rapid Assembly

- Handle for convenient transport and positioning
- Mounting clip as securing aid
- Eyebolts for easy mounting

## Maximum flexibility with unique multi-voltage capability

- One device for all voltages and networks, suitable for world-wide use thanks to inverter technology:
  - 110 – 240 V, 1~, 50 – 60 Hz
  - 380 – 480 V, 3~, 50 – 60 Hz
- International approvals and certifications:
  - cULus Listed
  - EAC
  - Tüv Nord GS
  - TÜV Nord-tested output measurement



# Wall-mounted air conditioners Blue e+



## Benefits:

- 75% energy saved due to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability
- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- Intuitive operation due to touch display and intelligent interfaces

## Temperature control:

- e+ controller (factory setting +35°C)

## Material:

- Sheet steel

## Color:

- RAL 7035

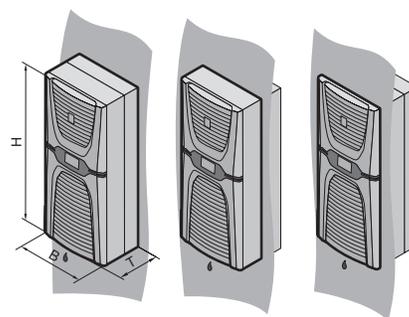
## Protection category IP to

### IEC 60 529:

- Internal circuit IP 55

## Supply includes:

- Assembly parts



## Power Category 5118 BTU (1600 W)

<b>Model No.</b>	Packs of	<b>3185.830</b>
<b>Total cooling output 50 Hz L35 L35 toDIN EN 14511 BTU (kW)</b>		<b>5459 (1.6)</b>
Total cooling output 50/60 Hz L35 L35 BTU (kW)		5459 / 5459 (1.6 / 1.6)
Total cooling output 50/60 Hz L35 L50 BTU (kW)		4095 / 4095 (1.2 / 1.2)
Rated operating voltage V, ~, Hz		110 - 240, 1~, 50/60 380 - 480, 3~, 50/60
Width (B) Inches (mm)		16 (400)
Height (H) inches (mm)		37 (950)
Depth (T) inches (mm)		12 (310)
Rated output kW		0.62
Power consumption Pel 50/60 Hz L35 L35 kW		0.54 / 0.54
Power consumption Pel 50/60 Hz L35 L50 kW		0.61 / 0.61
Operating temperature range °F (°C)		-4°F...+140°F (-20°C...+60°C)
Setting range °F (°C)		+68°F...+122°F (+20°C...+50°C)
Storage temperature range °F (°C)		-40°F... +158°F (-40°C...+70°C)
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		3.05
Refrigerant g		R134a, 750
Permissible operating pressure (p. max.) bar		24
Air throughput of fans (unimpeded air flow), Internal circuit/external circuit m³/h		700 / 895
Weight lbs (kg)		67 (30.5)
<b>Accessories</b>		
Filter mats	3 pc(s).	3285.800
Metal filters	1 pc(s).	3285.810
Temperature sensor	1 pc(s).	3124.400
Door-operated switch	1 pc(s).	4127.010

# Wall-mounted air conditioners Blue e+



## Benefits:

- 75% energy saved due to speed-regulated components and heat pipe technology
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- Intuitive operation due to touch display and intelligent interfaces

## Temperature control:

- e+ controller (factory setting +35°C)

## Material:

- Sheet steel

## Color:

- RAL 7035

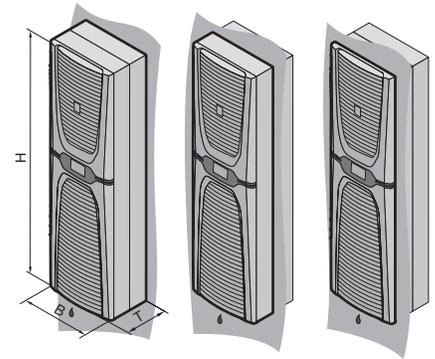
## Protection category IP to

### IEC 60 529:

- Internal circuit IP 55

## Supply includes:

- Assembly parts



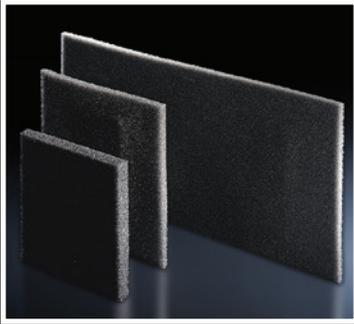
## Power Category 6830 – 19808 BTU (2000W – 6000W)

Model No.	Packs of	3186.930	3187.930	3188.940	3189.940
<b>Total cooling output 50 Hz L35 L35 to DIN EN 14511 BTU (kW)</b>		<b>6830 (2)</b>	<b>8879 (2.6)</b>	<b>14340 (4.2)</b>	<b>19808 (5.8)</b>
Total cooling output 50/60 Hz L35 L35 BTU (kW)		6830 / 6830 (2 / 2)	8879 / 8879 (2.6 / 2.6)	14340 / 14340 (4.2 / 4.2)	19808 / 19808 (5.8 / 5.8)
Total cooling output 50/60 Hz L35 L50 BTU (kW)		4405 / 4405 (1.29 / 1.29)	6215 / 6215 (1.82 / 1.82)	10313 / 10313 (3.02 / 3.02)	14344 / 14344 (4.2 / 4.2)
Rated operating voltage V, ~, Hz		110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	380 - 480, 3~, 50/60	380 - 480, 3~, 50/60
Width (B) inches (mm)		18 (450)	18 (450)	18 (450)	18 (450)
Height (H) inches (mm)		63 (1600)	63 (1600)	63 (1600)	63 (1600)
Depth (T) inches (mm)		12 (294)	12 (294)	15 (393)	15 (393)
Rated output kW		0.73	1.05	1.3	2.2
Power consumption Pel 50/60 Hz L35 L35 kW		0.57 / 0.57	0.99 / 0.99	1.21 / 1.21	2.2 / 2.2
Power consumption Pel 50/60 Hz L35 L50 kW		0.6 / 0.6	0.94 / 0.94	1.28 / 1.28	2.2 / 2.2
Operating temperature range		-20°C...+60°C	-20°C...+60°C	-20°C...+60°C	-20°C...+60°C
Setting range		+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	+20°C...+50°C
Storage temperature range		-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		3.5	2.63	3.46	2.64
Refrigerant g		R134a, 1150	R134a, 1150	R134a, 1750	R134a, 1750
Permissible operating pressure (p. max.) bar		24	24	24	24
Air throughput of fans (unimpeded air flow), Internal circuit/external circuit m³/h		1250 / 1250	1250 / 1250	2300 / 2300	2300 / 2300
Weight lbs (kg)		121 (55.2)	121 (55.2)	159 (72.4)	159 (72.4)
Note on Model No.		-	-	Full installation not possible	Full installation not possible

## Accessories

Filter mats	3 pc(s).	3285.900	3285.900	3285.900	3285.900
Metal filters	1 pc(s).	3285.910	3285.910	3285.910	3285.910
Temperature sensor	1 pc(s).	3124.400	3124.400	3124.400	3124.400
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010

# Accessories



## Filter mats

Rittal cooling units are low-maintenance and are supplied without filter mats. Filter mats may be used for extreme conditions.

### Benefits:

- Temperature-resistant from -40°C...+80°C

### Material:

- Open-celled polyurethane foamed plastic
- Thickness: 10 mm

### For Blue e+ air conditioners

To fit model No.	Packs of	Model No.
3185.830	3 pc(s).	<b>3285.800</b>
3186.930/ 3187.930/ 3188.940/ 3189.940	3 pc(s).	<b>3285.900</b>



## Metal filter

Particularly when cooling units are used in dusty and oily environments, it is advisable to use washable metal filters. If air or steam condenses on the metal surfaces, any particles present will adhere to the metal, and can easily be washed out with water or grease-dissolving solvents.

### Material:

- Aluminum
- Thickness: 10 mm

### For Blue e+ air conditioners

To fit model No.	Packs of	Model No.
3185.830	1 pc(s).	<b>3285.810</b>
3186.930/ 3187.930/ 3188.940/ 3189.940	1 pc(s).	<b>3285.910</b>



## Temperature sensor

NTC sensor to regulate Blue e+ cooling units according to an individual measurement point within the enclosure (control based on an external sensor).

### Supply includes:

- External sensor with connection cable (length 2.5 m)

Packs of.	1 pc(s)
<b>Model No.</b>	<b>3124.400.</b>

# Wall-mounted Blue e+ air conditioners

## Technical details

### IoT interface

The IoT interface is used to link Rittal components such as Blue e+ cooling units, Blue e+ chillers, smart monitoring systems etc. to the customer's own monitoring and/or energy management systems. Data may be integrated both horizontally and vertically into data collectors and processors, to allow the long-term logging and evaluation of device data, statuses and system messages.

#### Communication protocols:

SNMPv1, SNMPv2c, SNMPv3, OPC-UA, Modbus/TCP, CAN bus, Profinet

#### Network protocols:

Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS, SMTP, Syslog, LDAP, RADIUS

#### Benefits:

– The IoT interface is middleware, whose interfaces allow a variety of devices and systems to communicate with one another. The data can then be forwarded into superordinate systems.

#### Material:

– Plastic to UL 94-V0

#### Color:

– RAL 7016 Anthracite grey

#### Protection category IP to IEC 60529:

– IP 20

#### Supply includes:

- Connection cable (1 m) with RJ 45 connector
- Angle bracket for Blue e+ cooling unit



#### Assembly instruction:

– The IoT interface can be secured on a 35 x 7.5 top hat rail to DIN EN 60 715 using a springloaded metal clip, or to the rear of a Blue e+ cooling unit using the angle bracket.



Model No.	3124.300
W X H X D in. (mm)	0.07 x 4.6 x 4.72 (18 x 117 x 120)
For	Blue e+ cooling units, Blue e+ chillers, Smart monitoring system, CMC III sensors
Operating temperature range °F (°C)	+32°F...+158°F (+0°C...+70°C)
Protocols	SNMP, OPC-US, Modbus/TCP, CAN bus, Profinet
Interfaces	1 x Micro USB type B (device) for USB 2.0 1 x Micro-SD memory card slot for SD 2.0 1 x USB 2.0 high-speed functions (EHCI) 1 x acknowledgement button 1 x 3-pole push-in spring connection terminal for NTC sensor 2 x RJ45 jack for RS 485 interface (climate control unit interface)
Network interface	E 802.3 via 10BASE-T, 100BASE-T and 1000BASE-T
Type of electrical connection	3-pole push-in spring connection terminal (24 V DC)

### Wall-mounted air conditioners

Blue e+ Page 13.

Mounting cut-out

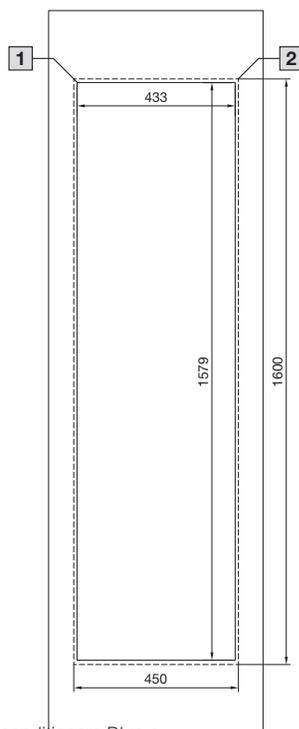
SK 3186.930,

SK 3187.930,

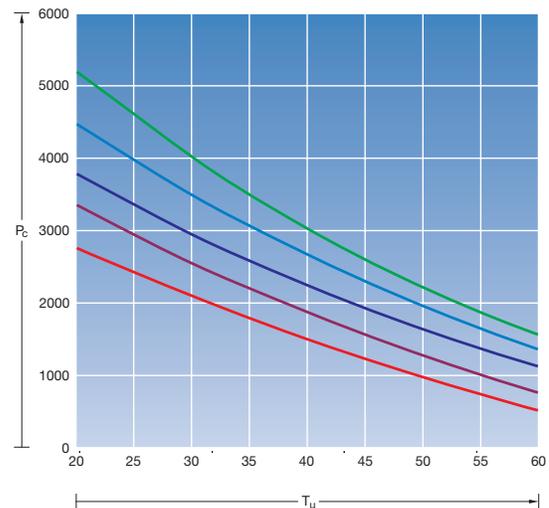
SK 3188.940, SK 3189.940

**1** A corner radius of up to 5 mm is permissible for the four corners of the rectangular cut-out

**2** External dimensions of the cooling unit



### Performance diagram Blue e+ 2600 W



Enclosure internal temperature

— Ti = 45°C

— Ti = 40°C

— Ti = 35°C

— Ti = 30°C

— Ti = 25°C

Pc = Total cooling output [W]

Tu = Ambient temperature [°C]

**The performance diagrams for all other Blue e+ cooling units can be found under the respective Model No. at [www.rittal.com](http://www.rittal.com)**

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From Rittal's newest Blue e+ energy efficient air conditioners to our liquid cooling units, enclosure heaters and climate control accessories, scan this qr code and discover the world of Rittal climate control products.

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