

# Rittal – The System.

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## Rittal roof-mounted fans



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ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

# The whole is more than the sum of its parts

The same is true of “Rittal – The System.” Keeping 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 that include production plants, test equipment, facility management and data centers. In accordance with our simple principle, “Faster – better – everywhere”, we are able to optimally combine innovative products and efficient service.

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

**Better** – by quickly translating 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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Roof-mounted fans

## One system for all sizes

### Simply top

- Just one mounting cut-out for all output categories 9.8 x 10.2 inches (250 x 258 mm)
- Optimum efficiency, due to sophisticated air routing with minimal pressure losses
- Innovative clamping attachment maintains ingress protection (IP) ratings



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## Roof-mounted fans

# Easy locking with innovative clamping attachment

### Simple to fit and maintain

- Innovative clamping attachment allows optional flexible locking from the outside or inside
- Easy electrical connection via plug terminal
- Good accessibility permits fast filter mat changes

### High protection category

- IP 55 as standard, due to a sophisticated labyrinth system and high-quality foamed-in seal
- International approvals and easy accessibility

### Large output range with high efficiency

- Passive variant without fan for natural convection
- Air throughput range from 294 – 589 cfm (500 – 1,000 m<sup>3</sup>/h)
- At an air throughput of 589 cfm (1,000 m<sup>3</sup>/h), EC fans ensure maximum energy efficiency



# Roof-mounted fan, roof vent



## Accessories for climate control Page 10

**Color:**  
– RAL 7035

**Protection category IP to IEC 60 529:**

- IP 22 without filter mat
- IP 55 including filter mat

**Supply includes:**  
– Complete unit ready to install, including filter mat

**Note:**  
– For energy-efficient operation of the fans, we recommend the use of thermostats or temperature displays  
– The specified air throughput, unimpeded airflow, is without a filter mat

## Air throughput 294 – 512 cfm (500 – 800 m<sup>3</sup>/h)

Model No.	Packs of	3138.000	3139.100	3139.110	3140.100	3140.110	3140.140	
Rated operating voltage V, ~, Hz		-	230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/60 460, 3~, 60	
<b>Air throughput, unimpeded air flow cfm (m<sup>3</sup>/h)</b>		-	<b>294/323 (500/550)</b>	<b>294/323 (500/550)</b>	<b>471/530 (800/900)</b>	<b>471/518 (800/880)</b>	<b>471/512 (800/870)</b>	
Rated current A		-	0.23 / 0.29	0.47 / 0.59	0.45 / 0.6	0.93 / 1.23	0.19 / 0.22	
Pre-fuse A		-	6	6	6	6	-	
Motor circuit-breaker A		-	-	-	-	-	6.3...10	
Power consumption W		-	52 / 65	53 / 66	102 / 135	105 / 140	98 / 130	
Width inches (mm)		15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	
Height inches (mm)		5.2 (133)	5.2 (133)	5.2 (133)	5.2 (133)	5.2 (133)	5.2 (133)	
Depth inches (mm)		15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	15.7 (400)	
Max. installation depth inches (mm)		1.1 (27)	1.8 (30)	1.8 (30)	1.8 (30)	1.8 (30)	1.8 (30)	
Required mounting cut-out inches (mm)		10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	
Fan		without fan motor	Radial, capacity motor	Radial, capacity motor	Radial, capacity motor	Radial, capacity motor	Radial, rotary current motor	
Operating temperature range F (C)		-22°F...+131°F (-30°C...+55°C)	-22°F...+131°F (-30°C...+55°C)	-22°F...+131°F (30°C...+55°C)	-22°F...+131°F (30°C...+55°C)	-22°F...+131°F (30°C...+55°C)	-22°F...+131°F (30°C...+55°C)	
Storage temperature range F (C)		-40°F...+150°F (-40°C...+70°C)	-40°F...+150°F (-40°C...+70°C)	-40°F...+150°F (40°C...+70°C)	-40°F...+150°F (40°C...+70°C)	-40°F...+150°F (-40°C...+70°C)	-40°F...+150°F (-40°C...+70°C)	

### Accessories

		3243.200	3243.200	3243.200	3243.200	3243.200	3243.200	
Outlet filter	1 pc(s).	3243.200	3243.200	3243.200	3243.200	3243.200	3243.200	Cat. 34, 308
Spare filter mats	12 pc(s).	3174.100	3174.100	3174.100	3174.100	3174.100	3174.100	307
Enclosure internal thermostat	1 pc(s).	-	3110.000	3110.000	3110.000	3110.000	3110.000	315
Digital enclosure internal temperature display and thermostat	1 pc(s).	-	3114.200	3114.200	3114.200	3114.200	3114.200	315
Hygrostat	1 pc(s).	-	3118.000	3118.000	3118.000	3118.000	3118.000	316

# Roof-mounted fan, roof vent



## Accessories for climate control Page 10

Energy-efficient and powerful design of the roof-mounted fans. The fan may be activated via control interface with external temperature-dependent speed control

**Color:**  
– RAL 7035

**Protection category IP to IEC 60 529:**

- IP 22 without filter mat
- IP 55 including filter mat

**Supply includes:**  
– Complete unit ready to install, including filter mat

**Note:**  
– For even more efficient operation or for monitoring the fans, we recommend the use of the EC speed controls  
– The specified air throughput, unimpeded airflow, is without a filter mat

## Air throughput, unimpeded air flow 589 cfm (1000 m<sup>3</sup>/h), with EC technology

Model No.	Packs of	3140.500	3140.510	
Control interface		■	■	
Rated operating voltage V, ~, Hz		200 - 240, 1~, 50/60	100 - 130, 1~, 50/60	
<b>Air throughput, unimpeded air flow cfm (m<sup>3</sup>/h)</b>		<b>589 (1000)</b>	<b>589 (1000)</b>	
Rated current A		1.2	1.9	
Pre-fuse A		6	6	
Power consumption W		148	125	
Width inches (mm)		15.7 (400)	15.7 (400)	
Height inches (mm)		5.2 (133)	5.2 (133)	
Depth inches (mm)		15.7 (400)	15.7 (400)	
Max. installation depth inches (mm)		1.8 (30)	1.8 (30)	
Required mounting cut-out inches (mm)		10.2 x 10.2 (258 x 258)	10.2 x 10.2 (258 x 258)	
Fan		Radial, EC motor	Radial, EC motor	
Operating temperature range F (C)		-22°F...+131°F (-30°C...+55°C)	-22°F...+131°F (-30°C...+55°C)	
Storage temperature range F (C)		-40°F...+158°F (-40°C...+70°C)	-40°F...+158°F (-40°C...+70°C)	

### Accessories

Accessories		3140.500	3140.510	
Outlet filter	1 pc(s).	3243.200	3243.200	Cat. 34, 308
Spare filter mats	12 pc(s).	3174.100	3174.100	307
EC speed control	1 pc(s).	3235.440	3235.440	316
	1 pc(s).	3235.450	3235.450	317
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	315
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	315
Hygrostat	1 pc(s).	3118.000	3118.000	316

# Accessories



## Spare filter mats

Made of chopped-fibre mat with a progressive structure. Temperature-resistant to 100°C, self-extinguishing category F1 to DIN 53 438. Dust laden air side: Open structure. Clean-air side: Closed structure. Reliable filtering of virtually all types of dust from a particle size of 10 µm

### Design for roof-mounted fans

To fit Model No.	3138.../3139.../3140...
Material	Chemical fibres
Width in. (mm)	10.4 (264)
Height in. (mm)	3.7 (95)
Depth in. (mm)	0.67 (17)
Filter class to DIN EN 779	G3
Packs of	12 pc(s)
<b>Model No.</b>	<b>3174.100</b>



## EC speed control

### Control unit for EC fan-and-filter units

Temperature-dependent speed control for EC fan-and-filter units to reduce noise and save energy. The function of the fan can also be monitored.

#### Functions:

- Activation and monitoring of up to 4 EC fan-and-filter units
- For mounting on a 35 mm support rail EN 50 022
- External temperature sensor to record the actual temperature
- Status LED to display the operating status
- Alarm relay for reporting overtemperature, fan defect, cable break and sensor failure

#### Supply includes:

- NTC sensor, length 1.80 m

To fit Model No.	3240.500/3241.500/ 3243.500/3244.500/ 3245.XXX/3140.500/ 3140.510
Rated operating voltage V	100 - 250
Setting range	41°F...+131°F +5°C...+55°C
<b>Model No.</b>	<b>3235.440</b>



## EC speed control

### Sensor for speed control

NTC sensor for temperature-dependent speed control of EC fan-and-filter units to reduce noise and save energy. Activation and power supply via an EC fan-and-filter unit.

#### Technical specifications:

- Control characteristic: fixed setpoint at 35°C, with linear control range between +35°C (maximum speed 100%) and +20°C (minimum speed 10%)

#### Protection category IP to IEC 60 529:

- IP 40

#### Supply includes:

- External sensor with connection cable (length 3 m)

To fit Model No.	3240.500/3241.500/ 3243.500/3244.500/ 3245.XXX/3140.500/ 3140.510
Rated operating voltage V	100 - 250
Setting range	41°F...+131°F +5°C...+55°C
<b>Model No.</b>	<b>3235.440</b>



## Digital enclosure internal temperature display and thermostat

For installation in the enclosure door or wall.

#### Technical specifications:

- Three-digit, 7-segment display
- Option of switching between °C/°F
- Includes 1800 mm long NTC sensor
- Two relay outputs as change-over contact and normally open contact (max. contact load 230 V, 6 A)
- Freely selectable switching difference

Rated operating voltage V, ~, Hz	100 - 230, 1~, 50/60 24 - 60 (DC)
Installation depth in (mm)	3.94 (100)
Approvals	UR
Setting range	41°F...+131°F +5°C...+55°C
Operating temperature range	41°F...+131°F +5°C...+55°C
<b>Model No.</b>	<b>3114.200</b>

# Accessories

## Enclosure internal thermostat

Especially suitable for controlling fan-and-filter units, heaters and heat exchangers, this thermostat can also be used as a signal generator for monitoring the enclosure internal temperature.

### Benefits:

- Time-saving connection technique using a terminal strip with a screw connection from the outside.
- Flexible mounting on a vertical or horizontal 35 mm support rail to EN 50 022, and snap fastening in the TS/SE enclosure section or on the mounting plate using the supplied adaptor

### Technical specifications:

- Bi-metal controller as a temperature-sensitive element with thermal feedback.
- Contact population: Single-pole change-over contact as a quick-break contact.

- Permissible contact load: Category 5 – 3 (heating) AC 10 (4) A (inductive load at  $\cos \Phi = 0.6$ ) / category 5 – 4 (cooling) AC 5 (4) A (inductive load at  $\cos \Phi = 0.6$ ) / DC = max. 30 W
- Switching difference: approx. 1 K  $\pm$  0.8 K

### Color:

- RAL 7035

Width in (mm)	2.80 (71)
Height in (mm)	2.80 (71)
Depth in (mm)	0.14 (33.5)
Rated operating voltage V, ~	24
	48 - 60
	115, 1~
	230, 1~
	24 (DC)
Setting range	41°F...+140°F (+5°C...+60°C)
	<b>Model No.</b>



## Hygrostat

The hygrostat switches on the heater and/or fan when a preset relative humidity in the enclosure is exceeded. In this way, the relative humidity is raised above the dew point, and condensation on assemblies or electronic components is avoided.

### Benefits:

- Time-saving connection technique using a terminal strip with a screw connection from the outside.
- Flexible mounting on a vertical or horizontal 35 mm support rail to EN 50 022, and snap fastening in the TS/SE enclosure section or on the mounting plate using the supplied adaptor

### Technical specifications:

- Contact population: Single-pole change-over contact as a quick-break contact.

- Permissible contact load: AC ~ 5 (0.2) A (inductive load at  $\cos \Phi = 0.6$ ) / DC = max. 20 W
- Setting range: 50 – 100% relative humidity
- Switching difference: approx. 4%

### Color:

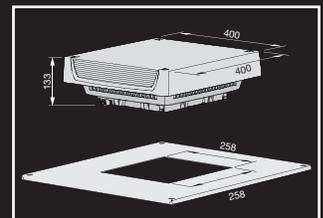
- RAL 7035

Width in (mm)	2.80 (71)
Height in (mm)	2.80 (71)
Depth in (mm)	0.14 (33.5)
Rated operating voltage V, ~	24 - 230, 1~
	12 - 75 (DC)
Setting range	41°F...+140°F (+5°C...+60°C)
	<b>Model No.</b>



## Conversion table for roof-mounted fans

Air throughput, unimpeded air flow			323 cfm (500 m³/h)	530 cfm (800 m³/h)	589 cfm (1000 m³/h)
without fan					
<b>new</b>	<b>3138.000</b>		–	–	–
old	8801.380	3148.007	–	–	–
230 V					
<b>new</b>	–		<b>3139.100</b>	<b>3140.100</b>	<b>3140.500</b>
old	–		3149.007	3149.420	3149.820
115 V					
<b>new</b>	–		<b>3139.110</b>	<b>3140.110</b>	<b>3140.510</b>
old	–		3169.007	3149.410	3149.810
400 V					
<b>new</b>	–		–	<b>3140.140</b>	–
old	–		3149.440	3149.840	–
Spare filter mats					
<b>new</b>	<b>3174.100</b>				
old	–	3174.000	3174.000	3174.000	3174.000



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- IT Infrastructure
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