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Faster – better – everywhere.

▶ # Rittal roof-mounted fans – Efficiency on top

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Climate control/Roof-mounted fans

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 centres. 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^2 production space worldwide
- 58 subsidiaries
- Around 90 warehouse facilities with more than 180,000 pallet locations and over 260,000 m^2 storage space worldwide

IT INFRASTRUCTURE   SOFTWARE & SERVICES

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Roof-mounted fans
One system for all sizes

Simply top

- Just one mounting cut-out for all output categories (258 x 258 mm)
- Optimum efficiency, thanks to sophisticated air routing with minimal pressure losses
- Innovative clamping attachment ensures a high protection category

ENCLOSURES   POWER DISTRIBUTION   CLIMATE CONTROL

FRIEDHELM **LOH** GROUP

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Roof-mounted fans

Easy locking with innovative clamping attachment

Simple to fit and maintain

- Innovative clamping attachment supports flexible locking optionally 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, thanks to a sophisticated labyrinth system and high-quality foamed-in seal
- International approvals and permits

Large output range with high efficiency

- Passive variant without fan for natural convection
- Air throughput range from 500 – 1,000 m³/h
- At an air throughput of 1,000 m³/h, EC fans ensure maximum energy efficiency

Roof-mounted fan, roof vent

Accessories for climate control Page 10

Colour:
– 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

Approvals:
– UR
– cUR
– CSA

Further technical information:
Available on the Internet

Air throughput, unimpeded air flow 500 – 873 m³/h

Model No.	Packs of	3138.000	3139.100	3139.110	3140.100	3140.110	3140.140	Page
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	
Air throughput, unimpeded air flow (without filter mats) m³/h		–	500 / 525	500 / 525	873 / 965	873 / 965	863 / 942	
Air throughput, unimpeded air flow (with filter mats) m³/h		–	417 / 446	417 / 446	725 / 759	725 / 759	700 / 749	
Rated current A		–	0.22 / 0.27	0.43 / 0.55	0.43 / 0.56	0.88 / 1.17	0.17 / 0.19	
Pre-fuse A		–	6	6	6	6	–	
Motor circuit-breaker A		–	–	–	–	–	6.3...10	
Power consumption W		–	50 / 62	49 / 62	98 / 130	101 / 135	90 / 122	
Width mm		400	400	400	400	400	400	
Height mm		133	133	133	133	133	133	
Depth mm		400	400	400	400	400	400	
Max. installation depth mm		27.5	34.6	34.6	34.6	34.6	34.6	
Required mounting cut-out mm		258 x 258	258 x 258	258 x 258	258 x 258	258 x 258	258 x 258	
Fan		without fan motor	Radial, capacitor motor	Radial, capacitor motor	Radial, capacitor motor	Radial, capacitor motor	Radial, rotary current motor	
Operating temperature range		-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	
Storage temperature range		-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	
Accessories								
Outlet filter	1 pc(s).	3243.200	3243.200	3243.200	3243.200	3243.200	3243.200	Cat. 34, 372
Spare filter mats	12 pc(s).	3174.100	3174.100	3174.100	3174.100	3174.100	3174.100	10
Enclosure internal thermostat	1 pc(s).	–	3110.000	3110.000	3110.000	3110.000	3110.000	11
Digital enclosure internal temperature display and thermostat	1 pc(s).	–	3114.200	3114.200	3114.200	3114.200	3114.200	11
Hygrostat	1 pc(s).	–	3118.000	3118.000	3118.000	3118.000	3118.000	11

Roof-mounted fans

Energy-efficient and powerful design of the roof-mounted fans. The fan may be activated via the control interface with tacho signal output integrated as standard, and monitoring of the fan speed and function is supported.

Colour:
– 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

Approvals:
– UR
– cUR
– CSA

Further technical information:
Available on the Internet

Air throughput, unimpeded air flow 1069 m^3/h, with EC technology

Model No.	Packs of	3140.500	3140.510	Page
Control interface		■	■	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	
Air throughput, unimpeded air flow (without filter mats) m^3/h		**1069 / 1069**	**1069 / 1069**	
Air throughput, unimpeded air flow (with filter mats) m^3/h		**841 / 841**	**841 / 841**	
Rated current A		0.99 / 0.99	1.45 / 1.45	
Pre-fuse A		6	6	
Power consumption W		129 / 129	106 / 106	
Width mm		400	400	
Height mm		133	133	
Depth mm		400	400	
Max. installation depth mm		34.6	34.6	
Required mounting cut-out mm		258 x 258	258 x 258	
Fan		Radial, EC motor	Radial, EC motor	
Operating temperature range		-30°C...+55°C	-30°C...+55°C	
Storage temperature range		-40°C...+70°C	-40°C...+70°C	
Accessories				
Outlet filter	1 pc(s).	3243.200	3243.200	Cat. 34, 372
Spare filter mats	12 pc(s).	3174.100	3174.100	10
EC speed control	1 pc(s).	3235.440	3235.440	10
EC speed control	1 pc(s).	3235.450	3235.450	10
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	11
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	11
Hygrostat	1 pc(s).	3118.000	3118.000	11

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 mm	264
Height mm	95
Depth mm	17
Filter class to DIN EN 779	G3
Packs of	12 pc(s).
Model No.	**3174.100**

EC speed control
Control unit for EC fan
Temperature-dependent speed control for EC fans 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	+5°C...+55°C
Model No.	**3235.440**

EC speed control
Sensor for speed control
NTC sensor for temperature-dependent speed control of EC fans 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	10 - 12 (DC)
Operating temperature range	-25°C...+80°C
Model No.	**3235.450**

Enclosure internal thermostat

Particularly suitable for controlling fans, 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 φ = 0.6)/ category 5- 4 (cooling): AC 5 (4) A (inductive load at cos φ = 0.6)/DC = max. 30 W
– Switching difference: approx. 1 K ± 0.8 K

Colour:
– RAL 7035

Width mm	71
Height mm	71
Depth mm	33.5
Rated operating voltage V, ~	24 48 - 60 115, 1~ 230, 1~ 24 (DC) 48 - 60 (DC)
Setting range	+5°C...+60°C
Model No.	**3110.000**

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 reduced, 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 φ = 0.6)/DC = max. 20 W
– Setting range: 50 – 100% relative humidity
– Switching difference: approx. 4%

Colour:
– RAL 7035

Width mm	71
Height mm	71
Depth mm	33.5
Rated operating voltage V, ~	24 - 230, 1~ 12 - 75 (DC)
Model No.	**3118.000**

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 mm	100
Approvals	UR
Setting range	+5°C...+55°C
Operating temperature range	+0°C...+50°C
Model No.	**3114.200**

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▶ **Easy to convert**

Conversion table for roof-mounted fans

Air through-put, unim-peded air flow			500 m³/h		800 m³/h	1000 m³/h
without fan						
new	**3138.000**		**–**		**–**	**–**
old	8801.380	3148.007	–		–	–
230 V						
new		**–**	**3139.100**		**3140.100**	**3140.500**
old		–	3149.007	3149.420	3149.820	–
115 V						
new		**–**	**3139.110**		**3140.110**	**3140.510**
old		–	3169.007	3149.410	3149.810	–
400 V						
new		**–**	**–**		**3140.140**	**–**
old		–	3149.440		3149.840	–
Spare filter mats						
new			**3174.100**			
old		–	3174.000	3174.000	3174.000	–
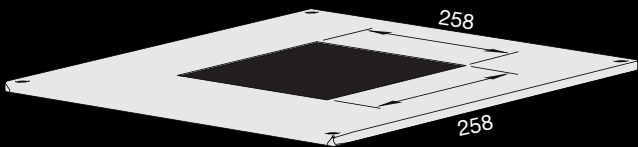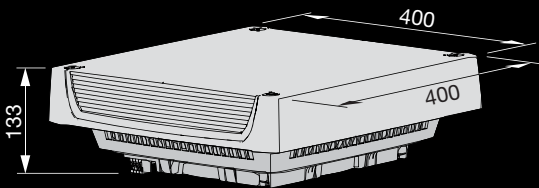
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