

**ebm-papst Mulfingen GmbH & Co. KGaA & Co. KG**  
Bachmühle 2 · D-74673 Mulfingen  
Phone +49 7938 81-0  
info1@de.fansco.com  
www.fansco.com

Limited partnership · Headquarters Mulfingen  
Amtsgericht (court of registration) Stuttgart · HRA 590344  
  
General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen  
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Item                     | 8300100923        |            |
| Motor                    | E09001-28         |            |
| Phase                    |                   | 1~         |
| Nominal voltage          | VAC               | 230        |
| Nominal voltage range    | VAC               | 200 .. 240 |
| Frequency                | Hz                | 50/60      |
| Method of obtaining data |                   | ml         |
| Speed (rpm)              | min <sup>-1</sup> | 1050       |
| Power consumption        | W                 | 370        |
| Current draw             | A                 | 2.3        |
| Min. ambient temperature | °C                | -25        |
| Max. ambient temperature | °C                | 55         |

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change

Data according to Commission Regulation (EU) 327/2011 (prEN 17166)

|                                   |   | Actual | Req. 2015 |                               |                   |      |
|-----------------------------------|---|--------|-----------|-------------------------------|-------------------|------|
| 01 Overall efficiency $\eta_{es}$ | % | 66.5   | 46.9      | 09 Power consumption $P_{ed}$ | kW                | 0.36 |
| 02 Measurement category           |   | A      |           | 09 Air flow $q_v$             | m <sup>3</sup> /h | 4055 |
| 03 Efficiency category            |   | Static |           | 09 Pressure increase $p_{fs}$ | Pa                | 196  |
| 04 Efficiency grade N             |   | 81.6   | 62        | 10 Speed (rpm) n              | min <sup>-1</sup> | 1050 |
| 05 Variable speed drive           |   | Yes    |           | 11 Specific ratio*            |                   | 1.00 |

Data obtained at optimum efficiency level.  
The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).  
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.  
The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

\* Specific ratio =  $1 + p_b / 100\,000\text{ Pa}$  LU-224856

8300100923  
VBS0500CSPFS

# EC centrifugal fan - RadiPac

backward-curved, single-intake

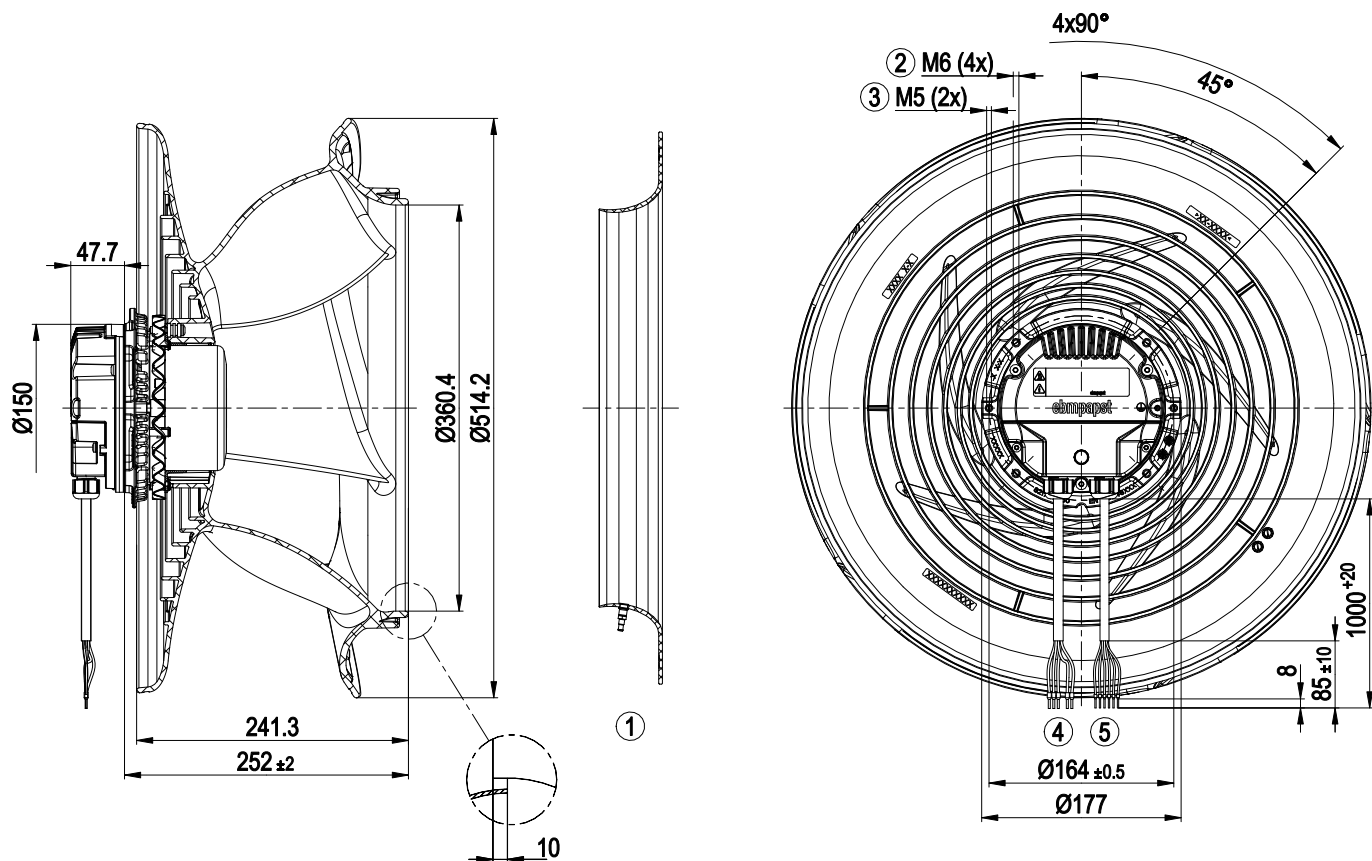
## Technical description

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                                                                     | 7.5 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Size                                                                       | 500 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Motor size                                                                 | 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Rotor surface                                                              | Painted black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Electronics housing material                                               | Die-cast aluminum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Impeller material                                                          | PP plastic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Number of blades                                                           | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Direction of rotation                                                      | Clockwise, viewed toward rotor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Degree of protection                                                       | IP55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Insulation class                                                           | "F"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Moisture (F) / Environmental (H) protection class                          | H1 = Moist – occasional or constantly high level of humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Max. permitted ambient temp. for motor (transport/storage)                 | +80 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Min. permitted ambient temp. for motor (transport/storage)                 | -40 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Installation position                                                      | Shaft horizontal or rotor on bottom; rotor on top on request                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Condensation drainage holes                                                | On rotor side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Mode                                                                       | S1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Motor bearing                                                              | Ball bearing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Technical features                                                         | <ul style="list-style-type: none"><li>- Output 10 VDC, max. 10 mA</li><li>- Operation and alarm display with LED</li><li>- Locked-rotor detection</li><li>- Speed control</li><li>- External 15-30 VDC input (parameterization)</li><li>- Alarm relay</li><li>- Configurable inputs/outputs (I/O)</li><li>- Power limiter</li><li>- MODBUS</li><li>- Motor current limitation</li><li>- PFC, passive</li><li>- RS-485 MODBUS-RTU</li><li>- Soft start</li><li>- Control interface with SELV potential safely disconnected from the mains</li><li>- Temperature derating</li><li>- Thermal overload protection for electronics/motor</li><li>- Line undervoltage / phase failure detection</li></ul> |
| Power Factor Correction (PFC)                                              | Passive                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | <= 3.5 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Motor protection                                                           | Electronic motor protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| With cable                                                                 | Lateral                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Protection class assignment                                                | I; If a protective earth is connected.<br>The built-in component has several local protection class assignments.<br>The final protection class is determined by the intended installation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Conformity with standards                                                  | EN 60335-1; EN 61800-5-1; CE; UKCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Approval                                                                   | CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

# EC centrifugal fan - RadiPac

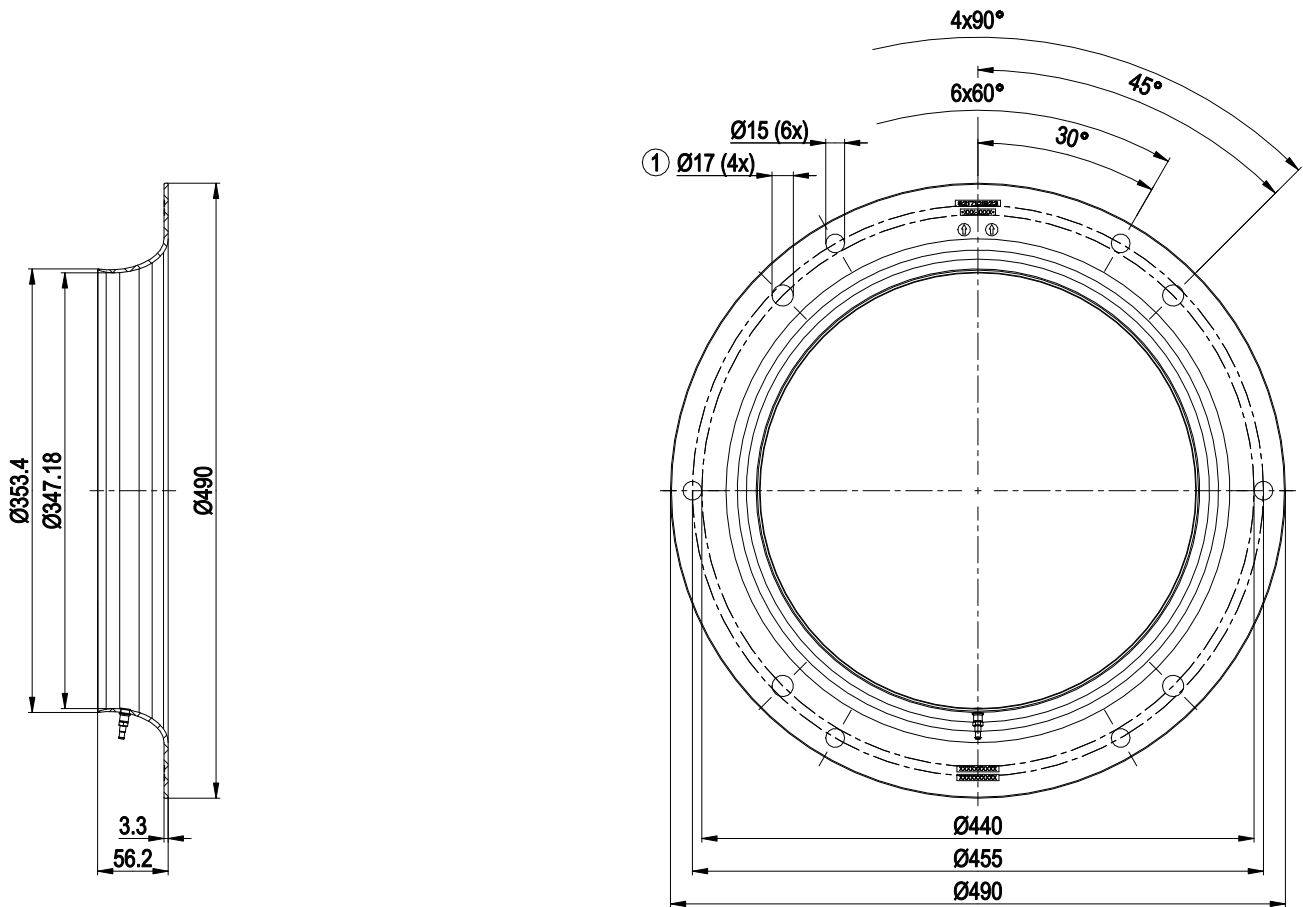
backward-curved, single-intake

## Product drawing



|   |                                                                                                             |
|---|-------------------------------------------------------------------------------------------------------------|
| 1 | Accessory part: Inlet ring 8217102238 with pressure tap (k-factor: 290) (not included in scope of delivery) |
| 2 | Max. clearance for screw 10 mm                                                                              |
| 3 | Max. clearance for screw 10 mm<br>The M5 tapped holes (2x) can be used to attach hoisting equipment.        |
| 4 | Supply line (PWR) PVC AWG18<br>5x wire-end ferrule                                                          |
| 5 | Control wire (CTRL) PVC AWG22<br>6x wire-end ferrule                                                        |

## Accessory part



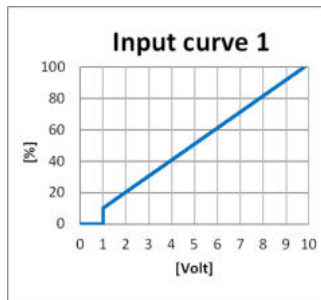
Inlet ring 8217102238 with pressure tap (k-factor: 290)

- |   |                                                                                                                                        |
|---|----------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Fastening holes for FlowGrid 35505-2-2957 (not included in scope of delivery) are provided and must be subsequently opened as required |
|---|----------------------------------------------------------------------------------------------------------------------------------------|

# EC centrifugal fan - RadiPac

backward-curved, single-intake

## Connection diagram

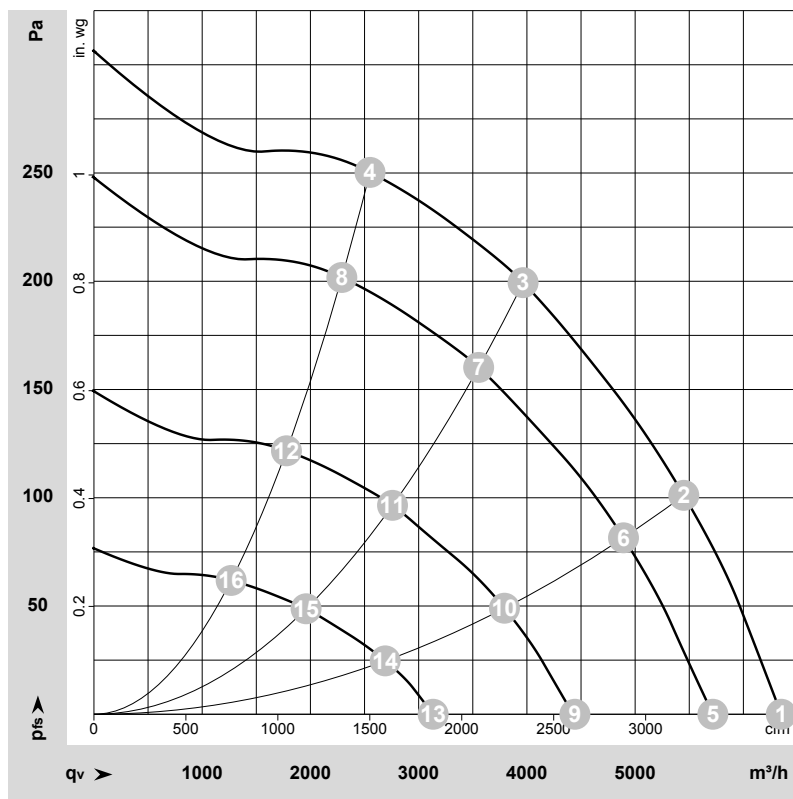


| No. | Conn. | Designation | Color        | Function/assignment                                                                                                                                                                                                                                            |
|-----|-------|-------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | PWR   | PE          | green/yellow | Protective earth                                                                                                                                                                                                                                               |
|     | PWR   | L           | black        | Power supply, phase, see nameplate for voltage range                                                                                                                                                                                                           |
|     | PWR   | N           | blue         | Power supply, neutral conductor, see nameplate for voltage range                                                                                                                                                                                               |
|     | PWR   | COM         | orange       | Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA, reinforced insulation on supply side and on control interface side                                                                                  |
|     | PWR   | NC          | orange       | Status relay, floating status contact, break for failure                                                                                                                                                                                                       |
|     | CTRL  | GND         | blue         | Reference ground for control interface, SELV                                                                                                                                                                                                                   |
|     | CTRL  | Vout        | red          | Voltage output 10 VDC +/-3%, I <sub>max</sub> =10 mA<br>Short-circuit-proof, power supply for external devices, SELV<br>alternative: 15-30 VDC input for parameterization via MODBUS without line voltage                                                      |
|     | CTRL  | IO1         | yellow       | Factory setting:<br>Analog input 0-10 V / PWM, R <sub>i</sub> =100 kΩ, function: set value<br>Characteristic curve parameterizable (see input characteristic curve "Input curve 1"), SELV<br>Function parameterizable (see table Optional interface functions) |
|     | CTRL  | IO2         | white        | Factory setting:<br>Open collector output, U <sub>max</sub> =50 VDC, I <sub>max</sub> =20 mA, function:Tacho output<br>1 pulse/revolution, SELV<br>Function parameterizable (see table Optional interface functions)                                           |
|     | CTRL  | RSA         | gray         | RS-485 interface for MODBUS RSA, SELV<br>dielectric strength to MODBUS RSB +/-14 V,<br>dielectric strength to GND +/-7 V                                                                                                                                       |
|     | CTRL  | RSB         | brown        | RS-485 interface for MODBUS RSB, SELV<br>dielectric strength to MODBUS RSA +/-14 V,<br>dielectric strength to GND +/-7 V                                                                                                                                       |
|     |       | LED         |              | green: status = good, ready for operation<br>orange: status = warning<br>red: status = failure                                                                                                                                                                 |

Terminal/plug assignment

|             |                                   |                                                            |  |                      |  |                                                                                          |  |                                           |  |                                                           |  |            |  |                                |  |            |  |                              |  |            |  |                                      |  |                         |  |                              |  |            |  |                         |  |          |  |                  |  |          |  |                                |  |          |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
|-------------|-----------------------------------|------------------------------------------------------------|--|----------------------|--|------------------------------------------------------------------------------------------|--|-------------------------------------------|--|-----------------------------------------------------------|--|------------|--|--------------------------------|--|------------|--|------------------------------|--|------------|--|--------------------------------------|--|-------------------------|--|------------------------------|--|------------|--|-------------------------|--|----------|--|------------------|--|----------|--|--------------------------------|--|----------|--|-----------------------------------|--|----------|--|--------------------------------------|--|----------|--|------------------------|--|------|--|
| Medium (M2) |                                   | Functions and parameter description<br>MODBUS V7.1         |  | configurable IO mode |  | electrical specification                                                                 |  | MODBUS Register for IO mode configuration |  | configurable IO functions: normal / inverse               |  | IO1        |  |                                |  |            |  |                              |  |            |  |                                      |  |                         |  |                              |  |            |  |                         |  |          |  |                  |  |          |  |                                |  |          |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
|             |                                   |                                                            |  |                      |  |                                                                                          |  |                                           |  |                                                           |  | IO1        |  |                                |  |            |  |                              |  |            |  |                                      |  |                         |  |                              |  |            |  |                         |  |          |  |                  |  |          |  |                                |  |          |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
| IO1         | Dim1 (high active): digital input | active: applied voltage 3.5 - 50 VDC                       |  | D158 [0]             |  | active: applied voltage 3.5 - 50 VDC                                                     |  | D158 [0]                                  |  | source: set value                                         |  | D101 [...] |  | switch: parameter set: #1 / #2 |  | D104 [...] |  | D12E [...]                   |  | D148 [...] |  | D16C [...]                           |  | D16A [...]              |  | D00C [1]                     |  | D638 [...] |  | selection direct via IO |  | D130 [4] |  | D61B             |  | D130 [0] |  | D130 [1]                       |  | D130 [2] |  | D130 [5]                          |  | D145     |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | not active: pin open or applied voltage < 1.5 VDC          |  | D158 [1]             |  | active: applied voltage < 1.5 VDC                                                        |  | D158 [1]                                  |  | source: input pulses autoaddressing                       |  | D130 [1]   |  | signal: tach out               |  | D130 [1]   |  | signal: alarm out            |  | D130 [1]   |  | signal: output pulses autoaddressing |  | D130 [1]                |  | signal: fan enable / disable |  | D130 [1]   |  | signal: diagnostics out |  | D130 [1] |  | signal: tach out |  | D130 [1] |  | signal: fan modulation level % |  | D130 [1] |  | signal: system modulation level % |  | D130 [1] |  | signal: remote control output 0-10 V |  | D130 [5] |  | signal: run monitoring |  | D145 |  |
|             |                                   | not active: pin open or applied voltage 3.5 - 50 VDC, SELV |  | D158 [2]             |  | RI = 100 kΩ, characteristic curve parameterizable, f <sub>PWM</sub> = 1 k - 10 kHz, SELV |  | D158 [2]                                  |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | not active: pin open or applied voltage 3.5 - 50 VDC, SELV |  | D158 [3]             |  | RI = 100 kΩ, characteristic curve parameterizable, f <sub>PWM</sub> = 1 k - 10 kHz, SELV |  | D158 [3]                                  |  | switch: control function: heating (pos.) / cooling (neg.) |  | D12E [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
| IO2         | Dim1 (active high): digital input | active: applied voltage 3.5 - 50 VDC                       |  | D159 [0]             |  | active: applied voltage < 1.5 VDC                                                        |  | D159 [0]                                  |  | source: set value                                         |  | D101 [...] |  | switch: parameter set: #1 / #2 |  | D104 [...] |  | D12E [...]                   |  | D148 [...] |  | D16C [...]                           |  | D16A [...]              |  | D00C [1]                     |  | D638 [...] |  | selection direct via IO |  | D130 [4] |  | D61B             |  | D130 [0] |  | D130 [1]                       |  | D130 [2] |  | D130 [5]                          |  | D145     |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | not active: pin open or applied voltage < 1.5 VDC, SELV    |  | D159 [2]             |  | RI = 100 kΩ, characteristic curve parameterizable, f <sub>PWM</sub> = 1 k - 10 kHz, SELV |  | D159 [2]                                  |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | Umax = 50 VDC, Imax = 20 mA, SELV                          |  | D159 [5]             |  | Umax = 50 VDC, Imax = 20 mA, SELV                                                        |  | D159 [5]                                  |  | switch: set value source                                  |  | D16C [...] |  | switch: fan enable / disable   |  | D16A [...] |  | D00C [1]                     |  | D638 [...] |  | D638 [...]                           |  | selection direct via IO |  | D130 [4]                     |  | D61B       |  | D130 [0]                |  | D130 [1] |  | D130 [2]         |  | D130 [5] |  | D145                           |  |          |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | Umax = 50 VDC, Imax = 20 mA, SELV                          |  | D159 [6]             |  | Umax = 50 VDC, Imax = 20 mA, SELV                                                        |  | D159 [6]                                  |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
| IO2         | Alarm out (open collector)        | Umax = 50 VDC, Imax = 20 mA, SELV                          |  | D159 [10]            |  | Umax = 50 VDC, Imax = 20 mA, SELV                                                        |  | D159 [10]                                 |  | source: set value                                         |  | D101 [...] |  | switch: parameter set: #1 / #2 |  | D104 [...] |  | D12E [...]                   |  | D148 [...] |  | D16C [...]                           |  | D16A [...]              |  | D00C [1]                     |  | D638 [...] |  | selection direct via IO |  | D130 [4] |  | D61B             |  | D130 [0] |  | D130 [1]                       |  | D130 [2] |  | D130 [5]                          |  | D145     |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | Umax = 50 VDC, Imax = 20 mA, SELV                          |  | D159 [11]            |  | Umax = 50 VDC, Imax = 20 mA, SELV                                                        |  | D159 [11]                                 |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | Umax = 50 VDC, Imax = 20 mA, SELV                          |  | D159 [12]            |  | Umax = 50 VDC, Imax = 20 mA, SELV                                                        |  | D159 [12]                                 |  | switch: control function: heating (pos.) / cooling (neg.) |  | D12E [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | Umax = 50 VDC, Imax = 20 mA, SELV                          |  | D159 [12]            |  | Umax = 50 VDC, Imax = 20 mA, SELV                                                        |  | D159 [12]                                 |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
| RSA         | RSB                               | MODBUS RTU, parameter specification V7.1, SELV             |  | D159 [12]            |  | Umax = 50 VDC, Imax = 20 mA, SELV                                                        |  | D159 [12]                                 |  | source: set value                                         |  | D101 [...] |  | switch: parameter set: #1 / #2 |  | D104 [...] |  | D12E [...]                   |  | D148 [...] |  | D16C [...]                           |  | D16A [...]              |  | D00C [1]                     |  | D638 [...] |  | selection direct via IO |  | D130 [4] |  | D61B             |  | D130 [0] |  | D130 [1]                       |  | D130 [2] |  | D130 [5]                          |  | D145     |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | MODBUS RTU, parameter specification V7.1, SELV             |  | D159 [12]            |  | Umax = 50 VDC, Imax = 20 mA, SELV                                                        |  | D159 [12]                                 |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
| COM         | NC                                | Relay                                                      |  | 250 VAC / 2 A (AC1)  |  | 250 VAC / 2 A (AC1)                                                                      |  | 250 VAC / 2 A (AC1)                       |  | source: set value                                         |  | D101 [...] |  | switch: parameter set: #1 / #2 |  | D104 [...] |  | D12E [...]                   |  | D148 [...] |  | D16C [...]                           |  | D16A [...]              |  | D00C [1]                     |  | D638 [...] |  | selection direct via IO |  | D130 [4] |  | D61B             |  | D130 [0] |  | D130 [1]                       |  | D130 [2] |  | D130 [5]                          |  | D145     |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | Relay                                                      |  | 250 VAC / 2 A (AC1)  |  | 250 VAC / 2 A (AC1)                                                                      |  | 250 VAC / 2 A (AC1)                       |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
| Vout        | Voltage output                    | Voltage 10 VDC, SELV                                       |  | Voltage 10 VDC, SELV |  | Voltage 10 VDC, SELV                                                                     |  | Voltage 10 VDC, SELV                      |  | source: set value                                         |  | D101 [...] |  | switch: parameter set: #1 / #2 |  | D104 [...] |  | D12E [...]                   |  | D148 [...] |  | D16C [...]                           |  | D16A [...]              |  | D00C [1]                     |  | D638 [...] |  | selection direct via IO |  | D130 [4] |  | D61B             |  | D130 [0] |  | D130 [1]                       |  | D130 [2] |  | D130 [5]                          |  | D145     |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | Voltage 10 VDC, SELV                                       |  | Voltage 10 VDC, SELV |  | Voltage 10 VDC, SELV                                                                     |  | Voltage 10 VDC, SELV                      |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
| Vout        | Voltage output                    | 15 - 30 VDC                                                |  | 15 - 30 VDC          |  | 15 - 30 VDC                                                                              |  | 15 - 30 VDC                               |  | source: set value                                         |  | D101 [...] |  | switch: parameter set: #1 / #2 |  | D104 [...] |  | D12E [...]                   |  | D148 [...] |  | D16C [...]                           |  | D16A [...]              |  | D00C [1]                     |  | D638 [...] |  | selection direct via IO |  | D130 [4] |  | D61B             |  | D130 [0] |  | D130 [1]                       |  | D130 [2] |  | D130 [5]                          |  | D145     |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | 15 - 30 VDC                                                |  | 15 - 30 VDC          |  | 15 - 30 VDC                                                                              |  | 15 - 30 VDC                               |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |
| Vout        | Voltage output                    | without line voltage                                       |  | without line voltage |  | without line voltage                                                                     |  | without line voltage                      |  | source: set value                                         |  | D101 [...] |  | switch: parameter set: #1 / #2 |  | D104 [...] |  | D12E [...]                   |  | D148 [...] |  | D16C [...]                           |  | D16A [...]              |  | D00C [1]                     |  | D638 [...] |  | selection direct via IO |  | D130 [4] |  | D61B             |  | D130 [0] |  | D130 [1]                       |  | D130 [2] |  | D130 [5]                          |  | D145     |  |                                      |  |          |  |                        |  |      |  |
|             |                                   | without line voltage                                       |  | without line voltage |  | without line voltage                                                                     |  | without line voltage                      |  | switch: direction of rotation: cw / ccw                   |  | D148 [...] |  | switch: set value source       |  | D16C [...] |  | switch: fan enable / disable |  | D16A [...] |  | D00C [1]                             |  | D638 [...]              |  | selection direct via IO      |  | D130 [4]   |  | D61B                    |  | D130 [0] |  | D130 [1]         |  | D130 [2] |  | D130 [5]                       |  | D145     |  |                                   |  |          |  |                                      |  |          |  |                        |  |      |  |

## Curves: Air performance 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-224856-1  
Date: 2023-01-19  
Nozzle: 8217101923

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Measured values

|    | Wired | U   | f  | n                 | P <sub>e</sub> | I    | LpA <sub>in</sub> | LwA <sub>in</sub> | LwA <sub>out</sub> | LwA | q <sub>V</sub> | P <sub>fs</sub> | q <sub>V</sub> | P <sub>fs</sub> |
|----|-------|-----|----|-------------------|----------------|------|-------------------|-------------------|--------------------|-----|----------------|-----------------|----------------|-----------------|
|    |       | V   | Hz | min <sup>-1</sup> | W              | A    | dB(A)             | dB(A)             | dB(A)              | dB  | m³/h           | Pa              | cfm            | in. wg          |
| 1  | 1~    | 230 | 50 | 1050              | 234            | 1.51 | 65                | 73                | 77                 | 78  | 6350           | 0               | 3735           | 0.00            |
| 2  | 1~    | 230 | 50 | 1050              | 317            | 1.99 | 60                | 68                | 71                 | 73  | 5450           | 100             | 3205           | 0.40            |
| 3  | 1~    | 230 | 50 | 1050              | 370            | 2.30 | 54                | 61                | 66                 | 67  | 3965           | 200             | 2335           | 0.80            |
| 4  | 1~    | 230 | 50 | 1050              | 343            | 2.14 | 54                | 61                | 66                 | 67  | 2550           | 250             | 1500           | 1.00            |
| 5  | 1~    | 230 | 50 | 945               | 171            | 1.13 | 62                | 71                | 74                 | 76  | 5720           | 0               | 3365           | 0.00            |
| 6  | 1~    | 230 | 50 | 945               | 229            | 1.48 | 57                | 65                | 69                 | 71  | 4890           | 82              | 2880           | 0.33            |
| 7  | 1~    | 230 | 50 | 945               | 263            | 1.68 | 51                | 59                | 64                 | 65  | 3555           | 160             | 2090           | 0.64            |
| 8  | 1~    | 230 | 50 | 940               | 246            | 1.58 | 52                | 58                | 63                 | 64  | 2290           | 202             | 1350           | 0.81            |
| 9  | 1~    | 230 | 50 | 730               | 84             | 0.60 | 58                | 66                | 70                 | 71  | 4445           | 0               | 2615           | 0.00            |
| 10 | 1~    | 230 | 50 | 735               | 109            | 0.76 | 52                | 60                | 64                 | 65  | 3795           | 49              | 2230           | 0.20            |
| 11 | 1~    | 230 | 50 | 735               | 123            | 0.85 | 47                | 53                | 58                 | 59  | 2760           | 97              | 1625           | 0.39            |
| 12 | 1~    | 230 | 50 | 735               | 116            | 0.80 | 46                | 52                | 57                 | 58  | 1780           | 122             | 1045           | 0.49            |
| 13 | 1~    | 230 | 50 | 525               | 34             | 0.27 | 48                | 56                | 63                 | 64  | 3135           | 0               | 1845           | 0.00            |
| 14 | 1~    | 230 | 50 | 525               | 43             | 0.33 | 42                | 50                | 57                 | 58  | 2690           | 25              | 1585           | 0.10            |
| 15 | 1~    | 230 | 50 | 525               | 48             | 0.36 | 38                | 46                | 53                 | 53  | 1960           | 49              | 1155           | 0.20            |
| 16 | 1~    | 230 | 50 | 525               | 45             | 0.35 | 37                | 44                | 49                 | 51  | 1270           | 62              | 745            | 0.25            |

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>V</sub> = Air flow · P<sub>fs</sub> = Pressure increase