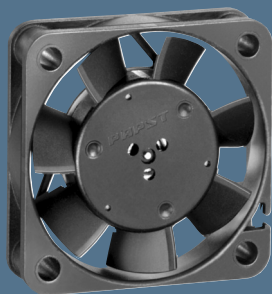


max. 9 m³/h

DC axial fans

Series 400 F 40 x 40 x 10 mm



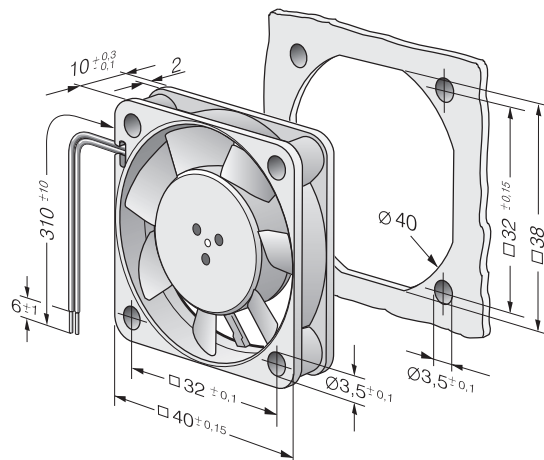
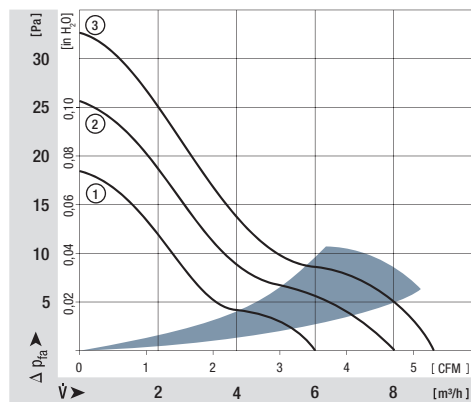
Highlights:

- Compact fan with low power consumption.
- Some models suitable for use at high ambient temperatures.

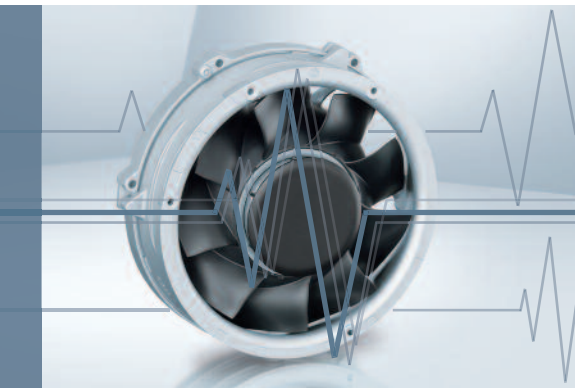
General characteristics:

- Material: fibreglass-reinforced plastic. impeller PA, housing PBT.
- Fully integrated electronic commutation.
- Protected against reverse polarity and locking.
- Connection via single strands AWG 28, TR 64. Bared and tin-plated.
- Air exhaust over struts. Direction of rotation counter-clockwise, seen on rotor.
- Mass: 17 g.

| Nominal data | | Air flow | Air flow | Nominal voltage | Voltage range | Sound pressure level | Sound power level | Sinter sleeve bearings Ball bearings | Power input | Nominal speed | Temperature range | Service life L ₁₀ (20 °C) ebm-papst Standard | Service life (60 °C) ebm-papst Standard | Life expectancy L ₁₀ ^Δ (40 °C), see P. 15 | Curve | Specials |
|--|-------------------|----------|----------|-----------------|---------------|----------------------|-------------------|---|-------------|---------------|-------------------|--|--|--|-------|----------|
| Type | m ³ /h | CFM | VDC | VDC | dB(A) | Bel(A) | □ / ■ | Watts | RPM | °C | Hours | Hours | Hours | P. 110 | | |
| 405 F | 8 | 4,7 | 5 | 4,5...5,5 | 22,1 | 4,4 | □ | 0,7 | 5 400 | -20...+70 | 45 000 / 15 000 | 47 500 | 2 | /2 | | |
| 405 FH | 9 | 5,3 | 5 | 4,5...5,5 | 26,0 | 4,6 | □ | 0,9 | 6 000 | -20...+70 | 45 000 / 15 000 | 47 500 | 3 | /2 | | |
| 412 FM | 6 | 3,5 | 12 | 10...14 | 16,5 | 3,8 | □ | 0,6 | 4 300 | -20...+70 | 45 000 / 15 000 | 47 500 | 1 | | | |
| 412 F | 8 | 4,7 | 12 | 10...14 | 22,1 | 4,4 | □ | 0,7 | 5 400 | -20...+70 | 45 000 / 15 000 | 47 500 | 2 | | | |
| 412 FH | 9 | 5,3 | 12 | 10...14 | 26,0 | 4,6 | □ | 0,8 | 6 000 | -20...+70 | 45 000 / 15 000 | 47 500 | 3 | /2 | | |
| 414 F | 8 | 4,7 | 24 | 20...28 | 22,1 | 4,4 | □ | 0,8 | 5 400 | -20...+70 | 45 000 / 15 000 | 47 500 | 2 | /2 | | |
| 414 FH | 9 | 5,3 | 24 | 21,6...26,4 | 26,0 | 4,4 | □ | 0,9 | 6 000 | -20...+70 | 45 000 / 15 000 | 47 500 | 3 | | | |
| Models with temperature range up to +85 °C. | | | | | | | | | | | | | | | | |
| 412 FM-074 | 6 | 3,5 | 12 | 10...14 | 16,5 | 3,8 | □ | 0,4 | 4 300 | -20...+85 | 45 000 / 15 000 | 47 500 | 1 | /2 | | |
| 412 F-130 | 8 | 4,7 | 12 | 10...14 | 22,1 | 4,4 | □ | 0,6 | 5 400 | -20...+85 | 45 000 / 15 000 | 47 500 | 2 | | | |
| 412 FH-132 | 9 | 5,3 | 12 | 10...14 | 26,0 | 4,6 | □ | 0,7 | 6 000 | -20...+85 | 45 000 / 15 000 | 47 500 | 3 | /2 | | |

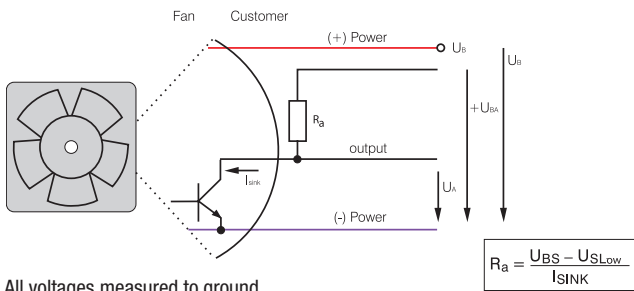


Speed signal /2



- Speed-proportional, square-wave signal for external monitoring of the fan motor speed
- 2, 3, or 6 pulses per revolution
- Open-collector signal output
- Extremely wide operating voltage range
- Easy adaptation to user interface
- Connection via separate cable
- The sensor signal also serves as a major comparison variable for setting and maintaining the setpoint speed for interactive or controlled cooling with one or more interconnected fans.

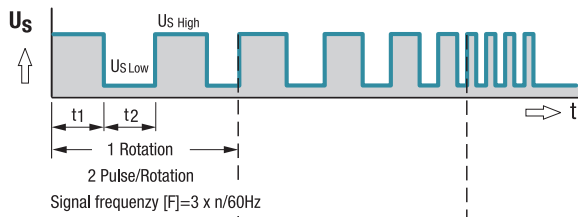
Electrical hookup



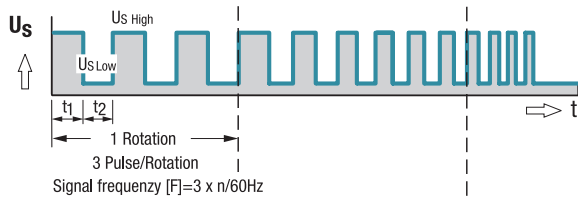
All voltages measured to ground.
External load resistor R_a / U_S / U_{BS} required.

Signal output voltage

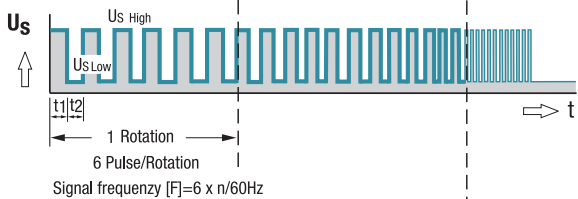
Standard signal for all models (exceptions see below)



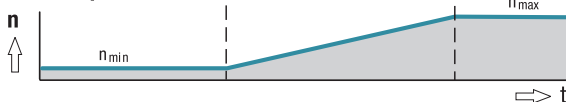
For multi options control input and 4100 NH7 and NH8



All TD Fans e.g. 6300 TD



Fan speed



| Signal data | Speed signal | Condition: | Speed signal | Condition: | Tach operating | Admissible sink current | Pulses per revolution | Fan description |
|----------------------|-------------------|------------|--------------------|----------------------|----------------------------|-------------------------|-----------------------|-----------------|
| | $U_{S\text{Low}}$ | I_{SINK} | $U_{S\text{High}}$ | $I_{S\text{source}}$ | voltage $U_{BS\text{max}}$ | $I_{SINK\text{max}}$ | | Basic type |
| Type | VDC | mA | VDC | mA | VDC | mA | Page | |
| 250 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 2 | 2 | 31 |
| 400 F | ≤ 0.4 | 1 | ≤ 30 | 0 | 30 | 2 | 2 | 32 |
| 400 | ≤ 0.4 | 1 | ≤ 30 | 0 | 30 | 2 | 2 | 33 |
| 420 J | ≤ 0.4 | 2 | ≤ 15 | 0 | 15 | 4 | 2 | 34 |
| 500 F | ≤ 0.4 | 1 | ≤ 30 | 0 | 30 | 2 | 2 | 35 |
| 600 F | ≤ 0.4 | 1 | ≤ 30 | 0 | 30 | 2 | 2 | 36 |
| 620 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 37 |
| 630 U | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 38 |
| 600 N | ≤ 0.4 | 2 | ≤ 28 | 0 | 28 | 4 | 2 | 39 |
| 600 J | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 41 |
| 700 F | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 42 |
| 8450 | ≤ 0.4 | 2 | ≤ 28 | 0 | 28 | 4 | 2 | 43 |
| 8400 N | ≤ 0.4 | 2 | ≤ 28 | 0 | 28 | 4 | 2 | 44 |
| 8400 N VARIOFAN | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 45 |
| 8300 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 46 |
| 8200 J | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 47 |
| 3400 N | ≤ 0.4 | 2 | ≤ 28 | 0 | 28 | 4 | 2 | 48 |
| 3400 N VARIOFAN | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 49 |
| 3300 N | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 50 |
| 3212 J / 3214 J | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 51 |
| 3218 J | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 4 | 2 | 51 |
| 3250 J | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 4 | 3 | 52 |
| 4412 F / 4414 F | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 53 |
| 4418 F | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 4 | 2 | 53 |
| 4400 FN | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 55 |
| 4312 / 4314 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 56 |
| 4318 | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 4 | 2 | 56 |
| 4312 / 4314 VARIOFAN | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 57 |
| 4318 VARIOFAN | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 4 | 2 | 57 |
| 4400 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 58/59 |
| 4100 N | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 60 |
| 4100 NHH...NH6 | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 10 | 2 | 61 |
| 4100 NH7...NH8 | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 3 | 62 |
| DV 4100 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 63 |
| 5200 N | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 64 |
| DV 5200 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 65 |

Subject to change

Available on request:

- Electrically isolated speed signal circuit
- Varying voltage potentials for power and logic circuit

| Signal data | | Speed signal $U_{S\text{ Low}}$ | Condition: I_{sink} | Speed signal $U_{S\text{ High}}$ | Condition: I_{source} | Tach operating voltage $U_{BS\text{ max}}$ | Admissible sink current $I_{\text{sink max}}$ | Pulses per revolution | Fan description Basic type |
|-----------------|-------|------------------------------------|------------------------------|-------------------------------------|--------------------------------|---|--|-----------------------|-------------------------------|
| Type | VDC | mA | VDC | mA | VDC | mA | Page | | |
| 5112 N | ≤ 0.4 | 2 | ≤ 15 | 0 | 5 | 20 | 2 | 66 | |
| 5114 N / 5118 N | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 2 | 66 | |
| 5300 | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 4 | 2 | 67 | |
| 5300 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 68 | |
| 7112 N / 7118 N | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 2 | 69 | |
| 7114 N | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 20 | 2 | 69 | |
| 7200 N | ≤ 0.4 | 2 | ≤ 15 | 0 | 15 | 20 | 2 | 70 | |
| 6400 | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 2 | 71 | |
| 6300 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 75 | |
| 6300 N | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 76 | |
| 6300 NTD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 77 | |
| 6300 | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 2 | 78 | |
| DV 6300 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 80 | |
| 2200 FTD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 81 | |
| RL 48 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 97 | |
| RL 65 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 98 | |
| RL 90 N | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 99 | |
| RLF 100 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 100 | |
| RG 90 N | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 101 | |
| RG 125 N | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 102 | |
| RG 140 N | ≤ 0.4 | 3 | ≤ 60 | 0 | 60 | 4 | 2 | 103 | |
| RG 160 N | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 20 | 2 | 104 | |
| RG 160 NTD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 105 | |
| RG 190 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 106 | |
| RG 220 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 107 | |
| RG 225 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 108 | |
| RET 97 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 109 | |
| REF 100 | ≤ 0.4 | 2 | ≤ 30 | 0 | 30 | 4 | 2 | 110 | |
| RER 120 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 112 | |
| RER 133 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 117 | |
| RER 160 NTD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 119 | |
| REF 175 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 120 | |
| RER 175 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 121 | |
| RER 190 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 122 | |
| RER 220 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 128 | |
| RER 225 TD | ≤ 0.4 | 2 | ≤ 60 | 0 | 60 | 20 | 6 | 129 | |

Subject to change

Note:

Fans that come with these fan specials could have variations with respect to the temperature range, voltage range, and power consumption compared to standard fans without specials.