

max. 20 m<sup>3</sup>/h

# DC axial fans

Series 500 F 50 x 50 x 15 mm



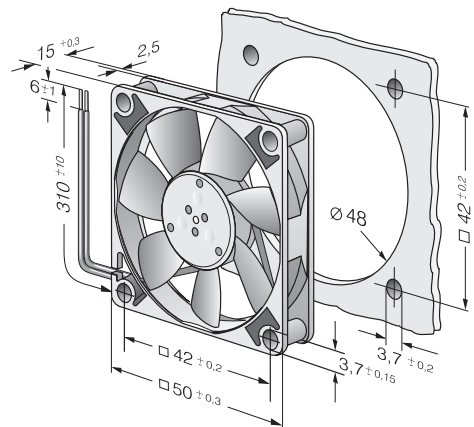
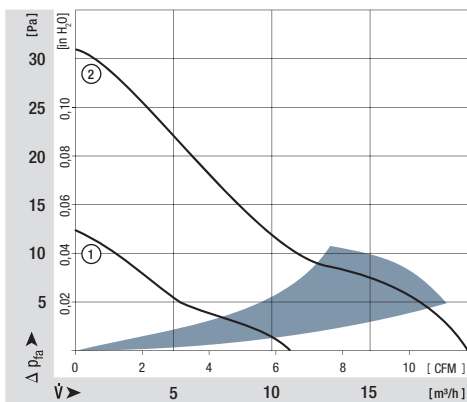
### Highlights:

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

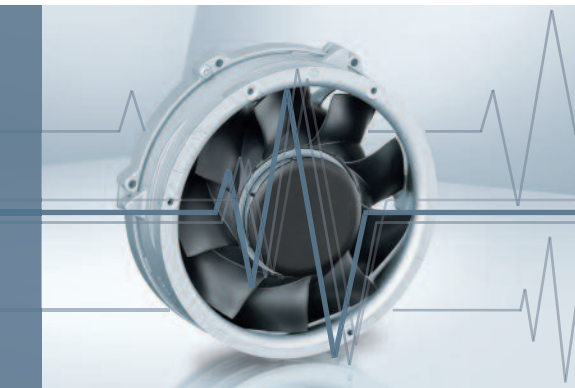
### General characteristics:

- 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: 25 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 <sub>10</sub> (20 °C) ebm-papst Standard	Service life L <sub>10</sub> (60 °C) ebm-papst Standard	Life expectancy L <sub>10</sub> Δ (40 °C) see P. 15	Curve	Specials
Type		m <sup>3</sup> /h	CFM	VDC	VDC	dB(A)	Bel(A)	□ / ■	Watts	RPM	°C	Hours	Hours	Hours	P. 110	
512 F		20	11,8	12	10,8...13,2	30	4,5	□	1,0	5 000	-20...+70	50 000 / 20 000	62 500	2	/2	
514 F		20	11,8	24	21,6...26,4	30	4,5	□	1,0	5 000	-20...+70	50 000 / 20 000	62 500	2	/2	
Model with temperature range up to +85 °C.																
512 FL-547		11	6,5	12	11,5...13,2	12	3,7	□	0,4	3 000	-20...+85	50 000 / 20 000	65 500	1		
512 F-532		20	11,8	12	10,8...13,2	30	4,5	□	0,9	5 000	-20...+85	50 000 / 20 000	65 500	2		

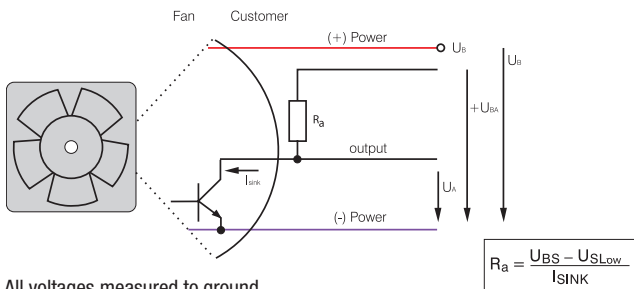


# Speed signal /2



- 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.

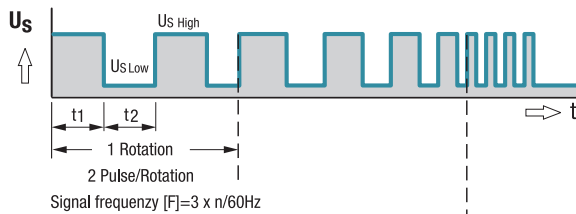
## Electrical hookup



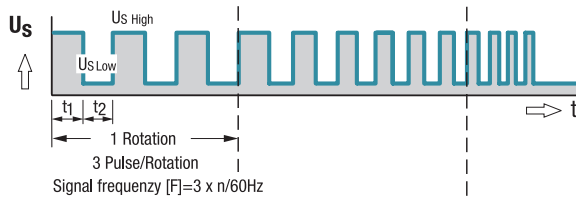
All voltages measured to ground.  
External load resistor  $R_a$  /  $U_S$  /  $U_{BS}$  required.

## Signal output voltage

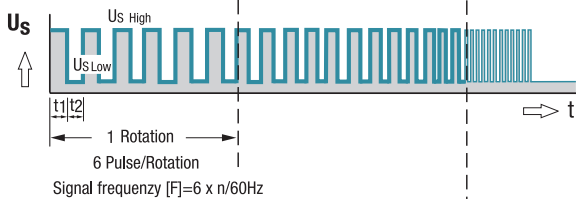
Standard signal for all models (exceptions see below)



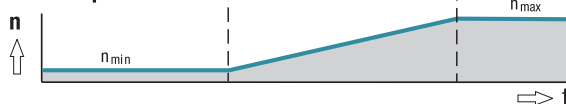
For multi options control input and 4100 NH7 and NH8



All TD Fans e.g. 6300 TD



## Fan speed



Signal data Type	Speed signal $U_{S_{Low}}$		Condition: $I_{sink}$		Speed signal $U_{S_{High}}$		Condition: $I_{source}$		Tach operating voltage $U_{BS_{max}}$		Admissible sink current $I_{sink_{max}}$		Pulses per revolution		Fan description Basic type	
	VDC	mA	VDC	mA	VDC	mA	VDC	mA	mA	mA						
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: $I_{\text{sink}}$	Speed signal $U_{S\text{ High}}$	Condition: $I_{\text{source}}$	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.