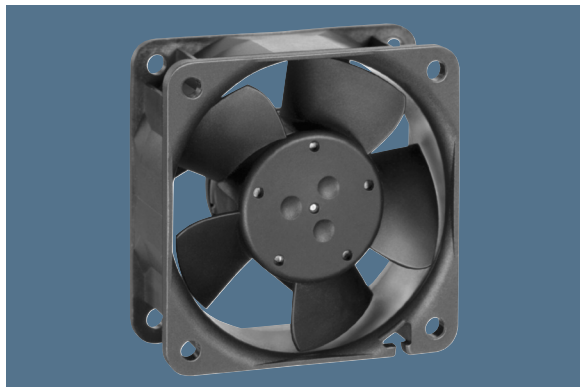


max. 56 m<sup>3</sup>/h

# DC axial fans

Series 600 N 60 x 60 x 25 mm



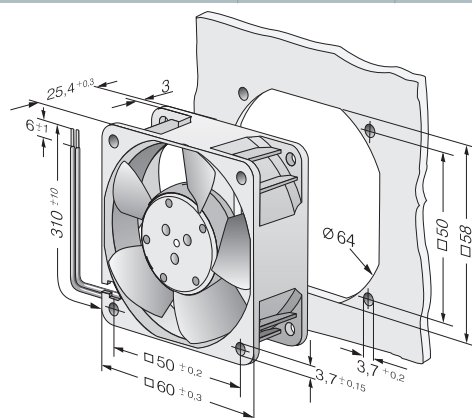
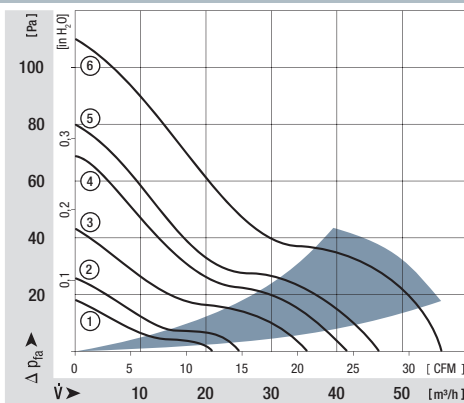
### Highlights:

- Ball bearings and sleeve bearings available.
- Some models suitable for use at high ambient temperatures up to 85 °C.

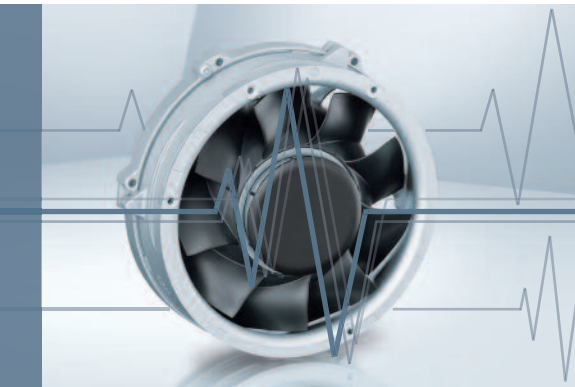
### General characteristics:

- Material: fibreglass-reinforced plastic. Impeller PA, housing PBT.
- Fully integrated electronic commutation.
- Protected against reverse polarity and locking.
- Connection via single strands AWG 22, TR 64. Bared and tin-plated.
- Air exhaust over struts. Direction of rotation clockwise, seen on rotor.
- Mass: 66 g.

Nominal data	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinterc sleeve bearings Ball bearings	Power input	Nominal speed	Temperature range	Service life L <sub>10</sub> (40 °C) ebm-papst Standard	Service life L <sub>10</sub> (T <sub>max</sub> ) ebm-papst Standard	Life expectancy L <sub>10</sub> Δ (40 °C) see p. 15	Curve	Specials
	Type	m <sup>3</sup> /h													
612 NGL	21	12,4	12	8...15	16	3,6	□	0,6	2 500	-20...+85	80 000 / 27 500	160 000	160 000	1	
612 NLE	21	12,4	12	8...15	16	3,6	■	0,4	2 500	-20...+85	80 000 / 27 500	160 000	160 000	1	
612 NGMLE	25	14,7	12	8...15	19	3,9	□	0,7	3 000	-20...+80	80 000 / 32 500	160 000	160 000	2	
612 NMLE	25	14,7	12	8...15	19	3,9	■	0,4	3 000	-20...+85	80 000 / 27 500	160 000	160 000	2	
612 NGME	35	20,6	12	8...15	28	4,6	□	1,2	4 100	-20...+75	80 000 / 35 000	160 000	160 000	3	
612 NME	35	20,6	12	8...15	28	4,6	■	0,8	4 100	-20...+75	80 000 / 35 000	160 000	160 000	3	/2
612 NN	42	24,7	12	8...15	35	5,0	■	1,6	5 100	-20...+70	70 000 / 35 000	140 000	140 000	4	
612 NH	46	27,1	12	8...15	37	5,3	■	2,0	5 600	-20...+70	70 000 / 35 000	140 000	140 000	5	/2
612 NHH-118	56	33,0	12	8...15	41	5,7	■	2,9	6 800	-20...+70	60 000 / 30 000	120 000	120 000	6	/2
614 NGL	21	12,4	24	18...28	16	3,6	□	1,0	2 500	-20...+70	80 000 / 40 000	160 000	160 000	1	
614 NL	21	12,4	24	18...28	16	3,6	■	0,9	2 500	-20...+70	80 000 / 40 000	160 000	160 000	1	/2
614 NGML	25	14,7	24	18...28	19	3,9	□	1,2	3 000	-20...+70	80 000 / 40 000	160 000	160 000	2	/2
614 NML	25	14,7	24	18...28	19	3,9	■	1,0	3 000	-20...+70	80 000 / 40 000	160 000	160 000	2	
614 NGM	35	20,6	24	18...28	28	4,6	□	1,7	4 100	-20...+70	80 000 / 40 000	160 000	160 000	3	/12
614 NM	35	20,6	24	18...28	28	4,6	■	1,4	4 100	-20...+70	80 000 / 40 000	160 000	160 000	3	/2/39
614 NN	42	24,7	24	18...28	35	5,0	■	1,8	5 100	-20...+70	70 000 / 35 000	140 000	140 000	4	
614 NH	46	27,1	24	18...26	37	5,3	■	2,1	5 600	-20...+70	70 000 / 35 000	140 000	140 000	5	/2
614 NHH	56	33,0	24	18...26	41	5,7	■	3,0	6 850	-20...+70	60 000 / 30 000	120 000	120 000	6	
614 NHH-119	56	33,0	24	18...28	41	5,7	■	3,0	6 850	-20...+70	60 000 / 30 000	120 000	120 000	6	/2
618 NM	35	20,6	48	36...56	28	4,6	■	1,4	4 100	-20...+70	80 000 / 40 000	160 000	160 000	3	
618 NN	42	24,7	48	36...56	35	5,0	■	2,1	5 100	-20...+65	70 000 / 40 000	140 000	140 000	4	/2/12/39

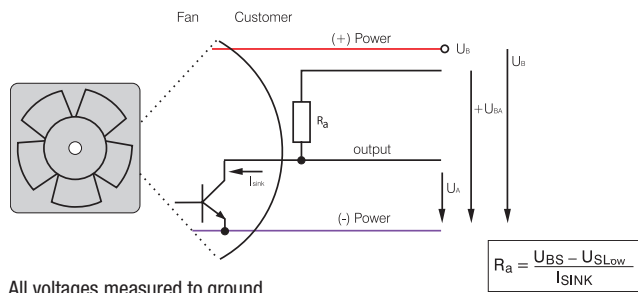


# Speed signal /2



- 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

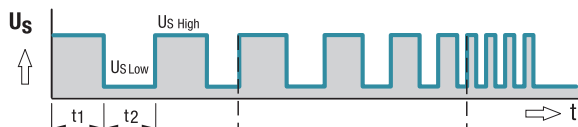


All voltages measured to ground.  
External load resistor  $R_a / U_S / U_{BS}$  required.

$$R_a = \frac{U_{BS} - U_{S\text{Low}}}{I_{\text{SINK}}}$$

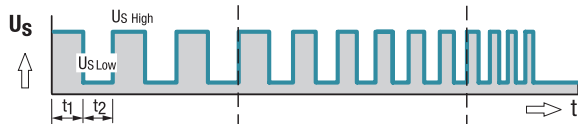
## Signal output voltage

Standard signal for all models (exceptions see below)



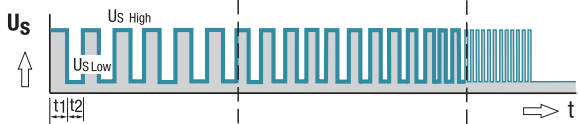
Signal frequency  $[F]=3 \times n/60\text{Hz}$

For multi options control input and 4100 NH7 and NH8



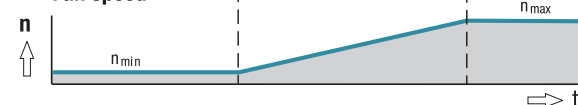
Signal frequency  $[F]=3 \times n/60\text{Hz}$

All TD Fans e.g. 6300 TD



Signal frequency  $[F]=6 \times n/60\text{Hz}$

## Fan speed



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	
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 $U_{S, Low}$	Condition: $I_{Sink}$	Speed signal $U_{S, High}$	Condition: $I_{Source}$	Tach operating voltage $U_{GS, max.}$	Admissible sink current $I_{Sink, max.}$	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.

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