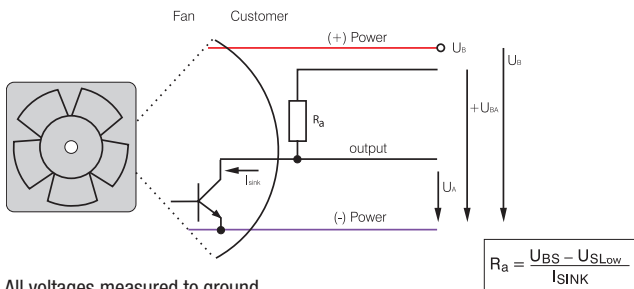


# Speed signal /2

- 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.



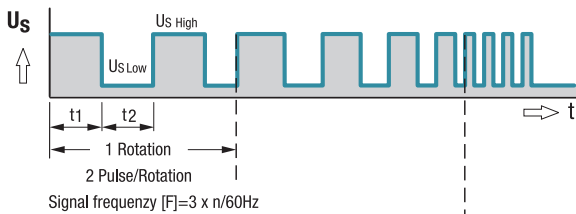
## Electrical hookup



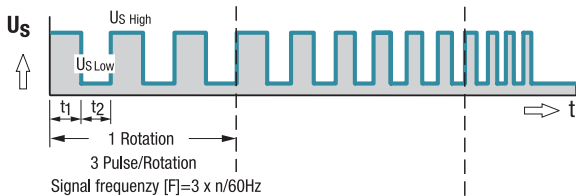
All voltages measured to ground.  
External load resistor  $R_a$  /  $U_S$  /  $U_{BS}$  required.

### Signal output voltage

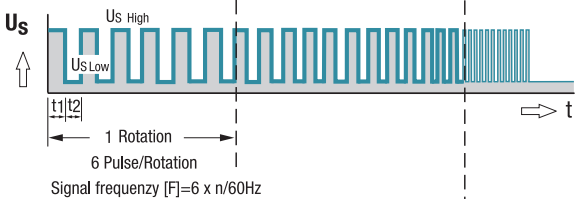
Standard signal for all models (exceptions see below)



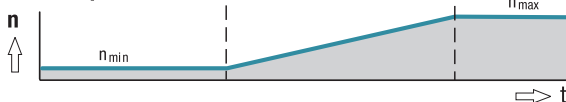
For multi options control input and 4100 NH7 and NH8



All TD Fans e.g. 6300 TD



### Fan speed



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

Subject to change

**Available on request:**

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

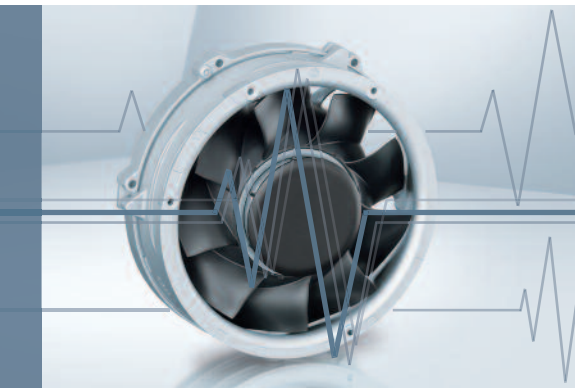
Signal data		Speed signal $U_{S\text{ Low}}$	Condition: $I_{\text{sink}}$	Speed signal $U_{S\text{ High}}$	Condition: $I_{\text{source}}$	Tach operating voltage $U_{BS\text{ max}}$	Admissible sink current $I_{\text{sink max}}$	Pulses per revolution	Fan description Basic type
Type	VDC	mA	VDC	mA	VDC	mA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

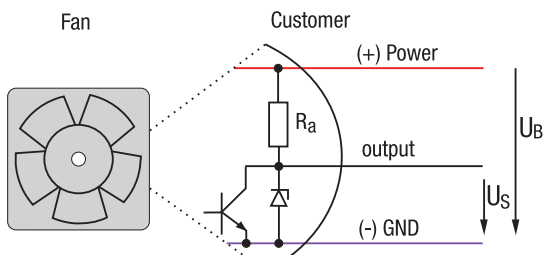
Fans that come with these fan specials could have variations with respect to the temperature range, voltage range, and power consumption compared to standard fans without specials.

# Speed signal /12



- Speed-proportional, square-wave signal for external monitoring of the fan motor speed
- 2, 3, or 6 pulses per revolution
- TTL-compatible
- Integrated pull-up resistor
- 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.

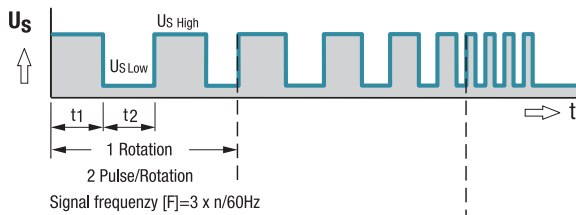
## Electrical hookup



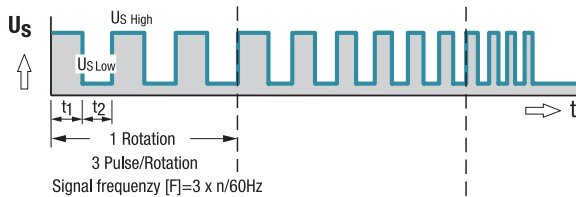
All voltages measured to ground.

## Signal output voltage

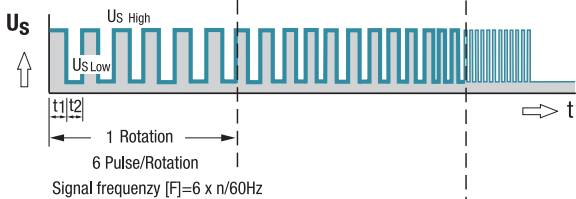
Standard signal for all models (exceptions see below)



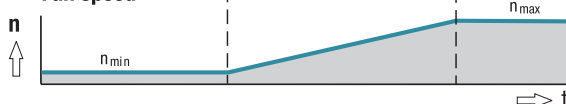
For multi options control input and 4100 NH7 and NH8



All TD Fans e.g. 6300 TD



## Fan speed



Signal data	Speed signal $U_{S\text{Low}}$	Condition: $I_{\text{sink}}$	Speed signal $U_{S\text{High}}$	Condition: $I_{\text{source}}$	Admissible sink current $I_{\text{sink max}}$	Fan description Basic type
Type	VDC	mA	VDC	mA	mA	Page
614 N/12 GM	$\leq 0.4$	1	2.5–5.5	1	1	39
618 N/12 N	$\leq 0.4$	1	2.5–5.5	1	1	39
8412 N/12 H	$\leq 0.4$	1	2.5–5.5	1	1	44
4412 F/12 GM	$\leq 0.4$	1	2.5–5.5	1	1	53
4418 F/12	$\leq 0.4$	1	2.5–5.5	1	1	53
4312 /12 M	$\leq 0.4$	1	2.5–5.5	1	1	56
4314 /12	$\leq 0.4$	1	2.5–5.5	1	1	56
4182 N/12 X	$\leq 0.4$	1	2.5–5.5	1	1	60

Subject to change

## Note:

With these fan options, deviations in regard to temperature range, voltage range and power consumption are possible compared with standard fan data.

**Available on request:**

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

Signal data		Speed signal U <sub>S</sub> Low	Condition: I <sub>sink</sub>	Speed signal U <sub>S</sub> High	Condition: I <sub>source</sub>	Admissible sink current I <sub>sink</sub> max.	Fan description Basic type
Type	VDC	mA	VDC	mA	mA	Page	
7214 N/12	≤0.4	2	2.5–5.5	1	≤20	70	
6424/12 H	≤0.4	2	2.5–5.5	1	≤20	71	
DV 6424/12	≤0.4	2	4.5–5.25	2	≤12	73	
DV 6448/12	≤0.4	2	4.5–5.25	2	≤12	73	
RG 125-19/12 N/12	≤0.4	1	2.5–5.5	1	≤1	103	
RG 160-28/12 N/12	≤0.4	2	2.5–5.5	1	≤5	104	
RG 160-28/18 N/12	≤0.4	2	2.5–5.5	1	≤20	104	
RER 125-19/12 N/12	≤0.4	1	2.5–5.5	1	≤1	116	
RER 160-28/12 N/12	≤0.4	2	2.5–5.5	1	≤5	118	
RER 160-28/18 N/12	≤0.4	2	2.5–5.5	1	≤20	118	

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.