

R3G310-AN12-30/F01

# EC centrifugal fan

backward curved, single inlet



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## Nominal data

Type	R3G310-AN12-30/F01	
Motor	M3G084-FA	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Type of data definition		fa
Speed	min <sup>-1</sup>	2000
Power input	W	190
Current draw	A	4.0
Min. ambient temperature	°C	- 25
Max. ambient temperature	°C	+60

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations



## Technical features

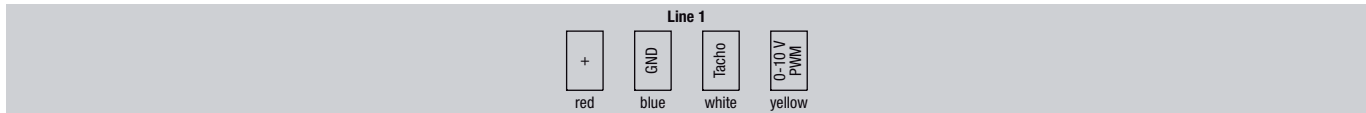
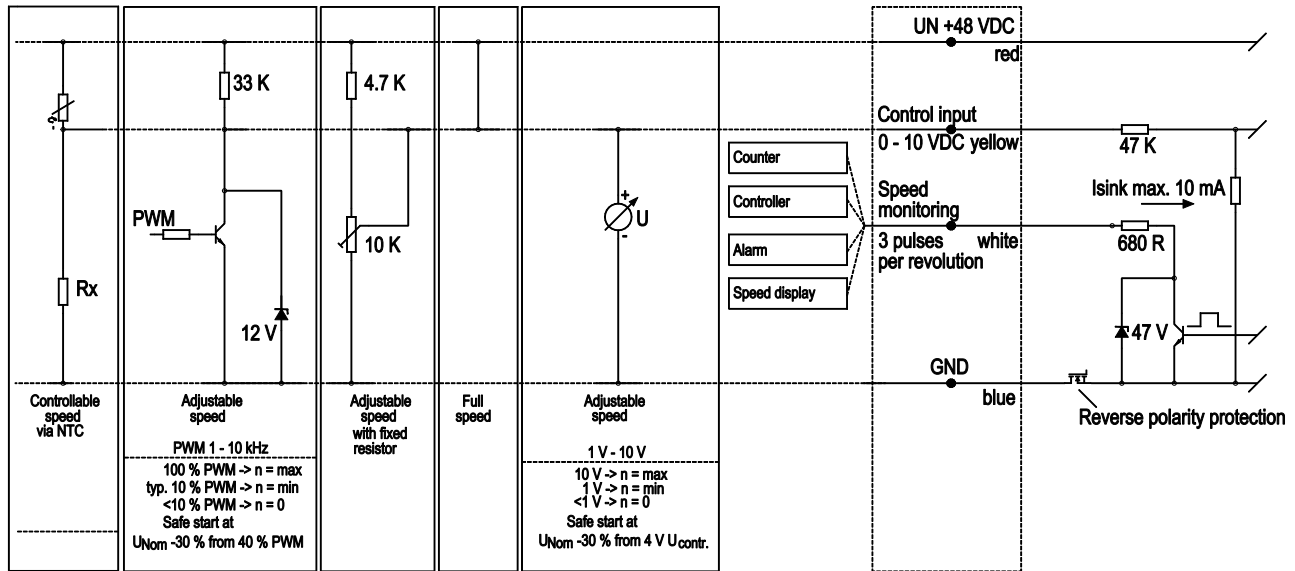
<b>Mass</b>	4.4kg
<b>Size</b>	310 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of electronics housing</b>	Die-cast aluminium
<b>Material of impeller</b>	Aluminium sheet, rivet
<b>Number of blades</b>	6
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 42
<b>Insulation class</b>	"B"
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	-40 °C
<b>Mounting position</b>	Any
<b>Condensate discharge holes</b>	None
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limit</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Over-temperature protected motor</li> </ul>
<b>EMC interference immunity</b>	Acc. to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	Acc. to EN 55022 (Class B)
<b>Motor protection</b>	Thermal overload protector (TOP) wired internally
<b>Cable exit</b>	Variable
<b>Product conforming to standard</b>	EN 60950-1
<b>Approval</b>	UL; CCC



## Connection screen

### Customer circuit

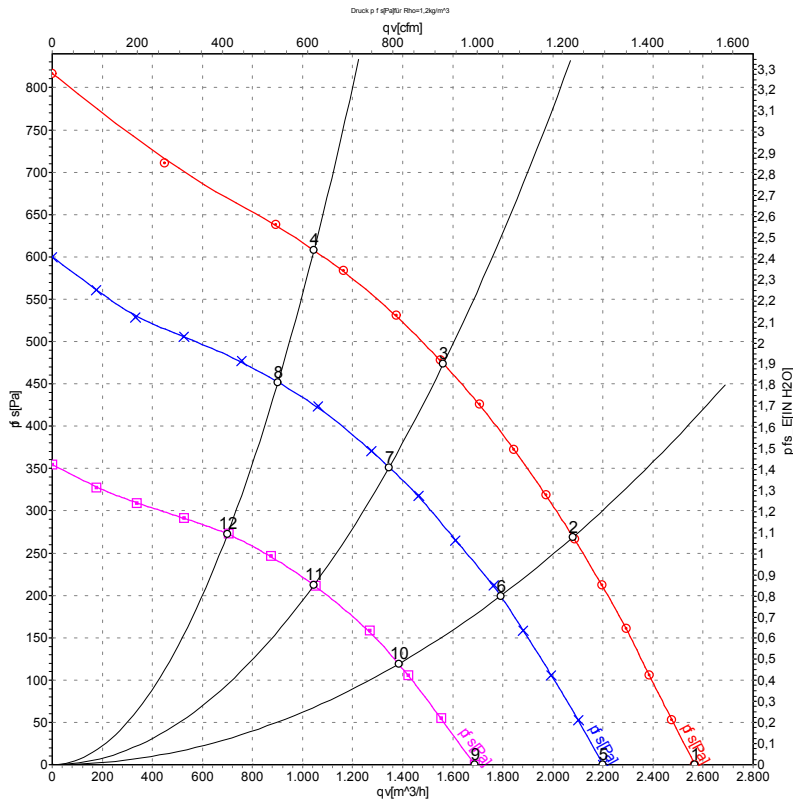
Notes on various control possibilities and their applications



Signal	Colour	Assignment / function
+	red	maximum ripple $\pm 3.5\%$
GND	blue	GND
Tacho	white	Tach output: 3 pulses per revolution
0-10 V / PWM	yellow	Control input



## Charts: Air flow



Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## Measured values

	U	n	P <sub>ed</sub>	I	qv	p <sub>fs</sub>
	V	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	57	2370	263	4.65	2570	0
2	57	2325	317	5.61	2080	269
3	57	2295	347	6.15	1560	474
4	57	2310	335	5.93	1045	608
5	48	2030	171	3.59	2200	0
6	48	2000	204	4.29	1790	200
7	48	1980	225	4.72	1345	350
8	48	1990	217	4.55	900	450
9	36	1570	84	2.35	1690	0
10	36	1555	101	2.83	1385	119
11	36	1545	110	3.07	1045	213
12	36	1550	106	2.96	700	274

U = Supply voltage · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

