



Product Change Notice - EOL

Date:	July 9, 2018
Overview:	Discontinuation of PN W2G110-AP39-92 (EOL)
Reason for change:	Low volume
Affected Part No(s):	W2G110-AP39-92
Possible Alternative(s):	4118N/12-190 <ul style="list-style-type: none">• Please see comparison chart and datasheets below for differences• Please note that this is a possible alternative, not a direct replacement; we will be happy to review any specific applications to assist in selecting the most appropriate solution for that application
Last Time Buy Deadline:	August 15, 2018
Attachments:	Comparison chart and datasheets for the W2G110-AP39-92 and 4118N/12-190
Comments:	N/A

Form No: 1274	Quality Record - No	Page 1 of 1
Rev. – Orig, Released 08/28/14	Retention Period – 1 year	Dept. Owner – Sales/Marketing



Part Number	Bearing	Airflow Direction	Voltage	Power (W)	Speed	Max CFM	Max Pressure	Tachometer Characteristics	Permitted Ambient Temp
W2G110-AP39-92	Ball	Intake over struts	48V	5.6W	3030rpm	97cfm	.36" H2O	TTL, 1 PPR	-25 to 60°C
4118N/12-190	Ball	Intake over struts	48V	4.5W	3200rpm	99cfm	.40" H2O	TTL, 1 PPR	-10 to 70°C

EC axial fan

sickle-shaped blades (S series), single-intake

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Nominal data

Type	W2G110-AP39-92	
Motor	M2G045-AI	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	3030
Power consumption	W	5.6
Current draw	A	0.13
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



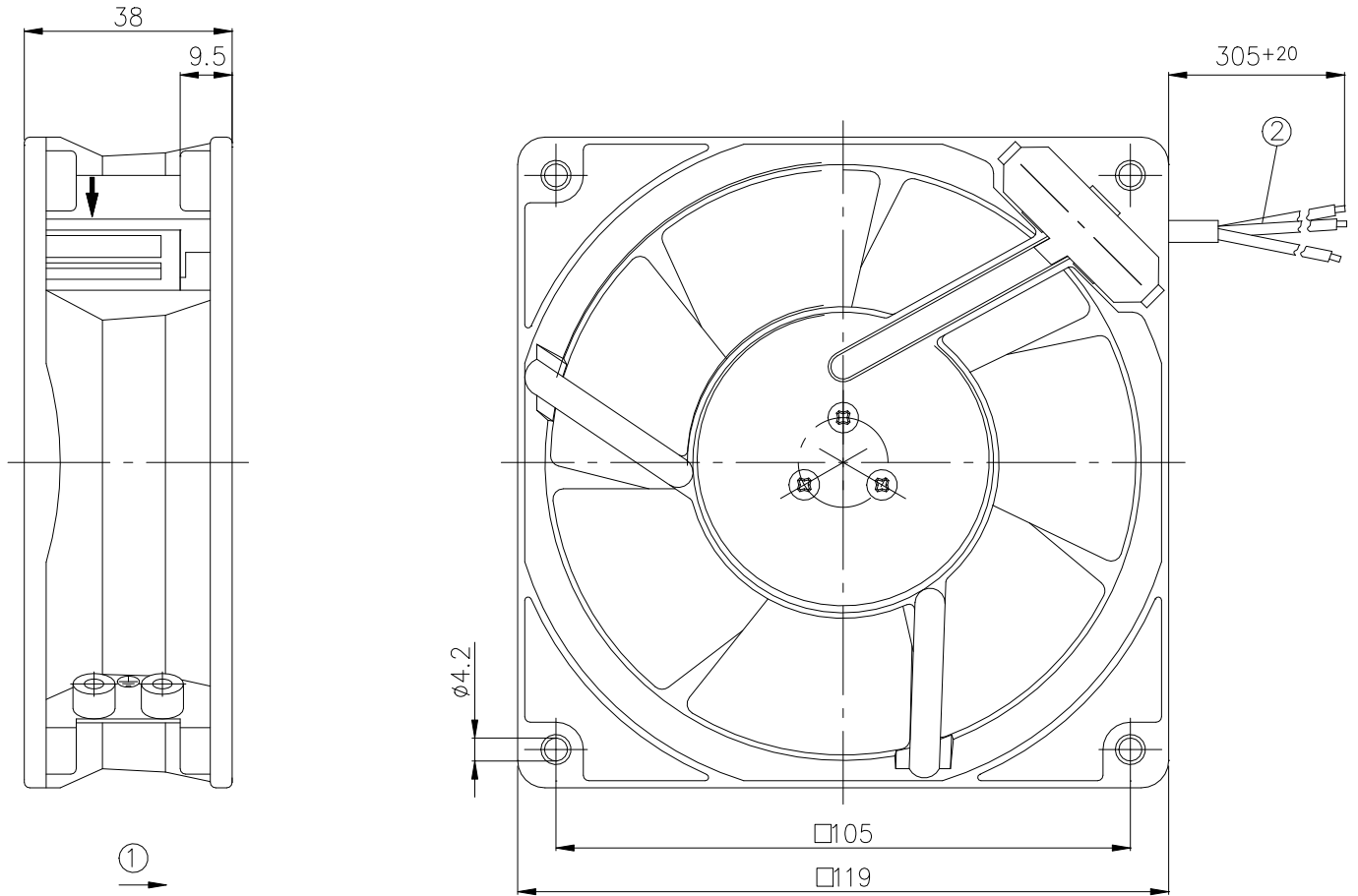
Technical description

Weight	0.5 kg
Size	110 mm
Motor size	45
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Fan housing material	Die-cast aluminum, painted black
Number of blades	5
Airflow direction	A
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP22
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Thermal overload protection for electronics/motor
Motor protection	Reverse polarity and locked-rotor protection
Conformity with standards	EN 60950-1

EC axial fan

sickle-shaped blades (S series), single-intake

Product drawing



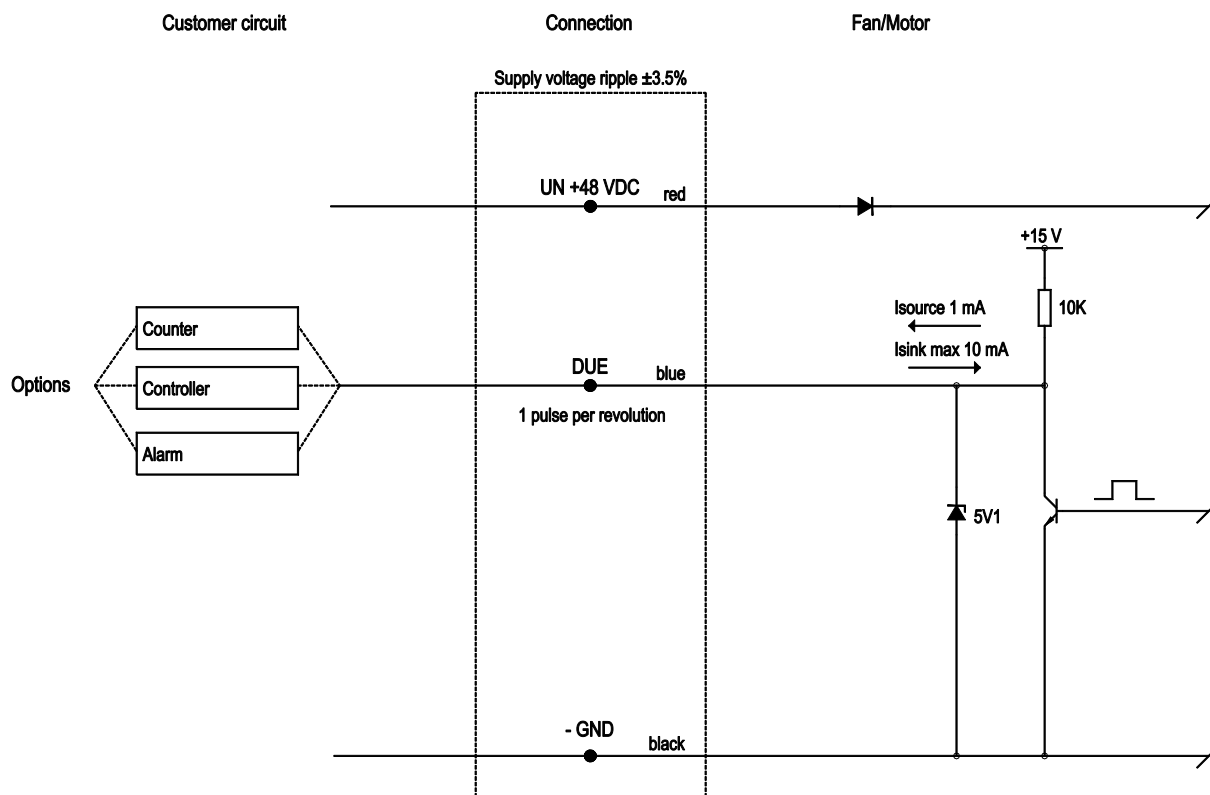
1	Direction of air flow "A"
2	Cable PVC AWG22, 3x tin-plated wire ends



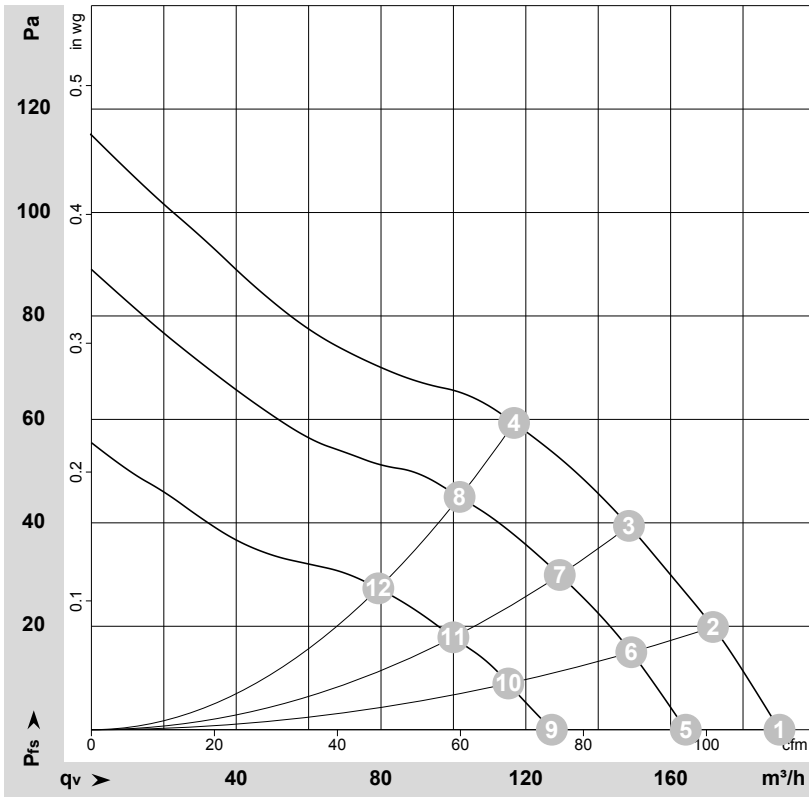
EC axial fan

sickle-shaped blades (S series), single-intake

Connection diagram



Curves: Air performance



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-77069-1
 Measurement: LU-77068-1
 Measurement: LU-77070-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	n	P _{ed}	I	q _v	p _{fs}	q _v	p _{fs}
	V	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	57	3485	8.0	0.14	190	0	110	0.00
2	57	3410	8.0	0.15	170	20	100	0.08
3	57	3330	8.0	0.15	150	40	85	0.16
4	57	3260	8.0	0.16	115	59	70	0.24
5	48	3030	5.6	0.13	165	0	95	0.00
6	48	2970	6.0	0.13	150	15	90	0.06
7	48	2905	6.0	0.13	130	30	75	0.12
8	48	2845	6.0	0.14	100	45	60	0.18
9	36	2350	3.00	0.10	125	0	75	0.00
10	36	2315	3.00	0.10	115	9	70	0.04
11	36	2275	3.00	0.11	100	18	60	0.07
12	36	2240	4.0	0.11	80	27	45	0.11

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase



Product Data Sheet 4118 N/12-190

ebmpapst

The engineer's choice



4118 N/12-190

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1 General

Fan type	Fan	
Rotating direction looking at rotor	Clockwise	
Airflow direction	Air intake over struts	
Bearing system	Ball bearing	
Mounting position - shaft	Any	

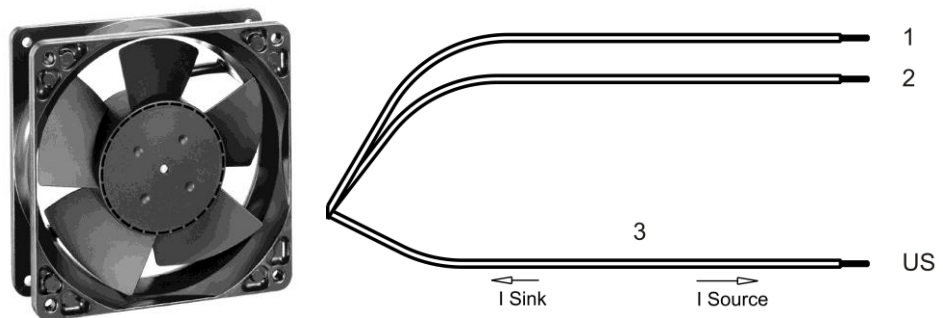
2 Mechanics

2.1 General

Width	119,0 mm	
Height	119,0 mm	
Depth	38,0 mm	
Mass	0,380 kg	
Housing material	Metal	
Impeller material	Plastic	
Max. torque when mounted across both mounting flanges	Wire outlet corner: 420 Ncm Remaining corners: 600 Ncm	
Screw size	ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Wires - Plug	
Lead wire length		
Tolerance		
Wire size (AWG)	24	
Insulation diameter	1,5 mm	
Plug	See drawing	
Contact	See drawing	



Wire	Color	Operation
1	red	+ UB
2	blue	- GND
3	white	Tacho

3 Operating Data

3.1 Electrical Operating Data

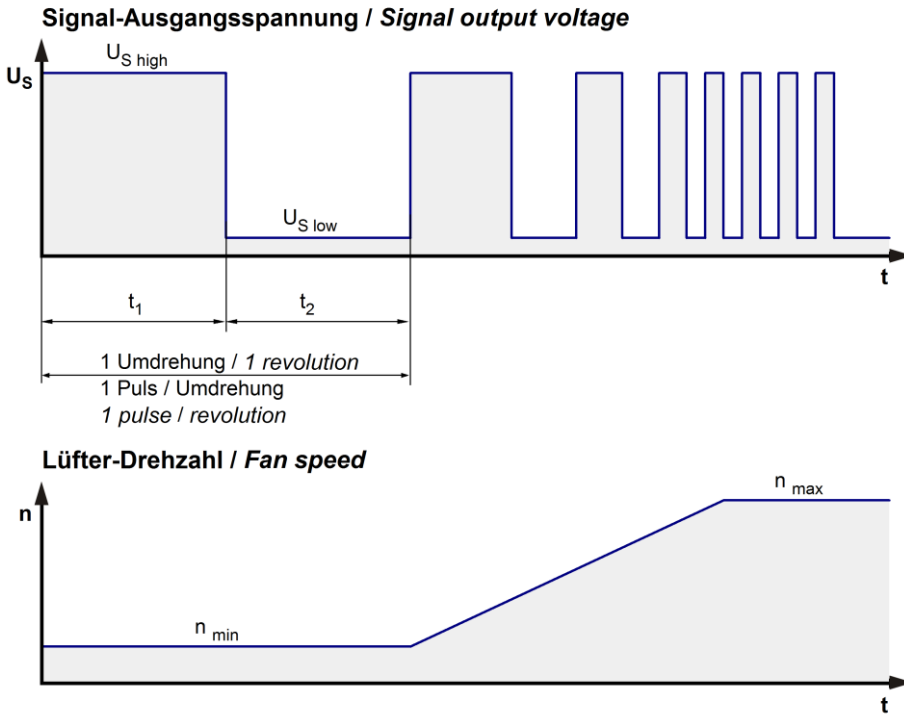
Measurement conditions: Normal air density = 1,2 kg/m³; Temperature 23°C +/- 3°C; Motor axis horizontal; warm-up time before measuring 5 minutes (unless otherwise specified). In the intake and outlet area should not be any solid obstruction within 0,5 m.

$\Delta p = 0$: corresp. to free air flow (see section 3.5)
I: corresp. to arithm. mean current value

Features	Condition	Symbol	Values		
Voltage range		U	36 V		72 V
Nominal voltage		U_N		48 V	
Power consumption	$\Delta p = 0$	P	4 W	4,5 W	6,8 W
Tolerance	0010		+/- 25 %	+/- 25 %	+/- 25 %
Current consumption	$\Delta p = 0$	I	110 mA	94 mA	95 mA
Tolerance	0010		+/- 25 %	+/- 25 %	+/- 25 %
Speed	$\Delta p = 0$	n	2.600 1/min	3.200 1/min	3.200 1/min
Tolerance	0010		+/- 12,5 %	+/- 5 %	+/- 5 %
Starting current consumption				595 mA	

3.2 Operating Data - Electrical Interface - Output

Tacho type	/12 (TTL)
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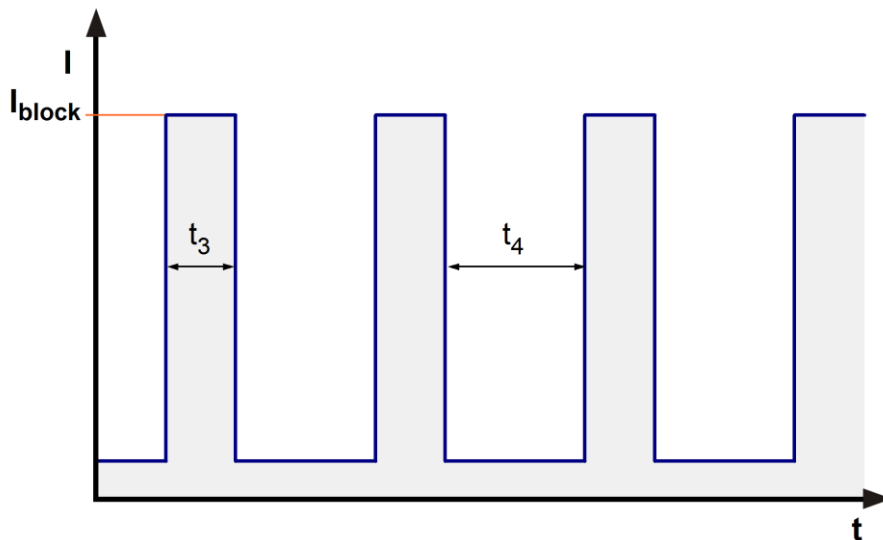


Features	Note	Values
Tacho signal TTL High		Min.: 2,5 V Max.: 5,5 V
Tacho signal Low	$U_{S\ low}$	$\leq 0,4\ V$
Tacho signal High	$U_{S\ high}$	$\leq 5,5\ V$
Maximum sink current	I_{sink}	$\leq 1\ mA$
External resistor	All voltages measured to GND.	
Tacho frequency	$n / 60$	53 Hz
Tacho isolated from motor	No	
Slew rate		$\Rightarrow 0,5\ V/us$

n = revolutions per minute (1/min)

3.3 Electrical Features

Electronic function	None	
Reversed polarity protection	Rectifying diode	
Max. residual current at U_N	$I_F \leq 50 \mu A$	
Locked rotor protection	Auto restart	
Locked rotor current at U_N	I_{block} approx. 595 mA	
Clock signal at locked rotor	t_3 / t_4 typical: 0,4 s / 20 s	



Locked rotor clock signal t_4 : After the 4. Cycle there is an extended time-out of 20 s.

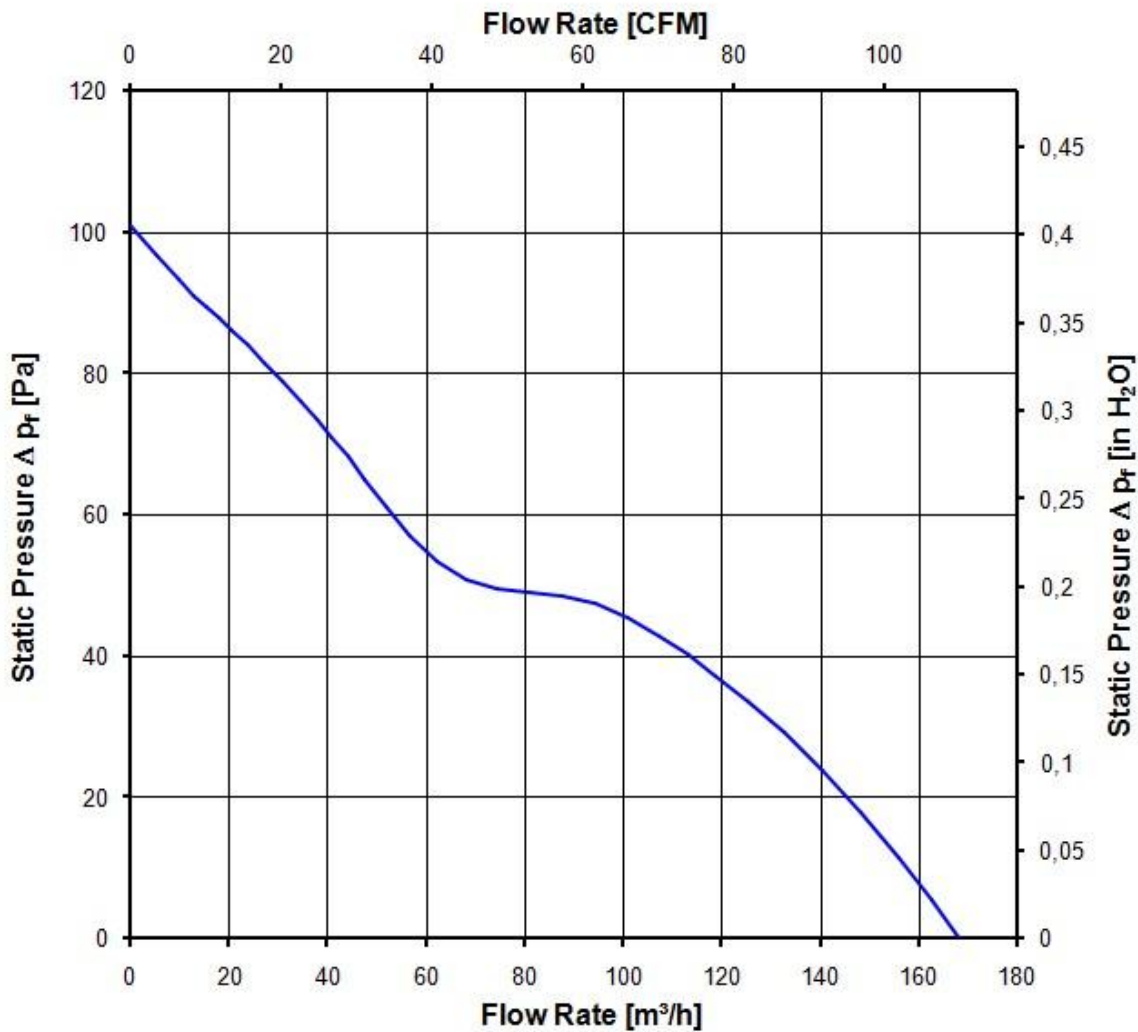
3.4 Aerodynamics

Measurement conditions: Measured with a double chamber intake rig acc. to DIN EN ISO 5801.
 Normal air density = 1,2 kg/m³; Temperature 23°C +/- 3°C;
 In the intake and outlet area should not be any solid obstruction within 0,5 m.
 The information is only valid under the specified test conditions and may be changed by the installation conditions. If there are deviations from the standard test conditions, the characteristic values must be checked under the installed conditions.

a.) Operation condition:

3.200 1/min at free air flow

Max. free-air flow ($\Delta p = 0 / \dot{V} = \text{max.}$)	168,0 m ³ /h	
Max. static pressure ($\Delta p = \text{max.} / \dot{V} = 0$)	100 Pa	



3.5 Sound Data

Measurement conditions: Sound pressure level: 1 Meter distance between microphone and the air intake.
 Sound power level: Acc. to DIN 45635 part 38 (ISO 10302)
 Measured in a semianchoic chamber with a background noise level of $L_p(A) < 5 \text{ dB}(A)$
 For further measurement conditions see section 3.5

a.) Operation condition:

3.200 1/min at free air flow

Optimal operating point	104,0 m ³ /h @ 40 Pa	
Sound power level at the optimal operating point	5,6 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	49,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-10 °C	
Max. permitted ambient temperature TU max.	70 °C	
Min. permitted storage temperature TL min.	-40 °C	
Max. permitted storage temperature TL max.	80 °C	

4.2 Climatic Requirements

Humidity requirements	humid heat, constant; according to DIN EN 60068-2-78, 14 days	
Water exposure	None	
Dust requirements	None	
Salt fog requirements	None	

Permitted application area:

The product is intended for use in sheltered rooms with controlled temperature and controlled humidity. Directly exposure to water must be avoided.

Pollution degree 1 (according DIN EN 60664-1)

There is either no pollution or it occurs only dry, non-conductive pollution. The pollution has no negative impact. Please require severity levels and specification parameters from the responsible development departments.

5 Safety

5.1 Electrical Safety

Dielectric strength DIN EN 60950 (VDE 0805) and DIN EN 60335 (VDE 0700) A.) Type test Measuring conditions: After 48h of storage at 95% R.H. and 25°C. No arcing or breakdown is allowed! All connections together to ground.	1000 VAC / 1 Min.	
B.) Routine test Measuring conditions: At indoor climate. No arcing or breakdown is allowed! All connections together to ground.	1000 VAC / 1 Sec.	
Isolation resistance Measuring conditions: After 48h of storage at 95% R.H. and 25°C measured with U=500 VDC for 1 min.	RI > 10 MOhm	
clearance / creepage distance	1,0 mm / 1,5 mm	
Protection class	I	

5.2 Approval Tests

CE	EC Declaration of Conformity	Yes
EAC	Eurasian Conformity	Yes
UL	Underwriters Laboratories	Yes / UL507, Electric Fans
VDE	Association for Electrical, Electronic and Information Technologies	Yes / Approval acc. to EN 60950 (VDE 0805) - Information technology equipment
CSA	Canadian Standards Association	Yes / C22.2 No. 113 Fans and Ventilators
CCC	China Compulsory Certification	Yes / GB 12350 Safety Requirements for small Power Motors

6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	85.000 h	
Life expectancy L10 at TU max.	40.000 h	
Life expectancy L10 acc. to IPC 9591 at TU = 40 °C	142.500 h	

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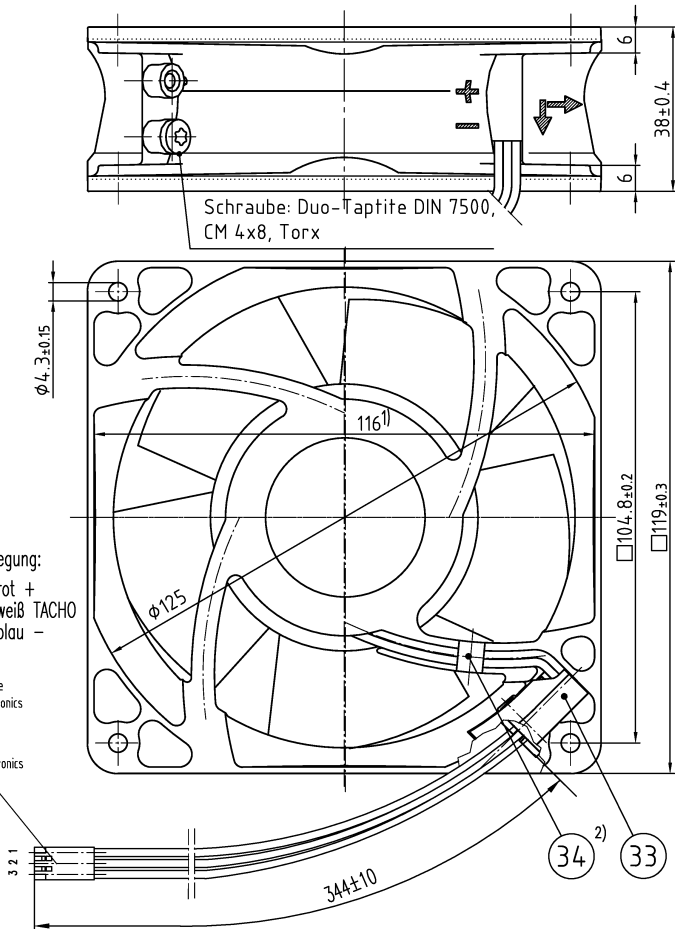
Schutzmerkmal nach DIN ISO 606 beachten

Steckerbelegung:

- PIN 1 = rot +
- PIN 2 = weiß TACHO
- PIN 3 = blau -

Steckergehäuse
 Fa. Berg-Electronics
 Nr. 65240-003

Kontakte
 Fa. Berg-Electronics
 Nr. 76347-301



Schraube: Duo-Tapfite DIN 7500,
 CM 4x8, Torx

Axialspiel bei
 - Kugellagerung (K): 0 (mit Federausgleich)
 - Gleitlagerung (G): 0.1 - 0.6

- 1) Maße für Montagewand
- 2) nur wenn in Stückliste enthalten

Tolerierung: DIN 7167		DIN ISO 2768-mK-E	
Allgemeintoleranzen:			
	Datum	Name	Artikel
Bearbeitet			
	Index	Änd.-Nr.	Zchg.-Nr.
			Blatt
Geprüft u. zur Verwendung freigegeben von am		PAPST PAPST-MOTOREN GmbH & Co KG D-78112 St. Georgen Germany	
		Ers.f.Zchg:	A4