

Product Change Notice

Date:	May 3, 2021
Overview:	Obsolescence of part number 8856V
Reason for Change:	Low global usage
Affected Part No(s):	8856V
Design Change Detail:	Part number 8856V is being discontinued due to low global usage. The suggested replacement is part number 8556N.
Effective Date:	Immediately
Last Time Buy Deadline:	N/A
Pricing:	N/A
ebm-papst employee:	Jeannine Zenobi
Attachments:	Comparison table and images for original part number 8856V versus suggested replacement part number 8556N plus datasheets for both part numbers
Comments:	Both products are dimensionally the same, but replacement part number 8556N has higher performance and flying leads instead of a plug connection. Please see below for details.

Comparison of 8856V vs. 8556N

	8856V [obsolete]	8556N
Speed	2150rpm @ 50Hz 2500rpm @ 60Hz	2800rpm @ 50Hz 3300rpm @ 60Hz
Max airflow at free air	20.6 CFM @ 50Hz 24.1 CFM @ 60Hz	27.0 CFM @ 50Hz 32.4 CFM @ 60Hz
Max static pressure	0.10 in.wg. @ 50Hz 0.13 in.wg. @ 60Hz	0.20 in.wg. @ 50Hz 0.27 in.wg. @ 60Hz
Sound pressure (free air, 1m)	24 / 29 dB(A)	31 / 35 dB(A)
Connection Type	Plug	2 flying leads

8856V [obsolete]



8556N



	Color	Operation
1	blue	L
2	blue	N

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

Product Data Sheet 8856 V

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8856 V

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1 General

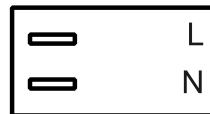
Fan type	Fan
Rotating direction looking at rotor	Clockwise
Airflow direction	Air outlet over struts
Bearing system	Ball bearing
Mounting position - shaft	Any
Balancing grade	2,5

2 Mechanics**2.1 General**

Width	80,0 mm	
Height	80,0 mm	
Depth	38,0 mm	
Diameter	0,0 mm	
Mass	0,490 kg	
Housing material	Metal	
Impeller material	Metal	
Max. torque when mounted across both mounting flanges	Wire outlet corner: 50 Ncm Remaining corners: 120 Ncm	
Screw size	ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Plug	
Lead wire length	See drawing	
Tolerance		
Tube length	See drawing	
Tolerance		
Wire size (AWG)		
Insulation diameter		
Plug	See drawing	
Contact	See drawing	



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 chapter aerodynamics)

I: corresp. to RMS line current

Features	Condition	Symbol	Values	
Frequency	$\Delta p = 0$	f	50 Hz	60 Hz
Nominal voltage	$\Delta p = 0$	U_N	230 V	230 V
Tolerance			+ 6 % - 10 %	+ 6 % - 10 %
Power consumption	$\Delta p = 0$	P	12,5 W	11 W
Tolerance			+ 5 % - 10 %	+ 5 % - 10 %
Speed	$\Delta p = 0$	n	2.150 1/min	2.500 1/min
Tolerance			+ - 5 %	+ - 5 %

3.4 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) 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 chapter aerodynamics.

a.) Operation condition:

2.150 1/min at free air flow

Frequency: 50 Hz

Optimal operating point	35,0 m ³ /h @ 0 Pa	
Sound power level at the optimal operating point	4,2 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	24,0 dB(A)	

b.) Operation condition:

2.500 1/min at free air flow

Frequency: 60 Hz

Optimal operating point	36,0 m ³ /h @ 5 Pa	
Sound power level at the optimal operating point	4,7 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	29,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-40 °C / 50 Hz -40 °C / 60 Hz	
Max. permitted ambient temperature TU max.	90 °C / 50 Hz 95 °C / 60 Hz	
Min. permitted storage temperature TL min.	-40 °C	
Max. permitted storage temperature TL max.	100 °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.

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.	1500 VAC / 1 Min.
B.) Routine test Measuring conditions: At indoor climate. No arcing or breakdown is allowed! All connections together to ground.	1500 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 > 50 MOhm
Clearance / creepage distance	2,0 mm / 1,8 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

The approval tests are observed to:

U approval max.: 230 V / f: 60 Hz @ TU approval max.: 95 °C

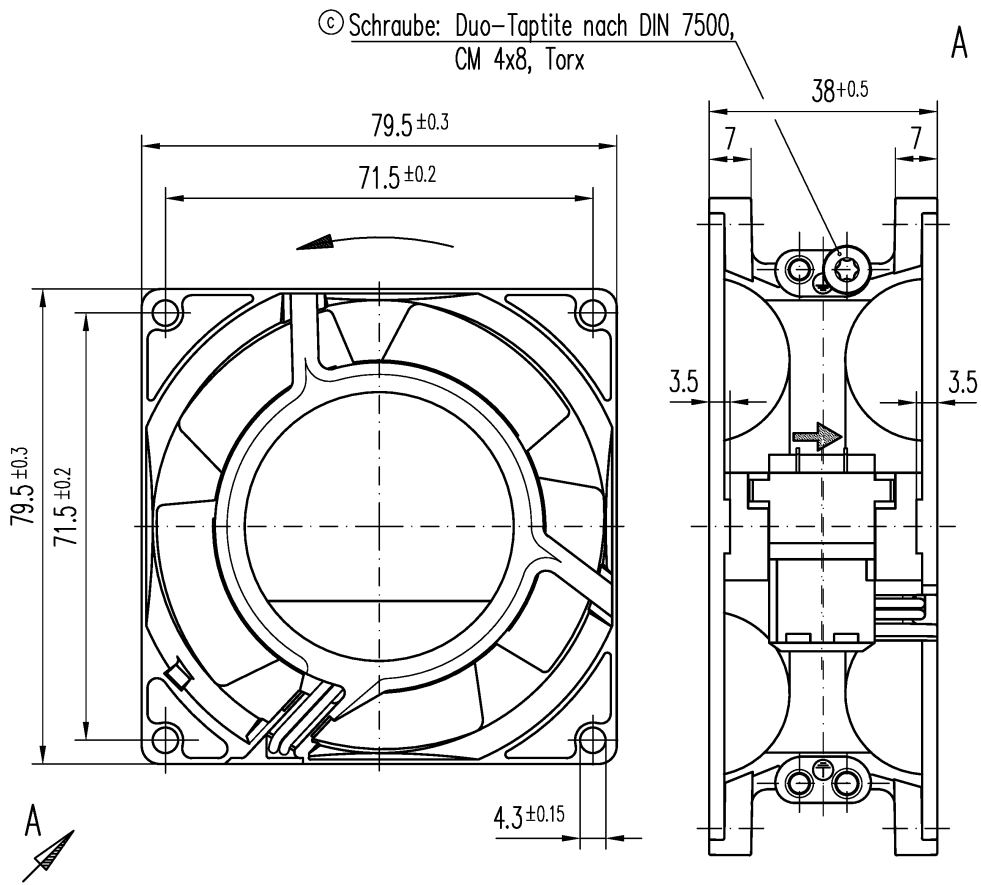
6 Reliability

6.1 General

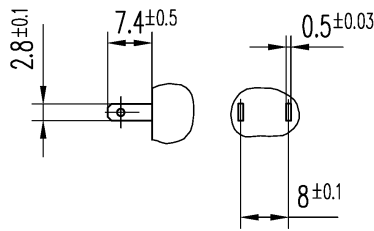
Life expectancy L10 at TU = 40 °C	52.500 h / 50 Hz 55.000 h / 60 Hz	
Life expectancy L10 at TU max.	15.000 h / 50 Hz 15.000 h / 60 Hz	

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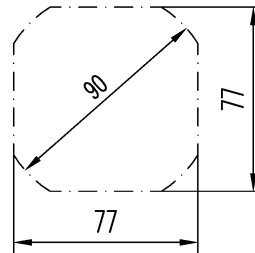
Schutzvermerk nach DIN 34 beachten



Maße f?r Steckeranschluß



Maße f?r Montagewand



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

516
 3...
 045
 243
 240
 235
 232
 231
 210

Allgemeintoleranzen				DIN ISO 2768-mK		gilt f?r:		924 4014 614(K) 8856 V	924 4014 630(G) 8500 V	924 4014 650(K) E8556 V	
								924 4014 612(G) 8850 V	924 4014 629(K) 8506 V	924 4014 645(G) 8550 V	
								924 4014 608(K) 8556 V	924 4014 620(G) 8880 V	924 4014 642(G) 8830 V	
								924 4014 606(G) 8550 V	924 4014 618(K) 8886 V	924 4014 642(G) 8830 V	
									924 4014 617(G) 8800 V	924 4014 636(G) 8880 VR	
				Datum	Name	Artikel				Maßstab	
				Erstellt	Knapp U.					1:1	
c	173/97	11.03.97	Nuber J.	Gepr?ft	Wrobel G.						
b	Erg?nzung	19.12.95	Kieninger								
a	224/94	11.11.94	Knapp								
Index	Znd.-Nr.	Datum	Ge?ndert von	PAPST				Zchg.-Nr.			
Zur Verwendung im Verteiler freigegeben von Wrobel G. am				PAPST-MOTOREN GmbH & Co KG D-78112 St. Georgen Germany						Blatt	
				Ers.f.Zchg.: W2S076...							

Product Data Sheet

9244014210
VWC0080AQHCZ
#8556 N

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#8556 N

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1 General

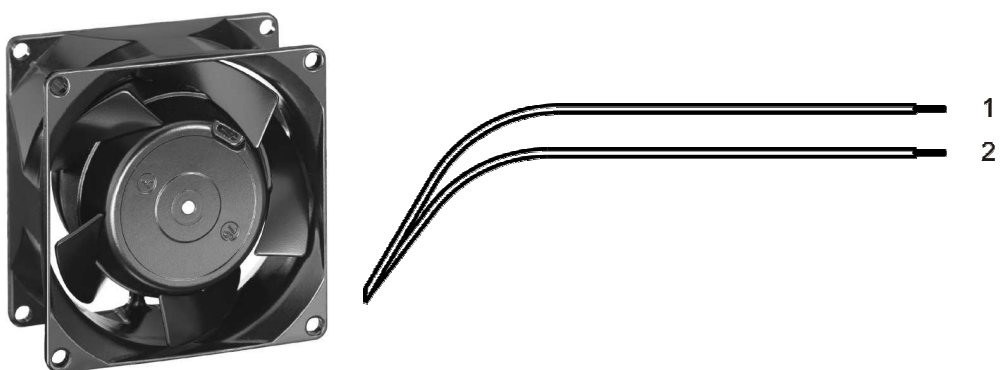
Fan type	Fan
Rotating direction looking at rotor	Clockwise
Airflow direction	Air outlet over struts
Bearing system	Ball bearing
Mounting position - shaft	Any
Balancing grade	2,5

2 Mechanics**2.1 General**

Width	80,0 mm	
Height	80,0 mm	
Depth	38,0 mm	
Diameter	0,0 mm	
Mass	0,380 kg	
Housing material	Metal	
Impeller material	Metal	
Max. torque when mounted across both mounting flanges	Wire outlet corner: 50 Ncm Remaining corners: 50 Ncm	
Screw size	ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Wires	
Lead wire length	L = 310,0 mm	
Tolerance	+ - 10,0 mm	
Tube length	S = 270,0 mm	
Tolerance	+ - 10,0 mm	
Wire size (AWG)	22	
Insulation diameter	1,09 mm	
Plug	See drawing	
Contact	See drawing	



	Color	Operation
1	blue	L
2	blue	N

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.

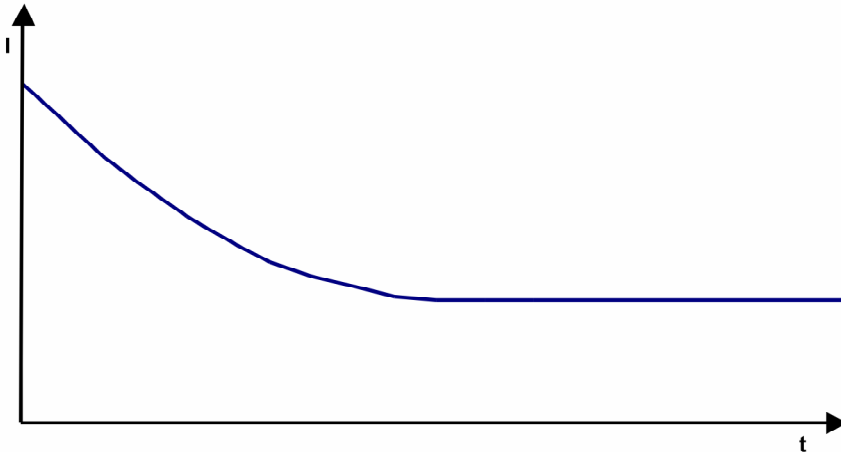
$\Delta p = 0$: corresp. to free air flow (see chapter aerodynamics)

I: corresp. to RMS line current

Features	Condition	Symbol	Values	
Frequency	$\Delta p = 0$	f	50 Hz	60 Hz
Nominal voltage	$\Delta p = 0$	U_N	230 V	
Tolerance			+ 6 %	- 10 %
Power consumption	$\Delta p = 0$	P	12 W	
Tolerance			+ 5 %	- 10 %
Speed	$\Delta p = 0$	n	2.800 1/min	
Tolerance			+ 3 %	+ 3 %

3.2 Electrical Features

Locked rotor protection	Impedance
Locked rotor current at	



3.3 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. Motor shaft horizontal. 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:
2.800 1/min at free air flow Frequency: 50 Hz

Max. free-air flow ($\Delta p = 0 / \dot{V} = \text{max.}$)	46,0 m ³ /h
Max. static pressure ($\Delta p = \text{max.} / \dot{V} = 0$)	50 Pa

b.) Operation condition:
3.300 1/min at free air flow Frequency: 60 Hz

Max. free-air flow ($\Delta p = 0 / \dot{V} = \text{max.}$)	55,0 m ³ /h
Max. static pressure ($\Delta p = \text{max.} / \dot{V} = 0$)	68 Pa

3.4 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) 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 chapter aerodynamics.

a.) Operation condition:

2.800 1/min at free air flow

Frequency: 50 Hz

Optimal operating point	32,0 m ³ /h @ 15 Pa	
Sound power level at the optimal operating point	4,5 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	31,0 dB(A)	

b.) Operation condition:

3.300 1/min at free air flow

Frequency: 60 Hz

Optimal operating point	39,0 m ³ /h @ 22 Pa	
Sound power level at the optimal operating point	5,0 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	35,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-40 °C / 50 Hz -40 °C / 60 Hz	
Max. permitted ambient temperature TU max.	90 °C / 50 Hz 95 °C / 60 Hz	
Min. permitted storage temperature TL min.	-40 °C	
Max. permitted storage temperature TL max.	100 °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.

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. B.) Routine test Measuring conditions: At indoor climate. No arcing or breakdown is allowed! All connections together to ground.	1500 VAC / 1 Min. 1500 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 > 50 MOhm
Clearance / creepage distance	2,0 mm / 1,8 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 E38324
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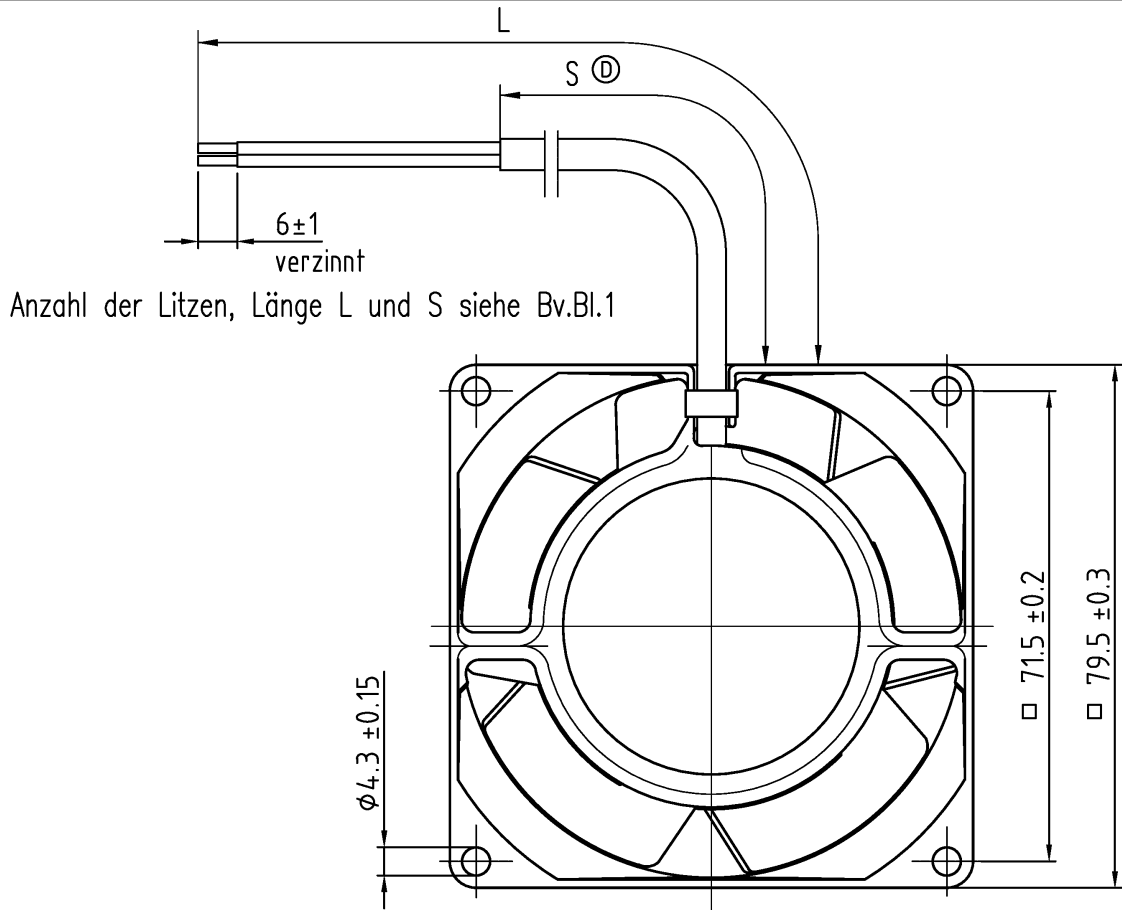
6 Reliability

6.1 General

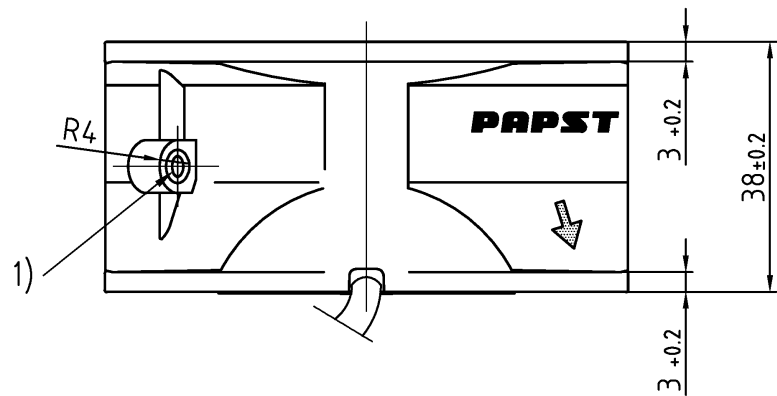
Life expectancy L10 at TU = 40 °C	52.500 h / 50 Hz 55.000 h / 60 Hz	
Life expectancy L10 at TU max.	15.000 h / 50 Hz 15.000 h / 60 Hz	

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Schutzvermerk nach DIN ISO 16016 beachten/
Refer to protection notice DIN ISO 16016!



Anzahl der Litzen, Länge L und S siehe Bv.BI.1



1) Bohrung für Gewinde M4 oder 8-32 UNC

UV = unverzinkt
VZ = verzinkt
AV = angeschnitten u. vorgezogen

Axialspiel bei Kugellagerung mit Feder spielfrei verspannt.

Tolerierung/Tolerances: DIN 7167		Längenmaße: DIN ISO 2768-mK		Artikel/Title		Massstab/scale	
Allgemeintoleranzen/ Gen. tolerances: DIN 7167		Winkel, Form u. Lage: DIN ISO 2768-mK					
Bearb./Drawn:		Name/Name					
Index/Index		Aend.-Nr./Change-No.				Zchg.-Nr./ Dwg.-No.:	
gepr. u. zur Verwendung freigegeben/Checked for release von by		am on		ebm-papst St. Georgen GmbH & Co. KG		Ers.f.Zchg/ Replaces:	
						Blatt/Page	
						A4	