5656 S

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Special features according to QMH 2-5.4.7 and company standard 1-23.00 have the following definitions:

"A" : Product features or process parameters which influence the safety of a product or the compliance of legal requirements. (Must not necessary verified and documented 100%. Standards and legal requirements must be considered.)

"FK" : Product features or process parameters which influence the fit and function of a product or which have to be controlled or documented for some other reasons (e.g. Customer requirements).

1 General

Fan type	Fan	
Rotational direction looking at rotor	counterclockwise	**FK**
Airflow direction	Air outlet over struts	**FK**
Bearing system	Ball bearing	
Lubrication	see sectional drawing of the bearing	
Mounting position Tolerance	any	
Balancing grade	2,5	**FK**
Impeller weight		

2 Mechanics

2.1 General

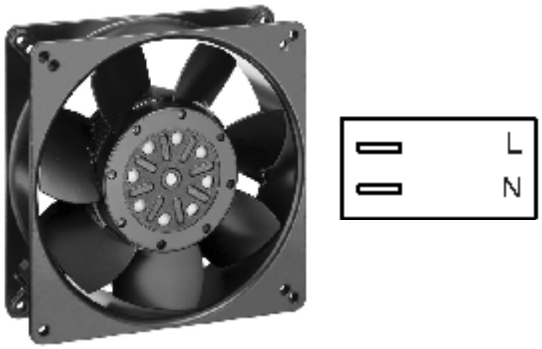
Width	135,0 mm	
Height	135,0 mm	
Depth	38,0 mm	
Diameter	0,0 mm	
Weight	0,800 kg	
Surface protection	see single part drawing of the housing, flange and impeller	
Housing material	Metal	
Impeller material	Metal	
Max. torque when mounted across both mounting flanges Screw size	wire outlet corner: 160 Ncm remaining corners: 190 Ncm ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Motor

Type of motor	Shaded pole motor-extern rotor	
Diameter of the motor	50,0 mm	
Height of the motor	12,0 mm	
Operating mode	Continuous duty	
Insulation material class	F	

2.3 Connections

Electrical connection	Plug	
Length of lead wire Tolerance		
Length of tube Tolerance		
Wire gauge (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 there may not be any solid obstruction within 0,5 m.

Δp = 0: corresp. to free air flow (see section 3.4)
I: corresp. to RMS line current

Features	Condition	Symbol	Values	
Frequency	Δp = 0	f	50 Hz	60 Hz
Nominal voltage Tolerance	Δp = 0	U_N	230,0 V + 10,0 % - 10,0 %	230,0 V + 10,0 % - 10,0 %
Power consumption Tolerance	Δp = 0	P	30,0 W + 5,0 % - 10,0 %	28,0 W + 5,0 % - 10,0 %
Current consumption Tolerance	Δp = 0	I	190 mA *) + 5,0 % - 10,0 %	170 mA *) + 5,0 % - 10,0 %
Speed Tolerance	Δp = 0	n	2.700 1/min *) +- 3,0 %	3.100 1/min *) +- 3,0 %

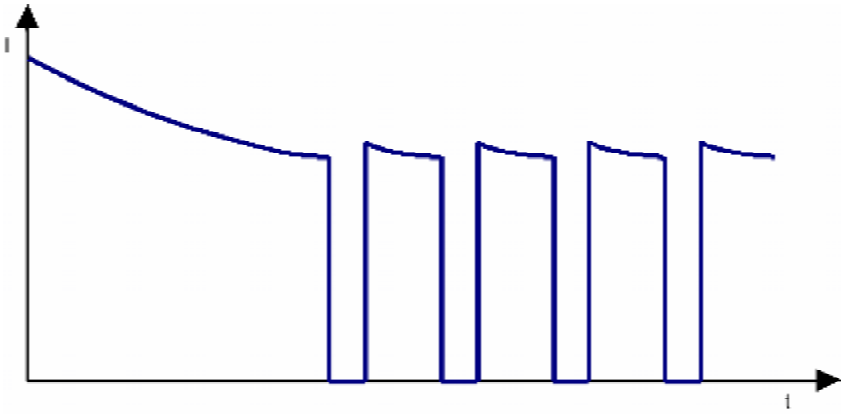
*) Attention: Marked values are "FK" features

3.2 Operating Data - Electrical Interface -Output

Tacho type	None

3.3 Electrical Features

Locked rotor protection	Thermal circuit breaker	**A**
Locked rotor current at Un		



3.4 Aerodynamic

Measurement conditions: Measured with a double chamber intake rig acc. to DIN 24163 Part 3.
Normal air density = 1,2 kg/m3; Temperature 23°C +/- 3°C;
In the intake and outlet area there may not be any solid obstruction within 0,5 m.

a.) Operation condition:
2.700 1/min at free air flow Frequency: 50 Hz

Max. free-air flow (Δp = 0 / $\dot{V}$ = max.)	240,0 m3/h	**FK**
Max. static pressure (Δp = max. / $\dot{V}$ =0)	95 Pa	**FK**

b.) Operation condition:
3.100 1/min at free air flow Frequency: 60 Hz

Max. free-air flow (Δp = 0 / $\dot{V}$ = max.)	275,0 m3/h	**FK**
Max. static pressure (Δp = max. / $\dot{V}$ =0)	110 Pa	**FK**

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 Lp(A) < 5 dB(A) For further measurement conditions see section 3.4

a.) Operation condition:
2.700 1/min at free air flow Frequency: 50 Hz

Optimal operating point	185,0 m3/h @ 29 Pa	
Sound power level at the optimal operating point	6,0 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	47,0 dB(A)	

b.) Operation condition:
3.100 1/min at free air flow Frequency: 60 Hz

Optimal operating point	210,0 m3/h @ 36 Pa	
Sound power level at the optimal operating point	6,3 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	51,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-35 °C / 50 Hz -35 °C / 60 Hz	
Max. permitted ambient temperature TU max.	70 °C / 50 Hz 80 °C / 60 Hz	
Min. permitted storage temperature TL min.	-40 °C	
Max. permitted storage temperature TL max.	100 °C	

4.2 Climatic requirements*)

*) Permittet application area:The product is for the use in sheltered rooms with controlled temperature and controlled humidity. Directly exposure to water must be avoid.

4.3 Mechanical requirements

not specified

4.4 EMC

not specified

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.	**A**
Insulation 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	
Air and leakage distances	2,0 mm / 1,8 mm	
Protection class	I	

5.2 Approval Tests

CE	Yes
UL	Yes
VDE	Yes
CSA	Yes
CCC	Yes

The approval tests are observed to:
U approval max.: 230 V / f: 50 and 60 Hz @ TU approval max.: 70 °C

6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	45.000 h / 50 Hz 47.500 h / 60 Hz	
Life expectancy L10 at TU max.	20.000 h / 50 Hz 20.000 h / 60 Hz	

6.2 Additional Data

not specified