R4E280-AO82-09

AC centrifugal fan

backward-curved, single-intake

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R4E280-AO82-09**
Motor	**M4E068-BF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Method of obtaining data		fa
Valid for approval/standard		CE
Speed (rpm)	min^{-1}	1220
Power consumption	W	50
Current draw	A	0.22
Capacitor	µF	2
Capacitor voltage	VDB	400
Capacitor standard		S2 (CE)
Max. ambient temperature	°C	30
Starting current	A	0.28

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

AC centrifugal fan

backward-curved, single-intake

Technical description

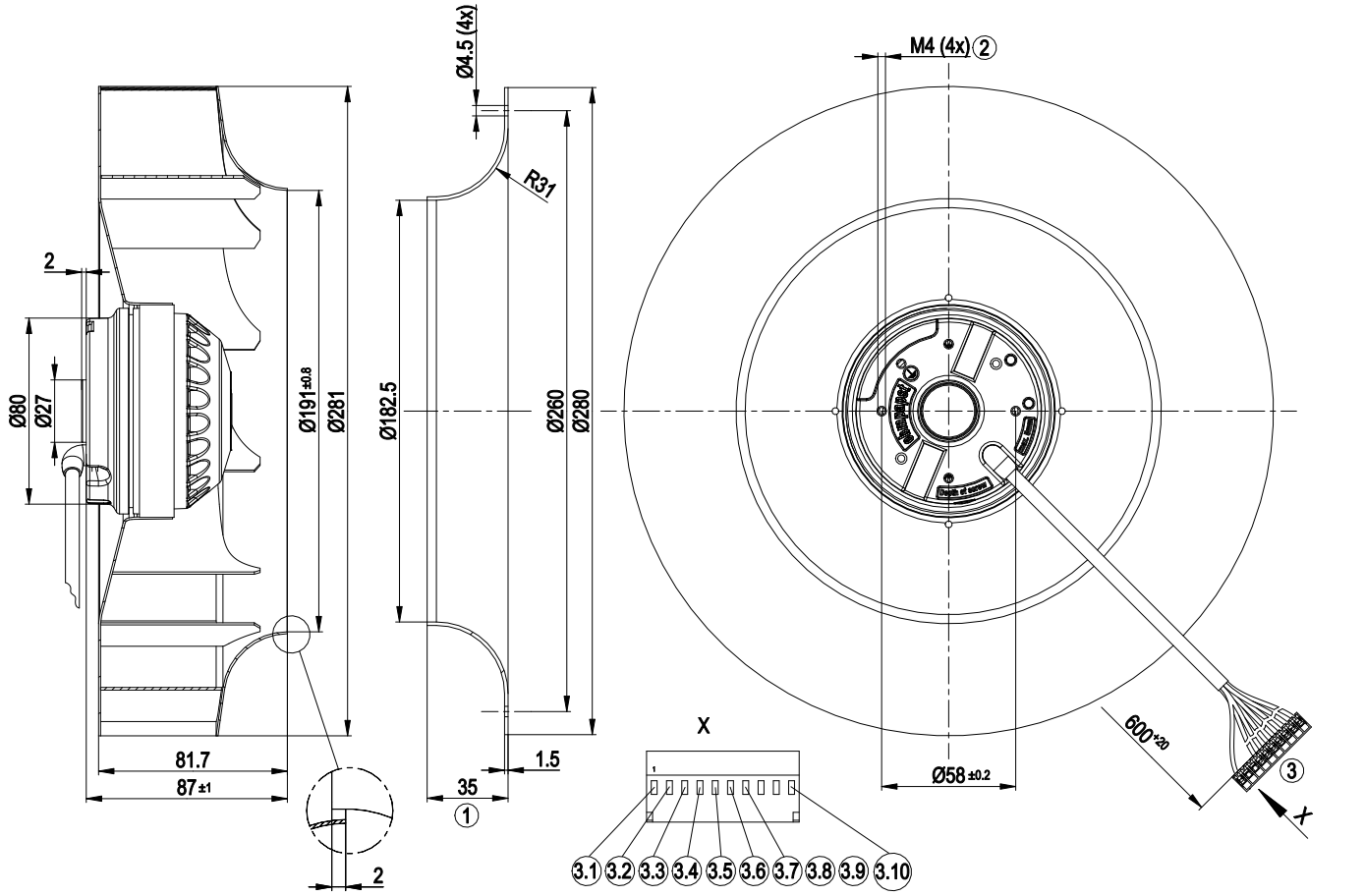
Weight	2.2 kg
Fan size	280 mm
Rotor surface	Unpainted
Impeller material	Sheet steel, galvanized
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F1-1
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
Speed levels	4
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC centrifugal fan

backward-curved, single-intake

Product drawing



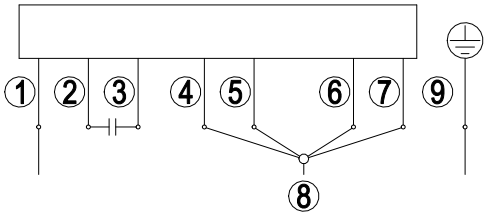
1	Accessory part: inlet ring 96360-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable AWG20, 10-pole connector housing Tyco 4-644462-0
3.1	white
3.10	green/yellow
3.2	red
3.3	gray
3.4	black
3.5	brown
3.6	yellow
3.7	blue
3.8	not used
3.9	not used

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC centrifugal fan

backward-curved, single-intake

Connection diagram



Note: High speed (step IV); low speed (step I); the switch must interrupt the circuit when switching.

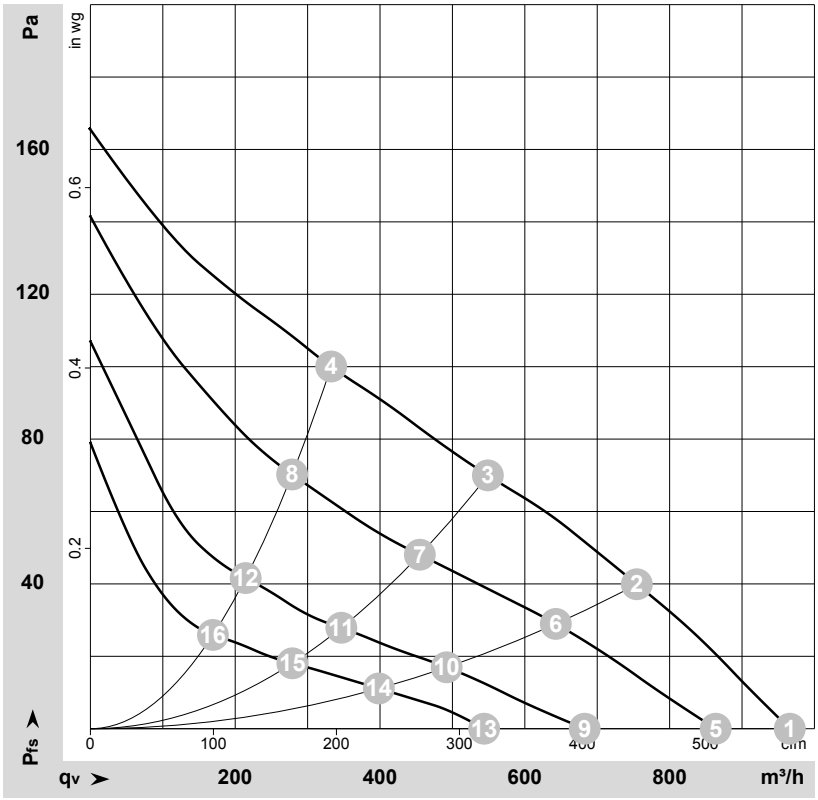
1	N (blue)
2	brown
3	yellow
4	Step I black 1 / white
5	Step II black 2 / red
6	Step III black 3 / gray
7	Step IV black 4 / black
8	L1
9	= PE = green/yellow

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC centrifugal fan

backward-curved, single-intake

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-74480-1
Measurement: LU-74481-1
Measurement: LU-74482-1
Measurement: LU-74483-1

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

	Stage	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	4	230	50	1220	50	0.22	965	0	570	0.00
2	4	230	50	1145	52	0.23	755	40	445	0.16
3	4	230	50	1100	54	0.24	550	70	325	0.28
4	4	230	50	1110	53	0.23	335	100	195	0.40
5	3	230	50	1100	36	0.19	865	0	510	0.00
6	3	230	50	975	37	0.19	645	29	380	0.12
7	3	230	50	905	39	0.20	455	48	270	0.19
8	3	230	50	930	38	0.20	280	70	165	0.28
9	2	230	50	885	29	0.17	685	0	400	0.00
10	2	230	50	760	30	0.17	490	17	290	0.07
11	2	230	50	690	30	0.17	345	28	205	0.11
12	2	230	50	715	30	0.17	215	42	125	0.17
13	1	230	50	725	26	0.16	545	0	320	0.00
14	1	230	50	620	27	0.16	400	11	235	0.04
15	1	230	50	555	27	0.16	280	18	165	0.07
16	1	230	50	570	27	0.16	170	26	100	0.10

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com