AC centrifugal module - RadiCal

backward curved, single inlet

with support plate

Nominal data

Type	**K4D560-RB03-01**
Motor	**M4D138-LA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Connection		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1390	1560	1390	1560
Power input	W	1950	2990	1950	2990
Current draw	A	6.9	8.93	3.98	5.16
Min. back pressure	Pa	0	0	0	0
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	40	60	40
Starting current	A	47	35	27	20

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	54.5	54.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		62	62
05 Variable speed drive		No	

09 Power input P_e	kW	1.92
09 Air flow q_v	m^3/h	6970
09 Pressure increase p_{fs}	Pa	540
10 Speed (rpm) n	min^{-1}	1395
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-146857

AC centrifugal module - RadiCal

backward curved, single inlet

with support plate

Technical features

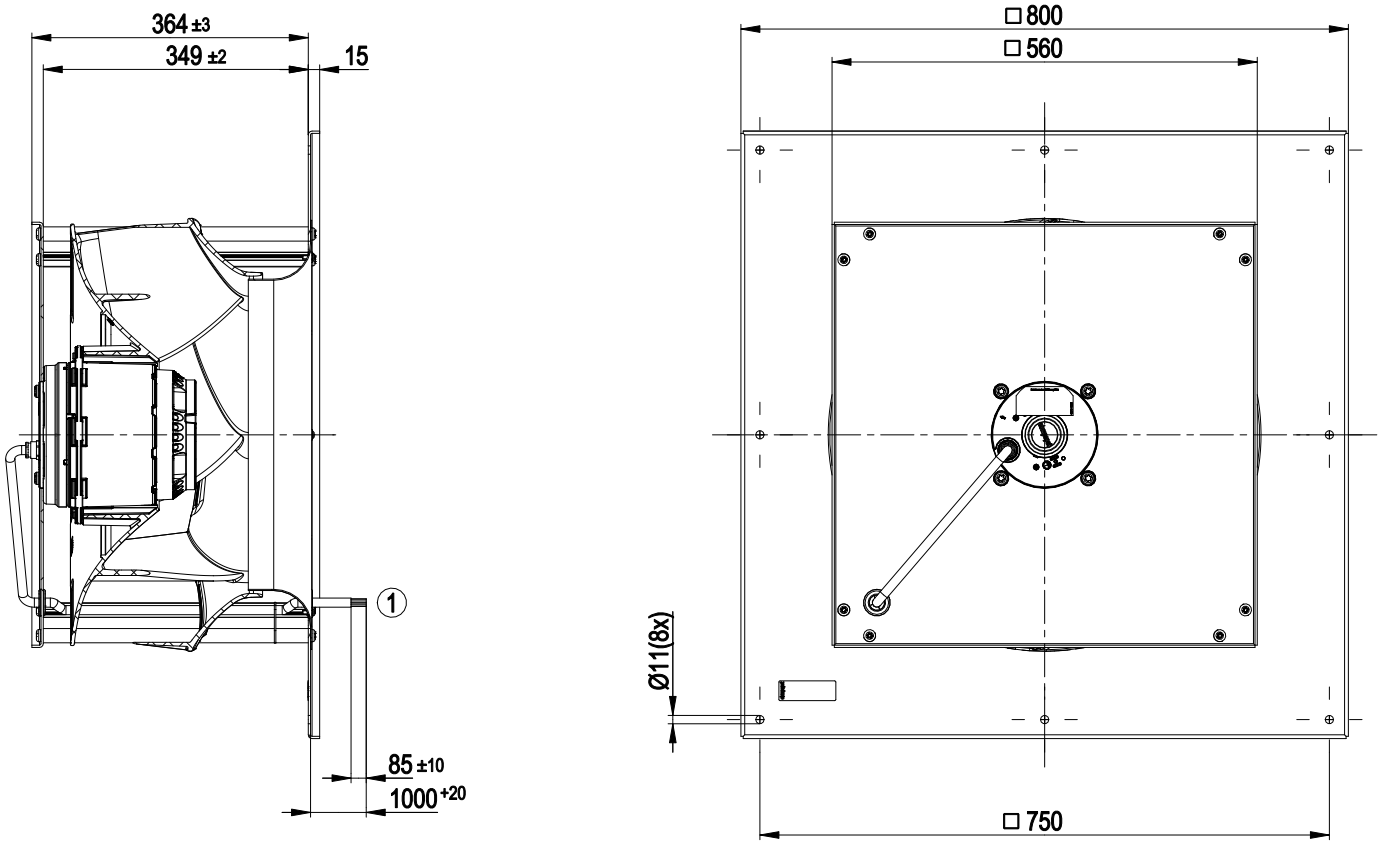
Mass	67 kg
Size	560 mm
Surface of rotor	Cast in aluminium
Material of impeller	PP plastic
Material of mounting plate	Sheet steel, galvanised
Material of distancing profiles	Aluminium
Material of inlet nozzle	Sheet steel, galvanised
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	On rotor and stator sides
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; EN 60034-1 (2010); CE
Approval	VDE; EAC

AC centrifugal module - RadiCal

backward curved, single inlet

with support plate

Product drawing



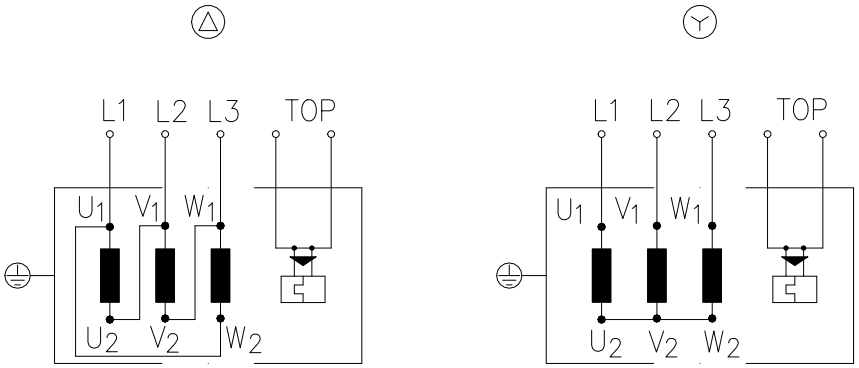
1	Connection line halogen-free, 9x 0.75 mm², 9x brass lead tips crimped

AC centrifugal module - RadiCal

backward curved, single inlet

with support plate

Connection screen



Changing the direction of rotation by reversing the two phases

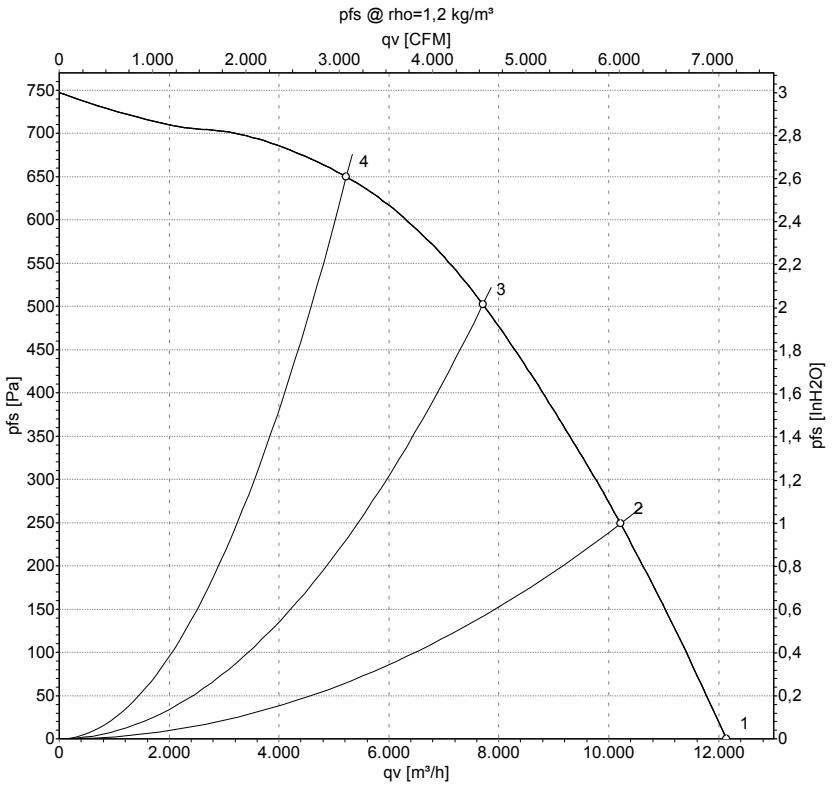
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

AC centrifugal module - RadiCal

backward curved, single inlet

with support plate

Charts: Air flow 50 Hz



Measurement: LU-146857-1

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

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	Y	400	50	1425	1477	3.44	78	85	88	12140	0	7145	0.00
2	Y	400	50	1405	1782	3.77	74	81	84	10215	250	6010	1.00
3	Y	400	50	1390	1950	3.98	71	78	82	7705	500	4535	2.01
4	Y	400	50	1400	1849	3.84	72	79	83	5225	650	3075	2.61

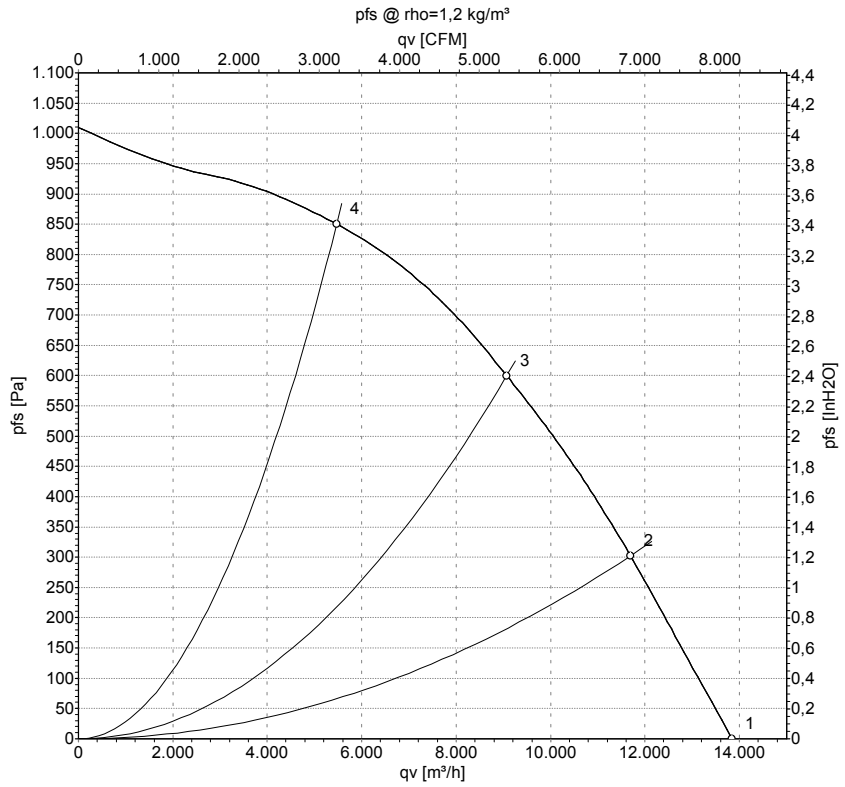
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

AC centrifugal module - RadiCal

backward curved, single inlet

with support plate

Charts: Air flow 60 Hz



Measurement: LU-146869-1

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

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	Y	400	60	1635	2275	4.05	81	88	91	13845	0	8150	0.00
2	Y	400	60	1590	2730	4.75	77	84	88	11690	300	6880	1.20
3	Y	400	60	1560	2990	5.16	74	81	85	9070	600	5340	2.41
4	Y	400	60	1585	2783	4.81	76	83	87	5470	850	3220	3.41

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase