D3G146-AL02-11

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

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Nominal data

Type	**D3G146-AL02-11**
Motor	**M3G074-CF**

Phase		1
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		fa
Speed (rpm)	min^{-1}	1620
Power input	W	166
Current draw	A	1.35
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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}	%	45.1	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		56.6	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.15
09 Air flow q_v	m^3/h	590
09 Pressure increase p_{fs}	Pa	385
10 Speed (rpm) n	min^{-1}	2540
11 Specific ratio*		1.00

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

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Technical features

Mass	3.4 kg
Size	146 mm
Surface of rotor	Thick layer passivated
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Motor suspension	Motor mounted anti-vibration on both sides
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
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	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Fault output (open collector) - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	PTC resistor
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	UL 2111; CSA C22.2 No.77

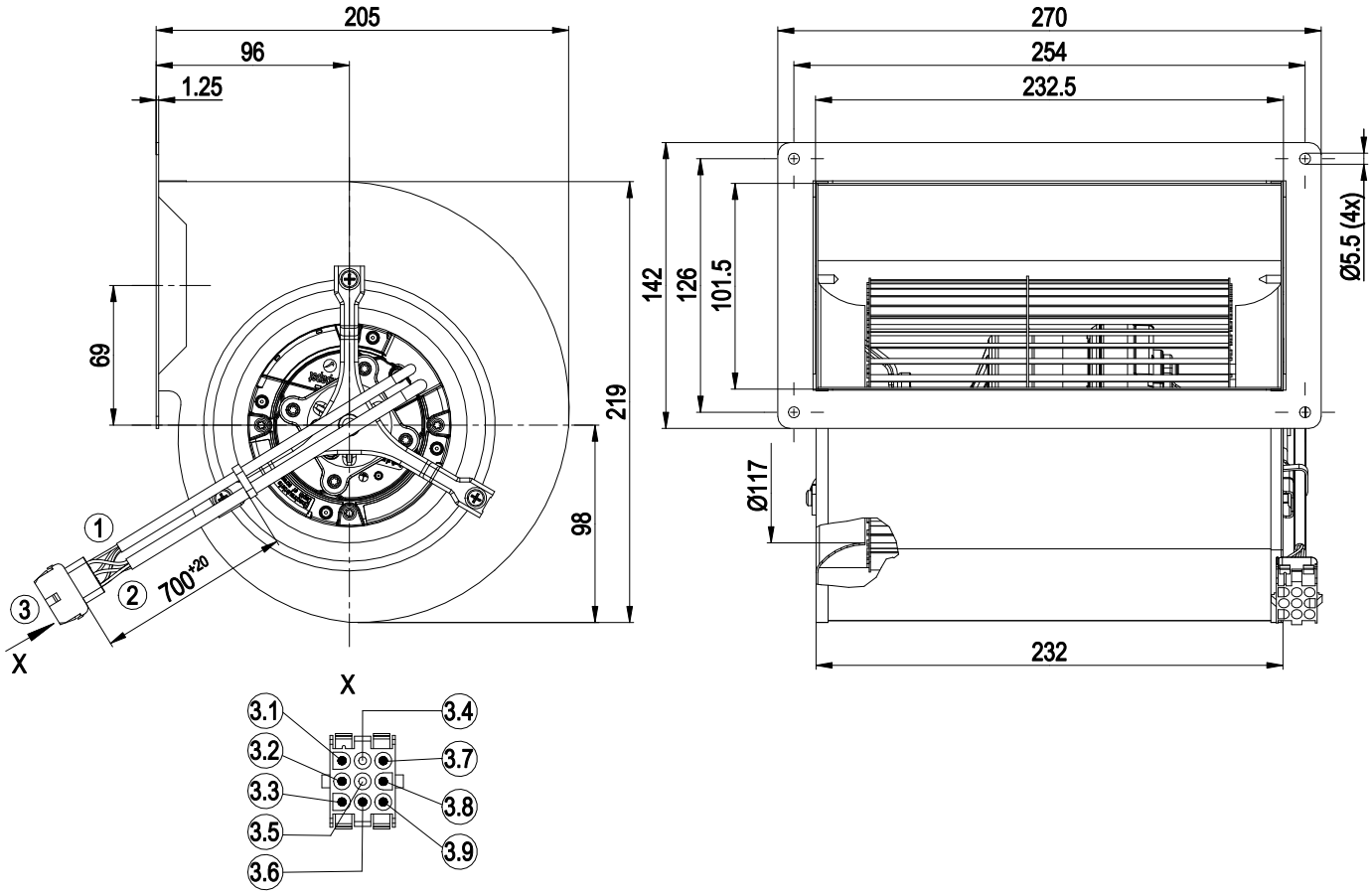
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Product drawing



1	Connection line PVC AWG22, 4x plug pin tyco 926886-1 crimped
2	Connection line PVC AWG20, 3x plug pin tyco 926887-1 crimped
3	9-pole connector housing tyco 927231-5
3.1	GND (blue)
3.2	Fan good / fan bad (white)
3.3	0-10 V PWM (yellow)
3.4	not used
3.5	not used
3.6	+10 V (red)
3.7	L (black)
3.8	N (blue)
3.9	PE (green/yellow)

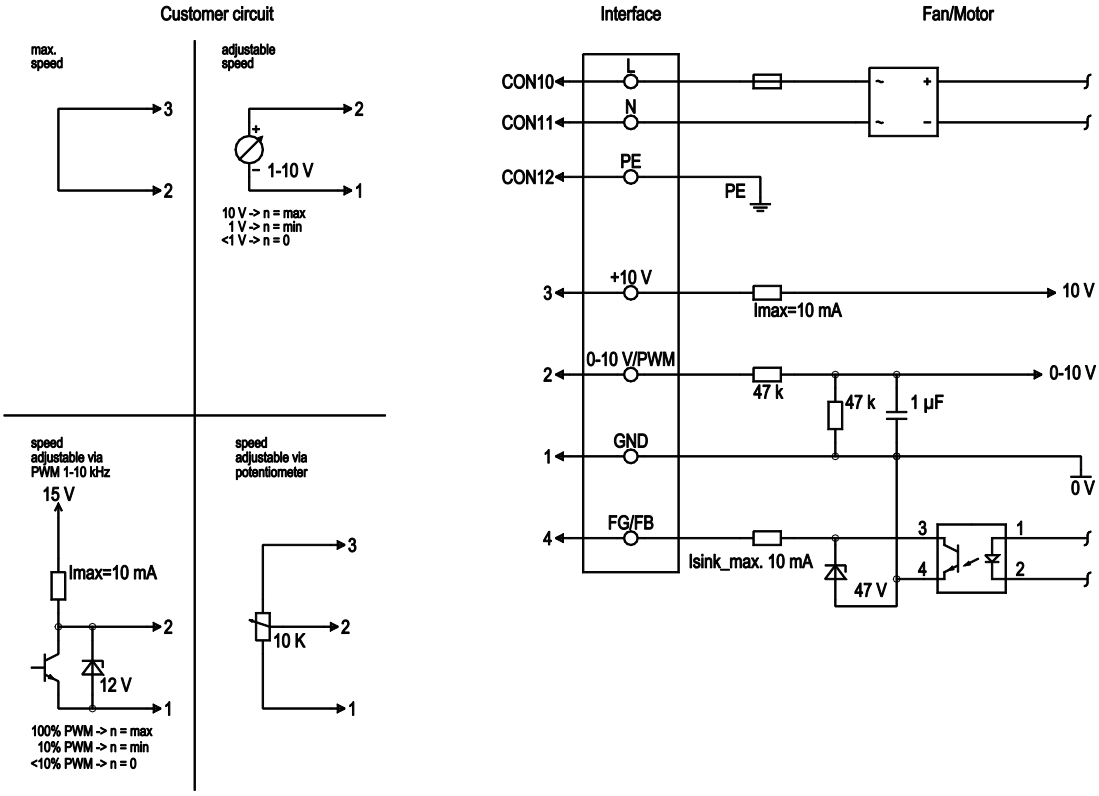
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer), SELV
	1	GND	blue	Signal ground for control interface, SELV
	4	FG/FB	white	Fan good / fan bad: Open collector, fan good = high, electrically isolated, Isink max=10 mA

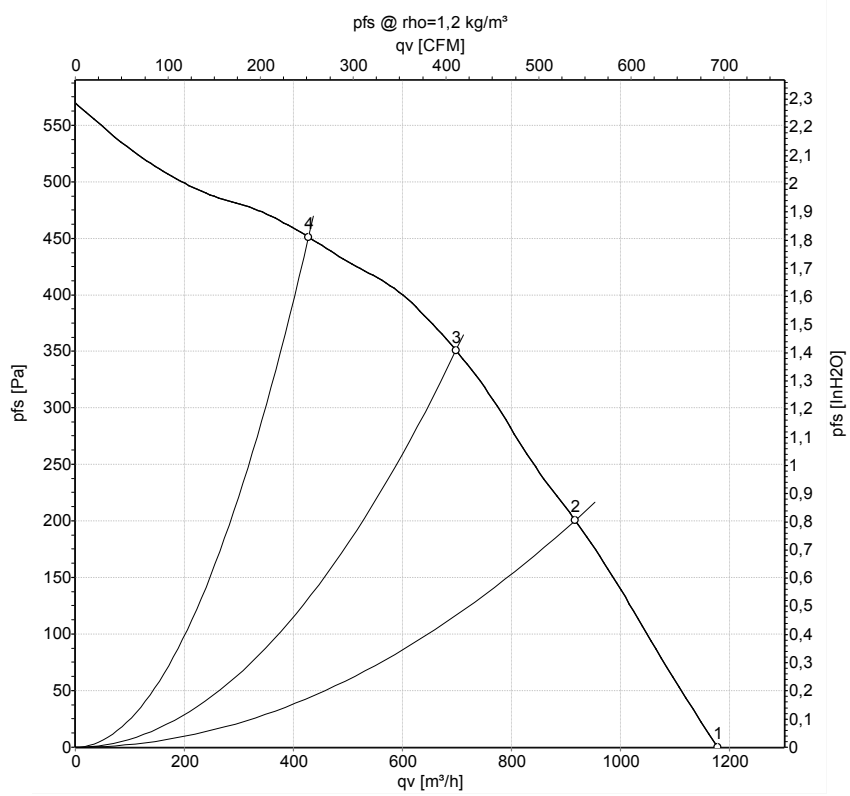
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Charts: Air flow 50 Hz



Measurement: LU-163963-1

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

	U	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	1620	166	1.35	1175	0	695	0.00
2	230	50	2010	166	1.35	915	200	540	0.80
3	230	50	2385	166	1.35	700	350	410	1.41
4	230	50	2670	138	1.14	425	450	250	1.81

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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