W3G910-GU22-01/F01

EC axial fan - HyBlade®

sickled blades (S series)

with full square nozzle

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Nominal data

Type	**W3G910-GU22-01/F01**	
Motor	**M3G150-IF**	
Phase		3~
Nominal voltage	[VAC]	400
Nominal voltage range	[VAC]	380 .. 480
Frequency	[Hz]	50/60
Type of data definition		ml
Speed	[min^{-1}]	885
Power input	[W]	2100
Current draw	[A]	3.2
Min. ambient temperature	[°C]	-25
Max. ambient temperature	[°C]	60

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

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Technical features

Leackage current	<= 3.5 mA
Size	910 mm
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Electrical leads	Via terminal box
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
Humidity class	F4-1
Blade angle	0°
Direction of air flow	"V"
Insulation class	"F"
Condensate discharge holes	Rotor-side
Bearing motor	Ball bearing
Mass	51 kg
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Aluminium sheet insert, sprayed with PP plastic
Material of guard grille	Steel, phosphated and coated in black plastic
Material of wall ring	Sheet steel, pre-galvanised and black plastic-coated
Motor protection	Reverse polarity and locked-rotor protection
Product conforming to standard	CE; EN 61800-5-1
Surface of rotor	Coated in black
Number of blades	5
Type of protection	IP 54
Protection class	I
Technical features	- RS485 MODBUS RTU - PFC, passive - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Alarm relay - Integrated PID controller - Input for sensor 0-10 V or 4-20 mA - Output for slave 0-10 V - Motor current limit - Soft start - Line undervoltage / phase failure detection - Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - External 24 V input (programming)
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; GOST; UL 1004-7 + 60730

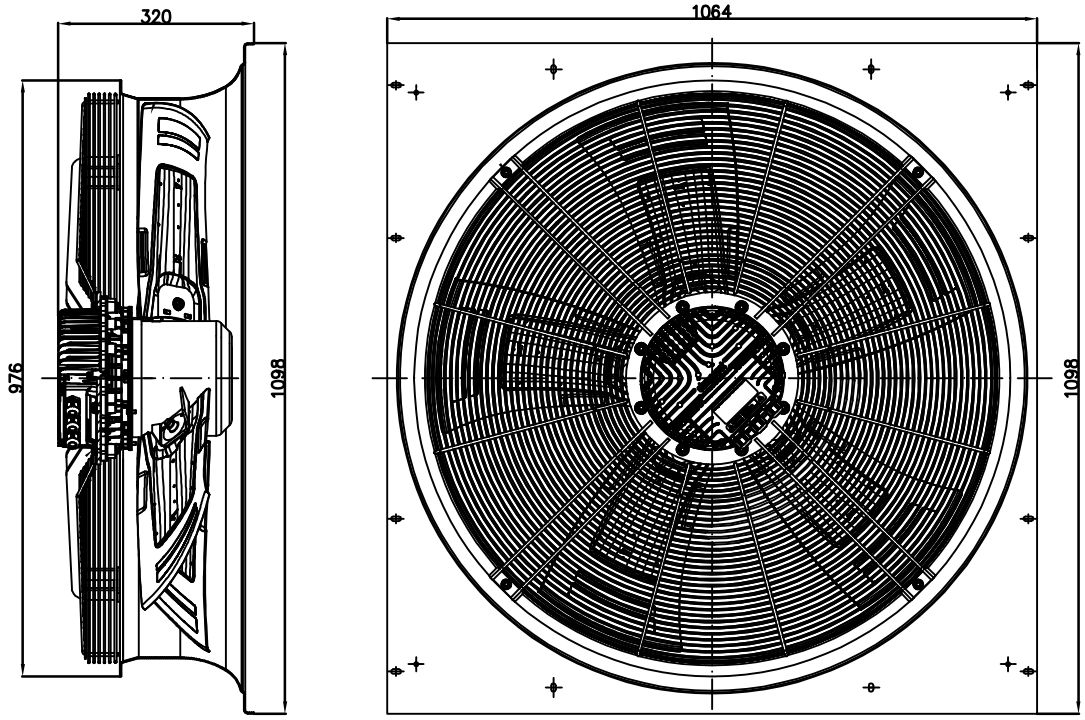
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Product drawing



1	Direction of air flow "V"
2	Cable diameter: min. 4 mm, max. 10 mm, tightening torque: 4±0.6 Nm
3	Tightening torque 3.5±0.5 Nm

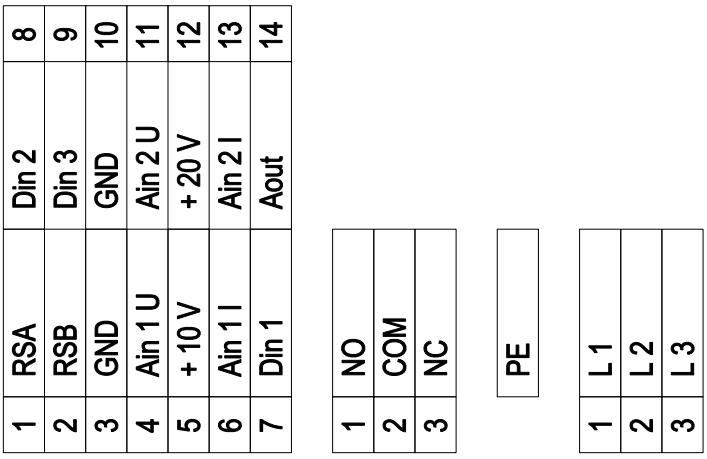
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Connection screen



No.	Pin	Signal	Function / assignment
KL 1	1	L1	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	2	L2	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	3	L3	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL 2	1	NO	Status relay, floating status contact; normally open; close with error
KL2	2	COM	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / 2 A (AC1)
KL2	3	NC	Status relay, floating status contact; break with error
KL 3	1	RSA	Bus connection RS485; RSA; MODBUS RTU
KL 3	2	RSB	Bus connection RS485; RSB; MODBUS RTU
KL 3	3 / 10	GND	Signal ground for control interface KL3
KL 3	4	Ain1 U	Analogue input 1 (set value); 0-10 V; Ri= 100 kΩ; parametrisable curves; only usable as alternative to input Ain1 I
KL 3	5	+ 10 V	Fixed voltage output 10 VDC; + 10 V +/-3%; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer)
KL 3	6	Ain1 I	Analogue input 1 (set value); 4-20 mA; Ri= 100 Ω; parametrisable curves; only usable as alternative to input Ain1 U
KL 3	7	Din1	Digital input 1: enabling of electronics; enabling: open pin or applied voltage 5 to 50 VDC; disabling: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to <1 V
KL 3	8	Din2	Digital input 2: parameter set switch 1/2; according to EEPROM setting, the valid/used parameter set is selectable per BUS or per digital input DIN2. Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage < 1 VDC
KL 3	9	Din3	Digital input 3: Control characteristic of the integrated controller; according to EEPROM setting, the control characteristic of the integrated controller is normally/inversely selectable per BUS or per digital input; normal: open pin or applied voltage 5 to 50 VDC (control deviation = actual sensor value - set value) inverse: bridge to GND or applied voltage < 1 VDC (control deviation = set value - actual sensor value)
KL 3	11	Ain2 U	Analogue input 2; actual sensor value 0-10 V; Ri= 100 kΩ; parametrisable curve; only usable as alternative to input Ain2 I
KL 3	12	+ 20 V	Fixed voltage output 20 VDC; + 20 V +25/-10 %; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors)
KL 3	13	Ain2 I	Analogue input 2; actual sensor value 4-20 mA; Ri= 100 Ω; parametrisable curve; only usable as alternative to input Ain2 U
KL 3	14	Aout	Analogue output 0-10 V; max. 5 mA; output of the actual motor control factor (output voltage of electronics)/ of the actual motor speed; function selectable per bus; parametrisable curve.

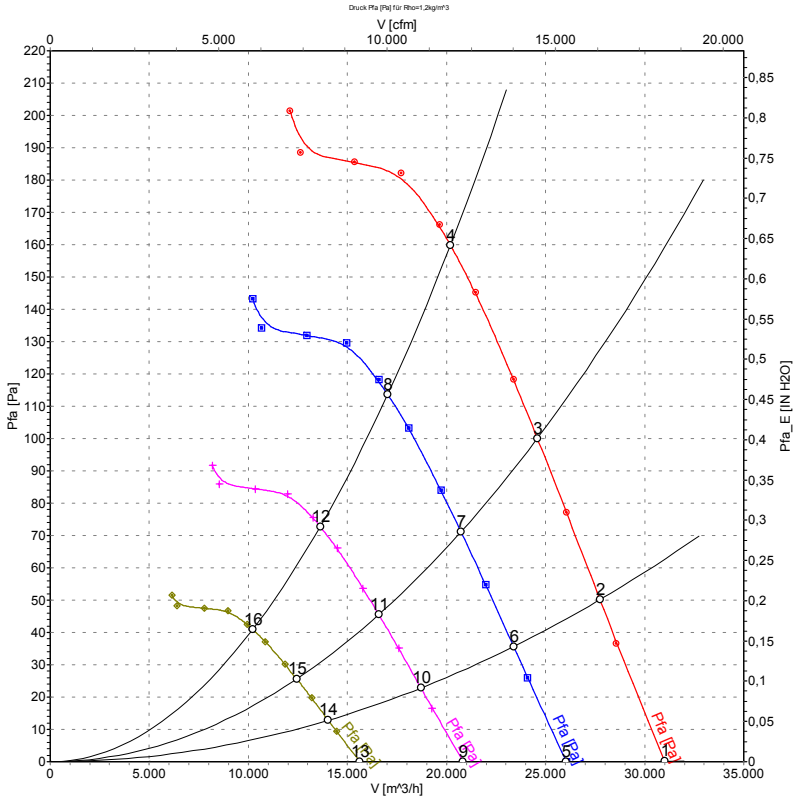
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Charts: Air flow 50 Hz



Measurement: LU-118474

Measured values

	U	f	n	P_1	I	LpA_{ss}	LpA_{ds}	LwA_{ss}	LwA_{ds}	$\dot{V}$	p_{fa}
	[V]	[Hz]	[min^{-1}]	[W]	[A]	[dB(A)]	[dB(A)]	[dB(A)]	[dB(A)]	[m^3/h]	[Pa]
1	400	50	885	1355	2.07	68	68	76	76	31010	0
2	400	50	885	1580	2.41	67	65	75	75	27740	50
3	400	50	885	1804	2.75	67	61	74	74	24580	100
4	400	50	885	2100	3.20	71	63	78	78	20200	160
5	400	50	750	802	1.23	64	64	72	72	26040	0
6	400	50	750	947	1.44	63	61	71	71	23390	36
7	400	50	750	1081	1.65	63	57	71	71	20730	71
8	400	50	750	1228	1.87	68	59	75	74	17030	114
9	400	50	600	411	0.63	60	59	67	67	20830	0
10	400	50	600	485	0.74	58	56	66	66	18710	23
11	400	50	600	554	0.84	58	52	66	66	16580	46
12	400	50	600	629	0.96	63	54	70	69	13630	73
13	400	50	450	173	0.27	53	53	61	61	15630	0
14	400	50	450	204	0.31	52	50	60	60	14030	13
15	400	50	450	234	0.36	52	46	60	60	12440	26
16	400	50	450	265	0.40	56	48	64	63	10220	41

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