



BFI-E3-11-0023-1012

Article number 61490

Output power 0.37 kW
Output 3x230 VAC, 2.3 A
Input voltage 1x110 VAC
IP20

Facts

General description

Article number	61490
Warranty	3 years

Mechanical

IP class	IP20
Physical size	Size 1
Measurements (H x W x D)	173 mm x 83 mm x 123 mm
Weight	1.0 kg
Typical power loss at rated power	0,02
Main switch	No
Built in Main switch, control switch and potentiometer	No
Conformal coated PCBs	Yes, 3C2/3S2 conformal coated PCBs

Output ratings

Output voltage	3 x 230 VAC
Rated motor current	2.3 A
Overload capacity	150% for 60 seconds, 175% for 2,5 seconds
Motor power	0.37 kW
Output frequency	0 – 500Hz, 0.1Hz resolution
Built-in brake transistor	No
Regenerative capacity	No brake transistor

Input ratings

Supply voltage	110 – 115VAC ± 10%
Voltage fluctuations	+/- 10%
Phase imbalance	3% maximum allowed
Displacement factor	> 0.98
Supply frequency	48 – 62Hz
Power cycles	120 per hour maximum, evenly spaced

Control specification

Control modes	V/F Voltage Vector, Energy Optimised V/F, Sensorless Vector Speed Control, Synchronous Reluctance Motor Control, Brushless DC Motor Control, Open Loop PM Vector Control
Current/torque limitation	Current limitation
PWM frequency	4-32 kHz effective
Stopping mode	Ramp to Stop: User Adjustable 0.1 – 600 seconds,Coast to Stop
Braking	Motor Flux Braking
Skip frequency	No
Analog setpoint control	0 to 10V, 10 to 0V, 0 to 20mA, 20 to 0mA, 4 to 20mA, 20 to 4mA
Digital setpoint control	4 fixed speeds, Motorised Potentiometer, Keypad, Modbus RTU, CANopen

Communication

Modbus RTU	9.6 - 115.2 kbps (8N1, 8N2, 8E1, 8O1)
BACnet MS/TP	No
Modbus TCP	No
Ethernet IP	No
EtherCat	No
Profinet IO	No
Profibus DP(DPV1)	No
Device Net	No
CC-Link	No
CAN open	Yes, 125 - 1000 kbps

Display

Programmable display	No
Multi language OLED display	No
External OLED display	Yes
LED display	Yes

HVAC

PID-control	PI-control with sleep/wake up
Spin start	Yes
Pump dry protection	No
Pump prime and burst protection	No
Stir function	No
Motor pre-heat	No
Broken impeller and broken belt detection	No
Automatic cleaning for pumps	No
Bypass control	No
Fire mode	Yes

Control terminals

Power supply	100 mA @ 24 VDC, 20 mA @ 10 VDC
Inputs	4 in total, 2 Digital, 2 Analog or Digital, selectable
Digital inputs	8-30 V DC, PNP, Response time: < 4 msec, Internal or external supply
Analog inputs	Resolution:12 bit, Response time: <4 msec; Accuracy: <± 2% of full scale, Adjustable scaling
Outputs	2 total, 1 relay, 1 analog or digital
Digital transistor outputs	24VDC/20 mA, Internal supply
Relay outputs	Maximum Voltage: 250 VAC, 30 VDC Switching Current Capacity: 6A AC, 5A DC
Analog outputs	0 to 10 V, 10 to 0 V, 0 to 20mA, 20 to 0mA, 4 to 20mA, 20 to 4mA
Safety inputs	No
Extra IOs	No

Control features

Speed control Master/slave	Slave
Modbus master functionality	No
Advanced hoist control	No
Built-in PLC	No

Standard compliances

Low voltage directive	2014/35/EU
EMC directive	2014/30/EU Cat C1 according to EN61800-3:2004
Conformance	CE, UL
Machine directive	2006/42/EC
Marine approvals	No
Safe torque OFF	No
Restriction of hazardous substances	RoHS2
Registration evaluation and authorisation of chemicals	Reach
Earth leakage current	EN 61800-5-1: 2007. Test techniques EN 60990:2000. 1x230 VA < 2,5 mA, 3x400VAC < 4,65 during runing
DC Bus discharge time	EN 61800-5-1:2007
Electrostatic discharge	EN 61800-3:2004+A1-2012. Test techniques EN 61000-4-2:2009.
Dielectric strength	61800-5-1: 2007
Surge	EN 61800-3: 2004+A1-2012. Test techniques EN 61000-4-5:2006.
Electrical fast transient burst	EN 61800-3: 2004+A1-2012. Test techniques EN 61000-4-4:2004.

Ambient conditions

Temperature operation	-20 to 50 °C
Humidity	95% max, non-condensing

Maintenance

Fault memory	Last 4 Trips stored with time stamp
Data logging	Logging of data prior to trip, Current, Temperature, DC Bus Voltage
Maintenance indicator	No
Monitoring	Hours Run Meter, kWh/MWh meter

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