BFI-H3-44-0390-3F1N-MN

Article number 62522

Output power 18 kW
Output 3x400 VAC, 39 A
Input voltage 3x380-480 VAC
IP55

Facts

General description

Article number	62522
Warranty	3 years

Mechanical

IP class	IP55
Physical size	Size 4
Measurements (H x W x D)	450 mm x 171 mm x 252 mm
Weight	12 kg
Typical power loss at rated power	2 % of rated power
Main switch	Yes, as option
Built in Main switch, control switch and potentiometer	No
Conformal coated PCBs	Yes, IEC 60721-3-3, 3S3/3C3

Output ratings

Output voltage	3 x 400 VAC
Rated motor current	39 A
Overload capacity	110% for 60 seconds, 165% for 4 seconds
Motor power	18 kW
Output frequency	0 – 250Hz, 0.1Hz resolution
Supported motor types	3 phase AC induction (IM), AC permanent magnet (PM), Brushless DC (BLDC), Synchronous reluctance (SynRM)
Built-in brake transistor	No
Regenerative capacity	No brake transistor

Input ratings

Supply voltage	380 – 480VAC ± 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
Total harmonic current distorsion	EN61000-3-12

Control specification

Control modes	Variable torque V/F, Variable torque energy optimised V/F, Constant torque U/F, Sensorless Vector Speed Control, Synchronous Reluctance Motor Control, Brushless DC Motor Control, Open Loop PM Vector Control
Current/torque limitation	Torque and current limitation
PWM frequency	4-32 kHz effective
Stopping mode	Ramp to Stop: User Adjustable 0.1 – 6000 seconds. Fast stop. Coast to Stop
Braking	Motor Flux Braking
Skip frequency	Yes
Analog setpoint control	0 to 10V, 10 to 0V, −10 to 10V, 0 to 20mA, 20 to 0mA, 4 to 20mA, 20 to 4mA
Digital setpoint control	8 fixed speeds, Motorised Potentiometer, Internal PLC, Keypad, Modbus RTU, BacNet, Optional: PROFIBUS DP, DeviceNet, EtherNet/IP, EtherCat, PROFINET, Modbus TCP, CC-Link

Communication

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

Display

Programmable display	Yes
Multi language OLED display	TFT Display
External OLED display	Yes, TFT Display
LED display	No

HVAC

PID-control	Yes with sleep/wake up functionality
Spin start	Yes
Pump dry protection	Yes
Pump prime and burst protection	Yes
Stir function	Yes
Motor pre-heat	Yes
Broken impeller and broken belt detection	Yes
Automatic cleaning for pumps	Yes
Bypass control	Yes
Fire mode	Yes

Control terminals

Power supply	100 mA @ 24 VDC, 20 mA @ 10 VDC
Inputs	5 in total, 3 Digital, 2 Analog or Digital, selectable
Digital inputs	10-30 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	4 total, 2 relays, 2 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 Volt, 0 to 20mA, 4 to 20mA
Safety inputs	2
Extra IOs	Yes, internal option

Control features

Speed control Master/slave	Yes, Master and slave
Modbus master functionality	Yes, Master and slave
Advanced hoist control	No
Built-in PLC	Yes

Standard compliances

Low voltage directive	2014/35/EU
EMC directive	2014/30/EU
Conformance	CE, UL, cUL
Machine directive	2006/42/EC
Marine approvals	Contact Beijer Electronics for more information
Safe torque OFF	Cat 3/PL"d" According to ISO 13849-1, SIL CL 2 According to EN61800-5-2 / EN62061 / IEC61508
Restriction of hazardous substances	RoHS2
Registration evaluation and authorisation of chemicals	Reach
Harmonics	EN 61000-3-12
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	-10 to 40 °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
Maintenence indicator	Yes. Onboard service life monitoring
Monitoring	Hours Run Meter, kWh/MWh meter

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