BLEMO®
Frequenzumrichter

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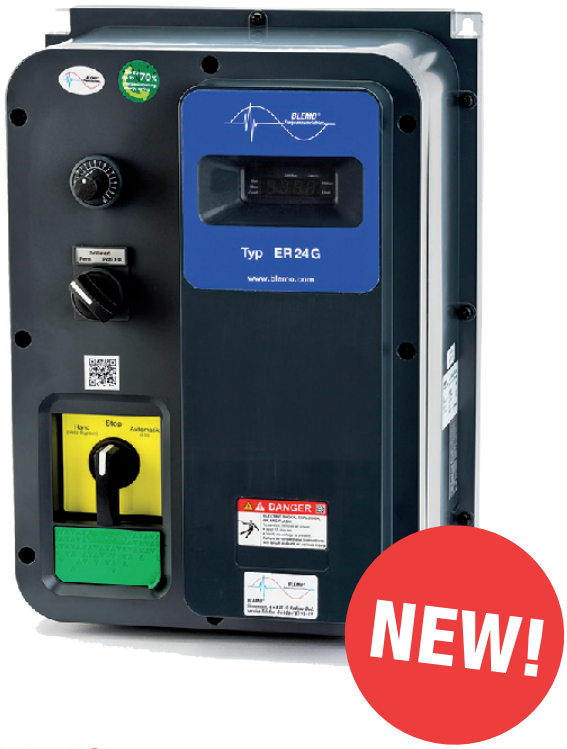
Frequency inverter, Compact Line,
Special variant ER24G-V4

With innovative bypass switch for emergency situations!



Incl. potentiometer, setpoint changeover switch, bypass switch and 150 application-specific functions for the protection of humans and animals!

The ER24G is the universal device from BLEMO® – for all applications with synchronous, asynchronous and AC motors.

STANDARD FEATURES

- 150 application-specific functions
- Lacquered boards
- RoHs, WEEE compliant (recycling rate: 88%)
- CE, UL, CSA, RCM, EAC, ATEX

Integrated:
- 4-digit 7-segment display
- EMV filter (IEC 61800-5-1)
- PTC thermistor input
- STO input (also dual-channel)
- PID controller
- Modbus, CANopen

Optional:
- Multilingual plain text display
- PROFIBUS DP V1, DeviceNet, EtherCAT, Ethernet/IP, Modbus TCP, POWERLINK and ProfiNet

YOUR BENEFITS

- Plug-and-play – only a little wiring required, connect mains and motor and put into operation
- Connection of AC motors
- The fanless IP65 version allows easy installation outside the control cabinet
- Integrated PID controller and various connection options for pressure and flow control sensors right on the device – ideal for pumps, compressors and fans
- Reliable, precise motor control
- Maintenance free
- Increased protection class
- Easy parameterization

APPLICATION EXAMPLES

Ventilation systems in hospitals and stables must not fail. The consequences would be fatal. The built-in bypass switch on the ER24G-V4 allows the motor to be connected directly to the mains in the event of a frequency inverter failure. If the control signal is lost, the speed can be adjusted manually via the built-in setpoint potentiometer.

DEVICE OVERVIEW ER24G

Voltage	Type	Rated output in kW	Continuous output current in A	Short-term overload current in A	Power loss at full load in W	Dimensions WxHxD	Weight* in kg
1~200...240 V	ER24-0.18G	0.18	1.5	2.3	22	250 x 340 x 182	5.0
50/60 Hz	ER24-0.37G	0.37	3.3	5.0	32	250 x 340 x 182	5.1
	ER24-0.55G	0.55	3.7	5.6	42	250 x 340 x 182	5.1
	ER24-0.75G	0.75	4.8	7.2	48	250 x 340 x 182	5.1
	ER24-1.1G	1.1	6.9	10.4	66	250 x 340 x 235	7.4
	ER24-1.5G	1.5	8.0	12.0	82	250 x 340 x 235	7.4
	ER24-2.2G	2.2	11.0	16.5	110	250 x 340 x 235	7.4
3~380...500 V	ER24-0.37/4G	0.37	1.5	2.3	28	250 x 340 x 200	5.9
50/60 Hz	ER24-0.55/4G	0.55	1.9	2.9	33	250 x 340 x 200	5.9
	ER24-0.75/4G	0.75	2.3	3.5	38	250 x 340 x 200	5.9
	ER24-1.1/4G	1.1	3.0	4.5	47	250 x 340 x 200	6.0
	ER24-1.5/4G	1.5	4.1	6.2	61	250 x 340 x 200	6.0
	ER24-2.2/4G	2.2	5.5	8.3	76	250 x 340 x 235	7.7
	ER24-3.0/4G	3.0	7.1	10.7	94	250 x 340 x 235	7.7
	ER24-4.0/4G	4.0	9.5	14.3	112	250 x 340 x 235	7.8
	ER24-5.5/4G	5.5	14.3	21.5	233	320 x 521 x 300	22.0
	ER24-7.5/4G	7.5	17.0	25.5	263	320 x 521 x 300	22.0

* For version 2, 0.4 kg must be added.

TECHNICAL DATA

Mains connection
- **Voltage:** (tolerance –15%/+10 %):
  - 1-phase, 200 to 240 V (0.18–2.2 kW)
  - 3-phase, 380 to 500 V (0.37–7.5 kW)
- **Frequency:** 50/60 Hz ±5%

Motor connection
- **Voltage:** 3-phase, 0 to max. U_{Mains}
- **Output frequency:** 0,1 to 599 Hz
- **Overload torque:** Max. up to 220% of motor load torque
- **Max. overload current:** 150% of rated current for 60 sec.
- **Braking torque:** 30% of the rated motor torque without braking resistor; up to 150% with optional braking resistor (brake chopper integrated as standard)
- **Rated motor frequency:** 40 to 599 Hz
- **Clock frequency:** 2 to 16 kHz (factory setting 4 kHz)
- **Ramp times:** 0.05 to 6.000 sec.

Control ports
- **3 analog inputs:** AI1: 0...+10 V, Ri = 30 kΩ (also programmable as digital input); AI2: -10 V...0...+10 V, Ri = 30 kΩ (also programmable as digital input); AI3: 0(4)...20 mA, Ri = 250 Ω
- **1 analog output:** Programmable as current or voltage output, AQ1: 0(4)...20 mA, Ri = 800 Ω; 0...10 V, Ri = 470 Ω (also programmable as digital output)
- **1 logic output:** DQ+/DQ-: Open collector, max. 30 VDC
- **6 programmable digital inputs:** DI1...DI6: Supply +24 VDC (min./max. 19/30 VDC), internal or external, PLC compatibility level 1, EN61131-2; DI5 can be used as pulse input with 20 kHz; DI6 can be used as PTC input
- **1 STO input:** Safe torque off (STO) 2...30 VDC, Ri = 1.5 kΩ
- **1 input for external power supply:** P24: 24 VDC, max. 1.1 A
- **2 programmable relay outputs:**
  R1: 1 changeover contact, min. 10 mA at 5 VDC, max. 5 A at 250 VAC and 30 VDC and ohmic load; R2: 1 S contact, min. 10 mA at 5 VDC, max. 5 A at 250 VAC and 30 VDC and ohmic load
- **2 internal voltage sources:** +24 VDC, max. 100 mA, +10 VDC, max. 10 mA
- **Integrated communication protocols:** Modbus, CANopen

Ambient conditions
- **Ambient temperature:** -10 to +50° C (14 to 122° F) without power reduction; +50 to +60° C (122 to 140° F) with power reduction
- **Storage temperature:** –25 to +70° C (–13 to 158° F)
- **Relative humidity:** < 95%, no condensation
- **Installation altitude:** Max. 1.000 m a.s.l.; above 1.000 m rated current must be reduced by 1% per additional 100 m
- **Max. degree of contamination:** PCBs coated according to IEC 60721-3-3 class 3C3 and 3S2

Protection class:
- ER24-...G-V1: IP 66; ER24-...G-V2, V4 and V7: IP65

Approvals:
- CE, UL, CSA, RCM, EAC, ATEX
- IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, categories C2), UL508C, EN 954-1 category 3, ISO/EN 13849-1/-2
- Category 3 (PL e), IEC 61800-5-2, IEC 61508 (parts 1+2)
- Safety levels SIL2 and SIL3

Integrated safety functions according to IEC 61508:
- STO, SLS, SS1, SMS, GDL

Your representative: