Fuji Electric

Innovating Energy Technology

smaller
smarter

FRENIC-Lift

Finest drives specialized in lift applications

NEW

Fuji Electric
3 Year Warranty

- **Book type frame up to 7.5 kW**
  - *Dual Mounting*
  - *Feed through mounting (with IP54 heat sink)*
  - *Removable input and output power terminals*
- **Contactor-less solution compliant to EN 81-1 + A3**
- **Customizable logic capability (PLC function)**
- **Built-in advanced fieldbuses dedicated to lift applications (CANopen CiA DSP 402 & 417 and DCP 3 & 4)**
- **Built-in EMC filter**
- **Different energy saving levels according to Draft ISO 25745 & VDI 4707**

FRENIC-Lift

In 2005, Fuji Electric designed the first FRENIC-Lift inverter to fulfill the requirements of lift applications. FRENIC-Lift is nowadays the most preferred inverter for lift application in the market.
By using the experiences in market, we have now developed the upgraded version of FRENIC-Lift: smaller but smarter.

Further advanced functions

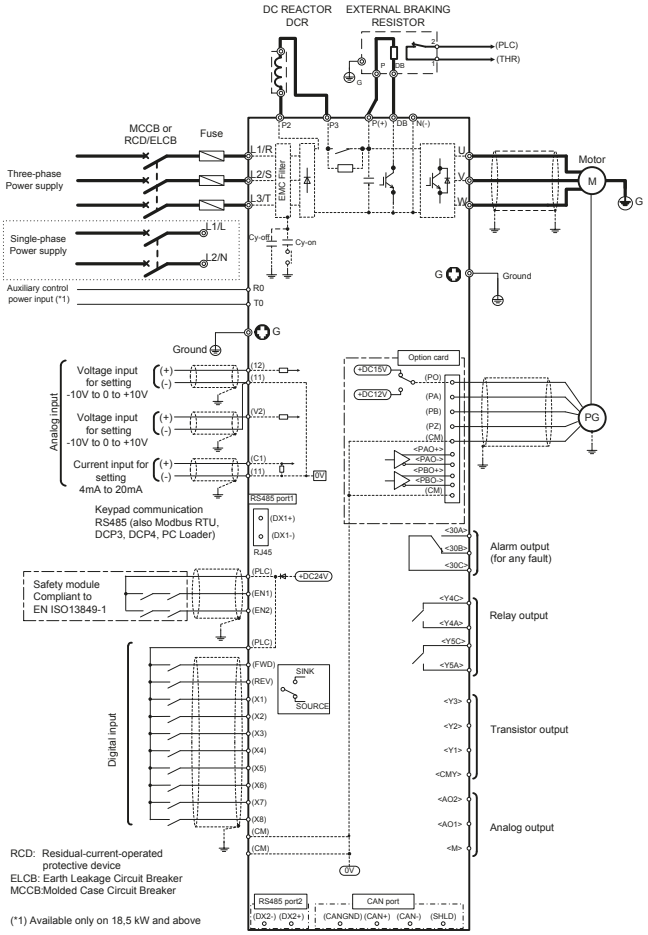
- Faster speed and current control loop for easier and faster comfort adjustment
- Two new motor control modes: Vector control with peripheral PG and Sensor-less vector control for rescue operation (PMSM)
- Removable control terminals
- Easier rescue operation with 24 VDC power supply for control board
- Several certified functions for safety operation
- New software functions to make easier setup
- Product range of 1ph 200 V 2.2 kW and 3ph 400 V 2.2 kW - 45 kW

Dimensions

Power Supply Voltage	Capacity [kW]	W [mm]	H [mm]	D [mm]
1ph, 200V	2.2	140	260	195
3ph, 400V	2.2			
	4.0			
	5.5			
	7.5			
3ph, 400V	11	under developement		
	15			
	18.5	250	400	195
	22			
	30	320	550	261
	37			
	45	355	615	276

Note: Replaceable with current FRENIC-Lift (FRN##LM1S-4E/EA and FRN2.2LM1S-7E/EA).

Basic wiring diagram



Standard Specifications: Single-phase 200 V & Three-phase 400 V Series

Item			Specifications											
Series			Single-phase 200 V	Three-phase 400 V										
Type Name			FRN__LM2G-7_	FRN__LM2G-4_										
			2.2	2.2	4	5.5	7.5	11	15	18.5	22	30	37	45
Nominal applied motor [kW]			2.2	2.2	4	5.5	7.5	11	15	18.5	22	30	37	45
Output ratings	Rated capacity [kVA]		4.1	4.1	6.8	10	14	18	24	29	34	45	57	69
	Rated voltage [V]		Three-phase 200 to 240 V, 50/60 Hz	Three-phase 380 to 480 V, 50/60 Hz										
	Rated current [A]		11	5.5	9	13.5	18.5	24.5	32	39	45	60	75	91
	Overload capacity [A] (Permissible energizing time)		22 (3s)	11 (3s)	18 (3s)	27 (3s)	37 (3s)	49 (3s)	64 (3s)	78 (3s)	90 (3s)	120 (3s)	150 (3s)	182 (3s)
	Rated frequency [Hz]		50, 60 Hz											
Input ratings	Normal operation	Main power supply, Phases, Voltage, Frequency	Single-phase 200 to 240 V, 50/60 Hz	Three-phase 380 to 480 V, 50/60 Hz										
		Auxiliary control power input voltage	Option for 24 VDC (+10 to -15%)							24 VDC or Single-phase 220 to 480 VAC		24 VDC (+10 to -15%) or Single-phase 380 to 480 VAC		
		Voltage/frequency variations	Voltage: +10 to -15% (Voltage unbalance: 2% or less), Frequency: +5 to -5%											
		Rated current [A] with DCR	-	4.5	7.5	10.6	14.4	21.1	28.8	35.5	42.2	57	68.5	83.2
		Required power supply capacity (with DCR) [kVA]	3.5	3.2	5.2	7.4	10	15	20	25	30	40	48	58
	UPS Operation	Main power supply, Phases, Voltage, Frequency	Single-phase 200 to 240V, 50/60 Hz	Single-phase 220 to 480V, 50/60Hz										
		Auxiliary control power input voltage	Option for 24 VDC (+10 to -15%)							24 VDC or Single-phase 220 to 480 VAC		24 VDC (+10 to -15%) or Single-phase 380 to 480 VAC		
		Voltage/frequency variations	Voltage: +10 to -10%, Frequency: +5 to -5%											
		Operation time [s]	180											
	Battery operation	Main power supply	24 VDC or more in the direct current voltage conversion											
		Auxiliary control power input: Phases, Voltage	Option for 24 VDC (+10% to -15%)											
		Operation time [s]	180											
Braking	Braking time [s]		60											
	Braking duty-cycle (%ED) [%]		50											
EMC filter (IEC/EN 61800-3:2004)			EMC standards compliance: Category C2 (emission) / 2nd Env. (Immunity)							EMC standards compliance: Category C3 (emission) / 2nd Env. (Immunity)				
Applicable safety standard			CSA B44.1-11/ASME A17.5-2011, EN 61800-5-1:2007, ISO 13849-1(STO PLe Cat. 4), EN61800-5-2 (SIL 3)											
Enclosure (IEC60529)			IP20 (IP54 heat sink)							IP20		IP00		
Cooling method			Fan cooling											

Options

Two types of keypad available:

Multifunction LED keypad

- USB port

Customizable LCD keypad

- User friendly
- Possible to display real system values with preferable indications
- Multi language support: 19 different languages + user customized language

Option board for main market encoders

- Option for line driver encoders
- Option for open collector encoders
- Option for SinCos absolute encoders
- Option for serial communication encoders (EnDat 2.1 & 2.2, Hiperface, SSI, Biss)

Encoder pulses feedback built-in in options:
Line driver with frequency divider

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Fuji Electric Europe GmbH
European Headquarters
Goethering 58, 63067 Offenbach, Germany
www.fujielectric-europe.com
info.inverter@fujielectric-europe.com