EFI 8000

Electrim Frequency Inverter

ABOUT ELECTRIM

Electrim series of products cover mainly the MV & LV electrical motors, inverters and starter panels including industries gears & drives.

The company is committed to challenge itself to become a main player in this field. Through the years, we have maintained a policy of providing high performance products and in line with technology development.

THE MISSION

To ensure Products recognition and best status in our Market, the Company emphasize QUALITY over PRICES. We would rather explain our pricing for a while than to apologize QUALITY for a LIFE.

Thus we choose to build a BRAND for long term and not to make short term PROFIT.

Electrim offer a total system solution consisting of motors, starter & protection, inverters & gears box for the industries.

EFI 8000

Electrim Frequency Inverter

Reliability & Stability

Industrial
Exterior Design

Easy to
Integrate & Install

Diverse
Basic Options

Standard LCD
Display Panel

Product advantages

- Book-style design, facilitating integration and installation in control cabinets.
- Optional base and output reactor for easier installation.
- Optional DC reactor to reduce harmonics, improve power factor, and lower energy consumption.
- Multiple basic options available to meet different application requirements.
- Supports STO safety function, meeting SIL 2 requirements.

Friendly human-machine

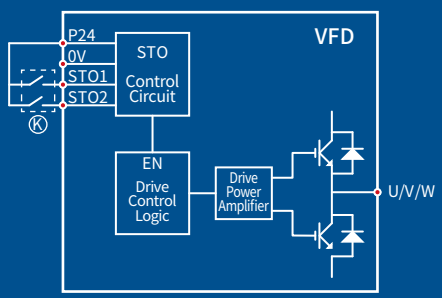
- Brand-new styling design, simple and magnificent
- Customized LED for richer displayed information
- Newly added shift function for more convenient parameter setting
- Equipped with parameter copying function
- LCD Display Panel (80mm×128mm)

CORE ADVANTAGES

STO Function

Standard-equipped with STO (Safe Torque Off) safety torque interruption function: by blocking IGBT trigger pulses, it enables the motor to decelerate freely, prohibits torque output, prevents unexpected motor startup, and ensures the safety of personnel and equipment.

Complies with EN/IEC 61508 SIL 2



Simplify the Equipment Safety Circuit

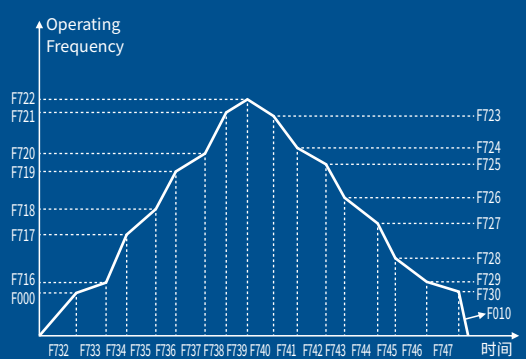
Saves space and reduces wiring

Reduces the use of vulnerable components such as contactors

The system remains powered on after emergency stop, enabling quick resumption of production

Progressive Multi-Speed Function

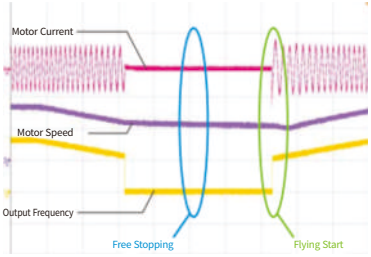
It is an intelligent speed regulation mode that achieves smooth startup, acceleration, deceleration and stop of the motor by presetting multiple frequency segments and operation time. It can flexibly adjust the acceleration and deceleration time of each segment according to process requirements, reducing mechanical impact, saving energy and reducing noise. Widely used in equipment such as textile machines, conveyors and mixers, it improves the level of automation and production efficiency, and ensures stable and efficient operation of the equipment.



PERFORMANCE CHARACTERISTICS

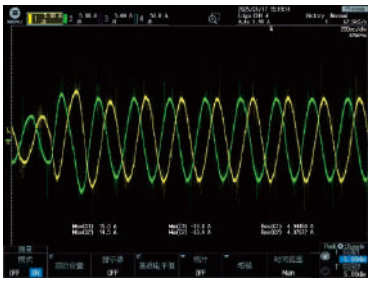
Flying Start

The drive detects the motor's speed and rotation direction during startup. This enables smooth re-powering of the motor that is in the process of free stopping, without causing large current or torque surges.



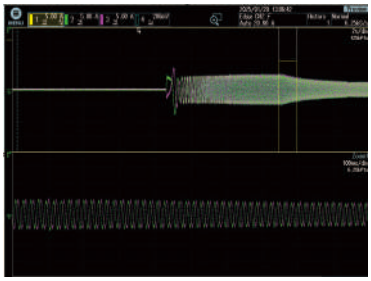
Motor Torque Boost in V/F Mode

No excessive motor parameter self-learning process is required. During the motor startup, the drive automatically identifies the motor resistance, enabling it to adaptively compensate its output voltage when the motor load changes, thus achieving the goal of improving the motor's actual load-carrying capacity. The application of this technology can prevent the motor from failing to operate or shutting down due to insufficient load-carrying capacity when the actual load increases, especially at low speeds.



Field Weakening Function

When the motor operates above its rated frequency (in the field weakening region), the output electromagnetic torque is reduced to prevent mechanical damage or other safety hazards caused by excessive output torque and excessively high speed of the motor.

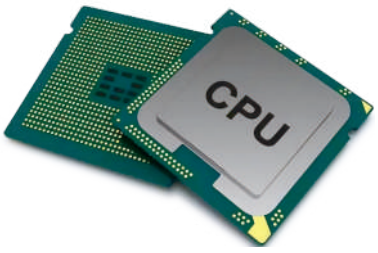


Dual-CPU Design

Advanced dual-core CPU topology control technology is adopted, with control and application separated to ensure stable and reliable software operation.

It is conducive to modular design and offers stronger expandability.

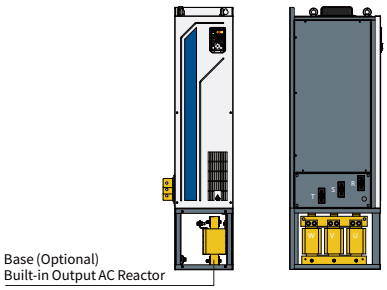
It facilitates EMC design, resulting in better anti-interference capability and higher safety.



Flexible Installation Method

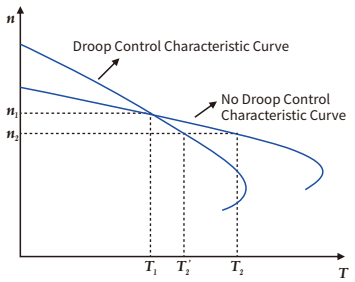
The base is removable

Input reactor is optional (for models of 200kW and above)



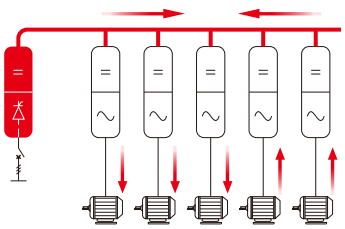
Droop Control

When multiple motors drive the same load, the load borne by each motor will vary due to differences in their rated speeds. The droop control function can adjust the speed drop of the motors under the same load to balance the load distribution among different motors under this working condition. During driving, droop control reduces the drive's output frequency; during regenerative braking, it increases the drive's output frequency.



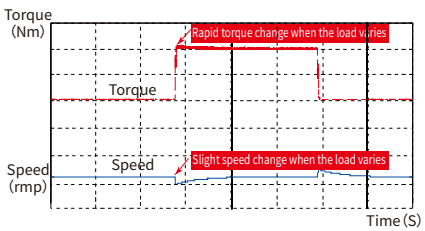
Common DC Bus

The common DC bus enables internal energy flow, improves the electrical energy efficiency of the system, and can achieve energy savings of up to 30%.



Fast Response

By increasing the response speed, it controls the speed variation when the load is disturbed, maintaining the motor speed as constant as possible. Compared with traditional model drives, its response time is reduced by more than half.



PERFORMANCE & CONFIGURATION

Basic application functions

Low-frequency torque boost	The low-frequency torque of V/F control and sensorless vector control can be increased by approximately 0.1% to 30.0% through voltage boost and torque boost respectively.
V/F curve	Linear type, multi-point type
Acceleration/deceleration curve	Linear or S-curve acceleration/deceleration Three groups of acceleration/deceleration times acceleration/deceleration time range: 0-3200s
Automatic voltage regulation (AVR)	When the grid voltage changes, it can automatically maintain a constant output voltage.
Built-in PID	It can easily implement a closed-loop control system for process control.
DC braking	DC braking range: 0.0Hz - maximum frequency Braking time: 0.0s-20.0s braking action current value: 0%-100%
Jog control	It can realize immediate start and stop of the motor; Jog frequency setting range: 0.0-20.0Hz; Jog stop mode: deceleration/free stop, DC braking.
Frequency hopping	Three frequency skip points and corresponding skip ranges can be set to prevent the drive from operating within the frequency band.
Multi-speed range	A maximum of 15 operating frequencies can be set through 4 logic input ports.
Input summing	The algebraic operation result of 2 analog inputs is used as the frequency setting, making the frequency setting more flexible.
2 sets of motor parameter switching	2 sets of motor parameters can be set and switched freely to match the currently driven motor.

Electrical characteristics

Input voltage	3-phase AC, 400V (-5%~+20%) , 50/60Hz ±5%
Output voltage	0-100% input voltage, 0.5Hz-400Hz
Control Mode	Constant torque V/F, quadratic load V/F, sensorless vector control, energy-saving mode
Switching frequency	1.5kHz-12kHz Automatic switching frequency adjustment: reduces switching frequency as temperature rises; reverts to initial value when temperature normalizes.
Overcurrent capability	Light load application: 120% rated output current for 60s, 160% rated output current for 2s Heavy load application: 150% rated output current for 60s, 200% rated output current for 2s

Control signal

Frequency setting signal	Integrated operation panel	Panel keys
	external signal	UP/DOWN setting, analog input, multi-speed, external keypad, serial communication
Start-stop control signal	Integrated operation panel	RUN/STOP keys
	external signal	Logic input terminals, external keypad, serial communication

Control circuit characteristics

Available internal power supply	10V 24V	10VDC ±5%, maximum current 10mA, for reference potentiometers 24VDC ±5%, maximum current 100mA, for logic inputs
Analog input	AI1 AI2	Voltage analog input: 0-5VDC or 0-10VDC, 30kΩ impedance Current analog input: 0/4-20mA/D, 250Ω impedance Resolution: 10-bit A/D conversion
Logic Input	LI1-L18	0-24VDC power supply Positive logic (source) or negative logic (sink) selectable, factory default is negative logic Multiple selectable functions, including forward, reverse, run, fault reset, and multi-speed settings ≤11kW: Only 6 channels (LI1-LI6) ≥15kW: LI6 configurable as high-speed pulse input
	AI1, AI2 Force valid input	When the drive power is 11kW or less, AI1 and AI2 can be set as logic inputs. F309, F310 are mandatory inputs, and their configured functions remain active during power-on.
Analog output	AO1, AO2	Voltage analog output: 0-10VDC, minimum load impedance 470Ω Current analog output: 0/4-20mA, maximum load impedance 700Ω Resolution: 8-bit Multiple selectable functions include output frequency, output current, speed reference, and serial data output
Logic Output	LO, CLO	Open collector, maximum current 100mA, maximum voltage 30VDC Logic output or pulse output selectable, factory default setting is logic output Logic output with various selectable functions, including fault, alarm, and set frequency reached Pulse output with various selectable output functions, including output frequency, output current, and speed reference
Relay output	T1A, T1B, T1C T2A, T2B, T2C T3A, T3C	TxA - Normally Open, TxB - Normally Closed, TxC - Common TxA: 5A @ 250VAC, 5A @ 30VDC Multiple selectable functions, including fault, alarm, and set frequency reached ≤11kW: Only 2 circuits are included: T1A-T1B-T1C, T2A-T2B-T2C
Serial Communication	485+, 485-	2-wire RS485 interface, Modbus-RTU
Safe Torque Off	STO 1-P24 STO 2-P24	Effectively prevents unexpected motor torque output, meeting EN/IEC61508 SIL2 (15kW and above)

Protection function

Drive protection	Input phase loss protection, output phase loss protection, underload detection, over-torque protection, undervoltage protection, overvoltage protection, overcurrent protection, overheating protection, phase short circuit protection
Motor protection	Motor thermal protection, motor current limit, motor overload, motor short circuit

Environmental characteristics

Protection level	IP20	Operating / Storage temperature	-10~40°C/-20~60°C
Cooling method	Forced air cooling	Humidity	≤95% (no condensation)
Installation location	Indoor	Altitude	≤1000m

PRODUCT SELECTION

EFI 8000 – 3T XXXX G S/R B L F – (YY) – (XX)

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Product Series

EFI 8000:
Electrim Frequency inverter

② Voltage specifications:

2: 200V~240V
3: 400V~480V
6: 660V~690V
S: Single-phase
T: Three-phase

③ Rated current:

Unit: A
02A6: 2.6A
04A1: 4.1A
05A5: 5.5A
6A9: 6.9A
12A6: 12.6A
… …
0725: 725A
0860: 860A

④ Current type:

None: Standard load application current
G: Heavy load application current
(≥355kW Only suitable for heavy load applications)

⑤ Motor type:

None: Asynchronous/induction motor
S: Permanent magnet synchronous motor
R: Switched reluctance motor

⑥ Braking unit:

None: No brake unit
B: Built-in brake unit

⑦ Reactor:

None: No reactor
L: Built-in DC reactor

⑧ Structure type:

None: Standard model (wall-mounted or cabinet-mounted)
F: Attached stand

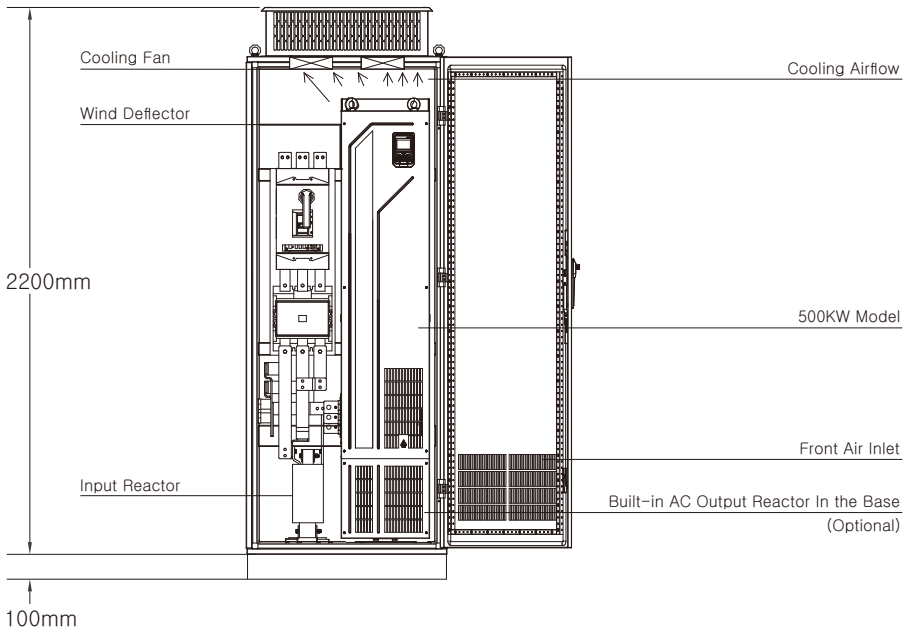
⑨ Optional card:

The two letters represent the types of 2 optional cards.

⑩ Others:

2 digits (00-99) indicate other options

Note: X represents a number (special case: the decimal point of the current in ③ is represented by the letter A), Y represents a letter.



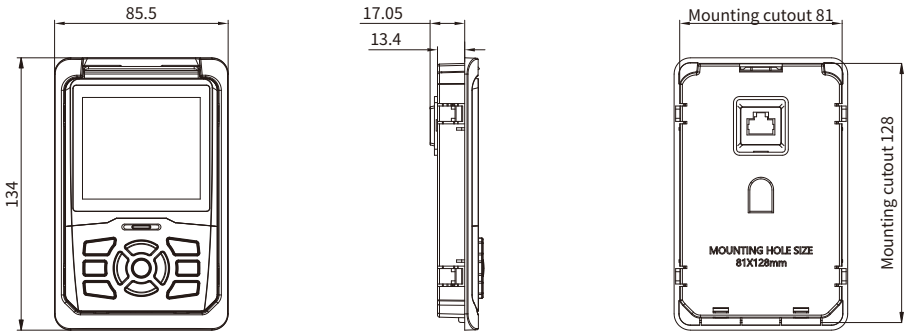
Product Selection Table

Model (400V)	Standard Applications			Heavy-load Applications			Accessory Selection	
	I in (A)	I out (A)	P rated (kW)	I in (A)	I out (A)	P rated (kW)	External AC Input Reactor (Dimensions: Appendix 1)	External AC Output Reactor (Dimensions: Appendix 2)
EFI 8000-3T02A6B	3.6	2.6	0.75	2.1	1.5	0.4	RV-ACL-1R5-1	RV-OCL-1R5-1
EFI 8000-3T04A1B	6.4	4.1	1.5	3.6	2.6	0.75	RV-ACL-1R5-1	RV-OCL-1R5-1
EFI 8000-3T05A5B	8.7	5.5	2.2	6.4	4.1	1.5	RV-ACL-1R5-1	RV-OCL-1R5-1
EFI 8000-3T06A9B	10.9	6.9	3	8.7	5.5	2.2	RV-ACL-2R2-1	RV-OCL-2R2-1
EFI 8000-3T09A5B	14	9.5	4	10.9	6.9	3	RV-ACL-004-1	RV-OCL-004-1
EFI 8000-3T12A6B	20.7	12.6	5.5	14	9.5	4	RV-ACL-004-1	RV-OCL-004-1
EFI 8000-3T18A5B	26.5	18.5	7.5	20.7	12.6	5.5	RV-ACL-5R5-1	RV-OCL-5R5-1
EFI 8000-3T0025B	36.6	25	11	26.5	18.5	7.5	RV-ACL-7R5-1	RV-OCL-7R5-1
EFI 8000-3T0032B	40	32	15	36.6	25	11	RV-ACL-011-1	RV-OCL-011-1
EFI 8000-3T0038B	47	38	18.5	40	32	15	RV-ACL-015-1	RV-OCL-015-1
EFI 8000-3T0045B	56	45	22	47	38	18.5	RV-ACL-018-1	RV-OCL-018-1
EFI 8000-3T0060B	70	60	30	56	45	22	RV-ACL-022-1	RV-OCL-022-1
EFI 8000-3T0075B	80	75	37	70	60	30	RV-ACL-030-1	RV-OCL-030-1
EFI 8000-3T0092B	94	92	45	80	75	37	RV-ACL-037-1	RV-OCL-037-1
EFI 8000-3T0115	128	115	55	94	92	45	RV-ACL-045-1	RV-OCL-045-1
EFI 8000-3T0150*	160	150	75	128	115	55	RV-ACL-055-1	RV-OCL-055-1
EFI 8000-3T0180*	190	180	90	160	150	75	RV-ACL-075-1	RV-OCL-075-1
EFI 8000-3T0215*	225	215	110	190	180	90	RV-ACL-110-1	RV-OCL-110-1
EFI 8000-3T0260*	265	260	132	225	215	110	RV-ACL-110-1	RV-OCL-110-1
EFI 8000-3T0305	310	305	160	265	260	132	RV-ACL-132-1	RV-OCL-132-1
EFI 8000-3T0350	355	350	185	310	305	160	RV-ACL-160-1	RV-OCL-160-1
EFI 8000-3T0380	385	380	200	355	350	185	RV-ACL-185-1	RV-OCL-185-1
EFI 8000-3T0425	430	425	220	385	380	200	RV-ACL-220-1	RV-OCL-220-1
EFI 8000-3T0480	485	480	250	430	425	220	RV-ACL-220-1	RV-OCL-220-1
EFI 8000-3T0530	545	530	280	485	480	250	RV-ACL-280-1	RV-OCL-280-1
EFI 8000-3T0600	610	600	315	545	530	280	RV-ACL-280-1	RV-OCL-280-1
EFI 8000-3T0650	665	650	355	610	600	315	RV-ACL-315-1	RV-OCL-315-1
EFI 8000-3T0650G	-	-	-	665	650	355	RV-ACL-380-1	RV-OCL-380-1
EFI 8000-3T0725G	-	-	-	785	725	400	RV-ACL-450-1	RV-OCL-450-1
EFI 8000-3T0860G	-	-	-	890	860	500	RV-ACL-550-1	RV-OCL-550-1

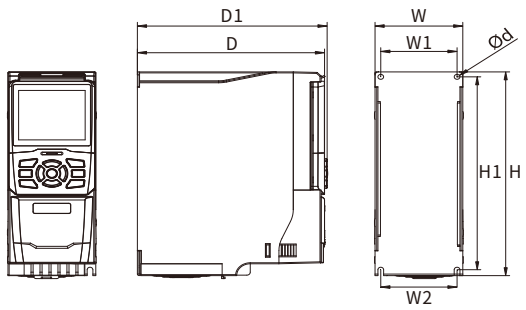
Note:

- For products 3T0075B and below: Built-in brake unit comes as standard.
- For products 3T0092-3T0260: Built-in brake unit is optional; for products 3T0305-3T0860G: External brake unit is optional.
- When placing an order, if a brake unit is required, please note this in the order.
- The "*" indicates that a built-in brake unit is optional; add "B" to the model (e.g., EFI 8000-3T0150B).

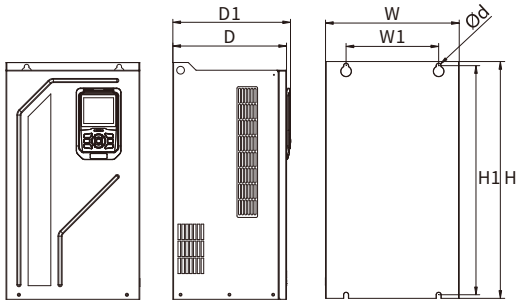
PRODUCT SPECIFICATIONS



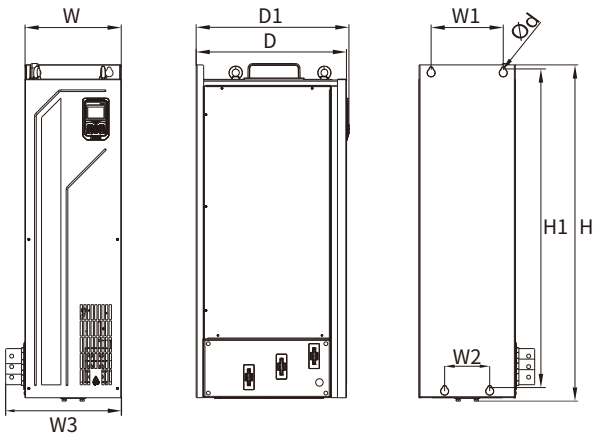
Schematic diagram of external panel and tray dimensions



Appearance diagram (3T0032B and below)



Appearance diagram (3T0038B –3T0380)



Appearance diagram (3T0425–3T0860G, without AC output reactor)

Overall & Installation Dimensions Table

3T0032B and below

Model (400V)	Overall dimensions (mm)				Installation dimensions (mm)			
	H	W	D	D1	H1	W1	W2	Aperture d
EFI8000-3T02A6B	206	76.5	163	168.5	195	66.5	66.5	ϕ5
EFI8000-3T04A1B								
EFI8000-3T05A5B								
EFI8000-3T06A9B								
EFI8000-3T09A5B								
EFI8000-3T12A6B	262	100	166	171	251	90	90	ϕ5
EFI8000-3T18A5B								
EFI8000-3T0025B								
EFI8000-3T0032B	353	120	217	222	341	108	90	ϕ7

3T0038B-3T0380

Model (400V)	Overall dimensions (mm)				Installation dimensions (mm)		
	H	W	D	D1	H1	W1	Aperture d
EFI8000-3T0038B	400	188	193.5	201	385	120	ϕ7
EFI8000-3T0045B							
EFI8000-3T0060B	440	200	198	206	425	140	ϕ9
EFI8000-3T0075B	460	260	221	229	445	180	ϕ9
EFI8000-3T0092B							
EFI8000-3T0115	520	290	248	256	500	200	ϕ11
EFI8000-3T0150	650	290	317	325	630	240	ϕ11
EFI8000-3T0180	785	290	334	342	765	240	ϕ11
EFI8000-3T0215							
EFI8000-3T0260							
EFI8000-3T0305	860	360	365	373	840	240	ϕ11
EFI8000-3T0350							
EFI8000-3T0380							

3T0425-3T0860G, without AC output reactor

Model (400V)	Overall dimensions (mm)				Installation dimensions (mm)				
	H	W	D	D1	H1	W1	W2	W3	Aperture d
EFI8000-3T0425	1116	320	500	508	1058	240	150	385	ϕ13
EFI8000-3T0480									
EFI8000-3T0530	1275	340	545	553	1215	240	185	401	ϕ13
EFI8000-3T0600									
EFI8000-3T0650									
EFI8000-3T0650G	1460	355	560	568	1400	240	185	426	ϕ13
EFI8000-3T0725G									
EFI8000-3T0860G									

APPENDIX 1

Input Reactor Selection Table

Product features

- Rated operating voltage: 220VAC-1140VAC, 50/60Hz
- Rated operating current: 5A to 1600A @ 40°C
- Insulation resistance: Core-winding 1000VDC Insulation resistance ≥ 100MΩ
- Dielectric strength: Core-winding 3000VAC/50Hz/5mA/10s
  No arcing (factory test)
- Reactor noise: Less than 80dB
  (tested at a horizontal distance of 1 meter from the reactor)
- Protection level: IP00
- Insulation class: Class F or higher
- Maximum current: 1.5 times the rated current, continuous for 60 seconds
- Temperature rise: ≤ 85K
- Product standards: GB19212.1-2008; GB19212.21-2007; GB1094.6-2011

Application

- The power supply is causing significant interference to other equipment (interference, overvoltage).
- Power phase voltage imbalance > 1.8% of rated voltage.
- Line transformers with very low impedance are more than 10 times the rated value of the inverter.
- A large number of inverters are installed on a single line to reduce line current.
- Use of cosϕ (power factor) correction capacitors or power factor correction units.

Environmental conditions

- Altitude not exceeding 2000 meters
- Temperature resistance class F (155°C) or higher
- Operating ambient temperature -25°C to +45°C, relative humidity not exceeding 90%
- Ambient air, no flammable or explosive materials, good ventilation

Product Selection Table

Fig. A

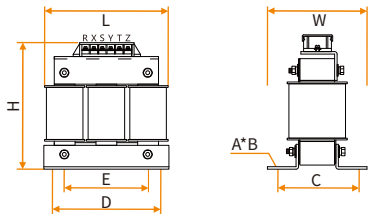


Fig. B

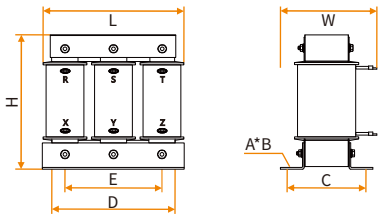


Fig. C

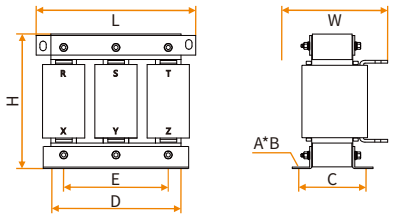
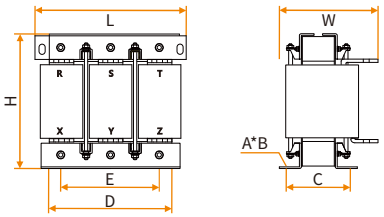


Fig. D



Model (400V)	Figure No.	Adaptive Power (kW)	Rated Current (A)	Inductance (mH)	Pressure Drop	Size (±2mm)							Weight (kg±10%)
						L	W	H	D	E	W1	A*B	
RV-ACL-1R5-1	A	1.5	5	2.8	2%	120	75	135	90	60	51	6*12	2.5
RV-ACL-2R2-1	A	2.2	7	2.0	2%	120	75	135	90	60	51	6*12	2.5
RV-ACL-004-1	A	3.7	10	1.4	2%	120	75	135	90	60	51	6*12	2.5
RV-ACL-5R5-1	A	5.5	15	0.94	2%	120	75	135	90	60	51	6*12	2.5
RV-ACL-7R5-1	A	7.5	20	0.7	2%	120	75	135	90	60	51	6*12	3
RV-ACL-011-1	B	11	30	0.47	2%	155	120	135	95	70	58	6*12	5
RV-ACL-015-1	B	15	40	0.35	2%	155	120	135	95	70	58	6*12	5
RV-ACL-018-1	B	18.5	50	0.28	2%	180	145	160	120	80	73	8.5*17	7
RV-ACL-022-1	B	22	60	0.24	2%	180	145	160	120	80	73	8.5*17	7
RV-ACL-030-1	B	30	80	0.18	2%	180	145	160	120	80	83	8.5*17	8
RV-ACL-037-1	B	37	90	0.16	2%	180	145	160	120	80	83	8.5*17	8
RV-ACL-045-1	B	45	120	0.117	2%	195	170	160	120	80	98	8.5*17	11
RV-ACL-055-1	B	55	150	0.094	2%	195	185	160	120	80	98	8.5*17	12
RV-ACL-075-1	C	75	200	0.07	2%	220	160	210	182	120	98	11*18	16
RV-ACL-110-1	C	110	250	0.056	2%	220	160	210	182	120	98	11*18	16
RV-ACL-132-1	C	132	290	0.048	2%	245	160	230	182	120	98	11*18	20
RV-ACL-160-1	C	160	330	0.042	2%	245	160	230	182	120	98	11*18	20
RV-ACL-185-1	C	185	390	0.036	2%	270	175	260	214	140	104	11*18	27
RV-ACL-220-1	C	220	490	0.028	2%	270	190	260	214	140	114	11*18	27
RV-ACL-280-1	C	280	600	0.0235	2%	295	210	295	214	140	124	12*20	40
RV-ACL-315-1	C	315	660	0.021	2%	295	210	295	214	140	124	12*20	40
RV-ACL-380-1	C	380	800	0.0175	2%	355	220	320	270	210	124	12*20	48
RV-ACL-450-1	C	450	1000	0.014	2%	355	220	345	270	210	124	12*20	53
RV-ACL-550-1	D	550	1200	0.012	2%	355	230	365	270	210	124	12*20	58

APPENDIX 2

Output Reactor Selection Table

Product features

- Rated operating voltage: 220VAC-1140VAC 50/60Hz
- Rated operating current: 5A to 1600A @ 40°C
- Insulation resistance: Core-winding 1000VDC Insulation resistance ≥ 100MΩ
- Dielectric strength: Core-winding 3000VAC/50Hz/5mA/10s
  No arcing (factory tested)
- Reactor noise: Less than 80dB
  (tested at a horizontal distance of 1 meter from the reactor)
- Protection level: IP00
- Insulation class: Class F or higher
- Maximum current: 1.5 × rated current, continuous for 60 seconds
- Temperature rise: ≤ 85K
- Product standards: GB19212.1-2008; GB19212.21-2007; GB1094.6-2011

Application

- Limits dv/dt to 500V/μs
- Limits voltage at motor terminals to: 1000V to 400V (rms value); 1150V to 460V (rms value)
- Reduces filter interference caused by the contactor between the filter and the motor
- Reduces motor ground leakage current

Environmental conditions

- Altitude not exceeding 2000 meters
- Temperature resistance class F (155°C) or higher
- Operating ambient temperature -25°C to +45°C, relative humidity not exceeding 90%
- Ambient air, no flammable or explosive materials, good ventilation

Product Selection Table

Fig. A

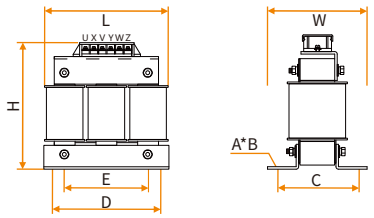


Fig. B

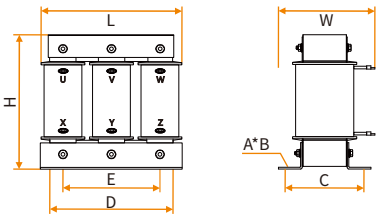


Fig. C

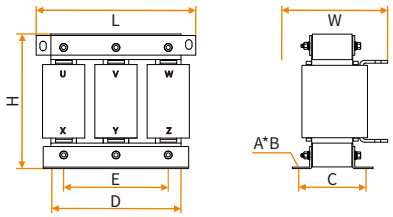
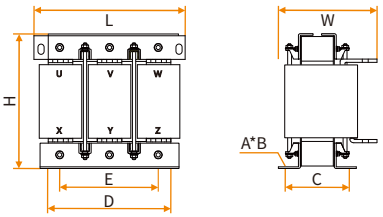


Fig. D



Model (400V)	Figure No.	Adaptive Power (kW)	Rated Current (A)	Inductance (mH)	Pressure Drop	Size (±2mm)							Weight (kg±10%)
						L	W	H	D	E	W1	A*B	
RV-OCL-1R5-1	A	1.5	5	1.4	1%	120	73	140	90	60	51	6*12	2.5
RV-OCL-2R2-1	A	2.2	7	1	1%	120	73	140	90	60	51	6*12	2.5
RV-OCL-004-1	A	3.7	10	0.7	1%	120	73	140	90	60	51	6*12	2.5
RV-OCL-5R5-1	A	5.5	15	0.47	1%	120	73	140	90	60	51	6*12	2.5
RV-OCL-7R5-1	A	7.5	20	0.35	1%	120	73	140	90	60	51	6*12	3
RV-OCL-011-1	B	11	30	0.235	1%	155	120	135	95	70	58	6*12	5
RV-OCL-015-1	B	15	40	0.175	1%	155	120	135	95	70	58	6*12	5
RV-OCL-018-1	B	18.5	50	0.14	1%	155	120	135	95	70	58	6*12	5
RV-OCL-022-1	B	22	60	0.12	1%	155	120	135	95	70	58	6*12	5
RV-OCL-030-1	B	30	80	0.087	1%	180	135	160	120	80	73	8.5*17	6.5
RV-OCL-037-1	B	37	90	0.078	1%	180	135	160	120	80	73	8.5*17	6.5
RV-OCL-045-1	B	45	120	0.058	1%	180	155	160	120	80	83	8.5*17	8
RV-OCL-055-1	B	55	150	0.047	1%	180	170	160	120	80	83	8.5*17	8
RV-OCL-075-1	C	75	200	0.035	1%	220	160	210	182	120	98	11*18	16
RV-OCL-110-1	C	110	250	0.028	1%	220	160	210	182	120	98	11*18	16
RV-OCL-132-1	C	132	290	0.024	1%	220	160	220	182	120	98	11*18	17
RV-OCL-160-1	C	160	330	0.021	1%	220	160	220	182	120	98	11*18	17
RV-OCL-185-1	C	185	390	0.018	1%	270	175	240	214	140	104	11*18	24
RV-OCL-220-1	C	220	490	0.014	1%	270	180	260	214	140	104	11*18	25
RV-OCL-280-1	C	280	600	0.0116	1%	295	190	295	214	140	104	12*20	32
RV-OCL-315-1	C	300	660	0.011	1%	295	190	295	214	140	104	12*20	32
RV-OCL-380-1	C	380	800	0.00875	1%	360	210	320	270	210	114	12*20	40
RV-OCL-450-1	C	450	1000	0.007	1%	360	210	345	270	210	114	12*20	45
RV-OCL-550-1	D	550	1200	0.0058	1%	360	220	345	270	210	114	12*20	48

Electrim Frequency Inverter