

**FR-E700** Variable Frequency Drive

World-class FA Products

**POWERFUL EXPANDABLE VERSATILE**



**SIMPLER OPERATION** Simple and fast installation, exceptionally user-friendly



**INTELLIGENT DESIGN** High-grade components for at least 10 years of maintenance-free operation



**MORE FLEXIBILITY** Compact dimensions, space-saving installation



**IMPROVED COMMUNICATION** Very expandable, extensive communications options

# FR-E700 | 0.4 kW to 15 kW

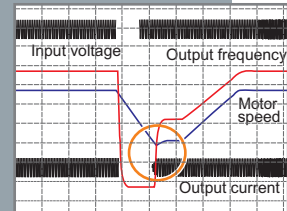
## Simple to Use

- Standard M – dial & display ensure easy setup & monitoring
- USB port allows setup & troubleshooting via PC
- RJ 45 port support alpha numeric keypad



## Intelligent Functions

- Sensorless vector control
- Overload capacity increased to 200% for 3 seconds
- Torque limiting
- Advanced auto tuning
- Catch spin feature



## Adaptable

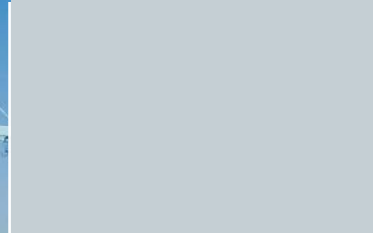
- Removable control I/O card simplifies wiring
- Connection to various network possible using option card
- Increased I/O possible with installed option card



## An Investment for the Future

- Easy to replace cooling fan requiring no tools
- Designed for 10 years maintenance free life
- Self diagnostic warning for key internal component





## SMART ATTRIBUTES

- Sensorless vector control for outstanding speed & torque performance
- Advanced auto tuning function can read out all the necessary parameters directly from motor in less than a minute
- All capacities include built-in brake chopper
- USB communication allow fast commissioning & troubleshooting
- Standard RS485 serial communications supporting Modbus RTU
- Sink / Source selectable I/O
- Supports remote I/O via network
- Built-in PID control
- Delivers rated current at 50°C & 14.5 kHz carrier frequency
- 200% overload for 3 seconds & 150% for 60 seconds
- Digital I/P : 7 nos.  
Digital O/P : 3 nos.  
Analog I/P : 2 nos. 0-5/10 VDC & 4-20mA DC  
Analog O/P: 0-10 VDC

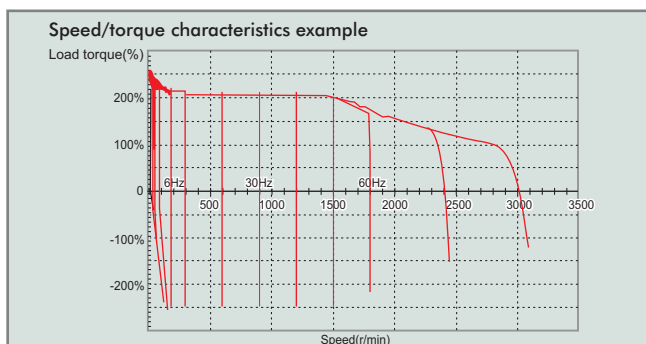
## ENHANCED FEATURES

- Dancer control PID
- Power failure stop function
- Traverse function
- Modbus RTU communication
- Catch spin function
- Regeneration avoidance function
- Optimum excitation control
- Plug-in options for communication
- Sink / Source logic selectable

## TOP-NOTCH TECHNICAL CHARACTERISTICS

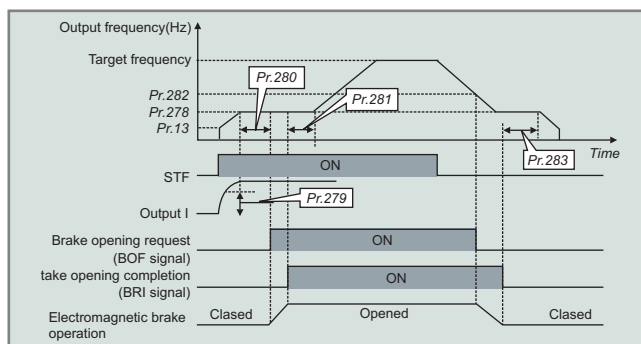
### Advanced Magnetic Flux Vector Control

- High starting torque : 200% @ 0.5 Hz
- Speed control: 1:120
- Advanced auto tuning without motor rotation



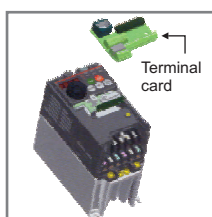
### Close Loop Brake Sequence Mode

- Built-in chopper for effective braking
- Precise electro-magnetic brake control for Lift & Hoist application



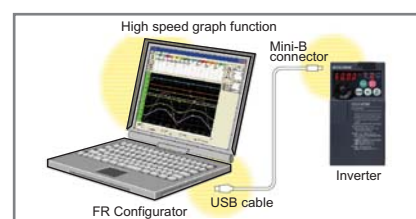
### Expandable Control Terminal

According to applications, terminal cards other than standard terminal such as analog, pulse train, two port RS485 terminal are available as options.



### Integrated USB Port

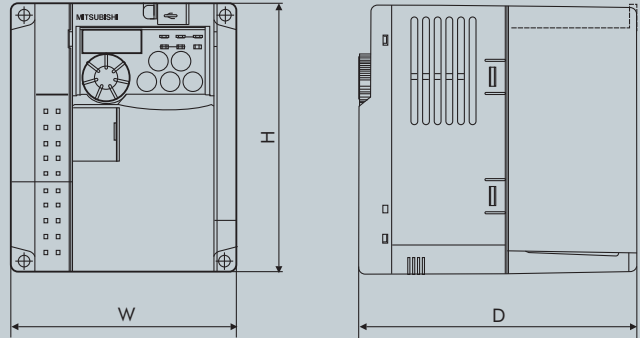
For fast commissioning & troubleshooting



## SPECIFICATIONS

Type	Rated O/P Current [A]	Rated Motor Capacity [kW]	WxHxD (mm)
FR-E740-016-EC	1.6	0.4	140 x 150 x 114
FR-E740-026-EC	2.6	0.75	140 x 150 x 114
FR-E740-040-EC	4.0	1.5	140 x 150 x 135
FR-E740-060-EC	6.0	2.2	140 x 150 x 135
FR-E740-095-EC	9.5	3.7	140 x 150 x 135
FR-E740-120-EC	12	5.5	220 x 150 x 147
FR-E740-170-EC	17	7.5	220 x 150 x 147
FR-E740-230-EC	23	11	220 x 260 x 190
FR-E740-300-EC	30	15	220 x 260 x 190

Operating conditions	Specifications
Voltage	Three-phase, 380-480 V (-15%, +10%)
Ambient temperature	-10°C bis +50°C (non-freezing)
Storage temperature	-20°C bis to + 65°C
Ambient humidity	Max. 90% relative humidity (non-condensing)
Altitude	Max. 1000m above sea level



Operating conditions	Specifications
Protection	IP20
Shock resistance	10 G
Vibration resistance	Max. 0.6 G
Certifications	CE/UL/cUL/RoHS

## PLUG-IN OPTIONS

Type	Description
FR-A7AX	Additional free configurable digital inputs (16 nos.)
FR-A7AY	Selectable standard digital output signals of the VFD can be output at the open collector (6 nos.) Selectable additional signals like analog output voltage or output current can be output and indicated at the analog output (2 nos.)
FR-A7AR	Selectable output signals of the VFD can be output through relay terminals (3 nos.)
FR-A7NP	Integration of the VFD in a Profibus DP network
FR-A7ND	Integration of the VFD in a DeviceNet network
FR-A7NC	Integration of the VFD in a CC-Link network
FR-A7NL	Integration of the VFD in a Lon Works network

\*E-kit: Required to mount all optional cards.

Display Option	Description
FR-PA07	LED Display Unit



Extruder



Crane



Centrifuge



Printing



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