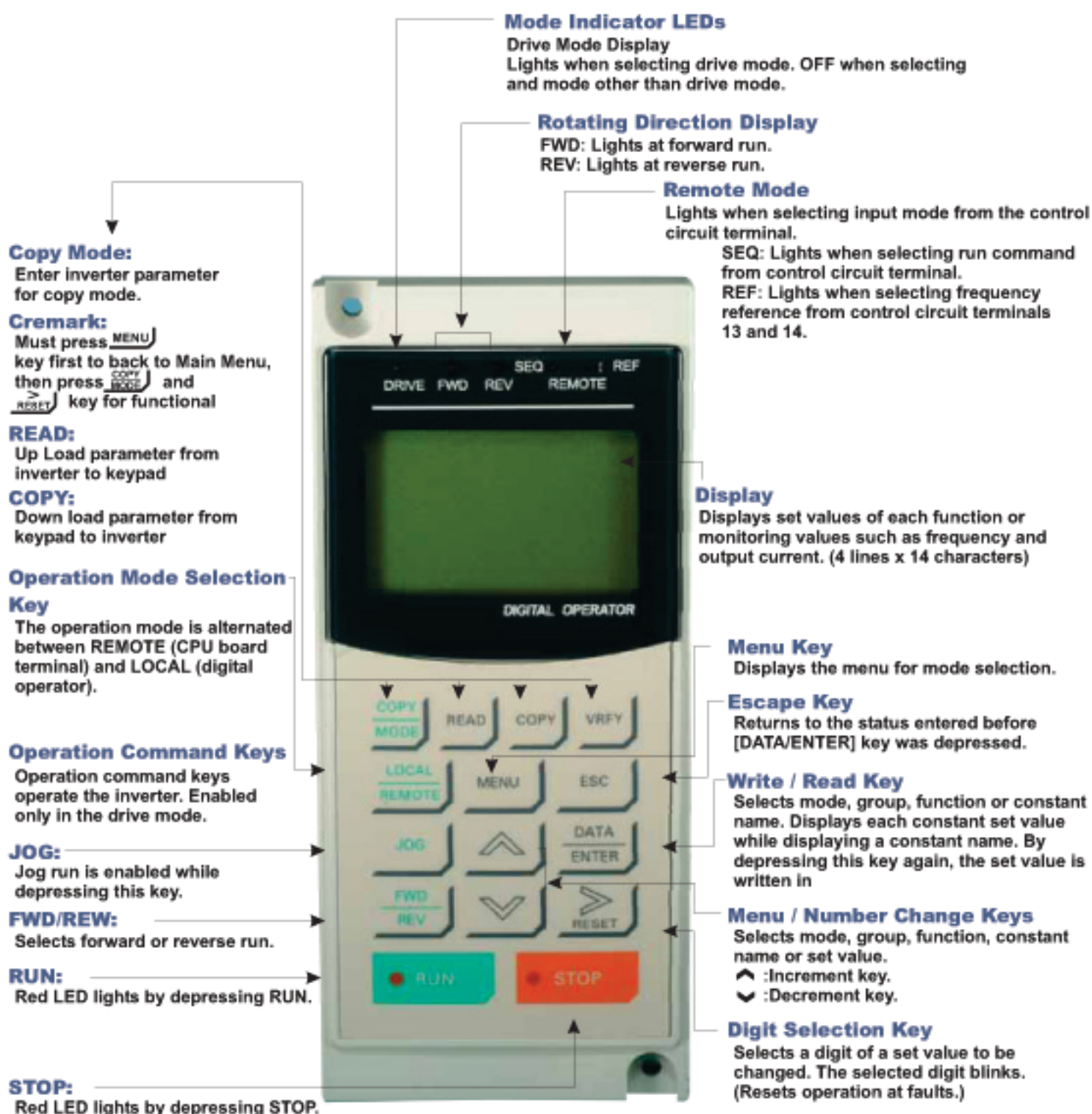


EI 9001 Series

The user-friendly LCD operator

Digital operator key description



Note: Only a digit that is blinking can be changed.

EI-9001 Series 220V Class Specifications

Inverter Model EI-9001		001L	-002L	-003L	-005L	-007L	-010L	-015L	-020L	-025L	-030L	-040L	-050L	-060L	-075L	-100L	-150L
Max. applicable motor output (kW)		0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	110
Inverter Capacity Hp		1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	150
Rated Output Current A		6	8	11	17.5	25	33	49	64	80	96	130	160	183	224	300	450
Protective Level		Enclosed wall-mounted type (NEMA1) IP20															
Power	Max. Output Voltage	3-phase 200/208/220, 50/60Hz, 230V/60Hz															
	Rated input Voltage and frequency	3-phase 200/208/220V 50Hz, 200/208/220/230V 60Hz															
	Allowable Voltage Fluctuation	+10%															
	Allowable Frequency Fluctuation	+5%															
	Max. Output Voltage	3-phase 200/208/220/230V Proportional to input voltage															
Control Characteristics	Rated Output Frequency	Up to 400Hz available by programming															
	Control Method	Sine wave PWM type, four control methods: (1) v/f (2) v/f with PG (3) open loop vector (4) flux vector															
	Starting Torque	150% / 1Hz (150%/or/min with PG)															
	Speed Control Range	1:100 (1:1000 with PG)															
	Speed Control Accuracy	± 0.2% (± 0.02% with PG)															
	Speed Response	5 Hz (30Hz with PG)															
	Torque Limit	Available (Parameter setting, 4 steps can be changed)															
	Torque Accuracy	± 5%															
	Torque Response	20Hz (40Hz with PG)															
	Frequency Control Range	0.1 to 400Hz															
	Frequency Accuracy	Digital command: 0.01% (-10°C to +40°C), Analog command: 0.1% (25°C ± 10°C)															
	Frequency Resolution	Digital operator reference: ± 0.01Hz Analog reference: 0.05Hz/ 60Hz (11bit+code)															
	Output Frequency Resolution	0.01 Hz															
	Overload Capacity	150% of rated output current for 1 minute															
	Frequency Setting Signal	-10 to 10 V, 0 to 10V, 4 to 20mA															
	Accel / Decel Time	0.01 to 6000.0 sec (Accel / decel time setting independently, 4 steps available)															
	Braking Torque	Approx.20%															
Protective function	Motor Overload Protection	Protected by electronic thermal overload relay															
	Instantaneous Overcurrent	Motor coasts to a stop at approx.200% of inverter rated current															
	Blown Fuse Protection	Motor coasts to a stop by blown-fuse															
	Overload	Motor coasts to a stop after 1 minute at 150% of rated output current															
	Overvoltage	Motor coasts to a stop if converter output voltage exceeds 400V															
	Undervoltage	Motor coasts to a stop if converter output voltage drops to 200V or below															
	Momentary Power Loss	Immediately stop by 15 ms and above momentary power loss (factory setting). Continuous operation during power loss less than 2 sec is equipped as standard															
	Heatsink Overheat	Protected by thermistor															
	Stall Prevention	Stall Prevention during accel / decel and constant speed operation															
	Ground Fault	Protected by electronic circuit (overcurrent level)															
	Power Charge Indication	Charge LED stays ON until bus voltage drops below 50V															
Environment	Ambient Temperature	-10°C to +40°C (enclosed wall-mounted type), -10°C to +45°C (open chassis type)															
	Humidity	90% RH or less															
	Storage Temperature	-20°C to +60°C															
	Location	Indoor (protected from corrosive gases and dust)															
	Elevation	1000 m or less															
	Vibration	9.8 1m/ S ² (1G) less than 20Hz, up to 1.96 m/ S ² (0.2G) at 20 to 50 Hz															

Note: (1) Max. applicable motor referring to standard 4 poles motor.

(2) High storage temperature may damage the capacitors in inverter.

EI-9001 Series 440V Class Specifications

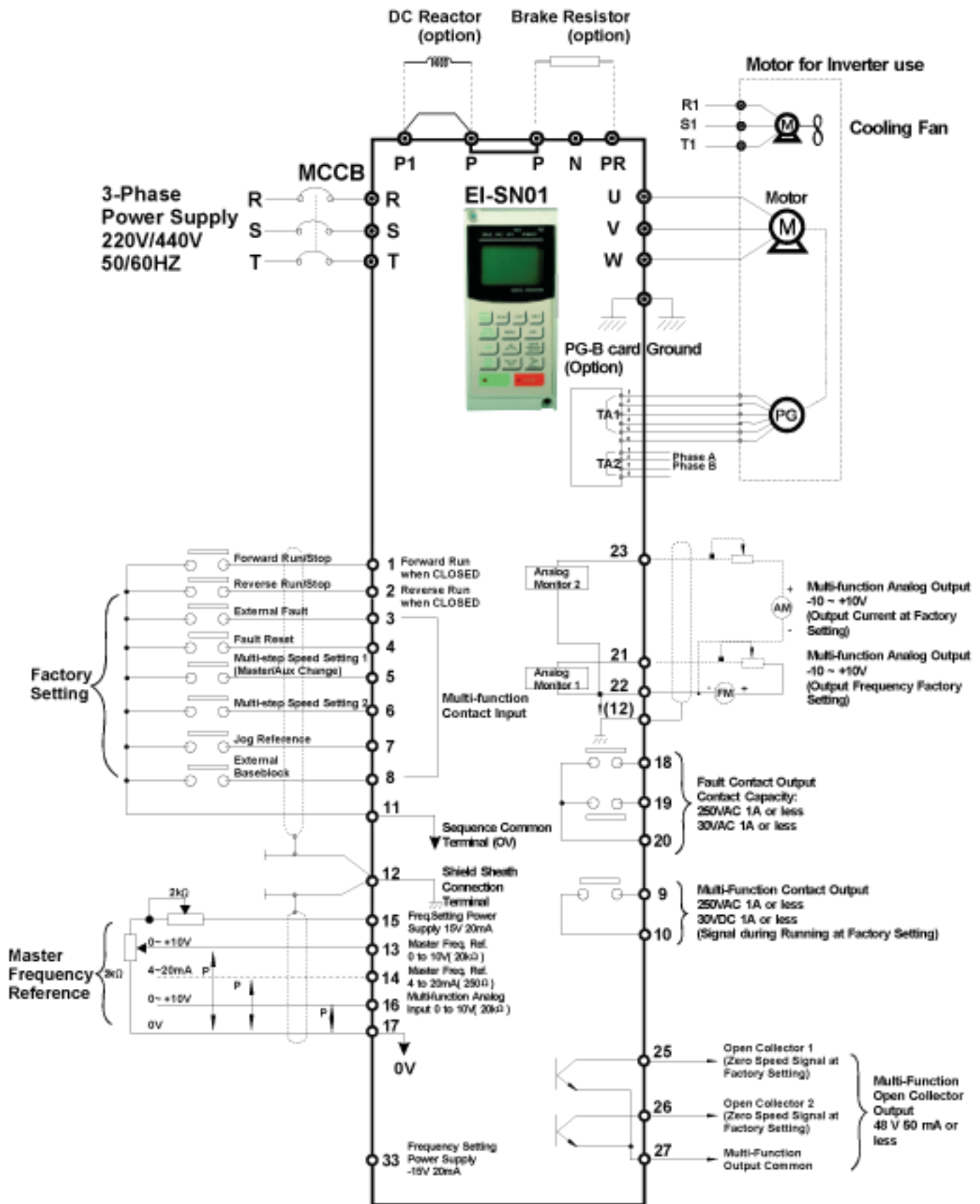
Inverter Model EI-9001		001H	002H	003H	005H	007H	010H	015H	020H	025H	030H	040H	050H	060H	075H	100H	150H	200H	250H	300H	400H
Max. applicable motor output (kW)		0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	110	160	185	220	300
Inverter Capacity Hp		1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	150	200	250	300	400
Rated Output Current A		3.4	4.8	6.2	9	14	18	27	34	41	48	65	80	96	128	165	224	302	340	450	605
Protective Level		Enclosed wall-mounted type (NEMA1) IP20																			
Power Supply	Max. Output Voltage	3-phase 380/400/415/440/460V (Proportional to voltage)																			
	Rated input Voltage and frequency	3-phase 380/400/440V/460V, 50Hz/60Hz																			
	Allowable Voltage Fluctuation	-15%																			
	Allowable Frequency Fluctuation	±5%																			
	Max. Output Voltage	3-phase, 380/400/415/440/460V																			
	Rated Output Frequency	Up to 400Hz available by programming																			
Control Characteristics	Control Method	Sine wave PWM type, four control methods: (1) v/f (2) v/f with PG (3) open loop vector (4) flux vector																			
	Starting Torque	150% / 1Hz (150%/or/min with PG)																			
	Speed Control Range	1:100 (1:1000 with PG)																			
	Speed Control Accuracy	± 0.2% (± 0.02% with PG)																			
	Speed Response	5 Hz (30Hz with PG)																			
	Torque Limit	Available (Parameter setting, 4 steps can be changed)																			
	Torque Accuracy	± 5%																			
	Torque Response	20Hz (40Hz with PG)																			
	Frequency Control Range	0.1 to 400Hz																			
	Frequency Accuracy	Digital command: 0.01% (-10°C to +40°C), Analog command: 0.1% (25°C ± 10°C)																			
	Frequency Resolution	Digital operator reference: ± 0.01Hz Analog reference: 0.05Hz/ 60Hz (11bit+code)																			
	Output Frequency Resolution	0.01 Hz																			
	Overload Capacity	150% of rated output current for 1 minute																			
	Frequency Setting Signal	-10 to 10 V, 0 to 10V, 4 to 20mA																			
	Accel / Decel Time	0.01 to 6000.0 sec (Accel / decel time setting independently, 4 steps available)																			
	Braking Torque	Approx.20%																			
	Protective function	Motor Overload Protection	Protected by electronic thermal overload relay																		
Instantaneous Overcurrent		Motor coasts to a stop at approx.200% of inverter rated current																			
Blown Fuse Protection		Motor coasts to a stop by blown-fuse																			
Overload		Motor coasts to a stop after 1 minute at 150% of rated output current																			
Overvoltage		Motor coasts to a stop if converter output voltage exceeds 800V																			
Undervoltage		Motor coasts to a stop if converter output voltage drops to 400V or below																			
Momentary Power Loss		Immediately stop by 15 ms and above momentary power loss (factory setting). Continuous operation during power loss less than 2 sec is equipped as standard																			
Heatsink Overheat		Protected by thermistor																			
Stall Prevention		Stall Prevention during accel / decel and constant speed operation																			
Ground Fault		Protected by electronic circuit (overcurrent level)																			
Power Charge Indication		Charge LED stays ON until bus voltage drops below 50V																			
Environment	Ambient Temperature	-10°C to +40°C (enclosed wall-mounted type), -10°C to +45°C (open chassis type)																			
	Hunidity	90% RH or less																			
	Storage Temperature	-20°C to +60°C																			
	Location	Indoor (protected from corrosive gases and dust)																			
	Elevation	1000 m or less																			
Vibration	9.8 1m/ S² (1G) less than 20Hz, up to 1.96 m/ S² (0.2G) at 20 to 50 Hz																				

Note: (1) Max. applicable motor referring to standard 4 poles motor.

(2) High storage temperature may damage the capacitors in inverter.

EI 9001

Connection Diagram



EI-9001 Series

Functions of Control Circuit terminals (Factory Preset)

Classification	Terminal	Signal Function	Description		Signal Level
Sequence Input Signal	1	Forward run/stop	Forward run when closed, stop when open		Photo-coupler insulation Input: +24 VDC 8mA
	2	Reverse run/stop	Reverse run when closed, stop when open		
	3	External fault input	Fault when closed, normal state when open	Multi-function contact inputs (H1-01 to H1-06)	
	4	Fault reset input	Reset when closed		
	5	Master/Auxiliary change (Multi-step speed reference 1)	Auxiliary frequency reference when closed		
	6	Multi-step speed reference 2	Effective when closed		
	7	Jog reference	Jog run when closed		
	8	External base block	Inv. Output stop when closed		
	11	Sequence control input common terminal			
Analog input Signal	15	+15V Power supply output	For analog command +15V power supply		+15V (Allowable current 20mA max.)
	33	-15V Power supply output	For analog command -15V power supply		-15V (Allowable current 20mA max.)
	13	Master frequency reference	-10 to +10V/-100% to +100% 0 to+10V/100%		-10 to +10V (20kΩ), 0 to +10V/ (20kΩ)
	14		4 to 20mA/100%		4 to 20mA (250Ω)
	16	Multi-function analog input	-10 to +10V/ -100% to +100% 0 to+10V/100%	Auxiliary analog input (H3-05)	-10 to +10V (20kΩ), 0 to +10V/ (20kΩ)
	17	Common terminal for control circuit	0V		
	12	Connection to shield sheath of signal lead			
Sequence Output Signal	9	During running (NO contact)	Closed when running	Multi-function Contact output	Dry contact Contact capacity: 250 VAC 1A or less 30VDC 1A or less Open collector output 48V 50 mA or less
	10				
	25				
	26	Speed agree detection	Makes when the freq. Reaches to ±1Hz of set freq.		
	27	Open collector output common			
	18	Fault contact output (NO/NC contact)	Fault when closed between terminals 18 and 20 Fault when open between terminals 19 and 20		Dry contact Contact capacity: 250 VAC 1A or less 30 VDC 1A or less
	19				
	20				
Analog output Signal	21	Frequency meter output	0 to +10V/100% freq.	Multi-function Analog monitor 1 (H4-01, H4-02)	0 to ±10V Max. ±5% 2 mA or less
	22	Common			
	23	Current monitor	5 V/inverter rated current	Multi-function Analog monitor 2 (H4-04,H4-05)	

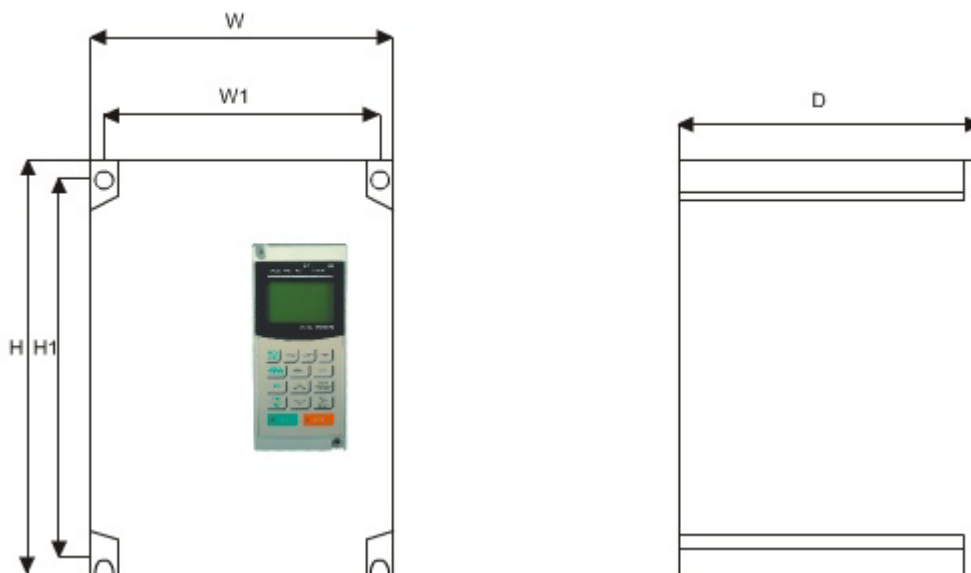
Terminal Array

11	12 (G)	13	14	15	16	17	25	26	27	33	18	19	20
1	2	3	4	5	6	7	8	21	22	23	9	10	

EI-9001 - External Dimensions

Type	Input Power	Capacity	W	W1	H	H1	D	Hole Diameter	DC Reactor
01L-05L	220V	1HP-5HP	138	115	278	264	174	Ø 6	Option
01H-07H	440V	1HP-7HP							
07L-10L	220V	7HP-10HP	228	204	300	285	206	Ø 6	Option
10H-15H	440V	10HP-15HP							
15L-30L	220V	15HP-30HP	300	270	450	435	238	Ø 8	Option
20H-40H	440V	20HP-40HP							

Unit: mm



Type	Input Power	Capacity	W	W1	W2	H	H1	D	Hole Diameter	DC Reactor
40L	220V	40HP	350	247		650	630	320	Ø 10	Option
50H-60H	440V	50HP-60HP								
50L	220V	50HP	375	287		712	693	320	Ø 10	Option
75H-100H	440V	75HP-100HP								
60L-75L	220V	60HP-75HP	580	480	240	726	706	320	Ø 10	Option
125H-150H	440V	125HP-150HP								
100L	220V	100HP	686	580	290	900	880	320		
175H-200H	440V	175HP-200HP								
300H	440V	300HP	780	580	290	1090	1050	360	Ø 10	Option
400H	440V	400P	900	780	390	1090	1050	360	Ø 10	Option

