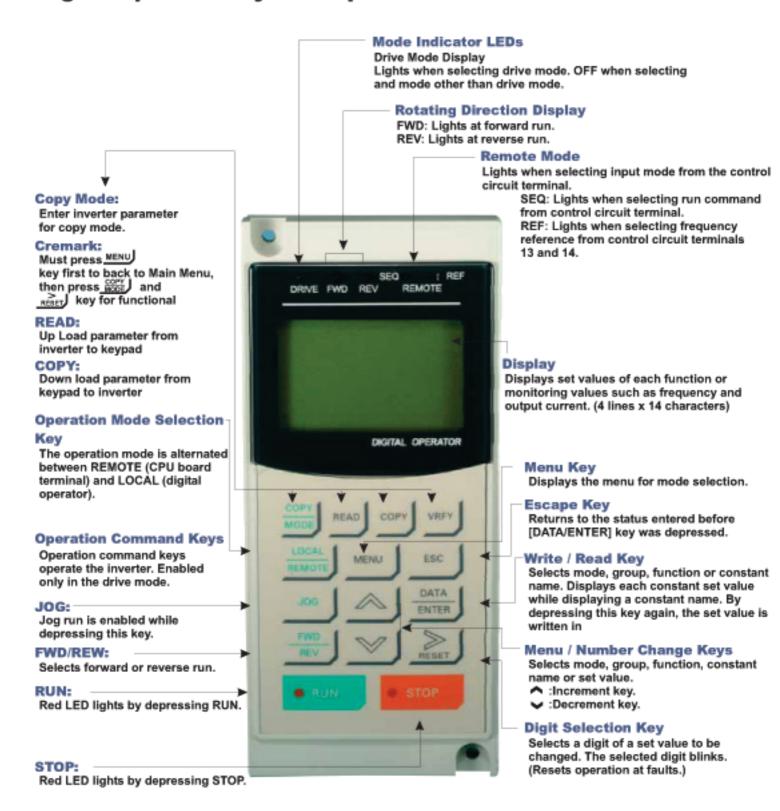
#### El 9001 Series

## 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

		0041	0001	0001	0051	0071	0.4.01	0.451	0001	0051	0001	0.401	0501	0001	0751	4001	4501
	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
	erter Capacity Hp	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	150
Ra	ted Output Current A	6	8	11	17.5	25	33	49	64	80	96	130	160	183	224	300	450
_	Protective Level									ed type							
	Max. Output Voltage	3-phase 200/208/220, 50/60Hz, 230V/60Hz 3-phase 200/208/220V 50Hz, 200/208/220/230V 60Hz															
_	Rated input Voltage and frequency				3-pl	nase 2	200/20	8/220			0/208/	/220/2	30V 6	0Hz			
Power	Allowable Voltage Fluctuation	+10%															
P.	Allowable Frequency Fluctuation	+5% 3-phase 200/208/220/230V Proportional to input voltage															
	Max. Output Voltage				3-ph									Itage			
	Rated Output Frequency	Cy Up to 400Hz available by programming  Sine wave PWM type, four control methods: (1) v/f (2) v/f with PG															
	Control Method			Sin	e wav	e PW								f with	PG		
	Ota tina Tana									o vect							
	Starting Torque						150%			%/or/n			)				
	Speed Control Range								_	00 wit							
ွ	Speed Control Accuracy						<u>±</u>			02% w		3)					
Ę	Speed Response								_	z with							
l:is	Torque Limit				Ava	ilable	(Para	meter			teps c	an be	chan	ged)			
5	Torque Accuracy	Available (Parameter setting, 4 steps can be changed) $\pm 5\%$															
ara	Torque Response	20Hz (40Hz with PG)															
S	Frequency Control Range	0.1 to 400Hz															
<u></u>	Frequency Accuracy	Digital command: 0.01% (-10°C to +40°C), Analog command: 0.1% (25°C $\pm$ 10°C)												)			
Control Characteristics	Frequency Resolution	Digital operator reference: ± 0.01Hz															
ပိ	0 1 15	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%															
	Motor Overload Protection	Protected by electronic thermal overload relay															
	Instantaneous Overcurrent	Motor coasts to a stop at approx.200% of inverter rated current															
o	Blown Fuse Protection Overload	Motor coasts to a stop by blown-fuse															
달	Overvoltage	Motor coasts to a stop after 1 minute at 150% of rated output current  Motor coasts to a stop if converter output voltage exceeds 400V															
ective function	Undervoltage		ı										os to 2			\A/	
ķ	Momentary Power Loss												r loss				
ξ	Momentary rower Loss												s equip				
e e	Heatsink Overheat		00110	maca	оро.	ation				y ther			o oqui	opou c	ao otai	iaaia	
Prote	Stall Prevention			Stal	l Prev	entior							speed	opera	ation		
	Ground Fault			0 (0.				_					nt leve				
	Power Charge Indication										_		belov	,			
H	Ambient Temperature		-10°C	to +4											hassis	tyne)	)
Environment	Humidity	-10°C to +40°C (enclosed wall-mounted type), -10°C to +45°C (open chassis type) 90% RH or less															
Ĭ	Storage Temperature	-20°C to +60°C															
ľ	Location	Indoor (protected from corrosive gases and dust)															
Ν	Elevation	1000 m or less															
ΙŪ	Vibration			9.8 1r	n/ S² (	1G) le	ess tha					S² (0 :	2G) at	20 to	50 Hz	,	
	VIDIATION			J.J 11	.,, 0 (	, U) I	, JU 1110	411 <b>2</b> UI	. <u>-</u> , up		, J 111/	J (U.2	<i>,</i> at	10	JU 1 12	•	

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

<sup>(2)</sup> High storage temperature may damage the capacitors in inverter.

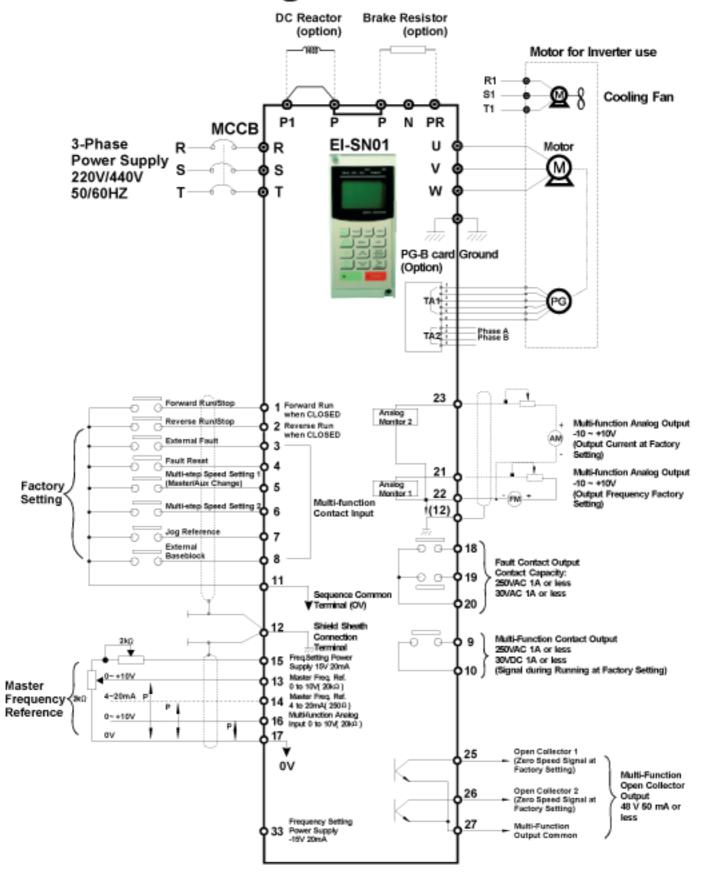
# EI-9001 Series 440V Class Specifications

-	nverter Model EI-9001	001H	-002H	-003H	-005H	-007H	-010H	-015H	-020H	-025H	-030H	-040H	-050H	-060H	-075H	-100H	-150H	-200H	-250H	-300H	-400H
	k. applicable motor output		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
Inve	(kW) erter Capacity Hp	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	150	200	250	300	400
Rat	ed 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								Enclo	sed wal	-mount	ed type	(NEMA	1) IP20							
	Max. Output Voltage							3-pha	ase 380	/400/41	5/440/4	60V (Pr	oportion	al to vo	ltage)						
_	Rated input Voltage and								3-ph	ase 380	/400/44	0V/460	V, 50Hz	/60Hz							
ď	frequency											<b>F</b> 0/									
er Supply	Allowable Voltage Fluctuation											5%									
Power	Allowable Frequency Fluctuation										±	5%									
₫.	Max. Output Voltage									3-phase	. 380/4	00/415/4	140/460	V							
	Rated Output Frequency									to 400H											
	Control Method						5	Sine wave							/f with I	PG					
													(4) flux								
	Starting Torque		150% / 1Hz (150%/or/min with PG) 1:100 (1:1000 with PG)																		
	Speed Control Range																				
	Speed Control Accuracy		± 0.2% (± 0.02% with PG) 5 Hz (30Hz with PG)																		
	Speed Response																				
ics	Torque Limit	Available (Parameter setting, 4 steps can be changed) + 5%																			
rist	Torque Accuracy	± 5% 20Hz (40Hz with PG)																			
cte	Torque Response	20Hz (40Hz with PG) 0.1 to 400Hz																			
ara	Frequency Control Range										0.1 to	400HZ									
ဗိ	Frequency Accuracy					D	igital co	mmand.	0.01%	(-10°C 1	n +40°0	C) Anal	oa comr	nand: 0	1% (25	5°C + 10	°C)				
<u> </u>	Frequency Resolution		Digital command: 0.01% (-10°C to +40°C), Analog command: 0.1% (25°C ± 10°C)  Digital operator reference: ± 0.01Hz																		
Control Characteristics			Analog reference: 0.05Hz/ 60Hz (11bit+code)																		
Ö	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%																			
	Motor Overload Protection		Protected by electronic thermal overload relay																		
	Instantaneous Overcurrent	Motor coasts to a stop at approx.200% of inverter rated current																			
ءِ	Blown Fuse Protection								Мо	otor coa	sts to a	stop by	blown-f	use							
ctio	Overload						Мо	otor coas	ts to a	stop afte	er 1 min	ute at 1	50% of	rated ou	ıtput cu	rrent					
ľű	Overvoltage							Motor co	asts to	a stop it	conver	ter outp	ut volta	ge exce	eds 800	VC					
Ve	Undervoltage						Moto	or coasts	to a sto	p if con	verter c	utput vo	oltage di	ops to	400V or	below					
Protective function	Momentary Power Loss							ately sto													
Pr	Heatsink Overheat									Pro	tected b	y therm	istor								
	Stall Prevention						S	tall Prev	ention o	luring a	ccel / de	cel and	consta	nt speed	d operat	tion					
	Ground Fault							F	rotecte	d by ele	ectronic	circuit (	overcurr	ent leve	el)						
	Power Charge Indication							Char	ge LED	stays C	N until	bus volt	age dro	ps belo	w 50V						
Į	Ambient Temperature					-1	0°C to	+40°C (e	nclosed			71 //		+45°C (	open ch	nassis ty	rpe)				
nen	Hunidity											d or les									
onn	Storage Temperature										-20°C to +60°C										
Environment	Location							Ir	ndoor (p	rotecte				and dus	st)						
Ш	Elevation											n or less									
	Vibration							1m/ S² (		s than 2	0Hz, up	to 1.96	m/ S² (	0.2G) a	t 20 to 5	50 Hz					

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

<sup>(2)</sup> High storage temperature may damage the capacitors in inverter.

# **Connection Diagram**



# **EI-9001 Series Functions of Control Circuit terminals (Factory Preset)**

Classifi -cation	Terminal	Signal Function	Description	1		Signal Level					
oation	1	Forward run/stop	Forward run when closed, stop when ope	en							
	2	Reverse run/stop	Reverse run when closed, stop when op-								
lal	3	External fault input	Fault when closed, normal state whopen	en							
Sigr	4	Fault reset input	Reset when closed								
Sequence Input Signal	5	Master/Auxiliary change (Multi-step speed reference 1)	Auxiliary frequency reference when close	ed	Multi-function contact inputs (H1-01 to H1-06)	Photo-coupler insulation Input: +24 VDC 8mA					
dneuc	6	Multi-step speed reference 2	Effective when closed	(111-01 to 111-00)							
Se	7	Jog reference	Jog run when closed								
	8	External base block	Inv. Output stop when closed								
	11	Sequence control input common terminal									
	15	+15V Power supply output	For analog command +15	+15V (Allowable current 20mA max.)							
Signal	33	-15V Power supply output	For analog command –15	er supply	-15V (Allowable current 20mA max.)						
Analog input Signal	13	Master frequency reference	-10 to +10V/-100% t 0 to+10V/100		00%	-10 to +10V (20kΩ), 0 to +10V/ (20kΩ)					
i go	14	TCICICIICC	4 to 20mA/10		analog input (H3-05)	4 to 20mA (250Ω)					
Analo	16	Multi-function analog input	-10 to +10V/ -100% to +100% Au 0 to+10V/100%	-10 to +10V (20kΩ), 0 to +10V/ (20kΩ)							
	17	Common terminal for control circuit	0V								
	12	Connection to shield sheath of signal lead									
	9	5			Dry contact						
ignal	10	During running (NO contact)	Closed when running		Multi-function	Contact capacity: 250 VAC 1A or less 30VDC 1A or less					
t S	25	Zero speed detection	Makes at min. freq. (EI-09) or less		Contact output	Open collector output 48V					
Sequence Output Signal	26	Speed agree detection	Makes when the freq. Reaches to ±1Hz freq.	of set		50 mA or less					
ence	27	Open collector output common									
nbe	18					Dry contact Contact capacity:					
Š	19 20	Fault contact output (NO/NC contact)		Fault when closed between terminals 18 and 20 Fault when open between terminals 19 and 20							
	24	Fraguency reader autout		1	Multi formation	30 VDC 1A or less					
a ttg	21 22	Frequency meter output  Common	0 to + 10V/100% freq.		Multi-function Analog monitor 1	0 to ± 10\/ May ± 50/					
Analog output Signal	23	Current monitor	5 V/inverter rated current	(H4-01, H4-02) Multi-function Analog monitor 2 (H4-04,H4-05)	0 to ± 10V Max. ± 5% 2 mA or less						

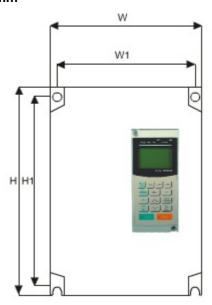
### **Terminal Array**

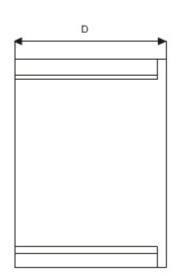
11 1	2 (G)	13	14	15	16	17	25	26	27	33	18 19 20
1	2	3	4	5	6	7	8	21	22	23	9 10

## EI-9001 - External Dimensions

Туре	Input Power	Capacity	W	W1	Н	H1	D	Hole Diameter	DC Reactor
01L-05L	220V	1HP-5HP	138	115	278	264	174	Ø 6	Option
01H-07H	440V	1HP-7HP	130	113					
07L-10L	220V	7HP-10HP	228	204	300	285	206	Ø6	Option
10H-15H	440V	10HP-15HP	220	204	300	200	200	ס ש	Option
15L-30L	220V	15HP-30HP	300	270	450	435	238	Ø8	Option
20H-40H	440V	20HP-40HP	300		450	433	230	0 0	Option

#### Unit: mm





Туре	Input Power	Capacity	w	W1	W2	Н	H1	D	Hole Diameter	DC Reactor
40L	220V	40HP	350	247		650	630	320	Ø 10	Ontion
50H-60H	440V	50HP-60HP	330	247		030	030	320	טו ש	Option
50L	220V	50HP	375	287		712	693	320	Ø 10	Option
75H-100H	440V	75HP-100HP	3/5	201		112			טו ש	
60L-75L	220V	60HP-75HP	580	480	240	726	706	320	Ø 10	Option
125H-150H	440V	125HP-150HP	360	400	240	720	700	320	טו ש	Option
100L	220V	100HP	686	580	290	900	880	320		
175H-200H	440V	175HP-200HP	000	360	290	900	000	320		
300H	440V	300HP	780	580	290	1090	1050	360	Ø 10	Option
400H	440V	400P	900	780	390	1090	1050	360	Ø 10	Option

