



Varispeed F7S

Catalog No.
(Japanese only)



An energy-saving inverter drive with variable torque that is easy to use. The inverter with super energy-saving motors (synchronous motor with built-in high-performance magnet) results in greater energy savings than the standard induction motors.

Features

- Greater energy savings for applications requiring variable torque such as fans, pumps, and blowers.
- Quick restart of synchronous motors without PG after momentary power loss.
- Small, light-weight, super energy-saving motors for reduced installation space, noise, and maintenance.

Model Designation

CIMR – F7 S 2 0P4

**Inverter
Varispeed F7
series**

Specifications

S : For IPM motor drives

Voltage Class

2 : Three-phase 200 V

4 : Three-phase 400 V

**Max. Applicable
Motor Output**

(P = decimal point)

0P4 : 0.4kW

to

160 : 160kW

Specifications

Item	Description	
Power Supply	200 V (three-phase)	400 V (three-phase)
Motor Output Range	0.4 to 75 kW	0.4 to 160 kW
Control Method	Sine wave PWM (open-loop vector control)	
Speed Control Range	1:10 (variable torque)	
Overload Capacity	120% rated output current for 1 min.	
Accel/Decel Time	0.01 to 6000.0 s (Accel/Decel time setting independently)	
Protective Functions	Motor overload protection, instantaneous overcurrent, overload, overvoltage, undervoltage, stall prevention, etc.	
Standard Functions	PID control, energy-saving control, torque limit, momentary power loss restart, speed search, etc.	
Harmonic Wave Prevention	DC reactor: Optional for inverters less than 18.5kW; provided for inverters of 22kW or more.	
LONWORKS (Optional card: SI-J*)		
Baud Rate	78 kbps	
Standard Network Variable	Variable-speed Motor-drive Function Profile Ver. 1.1 provided	
Functions	Inverter control, monitoring, and setting and referencing of parameters	

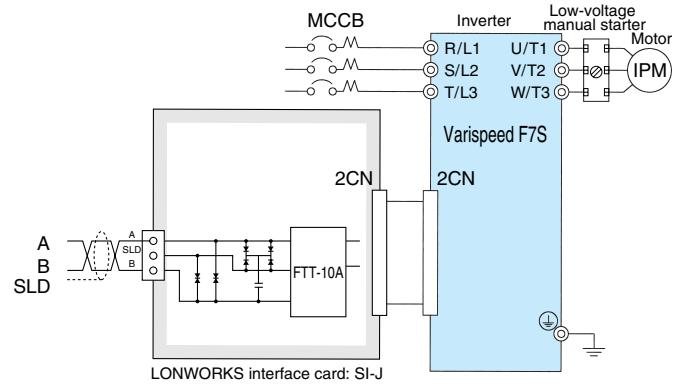
※: The inverter supports only standard software.

Models for Optional Card



• LONWORKS : SI-J

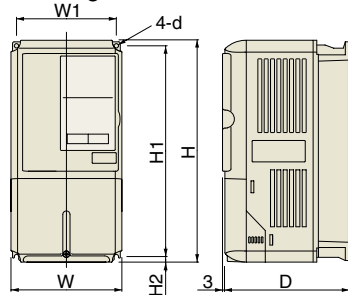
Connection Diagram with LONWORKS Interface Card



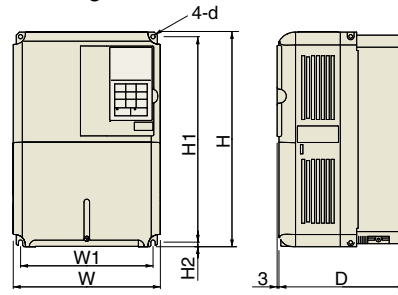
Dimensions Units: mm

Note: Open-chassis inverters are shown in drawings.

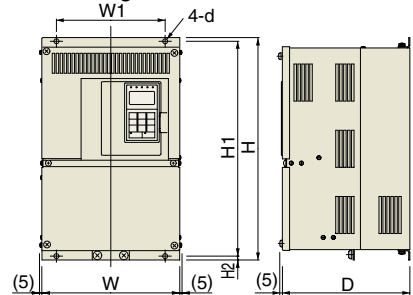
Drawing 1



Drawing 2



Drawing 3



Voltage	Max. Applicable Motor Output kW	Inverter Model CIMR-F7S	DWG	Open-chassis Type (IP00) in mm*1,*2							Enclosed Type (NEMA1) in mm*2							Approx. Mass kg	d*3
				W	H	D	W1	H1	H2		W	H	D	W1	H1	H2	H3*4		
200 V Class (3-phase)	0.4	20P4	1	140	280	157	126	266	7	3	140	280	157	126	266	7	—	3	M5
	0.75	20P7		140	280	177	126	266	7	4	140	280	177	126	266	7	—	4	M5
	1.5	21P5	2	200	300	197	186	285	8	6	200	300	197	186	285	8	0	6	M6
	2.2	22P2		240	350	207	216	335	7.5	7	240	350	207	216	335	7.5	10	7	M6
	3.7	23P7	3	250	400	258	195	385	7.5	11	254	535	258	195	385	7.5	0	11	M6
	5.5	25P5		275	450	258	220	435	7.5	24	279	615	258	220	435	7.5	30	27	M6
	7.5	27P5	3	375	600	298	250	575	12.5	57	380	809	298	250	575	12.5	62	62	M10
	11	2011		450	725	348	325	700	12.5	63	453	1027	348	325	700	12.5	68	68	M10
	15	2015	3	450	725	348	325	700	12.5	86	453	1027	348	325	700	12.5	94	94	M10
	18.5	2018		450	725	348	325	700	12.5	87	453	1027	348	325	700	12.5	95	95	M10
	22	2022	3	450	725	348	325	700	12.5	86	453	1027	348	325	700	12.5	94	94	M10
	30	2030		450	725	348	325	700	12.5	86	453	1027	348	325	700	12.5	94	94	M10
	37	2037	3	450	725	348	325	700	12.5	86	453	1027	348	325	700	12.5	94	94	M10
	45	2045		450	725	348	325	700	12.5	86	453	1027	348	325	700	12.5	94	94	M10
	55	2055	3	450	725	348	325	700	12.5	86	453	1027	348	325	700	12.5	94	94	M10
	75	2075		450	725	348	325	700	12.5	86	453	1027	348	325	700	12.5	94	94	M10
400 V Class (3-phase)	0.4	40P4	1	140	280	157	126	266	7	3	140	280	157	126	266	7	—	3	M5
	0.75	40P7		140	280	177	126	266	7	4	140	280	177	126	266	7	—	4	M5
	1.5	41P5	2	200	300	197	186	285	8	6	200	300	197	186	285	8	—	6	M6
	2.2	42P2		240	350	207	216	335	7.5	10	240	350	207	216	335	7.5	—	10	M6
	3.7	43P7	3	275	450	258	220	435	7.5	21	279	535	258	220	435	7.5	85	24	M6
	5.5	45P5		325	550	283	260	535	7.5	36	329	715	283	260	535	7.5	85	40	M6
	7.5	47P5	3	450	725	348	325	700	12.5	88	453	1027	348	325	700	12.5	96	96	M10
	11	4011		450	725	348	325	700	12.5	89	453	1027	348	325	700	12.5	97	97	M10
	15	4015	3	500	850	358	370	820	15	102	504	1243	358	370	820	15	122	122	M12
	18.5	4018		575	916	378	445	855	15	120	579	1324	378	445	855	15	130	130	M12
	22	4022	3	575	916	378	445	855	15	120	579	1324	378	445	855	15	130	130	M12
	30	4030		575	916	378	445	855	15	120	579	1324	378	445	855	15	130	130	M12
	37	4037	3	575	916	378	445	855	15	120	579	1324	378	445	855	15	130	130	M12
	45	4045		575	916	378	445	855	15	120	579	1324	378	445	855	15	130	130	M12
	55	4055	3	575	916	378	445	855	15	120	579	1324	378	445	855	15	130	130	M12
	75	4075		575	916	378	445	855	15	120	579	1324	378	445	855	15	130	130	M12

*1: If using open-chassis inverters of 18.5 kW or less in the 200V or 400V class, remove the top and the bottom covers.

*2: Inverters of 18.5 kW or less in the 200V or 400V class needs an attachment to externally mount the heatsink. Contact your Yaskawa representative for details.

*3: The mounting hole is the same size for both open-chassis and enclosed inverters.

*4: Refer to the Varispeed F7S catalog for the dimensions of the enclosed inverters.