



Super Energy-saving Drives

VARISPEED-686SS5

Catalog No.
KAE-S686-15



Combining a small and light-weight super energy-saving motor with an inverter, the unique YASKAWA VS-686SS5 drive delivers higher efficiency and power factor than ever before.

Features

- Power losses are low, slashing running costs.
- Smooth operation is possible with current vector control, without PG.
- Improved ease-of-use (excellent response, selection of running speed optimum for the specific machine).

Model Designation

CIMR – SS A 2 0P4

Inverter
VARISPEED-686SS5
series

Specifications
A : Japanese
domestic standards

Voltage Class
2 : Three-phase 200 V
4 : Three-phase 400 V

**Max. Applicable
Motor Output**
(P = decimal point)
0P4 : 0.4kW
to
300 : 300kW

Specifications

Item	Description	
Power Supply	200 V (three-phase)	400 V (three-phase)
Motor Output Range	0.4 to 75 kW	0.4 to 300 kW
Control Method	Sine wave PWM Constant torque (vector control with PG), Variable torque (open-loop vector control)	
Speed Control Range	1:500 for with PG	1:500 for without PG
Overload Capacity	150% rated output current for 1 min.	
Accel/Decel Time	0 to 6000 s (accel/decel time setting independently)	
Protective Functions	Motor protection, momentary overcurrent, overload, step-out, overvoltage, undervoltage, radiation-fin overheat, etc.	
Standard Functions	PID control, overtorque detection, torque limit, multi-step speed operation, auto-tuning, etc.	
CC-Link (Optional card : SI-C*)		
Remote I/Os	32 inputs; 32 outputs	
Remote Registers	4 words for RWr; 4 words for RWw	
No. of Stations	Single station (Remote device station)	

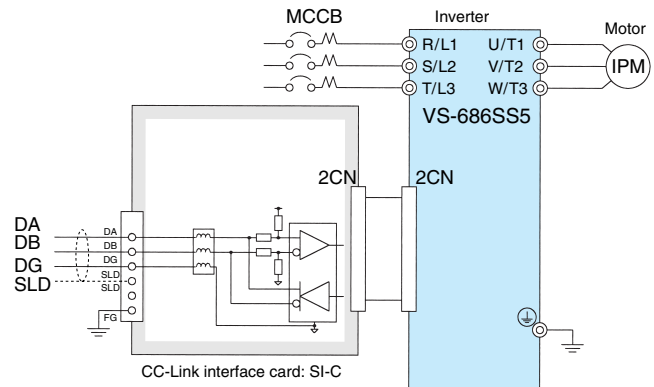
*: Requires the exclusive software for the SI-C installed in the inverter.

Models for Optional Card



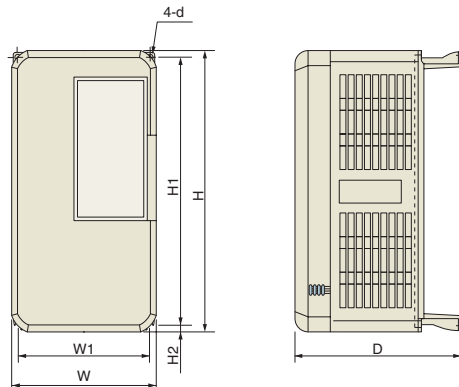
• CC-Link : SI-C

Connection Diagram with CC-Link Interface Card



Dimensions Units: mm

Note: The drawings show the dimensions of open-chassis inverters of 1.5 kW in the 200V class. Refer to the VARISPEED-686SS5 catalog for the dimensions of enclosed inverters.



Voltage	Max. Applicable Motor Output, kW	Inverter Model CIMR- 0000	Open-chassis Type (IP00) in mm*1,*2							Approx. Mass kg	Enclosed Type (NEMA1) in mm*2							Approx. Mass kg	d*3	DC*3 reactor
			W	H	D	W1	H1	H2	W		H	D	W1	H1	H2					
200 V Class (3-phase)	0.4	SSA20P4																Optional		
	0.75	SSA20P7	140	280	160	126	266	7	3	140	280	160	126	266	7	3	M5			
	1.5	SSA21P5																		
	2.2	SSA22P2																		
	3.7	SSA23P7	140	280	180	126	266	7	4.5	140	280	180	126	266	7	4.5	M5			
	5.5	SSA25P5	200	300	205	186	285	8	5.5	200	300	205	186	285	8	5.5	M6	Built-in		
	7.5	SSA27P5							6							6				
	11	SSA2011	250	380	225	236	365	7.5	11	250	380	225	236	365	7.5	11	M6			
	15	SSA2015								400					27.5					
	18.5	SSA2018	325	450	285	275	435	7.5	28	330	610	285	275	435	87.5	32	M6			
	22	SSA2022								675					152.5					
	30	SSA2030	425	675	350	320	650	12.5	61	430	985	350	320	650	212.5	67	M10			
	37	SSA2037							62							68				
	45	SSA2045	475	800	350	370	775	12.5	80	480	1110	350	370	775	212.5	87	M10			
55	SSA2055																			
75	SSA2075	575	925	400	445	895	15	135	580	1290	400	445	895	270	145	M12				
400 V Class (3-phase)	0.4	SSA40P4	140	280	160	126	266	7	3	140	280	160	126	266	7	3	M5	Optional		
	0.75	SSA40P7																		
	1.5	SSA41P5							4							4				
	2.2	SSA42P2	140	280	180	126	266	7		140	280	180	126	266	7		M5			
	3.7	SSA43P7							4.5							4.5				
	5.5	SSA45P5	200	300	205	186	285	8	6	200	300	205	186	285	8	6	M6	Built-in		
	7.5	SSA47P5																		
	11	SSA4011	250	380	225	236	365	7.5	11	250	380	225	236	365	7.5	11	M6			
	15	SSA4015																		
	18.5	SSA4018	325	450	285	275	435	7.5	29	330	610	285	275	435	87.5	32	M6			
	22	SSA4022							31							34				
	30	SSA4030	325	625	285	275	610	7.5	44	330	785	285	275	610	87.5	48	M6			
	37	SSA4037									850				152.5					
	45	SSA4045																		
	55	SSA4055	455	820	350	350	795	12.5	81	460	1130	350	350	795	212.5	87	M10			
	75	SSA4075							82							88				
	110	SSA4110	575	925	375	445	895	15	145	580	1290	375	445	895	270	157	M12			
	160	SSA4160			400				155			400				165				
	185	SSA4185	950	1450	435	750	1400	25	360									M12		
	220	SSA4220																		
	300	SSA4300	960	1600	455	750	1550	25	420											

*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: An inverter 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 DC reactor and the size of the mounting hole are the same for both open-chassis inverters and enclosed inverters.