SD1 Series

General Purpose AC Variable Speed Inverter Drives

IMO

Technical Datasheet

1 Phase 110/120V 50/60Hz ***0.4~1.1kW*** *(0.5~1.4HP)*
1 Phase 200/240V 50/60Hz ***0.4~2.2kW*** *(0.5~3HP)*
3 Phase 200/240V 50/60Hz ***0.4~7.5kW*** *(0.5~10HP)*
3 Phase 380/440V 50/60Hz ***0.75~110kW*** *(1~150HP)*

- IP20
- Torque Vector Control
- STO (safe torque off)
- Up to 150% Starting Torque
- Front Mounted RJ45 Socket (<2.2kW)
- Din Rail Mountable (<2.2kW)
- Fixed Keypad with Potentiometer (<2.2kW)
- Detachable Keypad (≥4kW)

- HDI Input (pulse)
- 2 Analogue Inputs
- 1/2 Analogue Outputs
- 2 Output Relays
- Transistor Output
- 4/5 Digital Inputs
- PNP/NPN Selectable

- In Built Modbus RTU / RS485
- PID Control as standard
- Internal DC Reactor (≥18.5kW)
- DC Injection Braking
- Internal Brake Chopper (≤37kW)
- Motor Auto-tune (static & dynamic)

- Internal C3 Filter (≥4kW), C3 Filter Option (<2.2kW)
- C1 & C2 Filter Options (entire range)
- Safety Circuit (SIL2/SIL3 - model dependant)
- CE, RoHS & Reach Compliant
- TUV Approved
- UL / cUL Approval on selected models
- 2 Year Warranty

RCM (AUS/NZ)

Options & Ordering Codes

SD1 - 2.5A - 43

Series

SD1 Inverter Drive	SD1

Output Power kW (HP)

0.75kW	(1HP)	2.5A	11kW	(15HP)	25A	45kW	(60HP)	92A
1.5kW	(2HP)	4.2A	15kW	(20HP)	32A	55kW	(75HP)	115A
2.2kW	(3HP)	5.5A	18.5kW	(25HP)	38A	75kW	(100HP)	150A
4kW	(5.5HP)	9.5A	22kW	(30HP)	45A	90kW	(125HP)	180A
5.5kW	(7.5HP)	14A	30kW	(40HP)	60A	110kW	(150HP)	215A
7.5kW	(10HP)	18.5	37kW	(50HP)	75A			

Input 380-400V Three Phase

SD1 - 2.5A - 23

Output Power kW (HP)

0.4kW	(0.5HP)	2.5A
0.75kW	(1HP)	4.2A
1.5kW	(2HP)	7.5A
2.2kW	(3HP)	10A
4kW	(5.5HP)	16A
5.5kW	(7.5HP)	20A
7.5kW	(10HP)	30A

Input 200-240V Three Phase

SD1 - 2.5A - 21

Output Power kW (HP)

0.4kW	(0.5HP)	2.5A
0.75kW	(1HP)	4.2A
1.5kW	(2HP)	7.5A
2.2kW	(3HP)	10A

Input 200-240V Single Phase

SD1 - 2.5A - 11

Output Power kW (HP)

0.4kW	(0.5HP)	2.5A
0.75kW	(1HP)	4.2A
1.1kW	(1.4HP)	5.8A

Input 110-120V Single Phase

Errors and omissions excepted. Subject to change without notice. © 2021 IMO Precision Controls Ltd

SD1 Series

General Purpose AC Variable Speed Inverter Drives

IMO

Technical Datasheet

Options & Ordering Codes - Filters & Accessories

	Model	C3 Filter	Current	C2 Filter	Current
Single Phase 110V	SD1-2.5A-11	SD1-RFC3-10	10A	SD1-RFC2-10	10A
	SD1-4.2A-11	SD1-RFC3-10	10A	SD1-RFC2-25	25A
	SD1-5.8A-11	SD1-RFC3-10	10A	SD1-RFC2-25	25A
Single Phase 220V	SD1-2.5A-21	SD1-RFC3-10	10A	SD1-RFC2-10	10A
	SD1-4.2A-21	SD1-RFC3-10	10A	SD1-RFC2-10	10A
	SD1-7.5A-21	SD1-RFC3-10	10A	SD1-RFC2-16	16A
	SD1-10A-21	SD1-RFC3-10	10A	SD1-RFC2-16	16A
Three Phase 220V	SD1-2.5A-23	SD1-RFC3-7	7A	SD1-RFC2-6	6A
	SD1-4.2A-23	SD1-RFC3-7	7A	SD1-RFC2-6	6A
	SD1-7.5A-23	Internal	-	SD1-RFC2-16	16A
	SD1-10A-23	Internal	-	SD1-RFC2-16	16A
	SD1-16A-23	Internal	-	SD1-RFC2-32	32A
	SD1-20A-23	Internal	-	SD1-RFC2-32	32A
	SD1-30A-23	Internal	-	SD1-RFC2-45	45A
Three Phase 380V	SD1-2.5A-43	SD1-RFC3-7	7A	SD1-RFC2-6	6A
	SD1-4.2A-43	SD1-RFC3-7	7A	SD1-RFC2-6	6A
	SD1-5.5A-43	SD1-RFC3-7	7A	SD1-RFC2-6	6A
	SD1-9.5A-43	Internal	-	SD1-RFC2-16	16A
	SD1-14A-43	Internal	-	SD1-RFC2-16	16A
	SD1-18.5A-43	Internal	-	SD1-RFC2-32	32A
	SD1-25A-43	Internal	-	SD1-RFC2-32	32A
	SD1-32A-43	Internal	-	SD1-RFC2-45	45A
	SD1-38A-43	Internal	-	SD1-RFC2-45	45A
	SD1-45A-43	Internal	-	SD1-RFC2-65	65A
	SD1-60A-43	Internal	-	SD1-RFC2-65	65A
	SD1-75A-43	Internal	-	SD1-RFC2-100	100A
	SD1-92A-43	Internal	-	SD1-RF52-100	100A
	SD1-115A-43	Internal	-	SD1-RFC2-150	150A
	SD1-150A-43	Internal	-	SD1-RFC2-150	150A
	SD1-180A-43	Internal	-	SD1-RFC2-240	240A
	SD1-215A-43	Internal	-	SD1-RFC2-240	240A

SD1-RFC3-10

Model	Description
SD1-KP	Remote Keypad
SD1-KP-CPY	Remote Keypad with Copy Function
SD1-KP-MB	Remote Keypad Mounting Bracket

Errors and omissions excepted. Subject to change without notice. © 2021 IMO Precision Controls Ltd

SD1 Series

General Purpose AC Variable Speed Inverter Drives

IMO

Technical Datasheet

Technical Specifications

	Model	Output Power		Input Current (A)	Output Current (A)	MCCB (A)	Cables (mm²)	UL Approval
Single Phase 110V	SD1-2.5A-11	0.4kW	0.5HP	8.1	2.5	20	4.0	YES
	SD1-4.2A-11	0.75kW	1.0HP	15.1	4.2	20	4.0	YES
	SD1-5.8A-11	1.1kW	1.4HP	20.0	5.8	30	4.0	YES
Single Phase 220V	SD1-2.5A-21	0.4kW	0.5HP	6.5	2.5	10.0	1.5	YES
	SD1-4.2A-21	0.75kW	1.0HP	9.3	4.2	16.0	1.5	YES
	SD1-7.5A-21	1.5kW	2.0HP	15.7	7.5	25.0	2.5	YES
	SD1-10A-21	2.2kW	3.0HP	24.0	10.0	40.0	2.5	YES
Three Phase 220V	SD1-2.5A-23	0.4kW	0.5HP	3.7	2.5	6.0	1.5	YES
	SD1-4.2A-23	0.75kW	1.0HP	5.0	4.2	10.0	1.5	YES
	SD1-7.5A-23	1.5kW	2.0HP	7.7	7.5	16.0	2.5	YES
	SD1-10A-23	2.2kW	3.0HP	11.0	10.0	25.0	2.5	YES
	SD1-16A-23	4kW	5.5HP	17.0	16.0	32.0	2.5	-
	SD1-20A-23	5.5kW	7.5HP	21.0	20.0	32.0	4	-
	SD1-30A-23	7.5kW	10HP	31.0	30.0	63.0	6	-
Three Phase 380V	SD1-2.5A-43	0.75kW	1.0HP	3.4	2.5	6.0	1.5	YES
	SD1-4.2A-43	1.5kW	2.0HP	5.0	4.2	10.0	1.5	YES
	SD1-5.5A-43	2.2kW	3.0HP	5.8	5.5	10.0	1.5	YES
	SD1-9.5A-43	4kW	5.5HP	13.5	9.5	25.0	2.5	YES
	SD1-14A-43	5.5kW	7.5HP	19.5	14.0	32.0	2.5	YES
	SD1-18.5A-43	7.5kW	10HP	25.0	18.5	40.0	4	YES
	SD1-25A-43	11kW	15HP	32.0	25.0	63.0	6	YES
	SD1-32A-43	15kW	20HP	40.0	32.0	63.0	6	-
	SD1-38A-43	18.5kW	25HP	47.0	38.0	100.0	10	-
	SD1-45A-43	22kW	30HP	51.0	45.0	100.0	16	-
	SD1-60A-43	30kW	40HP	70.0	60.0	125.0	25	-
	SD1-75A-43	37kW	50HP	80.0	75.0	160.0	25	-
	SD1-92A-43	45kW	60HP	98.0	92.0	200.0	35	-
	SD1-115A-43	55kW	75HP	128.0	115.0	200.0	50	-
	SD1-150A-43	75kW	100HP	139.0	150.0	250.0	70	-
	SD1-180A-43	90kW	125HP	168.0	180.0	315.0	95	-
	SD1-215A-43	110kW	150HP	201.0	215.0	350.0	120	-

Errors and omissions excepted. Subject to change without notice. © 2021 IMO Precision Controls Ltd

SD1 Series

General Purpose AC Variable Speed Inverter Drives

IMO

Technical Datasheet

Power & Control Connections

NOTE: This is a typical circuit which, depending on the rating is subject to change. Please check the user manual for more details.

Errors and omissions excepted. Subject to change without notice. © 2021 IMO Precision Controls Ltd

SD1 Series

General Purpose AC Variable Speed Inverter Drives

IMO

Technical Datasheet

Dimensions (mm)

	Model	W1	W2	H1	H2	D1	D2
Single Phase 110V	SD1-2.5A-11	80	60	185	175	140.5	137.3
	SD1-4.2A-11	80	60	185	175	140.5	137.3
	SD1-5.8A-11	80	60	185	175	140.5	137.3
Single Phase 220V	SD1-2.5A-21	80	60	160	150	123.5	120.3
	SD1-4.2A-21	80	60	160	150	123.5	120.3
	SD1-7.5A-21	80	60	185	175	140.5	137.3
	SD1-10A-21	80	60	185	175	140.5	137.3
Three Phase 220V	SD1-2.5A-23	80	60	185	175	140.5	137.3
	SD1-4.2A-23	80	60	185	175	140.5	137.3
	SD1-7.5A-23	146	131	256	243.5	167	84.5
	SD1-10A-23	146	131	256	243.5	167	84.5
	SD1-16A-23	146	131	256	243.5	167	84.5
	SD1-20A-23	170	151	320	303.5	196.3	113
	SD1-30A-23	170	151	320	303.5	196.3	113
Three Phase 380V	SD1-2.5A-43	80	60	185	175	140.5	137.3
	SD1-4.2A-43	80	60	185	175	140.5	137.3
	SD1-5.5A-43	80	60	185	175	140.5	137.3
	SD1-9.5A-43	146	131	256	243.5	167	84.5
	SD1-14A-43	146	131	256	243.5	167	84.5
	SD1-18.5A-43	170	151	320	303.5	196.3	113
	SD1-25A-43	170	151	320	303.5	196.3	113
	SD1-32A-43	170	151	320	303.5	196.3	113
	SD1-38A-43	200	185	340.6	328.6	184.3	104.5
	SD1-45A-43	200	185	340.6	328.6	184.3	104.5
	SD1-60A-43	250	230	400	380	202	123.5
	SD1-75A-43	250	230	400	380	202	123.5
	SD1-92A-43	282	160	560	542	238	138
	SD1-115A-43	282	160	560	542	238	138
	SD1-150A-43	282	160	560	542	238	138
	SD1-180A-43	338	200	554	535	329.2	—
	SD1-215A-43	338	200	554	535	329.2	—

Wall mounting dimensions of 1PH 110V & 230V
0.4 to 2.2kW SD1 Inverter (unit: mm)

Wall mounting dimensions of 3PH 380V 0.4 to 37kW &
3PH 220V 1.5 to 7.5kW SD1 Inverter (unit: mm)

Wall mounting dimensions of 3PH 380V 90 to 110kW
SD1 Inverter (unit: mm)

Wall mounting dimensions of 3PH 45 to 75kW
SD1 Inverter (unit: mm)

Errors and omissions excepted. Subject to change without notice. © 2021 IMO Precision Controls Ltd