



Siemens Easy Drive

SED2

Variable speed drives for speed control of three-phase a.c. motors actuating fans or pumps.

Range: 0.37 kW to 90 kW for IP20 version,
1.1 kW to 90 kW for IP54 version.

Voltage range: 200 V to 240 V / 380 V to 480 V / 500 V to 600 V.

Freely programmable I/Os

Integrated PID controller

Integrated HVAC functions

Use

The SED2 is used for energy-optimized speed control of pump and fan motors in HVAC applications:

- Demand-controlled speed control for supply and exhaust air fans in air handling systems
- Demand-controlled speed control for circulating pumps in HVAC systems
- Variable Air Volume (VAV) plants
- Cooling tower fans.
- Condensate pumps.

Product documentation

Getting started guide CM1G5192X	The "Getting started" guide is a short guide in the form of a CD booklet; it contains all notes and parameters necessary to configure the SED2 based on the factory settings.
Commissioning Guide CM1G5192en	The Commissioning Guide contains all information required for mounting, installing and commissioning the SED2 variable speed drives. It is supplied with the product and also contains a number of typical SED2 application examples with the relevant information on the parameter settings.
Operating instructions CM1U5192	The operating instructions are added to the product and contain all information required to install and commission the variable speed drives of type SED2.

Type summary

Type codes

SED2-aaaa/bcd				
SED2	-aaaa	b	c	d
SBT variable speed drive of the 2 nd generation	Power [kW]	Voltage range	IP	Filter
		2 = 200...240 V	2 = 20	X = unfiltered
		3 = 380...480 V	5 = 54	
		4 = 500...600 V		B = Class B filter

Complete type summary

See the tables in section SED2 type summary on page 10.

Accessories

Accessories	Order number ASN	Suited for
BOP (Basic Operator Panel)	SED2-BOP1	SED2-0.37/.2.- 90/.2. *
AOP (Advanced Operator Panel)	SED2-AOP1	SED2-0.37/.2.- 90/.2.
EMC filter, frame size A	SED2-BFLTR-A	SED2-0.37/22.- 0.75/22. SED2-0.37/32.- 1.5/32.
EMC filter, frame size B	SED2-BFLTR-B	SED2-1.1/22.- 2.2/22. SED2-2.2/32.- 4/32.
EMC filter, frame size C, 200 to 240 V	SED2-BFLTR-C-L	SED2-3/22.- 7.5/22.
EMC filter, frame size C, 380 to 480 V	SED2-BFLTR-C-H	SED2-5.5/32.- 15/32.
Gland plate, frame size A IP20	SED2-GL-A	SED2-0.37/22.- 0.75/22. SED2-0.37/32.- 1.5/32.
Gland plate, frame size B IP20	SED2-GL-B	SED2-1.1/22.- 2.2/22. SED2-2.2/32.- 4/32.
Gland plate, frame size C IP20	SED2-GL-C	SED2-3/22.- 7.5/22. SED2-5.5/32.- 15/32. SED2-0.75/42X- 15/42X
BOP/AOP door mounting set for 1 VSD	SED2-DOOR-KIT1	SED2-0.37/.2.- 90/.2.
BOP/AOP door mounting set for several VSDs	SED2-DOOR-KIT2	SED2-0.37/.2.- 90/.2.
PC – SED2 connection set	SED2-PC-KIT	SED2-0.37/...- 90/...
LON - Modul	SED2-LONI/F	SED2-0.37/...- 90/...
Interface module for SED2 VSD	PTE-SED2	SED2-0.37/...- 90/...

Equipment combinations


The DESIGO I/O-Open interface module PTE-SED2 enables easy system integration. Refer to the data sheet CA2N9782 for further information.

Low Harmonic Technology

The SED2 incorporates **LHT** (Low Harmonic Technology) in all models. The Total Harmonic Current Distortion (THID) is typically 50% lower than the SED1 and other traditional design VSD's. HarmonEE is a PC based simulation program available to calculate the THID. It calculates the harmonic spectrum to the 49th order and shows compliance with International Standards such as IEEE 519.2, UK EA G5/4 and IEC 61000-3-6.

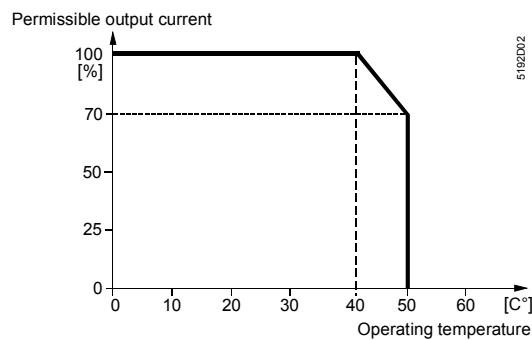
Technical data

Environmental conditions	Storage temperature	-40 °C to +70 °C
	Operating temperature for all types	-10 °C to +40 °C (+50 °C with derating)
	Humidity	95% relative humidity Non-condensing.
	Altitude	Up to 1000 meters above sea level without performance reduction
Power	Rated voltage range	3 x 200 - 240 V ±10% 3 x 380 - 480 V ±10% 3 x 500 - 600 V ±10%
	Input frequency	47 – 63 Hz
	Switch-on current	≤ Nominal input current
	Power factor	≥ 0.95
	Efficiency	96 – 97%
	Output frequency	0 – 150 Hz
	Overload capacity	110 % periodic overload capacity for 60 s within 5 minutes relative to the nominal output current.
	Power range	See section SED2 type summary.
	Switching frequency	4 kHz to 16 kHz (2 kHz steps)
Functions	Protection functions	Protection against: Undervoltage, overvoltage, ground fault, short circuit, rotor jam, motor and drive overtemperature
	HVAC functions	PID controller for speed, pressure, and temperature control. Belt failure detection with and without sensor. Staging of pumps or fans. Hibernation mode Variable speed drive bypass.
	Fixed frequencies	15, programmable
	Masking frequencies	4, programmable
Control unit	Setpoint resolution	0.01 Hz digital 10 bit analog
Inputs	2 analog inputs: AIN1, AIN2	0/2 to 10 V or 0/4 to 20mA, changeover possible (programmable scaling), configurable for direct connection of an LG-Ni 1000 temperature sensor.
	6 digital inputs: DIN1 to DIN6 20 configurable functions	Potential-free, expandable to 8 inputs by reconfiguring the 2 analog inputs. Switchable polarity: active low/ active high. Switching threshold: <3 V low, >3 V high. Input current min. 6 mA at ≥ 15 V, aim: 8 mA. Max. input voltage: 33 V.

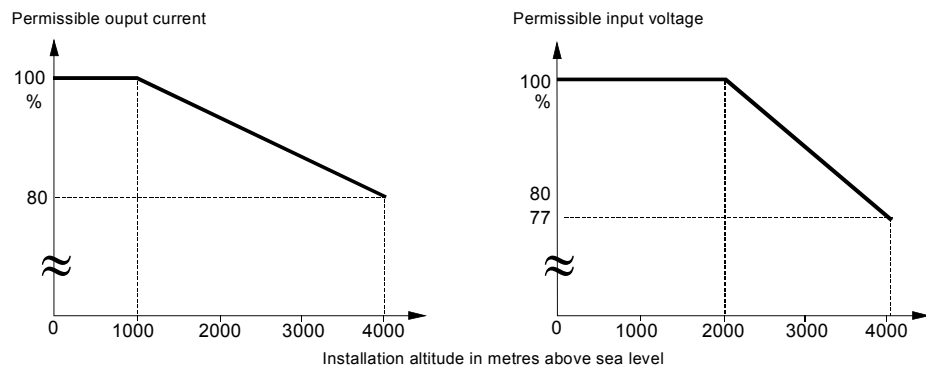
Outputs	2 analog outputs: AOUT1, AOUT2	0/2 to 10 V or 0/4 to 20 mA, changeover possible (programmable scaling). Output impedance: 1 k Ω Programmable. 1 potential-free changeover contact each. Max. contact rating: DC 30 V, 5 A AC 250 V, 2 A
	2 relays	Galvanically separated, unregulated auxiliary supply (18 to 32 V), 50 mA.
	Auxiliary supply 24 V	
Interface	Serial interface	RS 485, (RS 232 optional with converter). Protocols: USS, P1, and N2. USS transmission rate: up to 38.4 kBaud (default 9.6 kBaud) LON – Module optional
Degree of protection of housing	Degree of protection as per EN 60529	See section SED2 type summary
Standards	Product safety	
	Safety of machinery; electrical equipment of machines	EN 60204-1
	Semiconductor converters. General requirements and line commutated converters	EN 60146-1-1
	Electromagnetic compatibility	EN 55011 class B
	EMC emissions	The SED2-***/**B type drives are equipped with an EMC B filter designed for EN 55011 class B conducted emissions.
	Adjustable speed electrical power drive systems – Part 3: EMC product standard including specific test methods	EN 61800-3/A11
	CE conformity	
Electromagnetic compatibility	89/336/EEC	
Low voltage directive	73/23/EEC	
UL		UL and cUL approval for current transformers. 5B33 for use in the working environment having pollution degree 2-3.
C-TIC 		C-TIC registered N474

Derating factors for SED2 0.37 kW... 90 kW

Derating as a function of the operating temperature



Derating as a function of the altitude above sea level



Derating as a function of increasing the Pulse Frequency (P1800)

Increasing the Pulse Frequency (Switching Frequency) has the benefit of reducing the acoustic noise of the driven motor. The downside of this is that the SED2 will generate more heat internally within the drive. It is therefore important to observe the derating table shown below. If full motor output shall also be ensured at higher pulse frequencies, the VSD must be selected according to the following table.

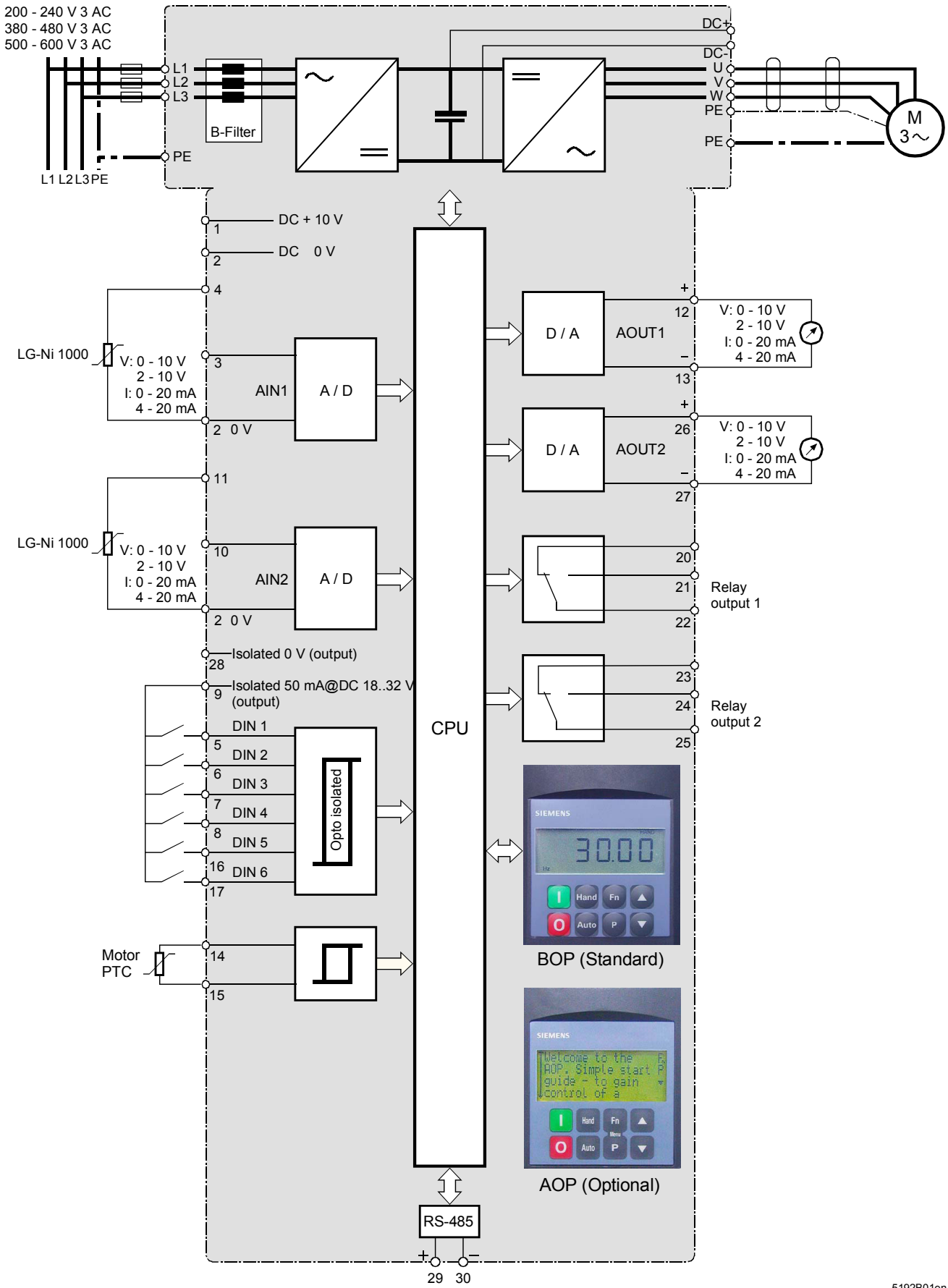
Note Increasing the pulse frequency will also potentially increase RFI (Radio Frequency Interference) and therefore extra precautions in bonding and screening may be necessary.

200 V – 240 V, ± 10%, 3 Phase											
IP20 Filtered	IP20 Unfiltered	IP54 Filtered	IP54 Unfiltered	Rating kW	Pulse Frequency in kHz						
					4	6	8	10	12	14	16
*	*	*	*		Max. Output Current in A						
SED2-7.5/22B	SED2-7.5/22X	Not Available		7.5	28	26.6	25.2	22.4	19.6	16.8	14
SED2-11/22B	SED2-11/22X			11	42	37.8	3.6	29.4	25.2	21	16.8
SED2-15/22B	SED2-15/22X			15	54	48.6	43.2	37.8	32.4	27	21.6
SED2-18.5/22B	SED2-18.5/22X			18.5	68	64.6	61.2	54.4	47.6	40.8	34
SED2-22/22B	SED2-22/22X			22	80	72	64	56	48	40	32
SED2-30/22B	SED2-30/22X			30	104	91	78	70.2	62.4	57.2	52
SED2-37/22B	SED2-37/22X			37	130	113.8	97.5	87.8	78	71.5	65
SED2-45/22B	SED2-45/22X			45	154	134.8	115.5	104	92.4	84.7	77

* 0.37 to 5.5 kW range do not require any current derating through the switching frequency range

380 V – 480 V, ± 10%, 3 Phase											
IP20 Filtered	IP20 Unfiltered	IP54 Filtered	IP54 Unfiltered	Rating kW	Pulse Frequency in kHz						
					4	6	8	10	12	14	16
					Max. Output Current in A						
SED2-0.37/32B	SED2-0.37/32X	Not Available		0.37	1.2	1.2	1.2	1.2	1.2	1.1	0.9
SED2-0.55/32B	SED2-0.55/32X			0.55	1.6	1.6	1.6	1.5	1.5	1.3	1.1
SED2-0.75/32B	SED2-0.75/32X			0.75	2.1	2.1	2.1	1.9	1.71	1.42	1.2
SED2-1.1/32B	SED2-1.1/32X	SED2-1.1/35B	SED2-1.1/35X	1.1	3	2.8	2.5	2.2	1.9	1.6	1.5
SED2-1.5/32B	SED2-1.5/32X	SED2-1.5/35B	SED2-1.5/35X	1.5	4	3.6	3.2	2.9	2.3	2	1.4
SED2-2.2/32B	SED2-2.2/32X	SED2-2.2/35B	SED2-2.2/35X	2.2	5.9	5.6	5.3	4.7	4.1	3.5	3
SED2-3/32B	SED2-3/32X	SED2-3/35B	SED2-3/35X	3	7.7	6.9	6.2	5.4	4.6	3.9	3.1
SED2-4/32B	SED2-4/32X	SED2-4/35B	SED2-4/35X	4	10.2	9.2	8.2	7.1	6.1	5.1	4.1
SED2-5.5/32B	SED2-5.5/32X	SED2-5.5/35B	SED2-5.5/35X	5.5	13.2	11.9	10.6	9.2	7.9	6.6	5.3
SED2-7.5/32B	SED2-7.5/32X	SED2-7.5/35B	SED2-7.5/35X	7.5	18.4	17.5	16.6	14.7	12.9	11	9.2
SED2-11/32B	SED2-11/32X	SED2-11/35B	SED2-11/35X	11	26	23.4	20.8	18.2	15.6	13	10.4
SED2-15/32B	SED2-15/32X	SED2-15/35B	SED2-15/35X	15	32	30.4	28.8	25.6	22.4	19.2	16
SED2-18.5/32B	SED2-18.5/32X	SED2-18.5/35B	SED2-18.5/35X	18.5	38	34.2	30.4	26.6	22.8	19	15.2
SED2-22/32B	SED2-22/32X	SED2-22/35B	SED2-22/35X	22	45	40.5	36	31.5	27	22.5	18
SED2-30/32B	SED2-30/32X	SED2-30/35B	SED2-30/35X	30	62	58.9	55.8	49.6	43.4	37.2	31
SED2-37/32B	SED2-37/32X	SED2-37/35B	SED2-37/35X	37	75	67.5	60	52.5	45	37.5	30
SED2-45/32B	SED2-45/32X	SED2-45/35B	SED2-45/35X	45	90	76.5	63	51.8	40.5	33.8	27
SED2-55/32B	SED2-55/32X	SED2-55/35B	SED2-55/35X	55	110	93.5	77	63.3	49.5	41.3	33
SED2-75/32B	SED2-75/32X	SED2-75/35B	SED2-75/35X	75	145	112.4	79.8	68.9	58	50.8	43.5
SED2-90/32B	SED2-90/32X	SED2-90/35B	SED2-90/35X	90	178	137.9	97.9	84.5	71.1	62.3	53.3

Internal diagram

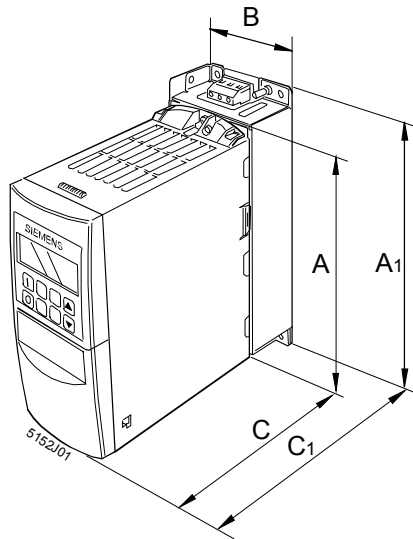


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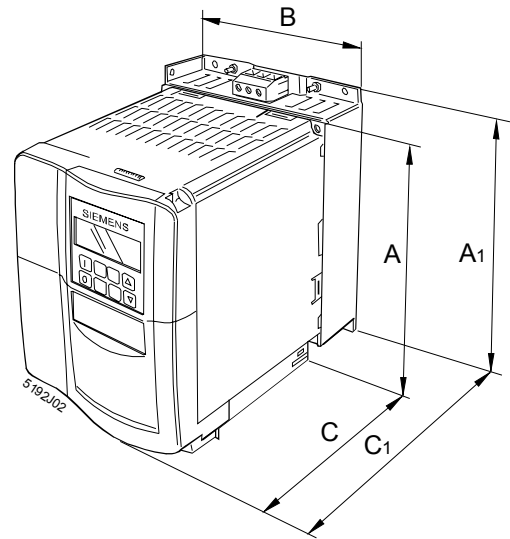
Dimensions of SED2 drives with IP20/NEMA 0 rating

Dimensions of SED2 frame sizes A to C

Frame size	Dimensions				
	A	A ₁	B	C	C ₁
A	173	200	73	149	192.5
B	202	213	149	172	222.5
C	245	261	185	195	250



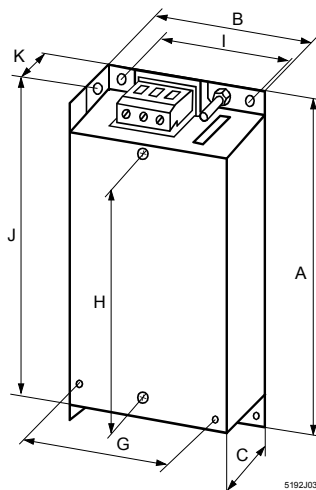
Frame size A



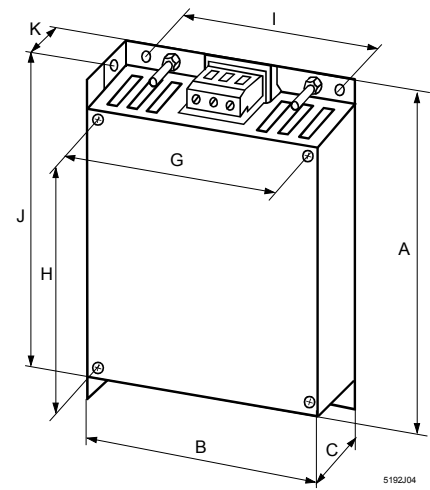
Frame sizes B and C

Dimensions of SED2 footprint filters for frame sizes A to C

Frame size	Dimensions in mm								
	A	B	C	G	H	I	J	K	
A	200	73	43.5	60	160	56	187	22	
B	213	149	50.5	138	174	120	200	24	
C	245	185	55	174	204	156	232	35	

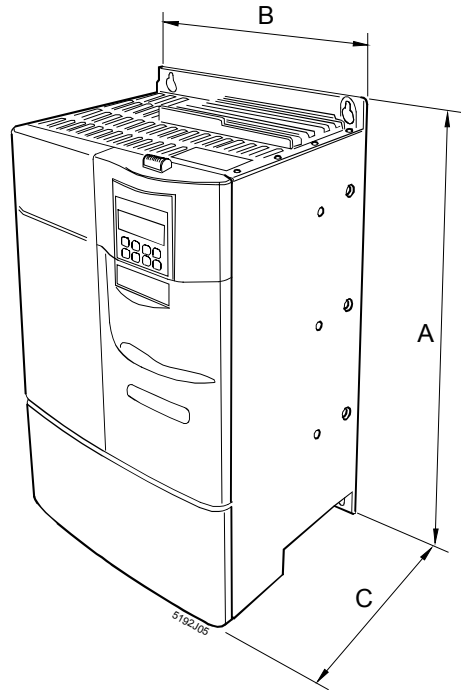


Filter for frame size A



Filter for frame sizes B and C

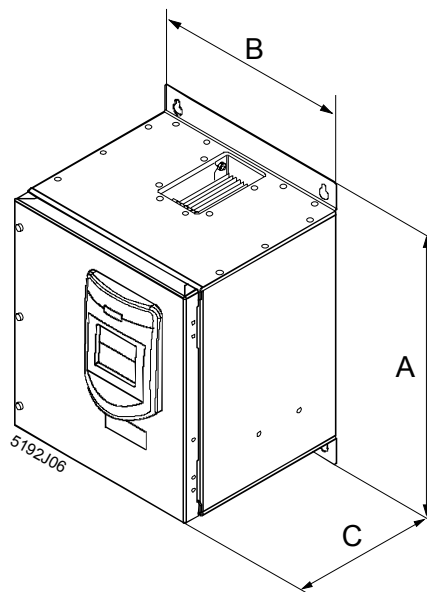
**Dimensions of SED2
frame sizes D to F
IP20 / NEMA 0**



Frame size	Dimensions in mm		
	A	B	C
D	520	275	245
E	650	275	245
F	850 (with filter 1150)	350	320

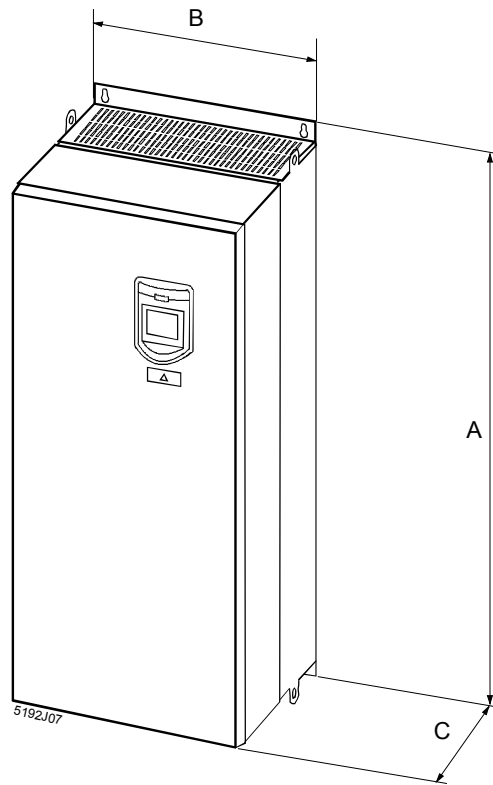
Dimensions of SED2 drives with IP54/NEMA 12 rating

**Dimensions of SED2
frame sizes B and C**



Frame size	Dimensions in mm		
	A	B	C
B	385	270	268
C	606	350	284

**Dimensions of SED2
frame sizes D to F /
IP54**



Frame size	Dimensions in mm		
	A	B	C
D	685	360	353
E	885	360	453
F	1150	450	473

SED2 type summary

200 V to 240 V, ± 10%, 3 phases / IP20							
Output power (variable torque)		IP code	Filter class	Max. output current	Frame size	Weight	Type (ASN)
kW	hp	IP		A		kg	
0.37	0.5	20	B	2.3	A	2	SED2-0.37/22B
0.55	0.75	20	B	3	A	2	SED2-0.55/22B
0.75	1	20	B	3.9	A	2	SED2-0.75/22B
1.1	1.5	20	B	5.5	B	4.2	SED2-1.1/22B
1.5	2	20	B	7.4	B	4.2	SED2-1.5/22B
2.2	3	20	B	10.4	B	4.2	SED2-2.2/22B
3	4	20	B	13.6	C	6.7	SED2-3/22B
4	5	20	B	17.5	C	6.7	SED2-4/22B
5.5	7.5	20	B	22	C	6.7	SED2-5.5/22B
7.5	10	20	B	28	C	6.7	SED2-7.5/22B
11	15	20	B	42	D	17	SED2-11/22B
15	20	20	B	54	D	17	SED2-15/22B
18.5	25	20	B	68	D	17	SED2-18.5/22B
22	30	20	B	80	E	22	SED2-22/22B
30	40	20	B	104	E	22	SED2-30/22B
37	50	20	B	130	F	75	SED2-37/22B
45	60	20	B	154	F	75	SED2-45/22B
0.37	0.5	20	unfiltered	2.3	A	1.3	SED2-0.37/22X
0.55	0.75	20	unfiltered	3	A	1.3	SED2-0.55/22X
0.75	1	20	unfiltered	3.9	A	1.3	SED2-0.75/22X
1.1	1.5	20	unfiltered	5.5	B	3.4	SED2-1.1/22X
1.5	2	20	unfiltered	7.4	B	3.4	SED2-1.5/22X
2.2	3	20	unfiltered	10.4	B	3.4	SED2-2.2/22X
3	4	20	unfiltered	13.6	C	5.5	SED2-3/22X
4	5	20	unfiltered	17.5	C	5.5	SED2-4/22X
5.5	7.5	20	unfiltered	22	C	5.5	SED2-5.5/22X
7.5	10	20	unfiltered	28	C	5.5	SED2-7.5/22X
11	15	20	unfiltered	42	D	16	SED2-11/22X
15	20	20	unfiltered	54	D	16	SED2-15/22X
18.5	25	20	unfiltered	68	D	16	SED2-18.5/22X
22	30	20	unfiltered	80	E	20	SED2-22/22X
30	40	20	unfiltered	104	E	20	SED2-30/22X
37	50	20	unfiltered	130	F	56	SED2-37/22X
45	60	20	unfiltered	154	F	56	SED2-45/22X

380 V to 480 V, ± 10%, 3 phases							
Output power (variable torque)		IP code	Filter class	Max. output current	Frame size	Weight	Type (ASN)
kW	hp						
0.37	0.5	20	B	1.2	A	2	SED2-0.37/32B
0.55	0.75	20	B	1.6	A	2	SED2-0.55/32B
0.75	1	20	B	2.1	A	2	SED2-0.75/32B
1.1	1.5	20	B	3	A	2	SED2-1.1/32B
1.5	2	20	B	4	A	2	SED2-1.5/32B
2.2	3	20	B	5.9	B	4.2	SED2-2.2/32B
3	4	20	B	7.7	B	4.2	SED2-3/32B
4	5	20	B	10.2	B	4.2	SED2-4/32B
5.5	7.5	20	B	13.2	C	6.7	SED2-5.5/32B
7.5	10	20	B	18.4	C	6.7	SED2-7.5/32B
11	15	20	B	26	C	6.7	SED2-11/32B
15	20	20	B	32	C	6.7	SED2-15/32B
18.5	25	20	B	38	D	17	SED2-18.5/32B
22	30	20	B	45	D	17	SED2-22/32B
30	40	20	B	62	D	17	SED2-30/32B
37	50	20	B	75	E	22	SED2-37/32B
45	60	20	B	90	E	22	SED2-45/32B
55	75	20	B	110	F	75	SED2-55/32B
75	100	20	B	145	F	75	SED2-75/32B
90	125	20	B	178	F	75	SED2-90/32B
0.37	0.5	20	unfiltered	1.2	A	1.3	SED2-0.37/32X
0.55	0.75	20	unfiltered	1.6	A	1.3	SED2-0.55/32X
0.75	1	20	unfiltered	2.1	A	1.3	SED2-0.75/32X
1.1	1.5	20	unfiltered	3	A	1.3	SED2-1.1/32X
1.5	2	20	unfiltered	4	A	1.3	SED2-1.5/32X
2.2	3	20	unfiltered	5.9	B	3.4	SED2-2.2/32X
3	4	20	unfiltered	7.7	B	3.4	SED2-3/32X
4	5	20	unfiltered	10.2	B	3.4	SED2-4/32X
5.5	7.5	20	unfiltered	13.2	C	5.5	SED2-5.5/32X
7.5	10	20	unfiltered	18.4	C	5.5	SED2-7.5/32X
11	15	20	unfiltered	26	C	5.5	SED2-11/32X
15	20	20	unfiltered	32	C	5.5	SED2-15/32X
18.5	25	20	unfiltered	38	D	16	SED2-18.5/32X
22	30	20	unfiltered	45	D	16	SED2-22/32X
30	40	20	unfiltered	62	D	16	SED2-30/32X
37	50	20	unfiltered	75	E	20	SED2-37/32X
45	60	20	unfiltered	90	E	20	SED2-45/32X
55	75	20	unfiltered	110	F	56	SED2-55/32X
75	100	20	unfiltered	145	F	56	SED2-75/32X
90	125	20	unfiltered	178	F	56	SED2-90/32X

380 V to 480 V, ± 10%, 3 phases							
Output power (variable torque)		IP code	Filter class	Max. output current	Frame size	Weight	Type (ASN)
kW	hp	IP		A		kg	
1.1	1.5	54	B	3	B	11.5	SED2-1.1/35B
1.5	2	54	B	4	B	11.5	SED2-1.5/35B
2.2	3	54	B	5.9	B	11.5	SED2-2.2/35B
3	4	54	B	7.7	B	11.5	SED2-3/35B
4	5	54	B	10.2	B	11.5	SED2-4/35B
5.5	7.5	54	B	13.2	C	21	SED2-5.5/35B
7.5	10	54	B	18.4	C	21	SED2-7.5/35B
11	15	54	B	26	C	21	SED2-11/35B
15	20	54	B	32	C	21	SED2-15/35B
18.5	25	54	B	38	D	35	SED2-18.5/35B
22	30	54	B	45	D	35	SED2-22/35B
30	40	54	B	62	D	35	SED2-30/35B
37	50	54	B	75	E	48	SED2-37/35B
45	60	54	B	90	E	48	SED2-45/35B
55	75	54	B	110	F	99	SED2-55/35B
75	100	54	B	145	F	99	SED2-75/35B
90	125	54	B	178	F	99	SED2-90/35B
1.1	1.5	54	unfiltered	3	B	10.3	SED2-1.1/35X
1.5	2	54	unfiltered	4	B	10.3	SED2-1.5/35X
2.2	3	54	unfiltered	5.9	B	10.3	SED2-2.2/35X
3	4	54	unfiltered	7.7	B	10.3	SED2-3/35X
4	5	54	unfiltered	10.2	B	10.3	SED2-4/35X
5.5	7.5	54	unfiltered	13.2	C	19.2	SED2-5.5/35X
7.5	10	54	unfiltered	18.4	C	19.2	SED2-7.5/35X
11	15	54	unfiltered	26	C	19.2	SED2-11/35X
15	20	54	unfiltered	32	C	19.2	SED2-15/35X
18.5	25	54	unfiltered	38	D	35	SED2-18.5/35X
22	30	54	unfiltered	45	D	35	SED2-22/35X
30	40	54	unfiltered	62	D	35	SED2-30/35X
37	50	54	unfiltered	75	E	48	SED2-37/35X
45	60	54	unfiltered	90	E	48	SED2-45/35X
55	75	54	unfiltered	110	F	81	SED2-55/35X
75	100	54	unfiltered	145	F	81	SED2-75/35X
90	125	54	unfiltered	178	F	81	SED2-90/35X

500 V to 600 V, ± 10%, 3 phases							
Output power (variable torque)		IP code	Filter class	Max. output current	Frame size	Weight	Type (ASN)
kW	hp	IP		A		kg	
0.75	1	20	unfiltered	1.4	C	5.5	SED2-0.75/42X
1.1	1.5	20	unfiltered	2.1	C	5.5	SED2-1.1/42X
1.5	2	20	unfiltered	2.7	C	5.5	SED2-1.5/42X
2.2	3	20	unfiltered	3.9	C	5.5	SED2-2.2/42X
3	4	20	unfiltered	5.4	C	5.5	SED2-3/42X
4	5	20	unfiltered	6.1	C	5.5	SED2-4/42X
5.5	7.5	20	unfiltered	9	C	5.5	SED2-5.5/42X
7.5	10	20	unfiltered	11	C	5.5	SED2-7.5/42X
11	15	20	unfiltered	17	C	5.5	SED2-11/42X
15	20	20	unfiltered	22	C	5.5	SED2-15/42X
18.5	25	20	unfiltered	27	D	16	SED2-18.5/42X
22	30	20	unfiltered	32	D	16	SED2-22/42X
30	40	20	unfiltered	41	D	16	SED2-30/42X
37	50	20	unfiltered	52	E	20	SED2-37/42X
45	60	20	unfiltered	62	E	20	SED2-45/42X
55	75	20	unfiltered	77	F	56	SED2-55/42X
75	100	20	unfiltered	99	F	56	SED2-75/42X
90	125	20	unfiltered	125	F	56	SED2-90/42X
1.1	1.5	54	unfiltered	2.1	C	19.2	SED2-1.1/45X
1.5	2	54	unfiltered	2.7	C	19.2	SED2-1.5/45X
2.2	3	54	unfiltered	3.9	C	19.2	SED2-2.2/45X
3	4	54	unfiltered	5.4	C	19.2	SED2-3/45X
4	5	54	unfiltered	6.1	C	19.2	SED2-4/45X
5.5	7.5	54	unfiltered	9	C	19.2	SED2-5.5/45X
7.5	10	54	unfiltered	11	C	19.2	SED2-7.5/45X
11	15	54	unfiltered	17	C	19.2	SED2-11/45X
15	20	54	unfiltered	22	C	19.2	SED2-15/45X
18.5	25	54	unfiltered	27	D	35	SED2-18.5/45X
22	30	54	unfiltered	32	D	35	SED2-22/45X
30	40	54	unfiltered	41	D	35	SED2-30/45X
37	50	54	unfiltered	52	E	48	SED2-37/45X
45	60	54	unfiltered	62	E	48	SED2-45/45X
55	75	54	unfiltered	77	F	81	SED2-55/45X
75	100	54	unfiltered	99	F	81	SED2-75/45X
90	125	54	unfiltered	125	F	81	SED2-90/45X

