



Variable speed drives

SED2

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

Range: 0.37 kW to 90 kW for IP20; IP21 version,
1.1 kW to 90 kW for IP54 version.

Voltage range: 200 V to 240 V / 380 V to 480 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.
Planning Manual CM1J5192en	The Planning Manual is intended for the support of system houses and HVAC planning engineers when planning and sizing drive systems for HVAC plants.
Application Guide "Fire Mode" CM1A5192en	Without additional control logics, the SED2 support two operating modes. In the comfort mode, the supply air and extract air fans are controlled exactly according to the actual demand. Thus, a high level of comfort is guaranteed at lowest energy consumption. If a fire control panel signals a fire, the SED2 change their operating mode to the fire emergency mode. This operating mode ensures that rooms for example are specifically controlled by means of overpressure to make sure escape routes are kept free of smoke.
Handbook Detection, measurement and mini- mization of harmonics CM1P5199en	This document focuses on interplay between the SED2 and harmonics in the power supply system. The document provides practical knowledge, aimed at identifying harmonics at an early stage and selecting the right approach to solve problems.

Type summary

Type codes

SED2-aaa/bcd				
SED2	-aaa	b	c	d
SBT variable speed drive of the 2 nd generation	Power [kW]	Voltage range	Protection of housing	EMC Filter according to EN 55011
		2 = 200...240 V	2 = IP20	X = unfiltered
		3 = 380...480 V	5 = IP54	B = Filter class B

Complete type summary

See the tables in section SED2 type summary on page 14.

Accessories

Accessories	Type reference ASN	Suited for
AOP (Advanced Operator Panel) Multilanguage Clear Text Display	SED2-AOP1	All SED Types
Gland plate, frame size A	SED2-GL-A	SED2 IP20 frame size A
Gland plate, frame size B	SED2-GL-B	SED2 IP20 frame size B
Gland plate, frame size C	SED2-GL-C	SED2 IP20 frame size C
BOP/AOP door mounting kit for 1 SED2 (RS232)	SED2-DOOR-KIT1	All types of SED2
BOP/AOP door mounting kit for several SED2 (RS485)	SED2-DOOR-KIT2	All types of SED2

Accessories	Type reference ASN	Suited for
PC – SED2 connection set	SED2-PC-KIT	All types of SED2
LON integration module	SED2-LONI/F	All types of SED2
Profibus integration module	MLFB 6SE6400-1PB00-0AA0 1	All types of SED2
TX OPEN module for DESIGO integration	TXI1.OPEN	All types of SED2
RS485 bus terminating resistor	SED2-RS485-NT	All types of SED2
IP21 cover for frame size A ²	SED2-IP21-A	SED2 IP20 frame size A
IP21 cover for frame size B ²	SED2-IP21-B	SED2 IP20 frame size B
IP21 cover for frame size C ²	SED2-IP21-C	SED2 IP20 frame size C
IP21 cover for frame size D and E ²	SED2-IP21-D/E	SED2 IP20 frame size D and E
IP21 cover for frame size F ²	SED2-IP21-F	SED2 IP20 frame size F

¹ To be ordered at Siemens I DT

² An SED2 protection class IP21 contains the following parts which must be ordered separately.

- IP21 cover
- Gland plate (only for frame size A, B and C)

Spare parts

Spare parts	Type reference ASN	Suited for:
Basic Operator Panel (BOP)	SED2-BOP1	All SED2 types
EMC filter frame size A	SED2-BFLTR-A	All SED2 IP20 frame size A
EMC filter frame size B	SED2-BFLTR-B	All SED2 IP20 frame size B
EMC filter frame size C for 200V AC	SED2-BFLTR-C-L	SED2-3/22x – SED2-7.5/22x
EMC filter frame size C for 400V AC	SED2-BFLTR-C-H	SED2-5.5/32x – SED2-15/32x
DIM module unit	SED2-DIMMOD-DF	All SED2 IP20 frame size D, E and F
I/O Board	SED2-IOBD1	All SED2 types
I/O Terminal cover	SED2-COV1-ABC	All SED2 IP20 frame size A, B und C
Power terminal cover frame size B	SED2-COV2-B	All SED2 IP20 frame size B
Power terminal cover frame size C	SED2-COV2-C	All SED2 IP20 frame size C
Cooling fan IP20 frame size A (with 3 wire connection)	SED2-FAN-20A	IP20 frame size A, produced before December 10 th 2002 (see SED2 serial number)
Cooling fan IP20 frame size A (with 2 wire connection)	SED2-FAN2-20A	IP20 frame size A produced since December 10 th 2002 (see SED2 serial number)
Cooling fan IP20 frame size B (with 3 wire connection)	SED2-FAN-20B	IP20 frame size B produced before April 22 nd 2004 (see SED2 serial number)
Cooling fan IP20 frame size B (with 2 wire connection)	SED2-FAN2-20B	IP20 frame size B produced since April 22 nd 2004 (see SED2 serial number)
Cooling fan IP20 frame size C (with 3 wire connection)	SED2-FAN-20C	IP20 frame size C produced before April 27 th 2004 (see SED2 serial number)

Spare parts	Type reference ASN	Suited for:
Cooling fan IP20 frame size C (with 2 wire connection)	SED2-FAN2-20C	IP20 frame size C produced since April 27th 2004 (see SED2 serial number)
Cooling fan IP20 frame size D und E	SED2-FAN-20DE2	All IP20 frame size D und E
Cooling fan IP20 frame size F	SED2-FAN-20F	All IP20 frame size F
Cooling fan IP54 frame size B (internal)	SED2-FAN2-20B	All IP54 frame size B
Cooling fan IP54 frame size B (external)	SED2-FAN-54B	All IP54 frame size B
Cooling fan IP54 frame size C (Internal)	SED2-FAN2-20C	All IP54 frame size C
Cooling fan IP54 frame size C (external)	SED2-FAN-54C	All IP54 frame size C
Cooling fan IP54 frame size D und E (Internal)	SED2-FAN-20DE2	All IP54 frame size D und E
Cooling fan IP54 frame size D und E (External)	SED2-FAN-54DE	All IP54 frame size D und E
Cooling fan IP54 frame size F (Internal)	SED2-FAN-20DE2	All IP54 frame size F
Cooling fan IP54 frame size F (External)	SED2-FAN-54F	All IP54 frame size F

Software

You obtain the following SED2 Software free from your local Siemens sales office:

EasyComm

Parameterization-Software including standard applications and Commissioning Wizard

EasySave

Calculates the payback time and energy savings in comparison to a conventional plant

HarmonEE

HarmonEE is a PC program developed by Siemens SBT to calculate the entire distortion of harmonic currents and voltages. It covers the harmonic spectrum up to the 49th order and conforms to international standards, such as IEEE 519.2, UK EA G5/4 and IEC 61000-3-6.

Equipment combinations

For the integration

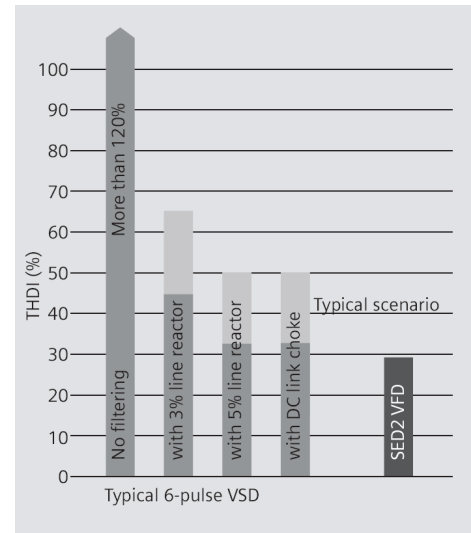
Desigo TX OPEN, TX SED2, Engineering Instructions CM110573

LON Integration module, data sheet CE1N5193

Profibus Integration module, data sheet (from Siemens I DT): 6SE6400-5AK00-0BP0




Low Harmonic Technology

The SED2 incorporates **LHT** (Low Harmonic Technology) in all models (technology for reducing harmonic currents on the AC line). Without additional chokes, SED2 variable frequency drives reach a THDI $\leq 29\%$.

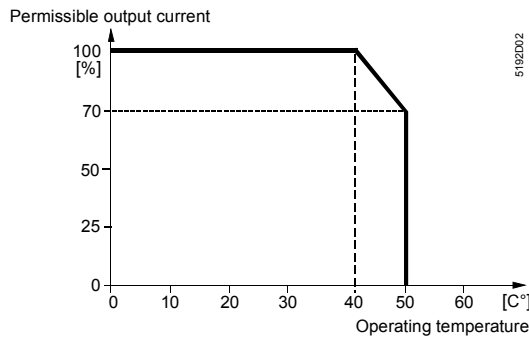


Technical data

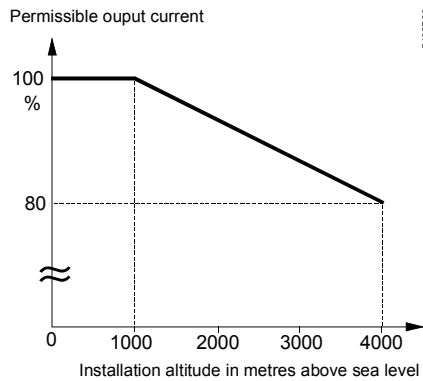
Environmental conditions	Storage temperature	-40 °C to +70 °C
	Operating temperature for all types	-10 °C to +40 °C (+50 °C with derating)
	Humidity	95% relative humidity Non-condensing
	Altitude	Up to 1000 meters above sea level without performance reduction
Power	Rated voltage range	3 x 200 - 240 V $\pm 10\%$ 3 x 380 - 480 V $\pm 10\%$
	Input frequency	47 - 63 Hz
	Switch-on current	\leq 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
Functions	Power range	0.37kW - 90kW
	Switching frequency	4 kHz to 16 kHz (2 kHz steps)
	Protection functions	Protection against: Undervoltage, overvoltage, ground fault, short circuit, rotor jam, motor and drive over temperature
	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 Fire mode
	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
	2 relays	1 potential-free changeover contact each Max. contact rating: DC 30 V, 5 A AC 250 V, 2 A
	Auxiliary supply 24 V	Galvanically separated, unregulated auxiliary supply (18 to 32 V), 50 mA.
	Max. motor cable length	Generally: 50 m screened 100 m unscreened
		EN 55011 Industrial scientific and medical (ISM) radio-frequency equipment: class B: 25 m screened with SED2 B filter option class A1: 50 m screened with SED2 B filter option
		EN61800-3 for conducted radio-frequency emission used in the first environment: C1 : 25 m screened with SED2 B filter option C2: 50 m screened with SED2 B filter option
		Up to 1000 m cable length with additional output filters
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, Profibus DP optional
Degree of protection of housing	as per EN 60529	IP20, IP21 und IP54
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	
	EMC emissions	EN 55011
	Electromagnetic compatibility part 3-12: Limits for harmonic currents	On the power side, the integrated LHT minimizes the network effects dramatically and thus maintains operation within the limits of EN 61000-3-12
	Adjustable speed electrical power drive systems Part 3: EMC product standard including specific test methods	EN 61800-3
	CE conformity	
	Electromagnetic compatibility	89/336/EEC
	Low voltage directive	2006/95/EC
	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
	RoHS 	2002/95/EG (RoHS)
	GOST-R -certified 	
	Quality and Environmental Management System	ISO 9001 (Quality) ISO 14001 (Environment)

Derating as a function of the operating temperature



Derating as a function of the atmospheric pressure (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.

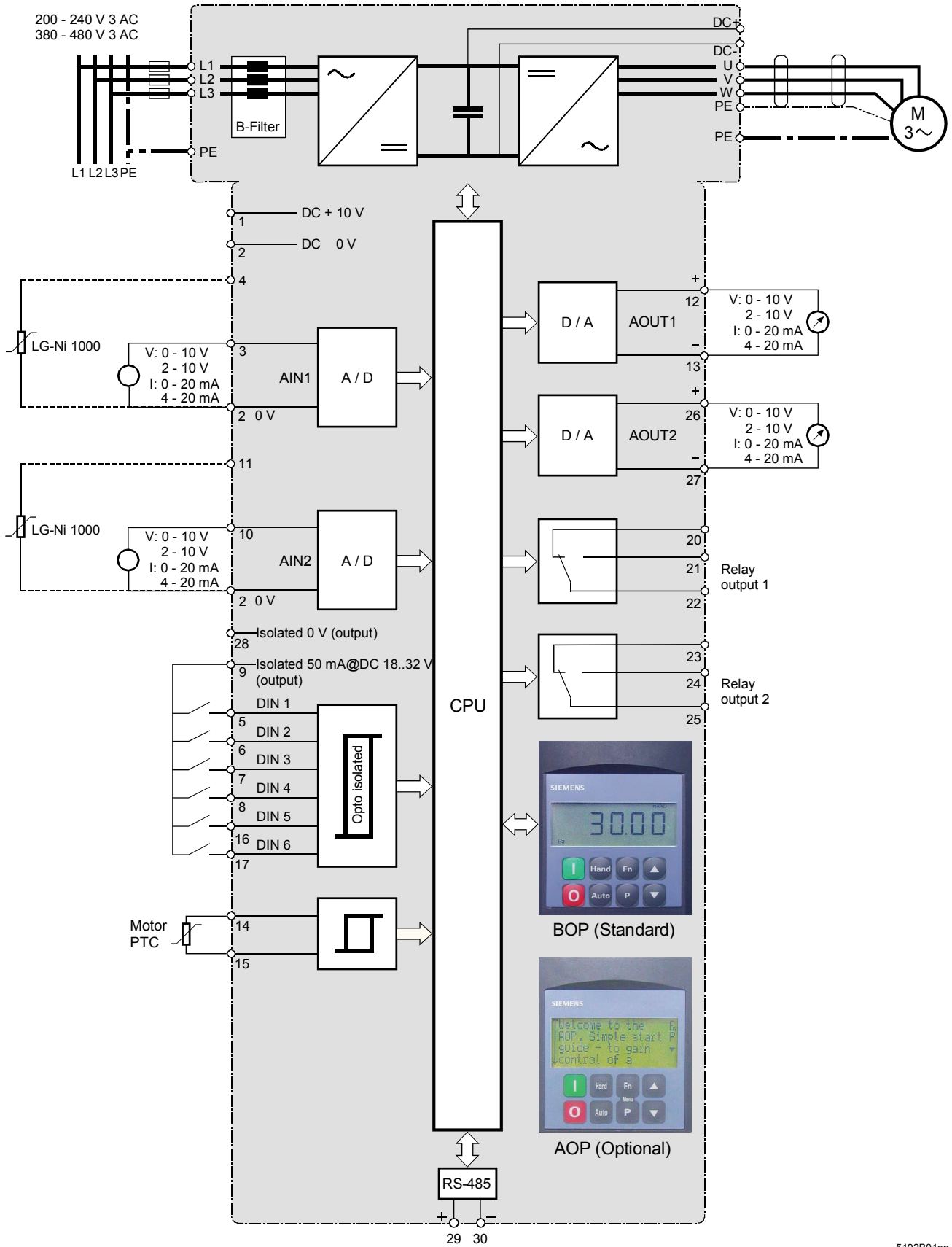
Note Increasing the pulse frequency will also potentially increase RFI (Radio Frequency Interference) and therefore extra precautions in bonding and screening may be necessary.

200 V – 240 V, ± 10%, 3 phases											
IP20/IP21 filtered	IP20/IP21 unfiltered	IP54 filtered	IP54 unfiltered	Rating	Pulse frequency in kHz						
				kW	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 phases											
IP20/IP21 filtered	IP20 unfiltered	IP54 filtered	IP54 unfiltered	Rating	Pulse frequency in kHz						
				kW	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

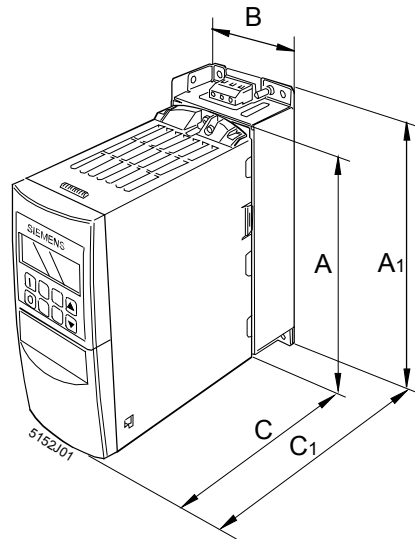


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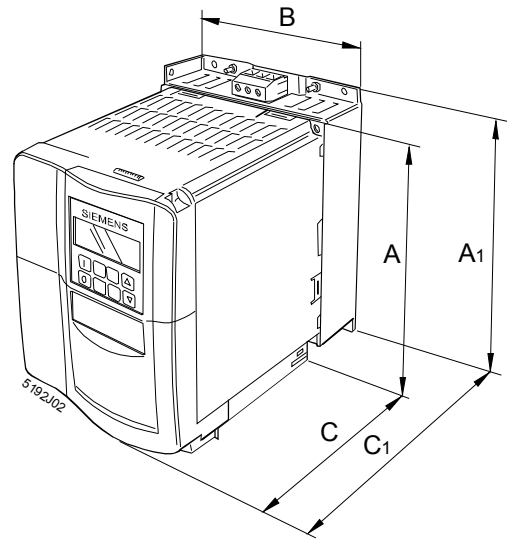
Dimensions of SED2 drives with IP20/NEMA 0 rating

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



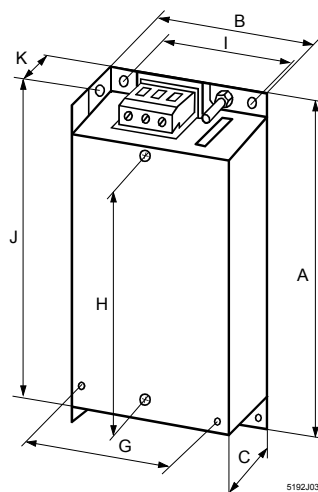
Frame size A



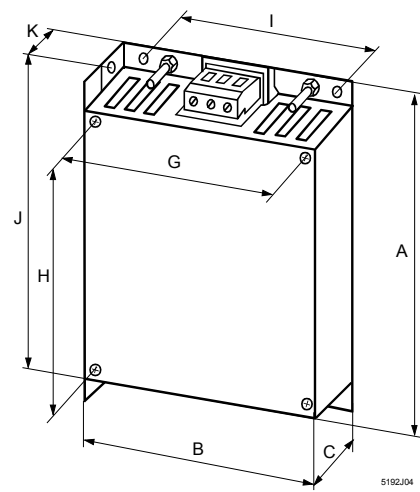
Frame sizes B and C

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	

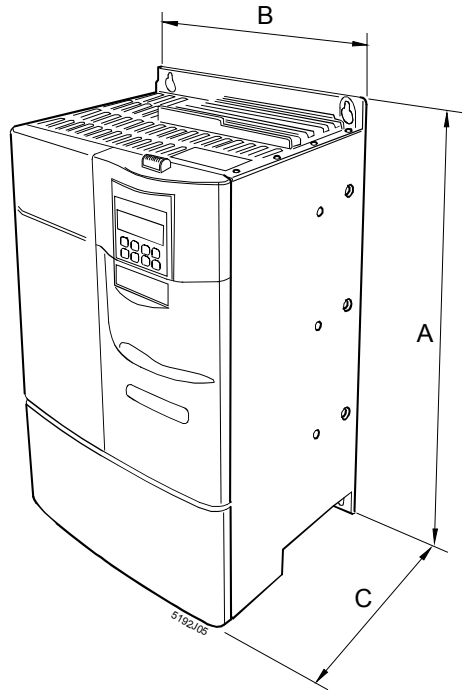


Filter for frame size A



Filter for frame sizes B and C

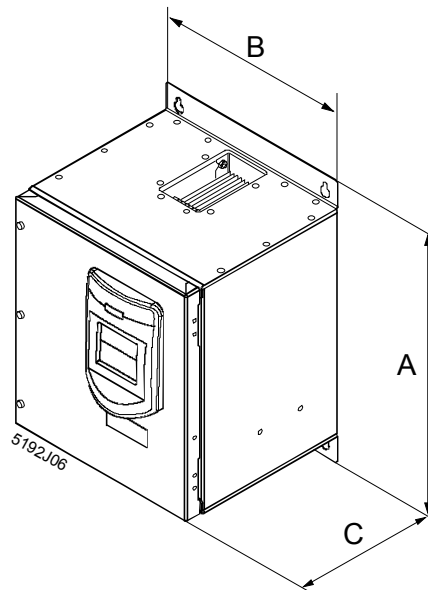
**Dimensions of SED2
frame sizes D to F
IP20 / NEMA 0**



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

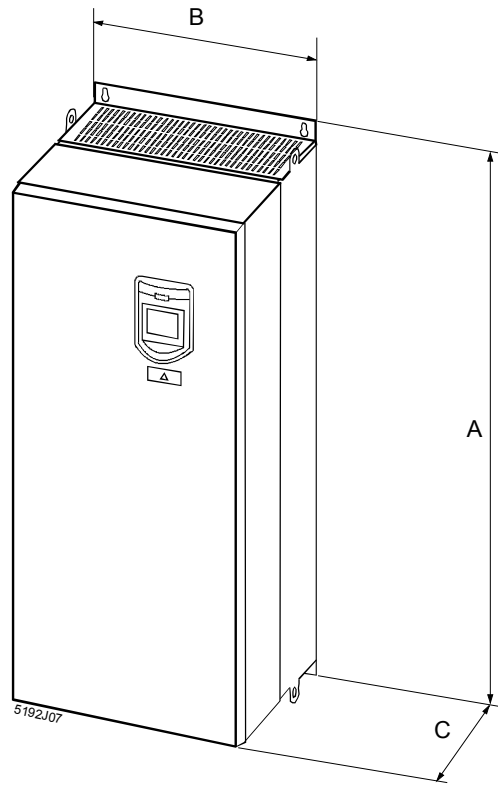
Dimensions of SED2 drives with IP54/NEMA 12 rating

**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**

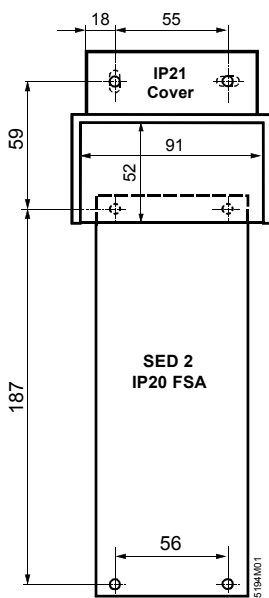


Frame size	Dimensions in mm		
	A	B	C
D	685	360	353
E	885	360	453
F	1150	450	473

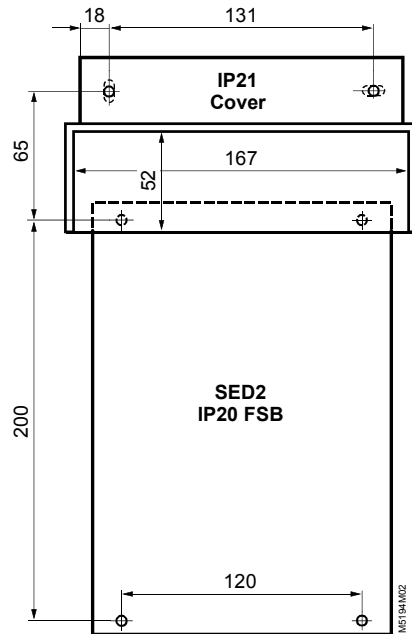
Dimensions of IP21 covers

Dimensions in mm

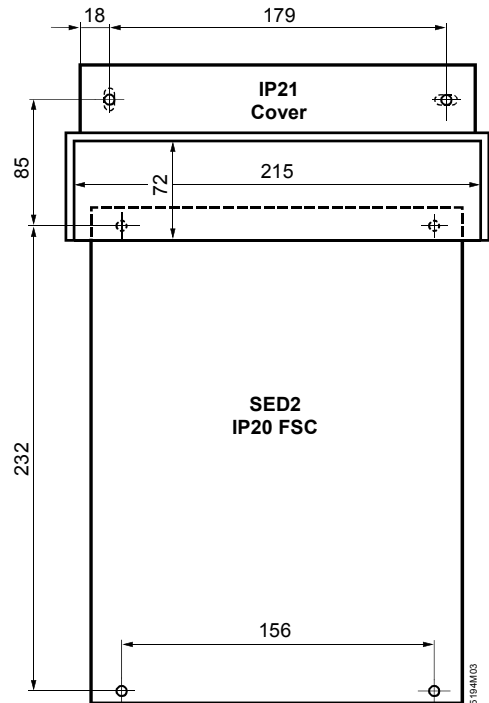
Frame size A



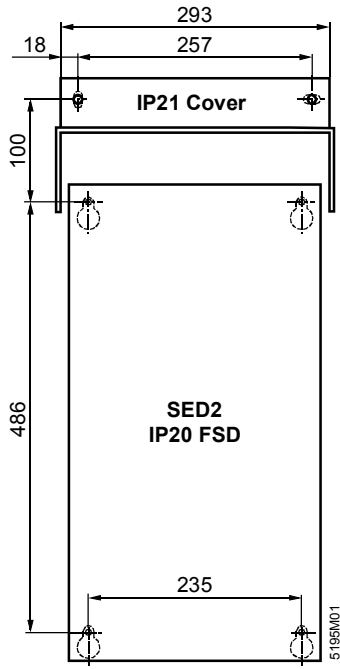
Frame size B



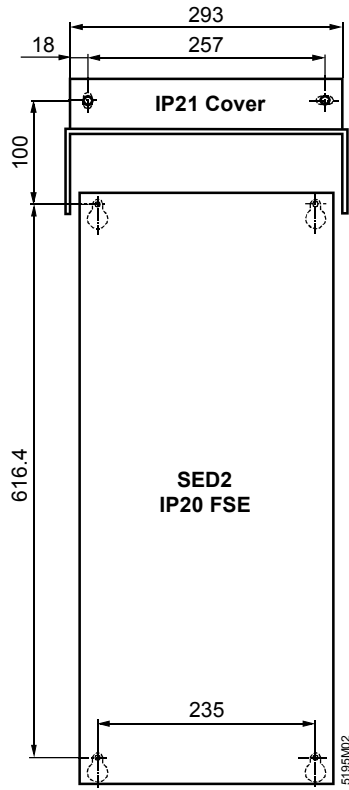
Frame size C



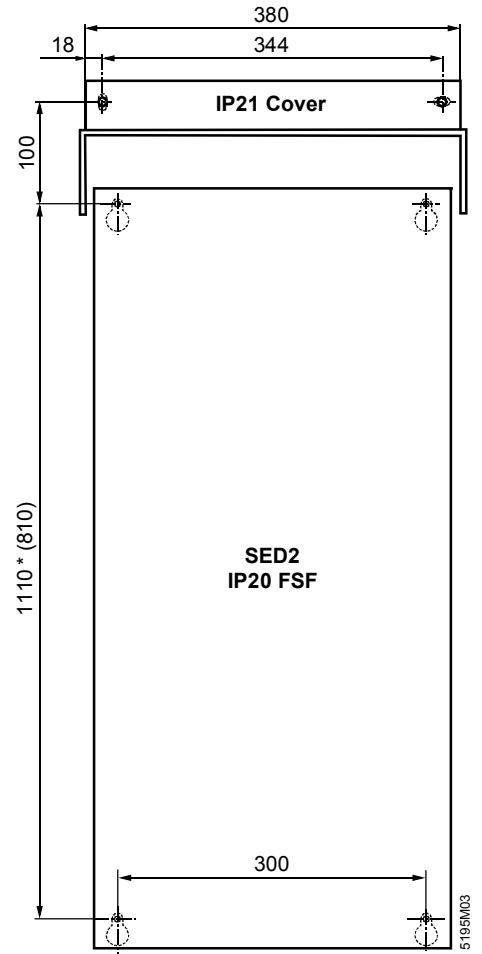
Frame size D



Frame size E



Frame size F



* with Filter

SED2 type summary

200 V to 240 V, ± 10%, 3 phases / IP20								
Output power (variable torque)		Protection of housing	Filter class	Max. input current	Max. output current	Frame size	Weight	Type reference (ASN)
kW	hp	IP		A	A		kg	
0.37	0.5	20	B	2.4	2.3	A	2	SED2-0.37/22B
0.55	0.75	20	B	3.1	3	A	2	SED2-0.55/22B
0.75	1	20	B	4.3	3.9	A	2	SED2-0.75/22B
1.1	1.5	20	B	6.2	5.5	B	4.2	SED2-1.1/22B
1.5	2	20	B	8.3	7.4	B	4.2	SED2-1.5/22B
2.2	3	20	B	11.3	10.4	B	4.2	SED2-2.2/22B
3	4	20	B	15.6	13.6	C	6.7	SED2-3/22B
4	5	20	B	20.1	17.5	C	6.7	SED2-4/22B
5.5	7.5	20	B	26.3	22	C	6.7	SED2-5.5/22B
7.5	10	20	B	36.4	28	C	6.7	SED2-7.5/22B
11	15	20	B	46	42	D	17	SED2-11/22B
15	20	20	B	60	54	D	17	SED2-15/22B
18.5	25	20	B	75	68	D	17	SED2-18.5/22B
22	30	20	B	88	80	E	22	SED2-22/22B
30	40	20	B	114	104	E	22	SED2-30/22B
37	50	20	B	143	130	F	75	SED2-37/22B
45	60	20	B	170	154	F	75	SED2-45/22B
0.37	0.5	20	unfiltered	2.4	2.3	A	1.3	SED2-0.37/22X
0.55	0.75	20	unfiltered	3.1	3	A	1.3	SED2-0.55/22X
0.75	1	20	unfiltered	4.3	3.9	A	1.3	SED2-0.75/22X
1.1	1.5	20	unfiltered	6.2	5.5	B	3.4	SED2-1.1/22X
1.5	2	20	unfiltered	8.3	7.4	B	3.4	SED2-1.5/22X
2.2	3	20	unfiltered	11.3	10.4	B	3.4	SED2-2.2/22X
3	4	20	unfiltered	15.6	13.6	C	5.5	SED2-3/22X
4	5	20	unfiltered	20.1	17.5	C	5.5	SED2-4/22X
5.5	7.5	20	unfiltered	26.1	22	C	5.5	SED2-5.5/22X
7.5	10	20	unfiltered	36.4	28	C	5.5	SED2-7.5/22X
11	15	20	unfiltered	46	42	D	16	SED2-11/22X
15	20	20	unfiltered	60	54	D	16	SED2-15/22X
18.5	25	20	unfiltered	75	68	D	16	SED2-18.5/22X
22	30	20	unfiltered	88	80	E	20	SED2-22/22X
30	40	20	unfiltered	114	104	E	20	SED2-30/22X
37	50	20	unfiltered	143	130	F	56	SED2-37/22X
45	60	20	unfiltered	170	154	F	56	SED2-45/22X

380 V to 480 V, ± 10%, 3 phases / IP20								
Output power (variable torque)		IP code	Filter class	Max. input current	Max. output current	Frame size	Weight	Type reference (ASN)
kW	hp	IP		A	A		kg	
0.37	0.5	20	B	1.6	1.2	A	2	SED2-0.37/32B
0.55	0.75	20	B	2.1	1.6	A	2	SED2-0.55/32B
0.75	1	20	B	2.8	2.1	A	2	SED2-0.75/32B
1.1	1.5	20	B	4.2	3	A	2	SED2-1.1/32B
1.5	2	20	B	5.8	4	A	2	SED2-1.5/32B
2.2	3	20	B	7.5	5.9	B	4.2	SED2-2.2/32B
3	4	20	B	10	7.7	B	4.2	SED2-3/32B
4	5	20	B	12.8	10.2	B	4.2	SED2-4/32B
5.5	7.5	20	B	16.6	13.2	C	6.7	SED2-5.5/32B
7.5	10	20	B	24	18.4	C	6.7	SED2-7.5/32B
11	15	20	B	33.8	26	C	6.7	SED2-11/32B
15	20	20	B	42	32	C	6.7	SED2-15/32B
18.5	25	20	B	45.7	38	D	17	SED2-18.5/32B
22	30	20	B	50	45	D	17	SED2-22/32B
30	40	20	B	68	62	D	17	SED2-30/32B
37	50	20	B	83	75	E	22	SED2-37/32B
45	60	20	B	99	90	E	22	SED2-45/32B
55	75	20	B	121	110	F	75	SED2-55/32B
75	100	20	B	160	145	F	75	SED2-75/32B
90	125	20	B	196	178	F	75	SED2-90/32B
0.37	0.5	20	unfiltered	1.6	1.2	A	1.3	SED2-0.37/32X
0.55	0.75	20	unfiltered	2.1	1.6	A	1.3	SED2-0.55/32X
0.75	1	20	unfiltered	2.8	2.1	A	1.3	SED2-0.75/32X
1.1	1.5	20	unfiltered	4.2	3	A	1.3	SED2-1.1/32X
1.5	2	20	unfiltered	5.8	4	A	1.3	SED2-1.5/32X
2.2	3	20	unfiltered	7.5	5.9	B	3.4	SED2-2.2/32X
3	4	20	unfiltered	10	7.7	B	3.4	SED2-3/32X
4	5	20	unfiltered	12.8	10.2	B	3.4	SED2-4/32X
5.5	7.5	20	unfiltered	16.6	13.2	C	5.5	SED2-5.5/32X
7.5	10	20	unfiltered	24	18.4	C	5.5	SED2-7.5/32X
11	15	20	unfiltered	33.8	26	C	5.5	SED2-11/32X
15	20	20	unfiltered	42	32	C	5.5	SED2-15/32X
18.5	25	20	unfiltered	45.7	38	D	16	SED2-18.5/32X
22	30	20	unfiltered	50	45	D	16	SED2-22/32X
30	40	20	unfiltered	68	62	D	16	SED2-30/32X
37	50	20	unfiltered	83	75	E	20	SED2-37/32X
45	60	20	unfiltered	99	90	E	20	SED2-45/32X
55	75	20	unfiltered	121	110	F	56	SED2-55/32X
75	100	20	unfiltered	160	145	F	56	SED2-75/32X
90	125	20	unfiltered	196	178	F	56	SED2-90/32X

380 V to 480 V, ± 10%, 3 phases / IP54

Output power (variable torque)		IP code	Filter class	Max. input current	Max. output current	Frame size	Weight	Type reference (ASN)
kW	hp	IP		A	A		kg	
1.1	1.5	54	B	4.2	3	B	11.5	SED2-1.1/35B
1.5	2	54	B	5.8	4	B	11.5	SED2-1.5/35B
2.2	3	54	B	7.5	5.9	B	11.5	SED2-2.2/35B
3	4	54	B	10	7.7	B	11.5	SED2-3/35B
4	5	54	B	12.8	10.2	B	11.5	SED2-4/35B
5.5	7.5	54	B	16.6	13.2	C	21	SED2-5.5/35B
7.5	10	54	B	24	18.4	C	21	SED2-7.5/35B
11	15	54	B	33.8	26	C	21	SED2-11/35B
15	20	54	B	42	32	C	21	SED2-15/35B
18.5	25	54	B	45.7	38	D	35	SED2-18.5/35B
22	30	54	B	50	45	D	35	SED2-22/35B
30	40	54	B	68	62	D	35	SED2-30/35B
37	50	54	B	83	75	E	48	SED2-37/35B
45	60	54	B	99	90	E	48	SED2-45/35B
55	75	54	B	121	110	F	99	SED2-55/35B
75	100	54	B	160	145	F	99	SED2-75/35B
90	125	54	B	196	178	F	99	SED2-90/35B
1.1	1.5	54	unfiltered	4.2	3	B	10.3	SED2-1.1/35X
1.5	2	54	unfiltered	5.8	4	B	10.3	SED2-1.5/35X
2.2	3	54	unfiltered	7.5	5.9	B	10.3	SED2-2.2/35X
3	4	54	unfiltered	10	7.7	B	10.3	SED2-3/35X
4	5	54	unfiltered	12.8	10.2	B	10.3	SED2-4/35X
5.5	7.5	54	unfiltered	16.6	13.2	C	19.2	SED2-5.5/35X
7.5	10	54	unfiltered	24	18.4	C	19.2	SED2-7.5/35X
11	15	54	unfiltered	33.8	26	C	19.2	SED2-11/35X
15	20	54	unfiltered	42	32	C	19.2	SED2-15/35X
18.5	25	54	unfiltered	45.7	38	D	35	SED2-18.5/35X
22	30	54	unfiltered	50	45	D	35	SED2-22/35X
30	40	54	unfiltered	68	62	D	35	SED2-30/35X
37	50	54	unfiltered	83	75	E	48	SED2-37/35X
45	60	54	unfiltered	99	90	E	48	SED2-45/35X
55	75	54	unfiltered	121	110	F	81	SED2-55/35X
75	100	54	unfiltered	160	145	F	81	SED2-75/35X
90	125	54	unfiltered	196	178	F	81	SED2-90/35X