



5191P01

Variable Speed Drive

SED1

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

Range: 0.75kW to 315kW for IP20/21 version,
1.1kW to 90kW for IP56 version

Voltage range: 208 V...240 V / 380 V...500 V / 525 V...575 V

Freely programmable I/Os

Integrated PID controller

Use

The SED1 variable speed drive 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 primary and secondary pumps in heating systems.
- VAV plants
- Cooling tower fans
- Condensate pumps

Product documentation

Operating instructions CM1U5191.

The operating instructions are added to the product and contain all required information on installing and commissioning the variable speed drives of type SED1.

Engineering manual CM1J5191

The engineering manual is designed for plant engineering and contains all information required for selecting the appropriate SED1 variable speed drive and the associated options.

Type summary

Type codes

SED1-aaaa/bcd				
SED1	-aaaa	b	c	d
L&S variable speed drive 1. Generation	Power [kW]	Voltage range	IP	Filter
		2 = 208...240V	2 = 20/21	X = unfiltered
		3 = 380...500V	5 = 56	A = Class A Filter
		4 = 525...575V		B = Class B Filter

Complete type summary

See tables in section "SED1 type summary" attached to this document.

Accessories

Accessories	Siemens MLFB order number
OPe multi-lingual clear text operating display	6SE95090-0XX87-8BF0
3m cable for OPe	6SX7010-0AB03 ¹
Connection cable for OPe – PC	6SE3290-0XX87-8SK0

¹ for external mounting of operating display OPe

Ordering

All orders for the SED1 variable speed drives and accessories are handled by the Siemens electronic ordering system DUI and are placed directly with the Siemens supply centre.

For this reason, the Siemens order number (MLFB) must be indicated in all orders.

Example:

Item	Order number (MLFB)
Variable speed drive SED1-11/32A	6SE9522-4DG50-6AA0
Line reactor 2% for the above variable speed drive	4EP3600-5US

Equipment combinations

The DESIGO I/O-Open interface module PTE.ASED.20 enables easy system integration. Refer to data sheet CA2N9725en for further information.

Technical data

Power

Operating voltage L1-L2-L3	3 x 208-240V ±10% SED1-xxxx/2.. 3 x 380-500V ±10% SED1-xxxx/3.. 3 x 525-575V ±15% SED1-xxxx/4..
Input frequency L1-L2-L3	50/60Hz
Making current L1-L2-L3	≤ full-load current
Input power factor L1-L2-L3	≥ 0.98
Output frequency U-V-W	0...150Hz
Overload capacity U-V-W	150% for 60 seconds
Power range	See section "SED1 type summary"

Function data

Variable speed drive protection functions	Undervoltage protection, overvoltage protection, overload protection, short-circuit-proof, idling-proof, motor overheating protection, variable speed drive overheating protection
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Control

Inputs

Analogue input AIN1 setpoint input AIN2 actual value input for PID controller	Input selectable for 0-10 V / 0-20 mA / 4-20mA
Digital input DIN1 - DIN6 15 configurable functions	Maximum input voltage DC 33 V Nominal switching threshold approx. 7 V

Outputs

Analogue output A1OUT, A2OUT 6 configurable functions	Current output 0-20 mA
Digital output RL1 8 configurable functions	Potential-free switchover contact for max 230 V/ 1A
Digital output RL2 8 configurable functions	Potential-free switchover contact for max 230 V/ 1A

Interface

Communications interface P+, N+	RS485, 2 lines, 19,200 baud max., USS protocol
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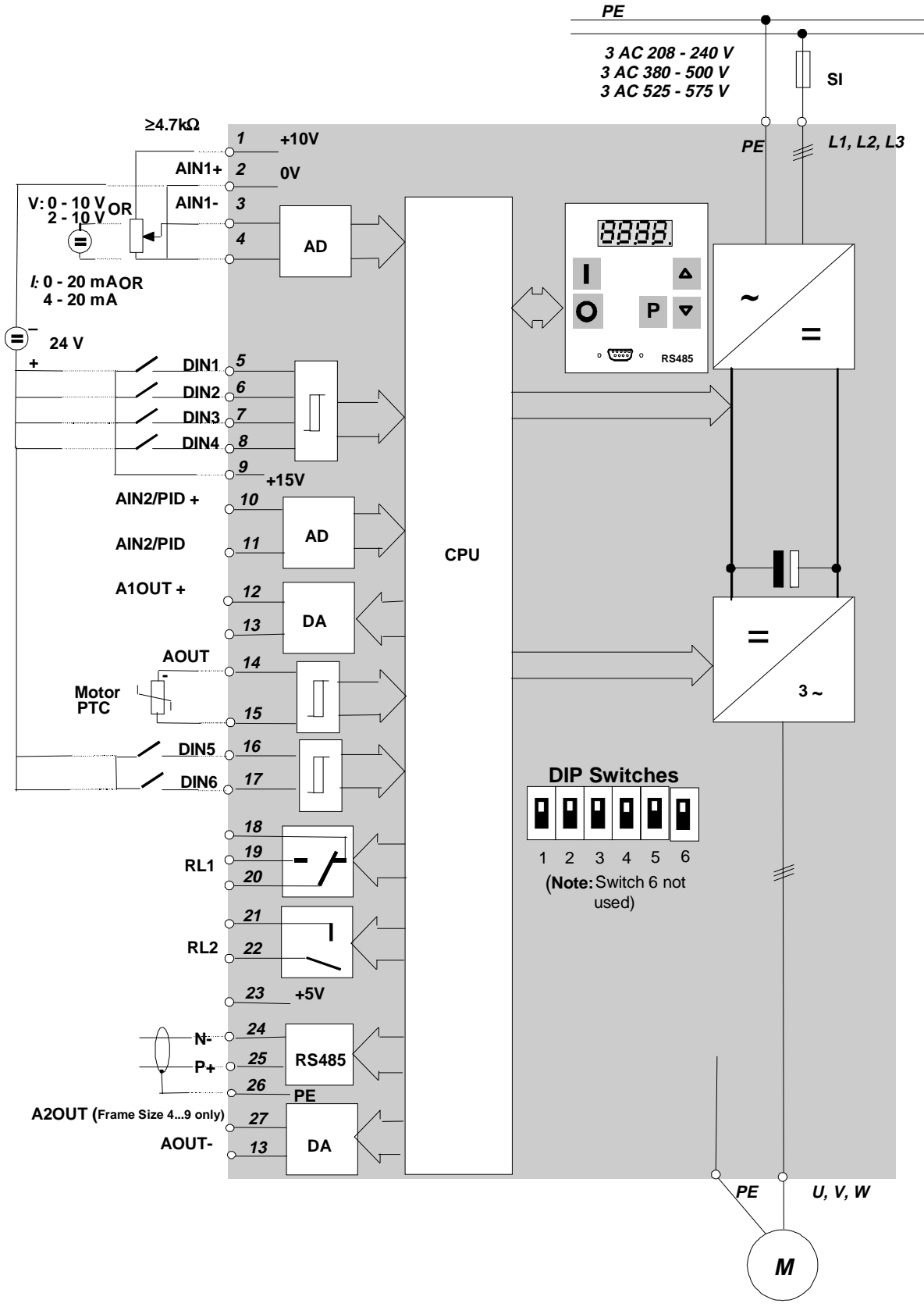
Degree of protection of housing

Degree of protection provided by enclosures as per EN 50 529	See section "SED1 type summary"
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Standards

Product safety Safety of machinery; electrical equipment of machines	EN 60204-1
General requirements and line commuted converters	EN 60146-1-1
Electromagnetic compatibility EMC EMC emissions	EN 55011 class A / class B The variable speed drives are available with EMC filters A or B. See "Type summary"
EMC product standard including specific test methods	EN 61800-3
CE conformity Electromagnetic compatibility Low voltage directive	89/336/EEC 73/23/EEC
UL	UL and cUL approval for current transformers. 5B33 for use in the working environment having pollution degree 2-3.

Block diagram



SED1 type summary

		Variable Speed Drive		External Filter		Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%
				MLFB	MLFB	MLFB	MLFB
Without Filter 208 to 240V +/-10% 3AC							
0.75	3.9	IP20	SED1-0.75/22X	6SE9513-8CA40-6AA0			4EP3200-1US
1.1	5.5	IP20	SED1-1.1/22X	6SE9515-5CB40-6AA0			4EP3200-1US
1.5	7.4	IP20	SED1-1.5/22X	6SE9517-4CB40-6AA0			4EP3400-1US
2.2	10.4	IP20	SED1-2.2/22X	6SE9521-0CC40-6AA0			4EP3400-1US
3	13.6	IP20	SED1-3/22X	6SE9521-4CC40-6AA0			4EP3500-0US
4	17.5	IP20	SED1-4/22X	6SE9521-8CC40-6AA0			4EP3600-4US
5.5	23	IP21	SED1-5.5/22X	6SE9522-3CG40-6AA0			4EP3600-5US
7.5	28	IP21	SED1-7.5/22X	6SE9522-8CG40-6AA0			4EP3700-2US
11	42	IP21	SED1-11/22X	6SE9524-2CH40-6AA0			4EP3800-2US
15	54	IP21	SED1-15/22X	6SE9525-4CJ40-6AA0			4EP3800-7US
18.5	68	IP21	SED1-18.5/22X	6SE9526-8CJ40-6AA0			4EP3900-2US
22	80	IP21	SED1-22/22X	6SE9528-0CJ40-6AA0			4EP3900-2US
30	104	IP21	SED1-30/22X	6SE9531-0CK40-6AA0			4EP4000-2US
37	130	IP21	SED1-37/22X	6SE9531-3CK40-6AA0			4EU2451-2UA00
45	154	IP21	SED1-45/22X	6SE9531-5CK40-6AA0			4EU2551-4UA00
Without Filter 208 to 240V +/-10% 3AC							
1.1	5.5	IP56	SED1-1.1/25X	6SE9515-5CS45-6AA0			4EP3200-1US
1.5	7.4	IP56	SED1-1.5/25X	6SE9517-4CS45-6AA0			4EP3400-1US
2.2	10.4	IP56	SED1-2.2/25X	6SE9521-0CS45-6AA0			4EP3400-1US
3	13.6	IP56	SED1-3/25X	6SE9521-4CS45-6AA0			4EP3500-0US
4	17.5	IP56	SED1-4.0/25X	6SE9521-8CS45-6AA0			4EP3600-4US
5.5	23	IP56	SED1-5.5/25X	6SE9522-3CS45-6AA0			4EP3600-5US
7.5	28	IP56	SED1-7.5/25X	6SE9522-8CS45-6AA0			4EP3700-2US
11	42	IP56	SED1-11/25X	6SE9524-2CS45-6AA0			4EP3800-2US

			Variable Speed Drive		External Filter	Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%
				MLFB	MLFB	MLFB	MLFB
Without Filter 208 to 240V +/-10% 3AC							
15	54	IP56	SED1-15/25X	6SE9525-4CS45-6AA0			4EP3800-7US
18.5	68	IP56	SED1-18.5/25X	6SE9526-8CS45-6AA0			4EP3900-2US
22	80	IP56	SED1-22/25X	6SE9528-0CS45-6AA0			4EP3900-2US
30	104	IP56	SED1-30/25X	6SE9531-0CS45-6AA0			4EP4000-2US
37	130	IP56	SED1-37/25X	6SE9531-3CS45-6AA0			4EU2451-2UA00
45	154	IP56	SED1-45/25X	6SE9531-5CS45-6AA0			4EU2551-4UA00
Class A Filter 208 to 240V +/-10% 3AC							
0.75	3.9	IP20	SED1-0.75/22A	6SE9513-8CA40-6AA0	6SE3290-0DA87-0FA1		4EP3200-1US
1.1	5.5	IP20	SED1-1.1/22A	6SE9515-5CB40-6AA0	6SE3290-0DB87-0FA3		4EP3200-1US
1.5	7.4	IP20	SED1-1.5/22A	6SE9517-4CB40-6AA0	6SE3290-0DB87-0FA3		4EP3200-1US
2.2	10.4	IP20	SED1-2.2/22A	6SE9521-0CC40-6AA0	6SE3290-0DC87-0FA4		4EP3200-1US
3	13.6	IP20	SED1-3/22A	6SE9521-4CC40-6AA0	6SE3290-0DC87-0FA4		4EP3500-0US
4	17.5	IP20	SED1-4/22A	6SE9521-8CC40-6AA0	6SE3290-0DC87-0FA4		4EP3600-4US
5.5	23	IP20	SED1-5.5/22A	6SE9522-3CG50-6AA0	integrated		4EP3600-5US
7.5	28	IP20	SED1-7.5/22A	6SE9522-8CG50-6AA0	integrated		4EP3700-2US
11	42	IP20	SED1-11/22A	6SE9524-2CH50-6AA0	integrated		4EP3800-2US
15	54	IP20	SED1-15/22A	6SE9525-4CJ50-6AA0	integrated		4EP3800-7US
18.5	68	IP20	SED1-18.5/22A	6SE9526-8CJ50-6AA0	integrated		4EP3900-2US
22	80	IP20	SED1-22/22A	6SE9528-0CJ50-6AA0	integrated		4EP3900-2US
30	104	IP20	SED1-30/22A	6SE9531-0CK50-6AA0	integrated		4EP4000-2US
37	130	IP20	SED1-37/22A	6SE9531-3CK50-6AA0	integrated		4EU2451-2UA00
45	154	IP20	SED1-45/22A	6SE9531-5CK50-6AA0	integrated		4EU2551-4UA00
Class A Filter 208 to 240V +/-10% 3AC							
1.1	5.5	IP56	SED1-1.1/25A	6SE9515-5CS55-6AA0	integrated	4EP3200-1US	3 x 4EM4605-4CB
1.5	7.4	IP56	SED1-1.5/25A	6SE9517-4CS55-6AA0	integrated	4EP3200-1US	3 x 4EM4605-6CB
2.2	10.4	IP56	SED1-2.2/25A	6SE9521-0CS55-6AA0	integrated	4EP3400-1US	4 x 4EM4605-6CB
3	13.6	IP56	SED1-3/25A	6SE9521-4CS55-6AA0	integrated	4EP3400-1US	3 x 4EM4807-4CB

			Variable Speed Drive		External Filter		Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%	
				MLFB	MLFB	MLFB	MLFB	
Class A Filter 208 to 240V +/-10% 3AC								
4	17.5	IP56	SED1-4/25A	6SE9521-8CS55-6AA0	integrated	4EP3400-1US	3 x 4EM4807-6CB	
5.5	23	IP56	SED1-5.5/25A	6SE9522-3CS55-6AA0	integrated	4EP3500-0US	4EP3700-7US (4EP3800-8US)	
7.5	28	IP56	SED1-7.5/25A	6SE9522-8CS55-6AA0	integrated	4EP3600-4US	4EP3801-0US (4EP3800-8US)	
11	42	IP56	SED1-11/25A	6SE9524-2CS55-6AA0	integrated	4EP3600-5US	4EP3900-5US (4EP4001-0US)	
15	54	IP56	SED1-15/25A	6SE9525-4CS55-6AA0	integrated	4EP3700-2US	4EP3900-5US (4EP4001-0US)	
18.5	68	IP56	SED1-18.5/25A	6SE9526-8CS55-6AA0	integrated	4EP3700-2US	4EP4001-1US (4EP4001-2US)	
22	80	IP56	SED1-22/25A	6SE9528-0CS55-6AA0	integrated	4EP3800-2US	4EU2451-4UA00 (4EU2451-5UA00)	
30	104	IP56	SED1-30/25A	6SE9531-0CS55-6AA0	integrated	4EP3800-7US	4EU2451-4UA00 (4EU2551-1UB00)	
37	130	IP56	SED1-37/25A	6SE9531-3CS55-6AA0	integrated	4EP3900-2US	4EU2551-2UB00 (4EU2551-3UB00)	
45	154	IP56	SED1-45/25A	6SE9531-5CS55-6AA0	integrated	4EP4000-2US	4EU2751-1UB00 (4EU2551-3UB00)	
Class B Filter 208 to 240V +/-10% 3AC								
0.75	3.9	IP20	SED1-0.75/22B	6SE9513-8CA40-6AA0	6SE3290-0DA87-0FB1		4EP3200-1US	
1.1	5.5	IP20	SED1-1.1/22B	6SE9515-5CB40-6AA0	6SE3290-0DB87-0FB3		4EP3200-1US	
1.5	7.4	IP20	SED1-1.5/22B	6SE9517-4CB40-6AA0	6SE3290-0DB87-0FB3		4EP3400-1US	
2.2	10.4	IP20	SED1-2.2/22B	6SE9521-0CC40-6AA0	6SE3290-0DC87-0FB4		4EP3400-1US	
3	13.6	IP20	SED1-3/22B	6SE9521-4CC40-6AA0	6SE3290-0DC87-0FB4		4EP3500-0US	
4	17.5	IP20	SED1-4/22B	6SE9521-8CC40-6AA0	6SE3290-0DC87-0FB4		4EP3600-4US	
5.5	23	IP20	SED1-5.5/22B	6SE9522-3CG40-6AA0	6SE2100-1FC20		4EP3600-5US	
7.5	28	IP20	SED1-7.5/22B	6SE9522-8CG40-6AA0	6SE2100-1FC20		4EP3700-2US	
11	42	IP20	SED1-11/22B	6SE9524-2CH40-6AA0	6SE2100-1FC20		4EP3800-2US	
15	54	IP20	SED1-15/22B	6SE9525-4CJ40-6AA0	6SE2100-1FC21		4EP3800-7US	
18.5	68	IP20	SED1-18.5/22B	6SE9526-8CJ40-6AA0	6SE2100-1FC21		4EP3900-2US	
22	80	IP20	SED1-22/22B	6SE9528-0CJ40-6AA0	6SE2100-1FC21		4EP3900-2US	
30	104	IP20	SED1-30/22B	6SE9531-0CK40-6AA0	6SE3290-0DK87-0FB7		4EP4000-2US	
37	130	IP20	SED1-37/22B	6SE9531-3CK40-6AA0	6SE3290-0DK87-0FB7		4EU2451-2UA00	
45	154	IP20	SED1-45/22B	6SE9531-5CK40-6AA0	6SE3290-0DK87-0FB7		4EU2551-4UA00	
90	168	IP20	SED1-90/32B	6SE9531-7DK40-6AA0	6SE3290-0DK87-0FB7	4EU2551-4UA00	4EU2751-2UB00 (4EU3051-0UB00)	

		Variable Speed Drive			External Filter		Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%	
				MLFB	MLFB	MLFB	MLFB	
Class B Filter 208 to 240V +/-10% 3AC								
1.1	5.5	IP56	SED1-1.1/25B	6SE9515-5CS55-6AA0	integrated	4EP3200-1US	3 x 4EM4605-4CB	
1.5	7.4	IP56	SED1-1.5/25B	6SE9517-4CS55-6AA0	integrated	4EP3200-1US	3 x 4EM4605-6CB	
2.2	10.4	IP56	SED1-2.2/25B	6SE9521-0CS55-6AA0	integrated	4EP3400-1US	4 x 4EM4605-6CB	
3	13.6	IP56	SED1-3/25B	6SE9521-4CS55-6AA0	integrated	4EP3400-1US	3 x 4EM4807-4CB	
4	17.5	IP56	SED1-4/25B	6SE9521-8CS55-6AA0	integrated	4EP3400-1US	3 x 4EM4807-6CB	
5.5	23	IP56	SED1-5.5/25B	6SE9522-3CS55-6AA0	integrated	4EP3500-0US	4EP3700-7US (4EP3800-8US)	
7.5	28	IP56	SED1-7.5/25B	6SE9522-8CS55-6AA0	integrated	4EP3600-4US	4EP3801-0US (4EP3800-8US)	
11	42	IP56	SED1-11/25B	6SE9524-2CS55-6AA0	integrated	4EP3600-5US	4EP3900-5US (4EP4001-0US)	
15	54	IP56	SED1-15/25B	6SE9525-4CS55-6AA0	integrated	4EP3700-2US	4EP3900-5US (4EP4001-0US)	
18.5	68	IP56	SED1-18.5/25B	6SE9526-8CS55-6AA0	integrated	4EP3700-2US	4EP4001-1US (4EP4001-2US)	
22	80	IP56	SED1-22/25B	6SE9528-0CS55-6AA0	integrated	4EP3800-2US	4EU2451-4UA00 (4EU2451-5UA00)	
30	104	IP56	SED1-30/25B	6SE9531-0CS55-6AA0	integrated	4EP3800-7US	4EU2451-4UA00 (4EU2551-1UB00)	
37	130	IP56	SED1-37/25B	6SE9531-3CS55-6AA0	integrated	4EP3900-2US	4EU2551-2UB00 (4EU2551-3UB00)	
45	154	IP56	SED1-45/25B	6SE9531-5CS55-6AA0	integrated	4EP4000-2US	4EU2751-1UB00 (4EU2551-3UB00)	

			Variable Speed Drive		External Filter		Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%	
				MLFB	MLFB	MLFB	MLFB	
Without Filter 380V to 500V +/-10% 3AC								
1.1	3	IP20	SED1-1.1/32X	6SE9513-0DA40-6AA0		4EP3200-1US	3 x 4EM4605-4CB	
1.5	4	IP20	SED1-1.5/32X	6SE9514-0DA40-6AA0		4EP3200-1US	3 x 4EM4605-6CB	
2.2	5.9	IP20	SED1-2.2/32X	6SE9516-0DB40-6AA0		4EP3400-1US	4 x 4EM4605-6CB	
3	7.7	IP20	SED1-3/32X	6SE9517-7DB40-6AA0		4EP3400-1US	3 x 4EM4807-4CB	
4	10.2	IP20	SED1-4/32X	6SE9521-0DC40-6AA0		4EP3400-1US	3 x 4EM4807-6CB	
5.5	13.2	IP20	SED1-5.5/32X	6SE9521-3DC40-6AA0		4EP3500-0US	4EP3700-7US (4EP3800-8US)	
7.5	17	IP20	SED1-7.5/32X	6SE9521-7DC40-6AA0		4EP3600-4US	4EP3801-0US (4EP3800-8US)	
11	23.5	IP21	SED1-11/32X	6SE9522-4DG40-6AA0		4EP3600-5US	4EP3900-5US (4EP4001-0US)	
15	30	IP21	SED1-15/32X	6SE9523-0DG40-6AA0		4EP3700-2US	4EP3900-5US (4EP4001-0US)	
18.5	37	IP21	SED1-18.5/32X	6SE9523-7DH40-6AA0		4EP3700-2US	4EP4001-1US (4EP4001-2US)	
22	43.5	IP21	SED1-22/32X	6SE9524-3DH40-6AA0		4EP3800-2US	4EU2451-4UA00 (4EU2451-5UA00)	
30	58	IP21	SED1-30/32X	6SE9525-8DJ40-6AA0		4EP3800-7US	4EU2451-4UA00 (4EU2551-1UB00)	
37	71	IP21	SED1-37/32X	6SE9527-1DJ40-6AA0		4EP3900-2US	4EU2551-2UB00 (4EU2551-3UB00)	
45	84	IP21	SED1-45/32X	6SE9528-4DJ40-6AA0		4EP4000-2US	4EU2751-1UB00 (4EU2551-3UB00)	
55	102	IP21	SED1-55/32X	6SE9531-0DK40-6AA0		4EP4000-2US	4EU2751-1UB00 (4EU2751-3UB00)	
75	138	IP21	SED1-75/32X	6SE9531-4DK40-6AA0		4EU2451-2UA00	4EU2751-1UB00 (4EU2751-6UB00)	
90	168	IP21	SED1-90/32X	6SE9531-7DK40-6AA0		4EU2551-4UA00	4EU2751-2UB00 (4EU3051-0UB00)	
Without Filter 380V to 480V +/-10% 3AC								
110	210	IP20	SED1-110K/32X	6SE9532-1EL40-6AA0		4EU2551-8UA00	4EU2751-5UB00	
132	260	IP20	SED1-132K/32X	6SE9532-6EL40-6AA0		4EU2751-0UB00	4EU3051-7UA00	
160	315	IP20	SED1-160K/32X	6SE9533-2EL40-6AA0		4EU2751-7UA00	4EU3051-3UB00	
200	370	IP20	SED1-200K/32X	6SE9533-7EL40-6AA0		4EU2751-8UA00	4EU3651-3UB00	
250	510	IP20	SED1-250K/32X	6SE9535-1EM40-6AA0		4EU3051-5UA00	4EU3651-4UB00	
315	590	IP20	SED1-315K/32X	6SE9536-0EM40-6AA0		4EU3051-6UA00	4EU3651-6UC00	

			Variable Speed Drive		External Filter	Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%
				MLFB	MLFB	MLFB	MLFB
Without Filter 380V to 500V +/-10% 3AC							
3	7.7	IP56	SED1-3/35X	6SE9517-7DS45-6AA0		4EP3400-1US	3 x 4EM4807-4CB
4	10.2	IP56	SED1-4/35X	6SE9521-0DS45-6AA0		4EP3400-1US	3 x 4EM4807-6CB
5.5	13.2	IP56	SED1-5.5/35X	6SE9521-3DS45-6AA0		4EP3500-0US	4EP3700-7US (4EP3800-8US)
7.5	17	IP56	SED1-7.5/35X	6SE9521-7DS45-6AA0		4EP3600-4US	4EP3801-0US (4EP3800-8US)
11	23.5	IP56	SED1-11/35X	6SE9522-4DS45-6AA0		4EP3600-5US	4EP3900-5US (4EP4001-0US)
15	30	IP56	SED1-15/35X	6SE9523-0DS45-6AA0		4EP3700-2US	4EP3900-5US (4EP4001-0US)
18.5	37	IP56	SED1-18.5/35X	6SE9523-7DS45-6AA0		4EP3700-2US	4EP4001-1US (4EP4001-2US)
22	43.5	IP56	SED1-22/35X	6SE9524-3DS45-6AA0		4EP3800-2US	4EU2451-4UA00 (4EU2451-5UA00)
30	58	IP56	SED1-30/35X	6SE9525-8DS45-6AA0		4EP3800-7US	4EU2451-4UA00 (4EU2551-1UB00)
37	71	IP56	SED1-37/35X	6SE9527-1DS45-6AA0		4EP3900-2US	4EU2551-2UB00 (4EU2551-3UB00)
45	84	IP56	SED1-45/35X	6SE9528-4DS45-6AA0		4EP4000-2US	4EU2751-1UB00 (4EU2551-3UB00)
55	102	IP56	SED1-55/35X	6SE9531-0DS45-6AA0		4EP4000-2US	4EU2751-1UB00 (4EU2751-3UB00)
75	138	IP56	SED1-75/35X	6SE9531-4DS45-6AA0		4EU2451-2UA00	4EU2751-1UB00 (4EU2751-6UB00)
90	168	IP56	SED1-90/35X	6SE9531-7DS45-6AA0		4EU2551-4UA00	4EU2751-2UB00 (4EU3051-0UB00)
Class A Filter 380V to 500V +/-10% 3AC							
1.1	3	IP20	SED1-1.1/32A	6SE9513-0DA40-6AA0	6SE3290-0DA87-0FA1	4EP3200-1US	3 x 4EM4605-4CB
1.5	4	IP20	SED1-1.5/32A	6SE9514-0DA40-6AA0	6SE3290-0DA87-0FA1	4EP3200-1US	3 x 4EM4605-6CB
2.2	5.9	IP20	SED1-2.2/32A	6SE9516-0DB50-6AA0	integrated	4EP3400-1US	4 x 4EM4605-6CB
3	7.7	IP20	SED1-3/32A	6SE9517-7DB50-6AA0	integrated	4EP3400-1US	3 x 4EM4807-4CB
4	10.2	IP20	SED1-4.0/32A	6SE9521-0DC50-6AA0	integrated	4EP3400-1US	3 x 4EM4807-6CB
5.5	13.2	IP20	SED1-5.5/32A	6SE9521-3DC50-6AA0	integrated	4EP3500-0US	4EP3700-7US (4EP3800-8US)
7.5	17	IP20	SED1-7.5/32A	6SE9521-7DC50-6AA0	integrated	4EP3600-4US	4EP3801-0US (4EP3800-8US)
11	23.5	IP20	SED1-11/32A	6SE9522-4DG50-6AA0	integrated	4EP3600-5US	4EP3900-5US (4EP4001-0US)
15	30	IP20	SED1-15/32A	6SE9523-0DG50-6AA0	integrated	4EP3700-2US	4EP3900-5US (4EP4001-0US)
19	37	IP20	SED1-18.5/32A	6SE9523-7DH50-6AA0	integrated	4EP3700-2US	4EP4001-1US (4EP4001-2US)
22	43.5	IP20	SED1-22/32A	6SE9524-3DH50-6AA0	integrated	4EP3800-2US	4EU2451-4UA00 (4EU2451-5UA00)

			Variable Speed Drive		External Filter	Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%
				MLFB	MLFB	MLFB	MLFB
Class A Filter 380V to 500V +/-10% 3AC							
30	58	IP20	SED1-30/32A	6SE9525-8DJ50-6AA0	integrated	4EP3800-7US	4EU2451-4UA00 (4EU2551-1UB00)
37	71	IP20	SED1-37/32A	6SE9527-1DJ50-6AA0	integrated	4EP3900-2US	4EU2551-2UB00 (4EU2551-3UB00)
45	84	IP20	SED1-45/32A	6SE9528-4DJ50-6AA0	integrated	4EP4000-2US	4EU2751-1UB00 (4EU2551-3UB00)
55	102	IP20	SED1-55/32A	6SE9531-0DK50-6AA0	integrated	4EP4000-2US	4EU2751-1UB00 (4EU2751-3UB00)
75	138	IP20	SED1-75/32A	6SE9531-4DK50-6AA0	integrated	4EU2451-2UA00	4EU2751-1UB00 (4EU2751-6UB00)
90	168	IP20	SED1-90/32A	6SE9531-7DK50-6AA0	integrated	4EU2551-4UA00	4EU2751-2UB00 (4EU3051-0UB00)
Class A Filter 380V to 480 +/-10% 3AC							
110	210	IP20	SED1-110K/32X	6SE9532-1EL40-6AA0	6SE7033-2ES87-0FA1	4EU2551-8UA00	4EU2751-5UB00
132	260	IP20	SED1-132K/32X	6SE9532-6EL40-6AA0	6SE7033-2ES87-0FA1	4EU2751-0UB00	4EU3051-7UA00
160	315	IP20	SED1-160K/32X	6SE9533-2EL40-6AA0	6SE7033-2ES87-0FA1	4EU2751-7UA00	4EU3051-3UB00
200	370	IP20	SED1-200K/32X	6SE9533-7EL40-6AA0	6SE7036-0ES87-0FA1	4EU2751-8UA00	4EU3651-3UB00
250	510	IP20	SED1-250K/32X	6SE9535-1EM40-6AA0	6SE7036-0ES87-0FA1	4EU3051-5UA00	4EU3651-4UB00
315	590	IP20	SED1-315K/32X	6SE9536-0EM40-6AA0	6SE7036-0ES87-0FA1	4EU3051-6UA00	4EU3651-6UC00
Class A Filter 380V to 460V +/-10% 3AC							
3.00	7.7	IP56	SED1-3/35A	6SE9517-7DS55-6AA0	integrated	4EP3400-1US	3 x 4EM4807-4CB
4.00	10.2	IP56	SED1-4/35A	6SE9521-0DS55-6AA0	integrated	4EP3400-1US	3 x 4EM4807-6CB
5.5	13.2	IP56	SED1-5.5/35A	6SE9521-3DS55-6AA0	integrated	4EP3500-0US	4EP3700-7US (4EP3800-8US)
7.5	17	IP56	SED1-7.5/35A	6SE9521-7DS55-6AA0	integrated	4EP3600-4US	4EP3801-0US (4EP3800-8US)
11	23.5	IP56	SED1-11/35A	6SE9522-4DS55-6AA0	integrated	4EP3600-5US	4EP3900-5US (4EP4001-0US)
15	30	IP56	SED1-15/35A	6SE9523-0DS55-6AA0	integrated	4EP3700-2US	4EP3900-5US (4EP4001-0US)
18.5	37	IP56	SED1-18.5/35A	6SE9523-7DS55-6AA0	integrated	4EP3700-2US	4EP4001-1US (4EP4001-2US)
22	43.5	IP56	SED1-22/35A	6SE9524-3DS55-6AA0	integrated	4EP3800-2US	4EU2451-4UA00 (4EU2451-5UA00)
30	58	IP56	SED1-30/35A	6SE9525-8DS55-6AA0	integrated	4EP3800-7US	4EU2451-4UA00 (4EU2551-1UB00)
37	71	IP56	SED1-37/35A	6SE9527-1DS55-6AA0	integrated	4EP3900-2US	4EU2551-2UB00 (4EU2551-3UB00)
45	84	IP56	SED1-45/35A	6SE9528-4DS55-6AA0	integrated	4EP4000-2US	4EU2751-1UB00 (4EU2551-3UB00)
55	102	IP56	SED1-55/3A	6SE9531-0DS55-6AA0	integrated	4EP4000-2US	4EU2751-1UB00 (4EU2751-3UB00)
75	138	IP56	SED1-75/35A	6SE9531-4DS55-6AA0	integrated	4EU2451-2UA00	4EU2751-1UB00 (4EU2751-6UB00)
90	168	IP56	SED1-90/35A	6SE9531-7DS55-6AA0	integrated	4EU2551-4UA00	4EU2751-2UB00 (4EU3051-0UB00)

			Variable Speed Drive		External Filter	Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%
				MLFB	MLFB	MLFB	MLFB
Class B Filter 380V to 500V +/-10% 3AC							
1.1	3	IP20	SED1-1.1/32B	6SE9513-0DA40-6AA0	6SE3290-0DA87-0FB1	4EP3200-1US	3 x 4EM4605-4CB
1.5	4	IP20	SED1-1.5/32B	6SE9514-0DA40-6AA0	6SE3290-0DA87-0FB1	4EP3200-1US	3 x 4EM4605-6CB
2.2	5.9	IP20	SED1-2.2/32B	6SE9516-0DB40-6AA0	6SE3290-0DB87-0FB3	4EP3400-1US	4 x 4EM4605-6CB
3	7.7	IP20	SED1-3/32B	6SE9517-7DB40-6AA0	6SE3290-0DB87-0FB3	4EP3400-1US	3 x 4EM4807-4CB
4	10.2	IP20	SED1-4.0/32B	6SE9521-0DC40-6AA0	6SE3290-0DC87-0FB4	4EP3400-1US	3 x 4EM4807-6CB
5.5	13.2	IP20	SED1-5.5/32B	6SE9521-3DC40-6AA0	6SE3290-0DC87-0FB4	4EP3500-0US	4EP3700-7US (4EP3800-8US)
7.5	17	IP20	SED1-7.5/32B	6SE9521-7DC40-6AA0	6SE3290-0DC87-0FB4	4EP3600-4US	4EP3801-0US (4EP3800-8US)
11	23.5	IP20	SED1-11/32B	6SE9522-4DG40-6AA0	6SE2100-1FC20	4EP3600-5US	4EP3900-5US (4EP4001-0US)
15	30	IP20	SED1-15/32B	6SE9523-0DG40-6AA0	6SE2100-1FC20	4EP3700-2US	4EP3900-5US (4EP4001-0US)
18.5	37	IP20	SED1-18.5/32B	6SE9523-7DH40-6AA0	6SE2100-1FC20	4EP3700-2US	4EP4001-1US (4EP4001-2US)
22	43.5	IP20	SED1-22/32B	6SE9524-3DH40-6AA0	6SE2100-1FC21	4EP3800-2US	4EU2451-4UA00 (4EU2451-5UA00)
30	58	IP20	SED1-30/32B	6SE9525-8DJ40-6AA0	6SE2100-1FC21	4EP3800-7US	4EU2451-4UA00 (4EU2551-1UB00)
37	71	IP20	SED1-37/32B	6SE9527-1DJ40-6AA0	6SE3290-0DK87-0FB7	4EP3900-2US	4EU2551-2UB00 (4EU2551-3UB00)
45	84	IP20	SED1-45/32B	6SE9528-4DJ40-6AA0	6SE3290-0DK87-0FB7	4EP4000-2US	4EU2751-1UB00 (4EU2551-3UB00)
55	102	IP20	SED1-55/32B	6SE9531-0DK40-6AA0	6SE3290-0DK87-0FB7	4EP4000-2US	4EU2751-1UB00 (4EU2751-3UB00)
75	138	IP20	SED1-75/324	6SE9531-4DK40-6AA0	6SE3290-0DK87-0FB7	4EU2451-2UA00	4EU2751-1UB00 (4EU2751-6UB00)
90	168	IP20	SED1-90/32B	6SE9531-7DK40-6AA0	6SE3290-0DK87-0FB7	4EU2551-4UA00	4EU2751-2UB00 (4EU3051-0UB00)
Class B Filter 380V to 460V +/-10% 3AC							
3	7.7	IP56	SED1-3/35B	6SE9517-7DS55-6AA0	integrated	4EP3400-1US	3 x 4EM4807-4CB
4	10.2	IP56	SED1-4/35B	6SE9521-0DS55-6AA0	integrated	4EP3400-1US	3 x 4EM4807-6CB
6	13.2	IP56	SED1-5.5/35B	6SE9521-3DS55-6AA0	integrated	4EP3500-0US	4EP3700-7US (4EP3800-8US)
8	17	IP56	SED1-7.5/35B	6SE9521-7DS55-6AA0	integrated	4EP3600-4US	4EP3801-0US (4EP3800-8US)
11	23.5	IP56	SED1-11/35B	6SE9522-4DS55-6AA0	integrated	4EP3600-5US	4EP3900-5US (4EP4001-0US)
15	30	IP56	SED1-15/35B	6SE9523-0DS55-6AA0	integrated	4EP3700-2US	4EP3900-5US (4EP4001-0US)
18.5	37	IP56	SED1-18.5/35B	6SE9523-7DS55-6AA0	integrated	4EP3700-2US	4EP4001-1US (4EP4001-2US)
22	43.5	IP56	SED1-22/35B	6SE9524-3DS55-6AA0	integrated	4EP3800-2US	4EU2451-4UA00 (4EU2451-5UA00)

			Variable Speed Drive		External Filter	Line Reactor	
kW	A	IP	Landis & Staefa Type			2%	4%
				MLFB	MLFB	MLFB	MLFB
Class B Filter 380V to 460V +/-10% 3AC							
30	58	IP56	SED1-30/35B	6SE9525-8DS55-6AA0	integrated	4EP3800-7US	4EU2451-4UA00 (4EU2551-1UB00)
37	71	IP56	SED1-37/35B	6SE9527-1DS55-6AA0	integrated	4EP3900-2US	4EU2551-2UB00 (4EU2551-3UB00)
45	84	IP56	SED1-45/35B	6SE9528-4DS55-6AA0	integrated	4EP4000-2US	4EU2751-1UB00 (4EU2551-3UB00)
55	102	IP56	SED1-55/3B	6SE9531-0DS55-6AA0	integrated	4EP4000-2US	4EU2751-1UB00 (4EU2751-3UB00)
75	138	IP56	SED1-75/35B	6SE9531-4DS55-6AA0	integrated	4EU2451-2UA00	4EU2751-1UB00 (4EU2751-6UB00)
90	168	IP56	SED1-90/35B	6SE9531-7DS55-6AA0	integrated	4EU2551-4UA00	4EU2751-2UB00 (4EU3051-0UB00)

			Frequenzumrichter		Externer Filter	Netzrückwirkungsdrössel	
kW	A	IP	Landis&Staeefa Typ			2%	4%
				MLFB	MLFB	MLFB	MLFB
Ohne Filter 525 to 575V +/-15% 3AC							
4	6.1	IP21	SED1-4/42X	6SE9516-1FG40-6AA0		4EP3400-3US	3 x 4EM4807-1CB
5.5	9	IP21	SED1-5.5/42X	6SE9521-0FG40-6AA0		4EP3600-8US	3 x 4EM4911-7CB
7.5	11	IP21	SED1-7.5/42X	6SE9521-1FG40-6AA0		4EP3600-2US	4EP3800-8US
11	17	IP21	SED1-11/42X	6SE9521-7FG40-6AA0		4EP3600-3US	4EP3800-8US
15	22	IP21	SED1-15/42X	6SE9522-2FG40-6AA0		4EP3700-6US	4EP4001-0US
18.5	27	IP21	SED1-18.5/42X	6SE9522-7FH40-6AA0		4EP3700-1US	4EP4001-0US
22	32	IP21	SED1-22/42X	6SE9523-2FH40-6AA0		4EP3801-2US	4EP4001-2US
30	41	IP21	SED1-30/42X	6SE9524-1FJ40-6AA0		4EP3800-1US	4EP4001-2US
37	52	IP21	SED1-37/42X	6SE9525-2FJ40-6AA0		4EP3900-1US	4EU2551-1UB00
45	62	IP21	SED1-45/42X	6SE9526-2FJ40-6AA0		4EP4000-7US	4EU2551-1UB00
Ohne Filter 525V to 575V +/-15% 3AC							
4	6.1	IP56	SED1-4/45X	6SE9516-1FS45-6AA0		4EP3400-3US	3 x 4EM4807-1CB
5.5	9	IP56	SED1-5.5/45X	6SE9521-0FS45-6AA0		4EP3600-8US	3 x 4EM4911-7CB
7.5	11	IP56	SED1-7.5/45X	6SE9521-1FS45-6AA0		4EP3600-2US	4EP3800-8US
11	17	IP56	SED1-11/45X	6SE9521-7FS45-6AA0		4EP3600-3US	4EP3800-8US
15	22	IP56	SED1-1500/45X	6SE9522-2FS45-6AA0		4EP3700-6US	4EP4001-0US
19	27	IP56	SED1-18.5/45X	6SE9522-7FS45-6AA0		4EP3700-1US	4EP4001-0US
22	32	IP56	SED1-22/45X	6SE9523-2FS45-6AA0		4EP3801-2US	4EP4001-2US
30	41	IP56	SED1-30/45X	6SE9524-1FS45-6AA0		4EP3800-1US	4EP4001-2US
37	52	IP56	SED1-37/45X	6SE9525-2FS45-6AA0		4EP3900-1US	4EU2551-1UB00
45	62	IP56	SED1-45/45X	6SE9526-2FS45-6AA0		4EP4000-7US	4EU2551-1UB00