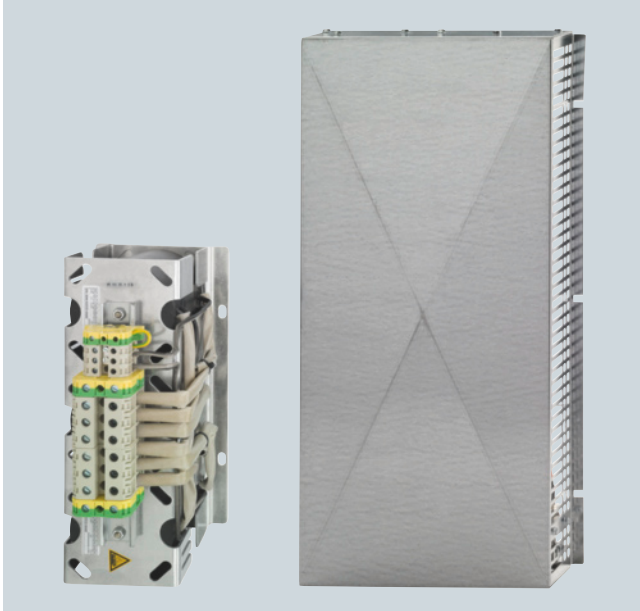


SINAMICS S120 drive system

Booksize format

Active Line Modules HFD line reactors/damping resistors

Overview



HFD line reactor and damping resistor

As an alternative to the Active Interface Modules, a solution is also possible using an HFD line reactor package as a line connection for the Active Line Modules. The line reactors with HFD characteristics and damping resistor can be ordered in the form of an HFD package or as an HFD package in combination with line filters and are necessary for the function of the Active Line Modules.

The HFD packages are used with SINAMICS S120 drive solutions that build on runtime versions below FW V2.5 SP1 (e.g. integrated drive controls in SINUMERIK 802D sl/840D sl). The use of other makes of line reactor can lead to malfunctions or irreparable damage to equipment.

Benefits

- Limitation of mains and HF harmonic effects
- Storing the energy in step-up converter mode of the Active Line Modules for stepping up the DC link voltage
- The damping resistor connected to the HFD line reactor dampens possible system oscillations.

Application

HFD line reactors can be used for 400 V 3 AC -10 % to 480 V 3 AC +10 %; 50/60 Hz ± 10 %.

Selection and ordering data

Line supply voltage 380 ... 480 V 3 AC			HFD package	HFD package with Wideband Line Filter	
Rated infeed power of the Active Line Module	Suitable for Active Line Module		Contains HFD line reactor + damping resistor	Contains HFD reactor + damping resistor + Wideband Line Filter	
kW (HP)	Type		Order No.		Order No.
HFD package with 0.3 kW damping resistor¹⁾					
16 (18)	6SL3130-7TE21-6AA3 6SL3131-7TE21-6AA3 6SL3136-7TE21-6AA3	6SL3000-0DE21-6AA0 + 6SN1113-1AA00-0DA0	6SN1111-0AA00-0BV0	6SL3000-0DE21-6AA0 + 6SN1113-1AA00-0DA0 + 6SL3000-0BE21-6AA0	6SN1111-0AA00-1BV0
36 (40)	6SL3130-7TE23-6AA3 6SL3131-7TE23-6AA3 6SL3136-7TE23-6AA3	6SL3000-0DE23-6AA0 + 6SN1113-1AA00-0DA0	6SN1111-0AA00-0CV0	6SL3000-0DE23-6AA0 + 6SN1113-1AA00-0DA0 + 6SL3000-0BE23-6AA0	6SN1111-0AA00-1CV0
FD package with 0.8 kW damping resistor					
16 (18)	6SL3130-7TE21-6AA3 6SL3131-7TE21-6AA3 6SL3136-7TE21-6AA3	6SL3000-0DE21-6AA0 + 6SL3100-1BE21-3AA0	6SN1111-0AA00-0BV1	6SL3000-0DE21-6AA0 + 6SL3100-1BE21-3AA0 + 6SL3000-0BE21-6AA0	6SN1111-0AA00-1BV1
36 (40)	6SL3130-7TE23-6AA3 6SL3131-7TE23-6AA3 6SL3136-7TE23-6AA3	6SL3000-0DE23-6AA0 + 6SL3100-1BE21-3AA0	6SN1111-0AA00-0CV1	6SL3000-0DE23-6AA0 + 6SL3100-1BE21-3AA0 + 6SL3000-0BE23-6AA0	6SN1111-0AA00-1CV1
55 (60)	6SL3130-7TE25-5AA3 6SL3131-7TE25-5AA3 6SL3136-7TE25-5AA3	6SL3000-0DE25-5AA1 + 6SL3100-1BE21-3AA0	6SN1111-0AA00-0DV0	6SL3000-0DE25-5AA1 + 6SL3100-1BE21-3AA0 + 6SL3000-0BE25-5AA0	6SN1111-0AA00-1DV0
80 (100)	6SL3130-7TE28-0AA3 6SL3131-7TE28-0AA3 6SL3136-7TE28-0AA3	6SL3000-0DE28-0AA1 + 6SL3100-1BE21-3AA0	6SN1111-0AA00-0EV0	6SL3000-0DE28-0AA1 + 6SL3100-1BE21-3AA0 + 6SL3000-0BE28-0AA0 +	6SN1111-0AA00-1EV0
120 (150)	6SL3130-7TE31-2AA3 6SL3131-7TE31-2AA3 6SL3136-7TE31-2AA3 6SL3135-7TE31-2AA3	6SL3000-0DE31-2AA1 + 6SL3100-1BE21-3AA0	6SN1111-0AA00-0FV0	6SL3000-0DE31-2AA1 + 6SL3100-1BE21-3AA0 + 6SL3000-0BE31-2AA1	6SN1111-0AA00-1FV0

¹⁾ For a safe operation of the 0.3 kW damping resistor a temperature measurement during operation is necessary (see SINAMICS S120 Equipment Manual Booksize Power Units). Therefore the 0.8 kW damping resistor should be applied preferably.

SINAMICS S120 drive system

Booksize format

Active Line Modules HFD line reactors/damping resistors

Technical specifications

Line supply voltage 380 ... 480 V 3 AC

		6SL3000-0DE21-6AA0	6SL3000-0DE23-6AA0	6SL3000-0DE25-5AA1	6SL3000-0DE28-0AA1	6SL3000-0DE31-2AA1
Product name		HFD line reactor				
Rated current	A	30	67	103	150	225
Power loss, typically	kW	0.17	0.25	0.35	0.45	0.59
Line supply/load connection 1U1, 1V1, 1W1/ 1U2, 1V2, 1W2		Screw terminals 16 mm ²	Screw terminals 35 mm ²	Screw terminals 70 mm ²	M10 connecting lugs	M10 connecting lugs
PE connection		Screw terminals 16 mm ²	Screw terminals 35 mm ²	Screw terminals 70 mm ²	M10 connecting lugs	M10 connecting lugs
Degree of protection		IP20	IP20	IP20	IP00	IP00
Dimensions						
• Width	mm (in)	150 (5.91)	150 (5.91)	150 (5.91)	200 (7.87)	275 (10.83)
• Height	mm (in)	125 (4.92)	235 (9.25)	290 (11.42)	210 (8.27)	265 (10.43)
• Length	mm (in)	330 (12.99)	330 (12.99)	330 (12.99)	380 (14.96)	480 (18.90)
Weight, approx.	kg (lb)	13 (28.7)	21 (46.3)	27 (59.5)	37 (81.6)	67 (148)
Suitable for Active Line Module in booksize format	Type	6SL3130-7TE21-6AA3 6SL3131-7TE21-6AA3 6SL3136-7TE21-6AA3	6SL3130-7TE23-6AA3 6SL3131-7TE23-6AA3 6SL3136-7TE23-6AA3	6SL3130-7TE25-5AA3 6SL3131-7TE25-5AA3 6SL3136-7TE25-5AA3	6SL3130-7TE28-0AA3 6SL3131-7TE28-0AA3 6SL3136-7TE28-0AA3	6SL3130-7TE31-2AA3 6SL3131-7TE31-2AA3 6SL3136-7TE31-2AA3 6SL3135-7TE31-2AA3
• Rated infeed power of the Active Line Module	kW	16	36	55	80	120

Selection and ordering data

Damping resistor (part of the HFD package)

Description

Order No.

HFD resistor 0.8 kW for all HFD line reactors

6SL3100-1BE21-3AA0

External pulsed resistor 0.3 kW

6SN1113-1AA00-0DA0

Technical specifications

Product name		6SL3100-1BE21-3AA0 HFD resistor for all HFD line reactors	6SN1113-1AA00-0DA0 External pulsed resistor
Resistance, low inductance	Ω	15	15
Damping For 0 ... 230 kHz	dB	≤ 3	≤ 3
Power	kW	0.8	0.3
Cooling method		Natural cooling	Natural cooling
Degree of protection to EN 60529 (IEC 60529)		IP51	IP54
Dimensions			
• Width	mm (in)	270 (10.63)	80 (3.15)
• Height	mm (in)	75 (2.95)	210 (8.27)
• Depth	mm (in)	555 (21.85)	53 (2.09)
Weight, approx.	kg (lb)	5.5 (12.1)	3.4 (7.50)
Connecting cable Included in the scope of supply	m (ft)	5 (16.41)	3 (9.84)
Approvals, according to		cULus	cULus