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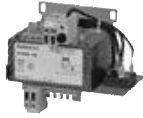
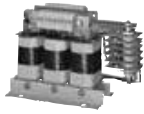
Power Supplies

Introduction


Overview

4AV non-stabilized power supplies

					
	4AV21/23	4AV20/22/24/26	4AV4	4AV3	4AV5
Filtered for supply of electronic controls					
Ripple	< 5 %	< 5 %	< 5 %	< 5 %	< 5 %
Phase	1	1	1	3	3
Rated input voltage	V AC 115 ... 415	115 ... 415	230 ... 415	200 ... 600	400 ... 415
Rated output voltage according to EN 61131-2 suitable for SIMATIC systems	V DC 24	24	24	24	24
Rated output current	A 1 ... 3.5	2.5 ... 15	1.5 ... 10	15 ... 150	25, 35
Connection	Screw/flat connection	Screw/flat or Cage Clamp connection	Screw/flat or Cage Clamp connection	Screw/flat connection	Screw/flat connection
Mounting	Standard rail mounting	Screw and/or standard rail mounting	Screw and/or standard rail mounting	Screw mounting	Screw mounting
cULus certification	Yes	Yes	No	Partially	No

		
	4AV98	4AV96
Unfiltered for supply of general loads		
Ripple	48.3 %	< 5 %
Phase	1	3
Rated input voltage	V AC 230 or 400	400
Rated output voltage	V DC 24	30-27-24
Rated output current/rated power	50 ... 500 W	4 ... 25 A
Connection	Screw/flat connection	Screw/flat connection
Mounting	Screw mounting	Screw mounting
cULus certification	No	No

4FD¹⁾, 6EP²⁾ stabilized power supplies

					
	4FD ¹⁾	6EP1 LOGO!Power ²⁾	6EP1 SITOP power ²⁾	6EP1 SITOP modular ²⁾	6EP1 SITOP power uninterruptible ²⁾
Phases	1	1	1	1, 2, 3	1
Rated input voltage	V 115 ... 230 AC	100 ... 240 AC	48 ... 220 DC, 120 ... 230 AC, 120/230 AC	120/230 ... 500 AC, 120/230 AC, 3 x 400 ... 500 AC	24 DC
Rated output voltage	V DC 5, 12, 15, 24	5, 12, 15, 24	24, 3 ... 52	24	24
Rated output current	A 3 ... 10	1.3 ... 6.3	0.375 ... 20	5 ... 40	6, 15, 40
Connection	Cage Clamp terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal
Mounting	Standard rail mounting	Standard rail mounting	Standard rail mounting	Standard rail mounting	Standard rail mounting
Approval	cULus	UL, cUL	UL, cUL	UL, cUL	UL, cUL

Further products for power supplies can be found in Catalog KT 10.1 or on the Internet at <http://www.siemens.com/sidac> and <http://www.siemens.com/sitop>.

1) For more information see the Interactive Catalog CA 01 and A&D Mall.

2) For more information see Catalog KT 10.1 "SITOP power Power Supplies, LOGO!Power".

4AV Non-Stabilized Power Supplies

Filtered for Supply of Electronic Controls

General data

Overview

4AV2, 4AV3, 4AV4 and 4AV5 power supplies deliver a non-stabilized DC voltage of 24 V DC based on single-phase or three-phase safety isolating transformers with downstream rectifiers and capacitor filtering.

Design

The 4AV2, 4AV3, 4AV4 and 4AV5 power supplies are single-phase or three-phase transformers with downstream rectifiers in two-pulse (B2) or six-pulse (B6) bridge connection with capacitor filtering. They comply with safety class I.

The safety isolating transformers used are designed according to EN 61558-2-6 and support the safe isolation of protective extra-low voltage (SELV) and extra-low voltage (FELV) circuits from other circuits. The transformers are completely impregnated with polyester resin for protection against harmful environmental influences.

4AV devices are

- Designed for fuseless protection with standard circuit-breakers;
- Equipped with additional ground connections for a simple grounding of the control current circuit using a detachable connection directly on the device;
- Easy to install thanks to freely accessible fixing holes and, in some cases, by snapping onto standard mounting rails.
- Connected with varistors and metalized dielectric capacitors for damping high-frequent overvoltages;
- Available for standard IEC voltages 230/400 V, and the multi-voltage designs allow connection to the most commonly available mains voltages worldwide up to 600 V.

Types 4AV21 and 4AV23 are protected by an integrated solid-state fuse. The output is automatically reconnected after the short cooling time following a mains disconnection or load shedding. For the 4AV4 types, short-circuit and overload protection is provided by an integrated replaceable fuse on the secondary side.

Protective devices

For reliable protection against short-circuits, overload and touch, the cables between the output terminals of the power supply and the load must have a negligible line impedance. For more details see DIN VDE 0100 (Erection of low-voltage systems) Part 410, Part 520 (particularly section 525) and Part 610.

Connections

Screw-flat connector

The 4AV power supplies are supplied as standard with screw terminals (except: 4AV38, secondary with flat connectors).

Cage Clamp terminal

For conductor cross-sections 0.8 mm² to 4 mm² and currents up to 24 A.

The 4AV20, 4AV22, 4AV24, 4AV26 and 4AV41 single-phase units can be supplied, if required, with screwless Cage Clamp terminals (multi-voltage design is not possible). The grounding terminal is designed as a Cage Clamp terminal.

The terminals used with the SIGUT connection are:

- Finger-safe to DIN VDE 0106 Part 100
- Suitable for conductor cross-sections to DIN VDE 0100 Part 430 Sheet 1 and EN 60204 (VDE 0113 Part 1)

Mounting

Standard version

The 4AV power supplies (except: 4AV21/4AV23) are supplied in the standard version for screw-fixing to the mounting plate.

Standard mounting rail fixing

- **Integrated version**
For fixing on standard mounting rails (horizontal mounting position), types 4AV20, 4AV41 03 and 4AV41 06 are equipped as standard with an integrated snap-on fitting for 35 mm standard mounting rails to EN 50022. Types 4AV21 and 4AV23 are only suitable for fixing on standard mounting rails.
- **Optional version**
Types 4AV22, 4AV24, 4AV41 01 and 4AV41 10 are available on request with a preassembled adapter for fixing on a 35 mm standard mounting rail.

Additional capacitors for 4AV3 (aluminum electrolyte)

Types 4AV30 to 4AV38 can be supplied with additional capacitors. This is how the values in the "Selection and Ordering Data" are achieved.

The back-up time is applicable for: $U_1 = U_{1N} - 10\%$

Function

The 4AV power supplies comply with EN 61131-2, irrespective of the load (no load up to rated current) and also irrespective of fluctuations of the mains supply (+6 % to -10 % to IEC 60038).

Despite variations in these parameters, the electronic control is supplied with the permissible operational voltage without having to select suitable tapplings on the transformer to step up or step down the DC output voltage according to load and mains conditions. The transformers are dimensioned in their voltage stability for this application.

Any number of units of the same type can be connected in parallel if a higher current level is required. The total current in this case must not exceed 90 % of the individual rated currents.

4AV Non-Stabilized Power Supplies

Filtered for Supply of Electronic Controls

General data

Technical specifications

Single-phase and three-phase DC power supplies

24 V DC voltage Limit values	EN 61131-2	4AV2 Typical value	4AV3 Typical value	4AV4 Typical value	4AV5 Typical value	Conditions
Ripple	≤ 5 %	2.2 ... 2.7 %	4.2 %	3.0 ... 3.7 %	4.2 %	at rated current
24 V DC voltage						
• Upper limit	30 V	≤ 28.8 V	≤ 28.8 V	≤ 30 V	≤ 30 V	for mains overvoltage +6 % and no-load operation
• Lower limit						for mains undervoltage -10 % and rated current
- arithmetic mean value	20.4 V	20.4 V	20.5 V	20.4 V	20.4 V	
- lower peak value	19.2 V	19.3 V	19.3 V	19.2 V	19.2 V	
• Rated value		23.5 V	23.5 V	23.5 V	23.5 V	for rated mains voltage and rated current

Current-carrying capacity of the power supplies with 3RT1 contactors for DC operation

- Sizes S00 to S3 with DC solenoid systems: power at closing = power when closed. The DC power supplies can be loaded up to their rated currents.
- Sizes S6 to S12: when operating the rectifiers at -10 % mains undervoltage

Contactor	Number of 3RT1 contactors that can be operated simultaneously ¹⁾ with preloading: ① no-load operation, ② rated current																									
	4AV20/21		4AV23		4AV22		4AV24		4AV26		4AV30		4AV31		4AV32		4AV33		4AV34		4AV35		4AV36		4AV38	
Type	①	②	①	②	①	②	①	②	①	②	①	②	①	②	①	②	①	②	①	②	①	②	①	②	①	②
3RT1. 5	--	--	--	--	1	1	2	1	3	1	2	1	3	2	4	2	7	5	8	5	14	10	22	16	42	30
3RT1. 6	--	--	--	--	1	1	1	1	2	1	1	1	2	1	2	1	4	3	4	3	7	5	11	8	22	15
3RT1. 7	--	--	--	--	--	--	1	--	1	--	1	--	1	1	2	1	3	2	3	2	5	4	9	6	16	12

1) The number of contactors can be significantly increased by using additional banks of capacitors which must be connected externally.

4AV Non-Stabilized Power Supplies Filtered for Supply of Electronic Controls



General data

Primary-side short-circuit protection, secondary-side short-circuit and overload protection

Rectifier unit	Rated output current I_d	Primary-side protection against short-circuits (line protection) by means of Motor starter protector ¹⁾ or fuse, gL/gG operational class	Rated input voltage U_{IN}							Secondary-side protection against short-circuit and overload by means of motor starter protector or fuse, operational class
			575 V (600 V)	500 V	460 V (480 V)	400 V (415 V)	230 V (240 V)	200 V	115 V (120 V)	
Type	A DC	Type							Type	
Single-phase										
4AV21	1	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	OCA 0.24 1	OFA 0.4 1	--	OJA 0.9 2	Built-in electrical short-circuit/overload protection
4AV20	2.5	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	OFA 0.4 1	OHA 0.6 2	--	1BA 1.6 2	3RV10 11-□□□10 Setting value in A Fuse gL/gG A
4AV23	3.5	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	OHA 0.55 2	OJA 0.7 2	--	1CA 2 4	Built-in electrical short-circuit/overload protection
4AV22	5	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	OHA 0.6 2	1AA 1.1 4	--	1DA 2.4 4	3RV10 11-□□□10 Setting value in A Fuse gL/gG A
4AV24	10	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	1CA 1.8 4	1DA 2.4 4	--	1GA 5 6	3RV10 11-□□□10 Setting value in A Fuse gL/gG A
4AV26	15	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	1CA 2 4	1EA 3.2 6	--	1HA 6 10	3RV10 21-□□□10 Setting value in A Fuse gL/gG A
4AV41 01	1.5	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	OBA 0.15 0.5	ODA 0.27 1	--	--	Integrated blade-type fuse FK2
4AV41 03	3	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	OGA 0.5 1	OHA 0.7 2	--	--	Integrated blade-type fuse FK2
4AV41 06	6	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	OJA 0.8 2	OKA 1.2 1	--	--	Integrated blade-type fuse FK2
4AV41 10	10	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	1BA 1.6 4	1CA 2.4 4	--	--	Integrated blade-type fuse FK2
Three-phase										
4AV30	10	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	OFA 0.4 1	OFA 0.4 1	OFA 0.4 1	OHA 0.6 2	OKA 1 2	OKA 1 2	--	3RV10 11-□□□10 Setting value in A Fuse gL/gG A
4AV31	15	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	OHA 0.6 2	OHA 0.6 2	OHA 0.6 2	OKA 1 2	1BA 1.6 2	1CA 2 4	--	3RV10 21-□□□10 Setting value in A Fuse gL/gG A
4AV32	20	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	OHA 0.6 2	OKA 1 2	OKA 1 2	OKA 1 2	1BA 1.6 4	1DA 2.4 4	--	3RV10 21-□□□10 Setting value in A Fuse gL/gG A
4AV33	30	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	1CA 1.8 4	1CA 1.8 4	1CA 1.8 4	1CA 2 4	1EA 3.2 6	1FA 4 6	--	3RV10 31-□□□10 Setting value in A Fuse gL/gG A
4AV34	40	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	1CA 2 4	1CA 2 4	1CA 2 4	1DA 2.4 4	1GA 5 6	1GA 5 10	--	3RV10 31-□□□10 Setting value in A Fuse gL/gG A
4AV35	50	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	1DA 2.4 6	1DA 2.4 6	1EA 3.2 6	1FA 4 6	1HA 6 10	1HA 6 10	--	3RV10 41-□□□10 Setting value in A Fuse gL/gG A
4AV36	80	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	1HA 6 10	--	1HA 6 10	--	--	--	3RV10 41-□□□10 Setting value in A Fuse gL/gG A
4AV38	150	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	1KA 10 16	--	1KA 12 16	--	--	--	3VF32 11-1B□41-0AA0 Setting value in A Fuse gL/gG A
4AV51 25	25	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	1BA 1.6 2	--	--	--	3RV10 31-□□□10 Setting value in A Fuse gL/gG A
4AV51 35	35	3RV10 11-□□□10 Setting value in A Fuse gL/gG A	--	--	--	1CA 2.4 4	--	--	--	3RV10 31-□□□10 Setting value in A Fuse gL/gG A

1) In the event of a short-circuit on the feeder lines between the protective device and the input side of the unit, the rated short-circuit breaking capacity of the protection equipment must be taken into account with regard to the maximum possible prospective short-circuit current at the place of installation.

4AV Non-Stabilized Power Supplies Filtered for Supply of Electronic Controls

4AV2, 4AV4 power supplies,
filtered, single-phase

Overview

- Rated output voltage U_{2N} 24 V DC according to EN 61131-2¹⁾ and SIMATIC at input voltage +6 % to -10 % and load 0 % to 100 %
- Safety transformer according to EN 61558-2-6
- 4AV21, 4AV23: **CE, cULus**;
4AV20, 4AV22, 4AV24, 4AV26: **CE, cULus**;
4AV41: **CE**
- 4AV2: $t_a = 60$ °C/B,
4AV41: $t_a = 40$ °C/B
- Varistor suppressor circuit
- Status LED
- 4AV2: suitable for connection to the public supply and industrial networks: EN 61000-3-2, -3-3;
emitted interference: EN 50081-1; interference immunity: EN 50082-2;
4AV4: suitable for connection to industrial networks: EN 61000-3-2, -3-3;
emitted interference: EN 50081-1; interference immunity: EN 50082-2
- Ripple < 5 %.



4AV21, 4AV23 (figure on the left) and 4AV20, 4AV22 to 4AV24 (figure on the right)

1) EN 61131-2: equipment specification for power supply and interface for programmable controllers. Limit values for 24 V DC see "Technical Specifications".

Schematics

Connector designations and terminal assignments

	Rated input voltage U_{1N} V	Primary connections and links		
		Rated voltage U_{1N} V	Connections	Circuit terminals
 NSF0_00045c 1) 2) 3) 4) 3) 3)	230 (240) - 115 (120)	Type 4AV21 02 and 4AV23 02		
		230 (240)	1-4	2-3
 NSF0_00046c 1) 2) 3) 3)	400 (415)	Type 4AV21 06 and 4AV23 06		
		400 (415)	1-2	--
 NSF0_00047b 1)	400 (415) - 230 (240) - ± 15	Type 4AV2. 00		
		415	5-3	--
		400 (415)	1-3	--
		385	4-3	--
		245	5-2	--
 NSF0_00048b 1)	400 (415) - 230 (240) - 115 (120)	Type 4AV2. 01		
		400 (415)	1-5	2-3
		230 (240)	1-4	2-3
 NSF0_00178a 1)	400 230 ± 15	Type 4AV41		
		415	400 V +15 V	--
		400	400 V 0 V	--
		385	400 V -15 V	--
		245	230 V +15 V	--

1) For Cage Clamp terminals, the ground connection is routed to the terminal. The order of terminal assignments then changes as follows NSF0_00183

4AV Non-Stabilized Power Supplies Filtered for Supply of Electronic Controls

4AV3, 4AV5 power supplies,
filtered, three-phase

Overview

- Rated output voltage U_{2N} 24 V DC according to EN 61131-2¹⁾ and SIMATIC at input voltage +6 % to -10 % and load 0 % to 100 %
- Safety transformer according to EN 61558-2-6
- 4AV30 to 4AV35: **CE, cULus**;
4AV36, 4AV38, 4AV51: **CE**
- 4AV3: $t_a = 60$ °C/B,
4AV51: $t_a = 40$ °C/B
- Varistor suppressor circuit
- Status LED
- 4AV3: suitable for connection to public supply and industrial networks EN 61000-3-2, -3-3; emitted interference EN 50081-1; interference immunity EN 50082-2;
4AV5: suitable for connection to industrial networks EN 61000-3-2, -3-3; emitted interference EN 50081-1; interference immunity EN 50082-2
- Ripple < 5 %.

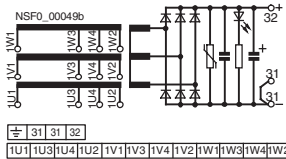
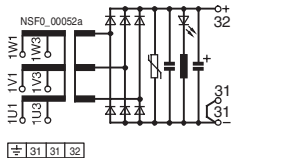
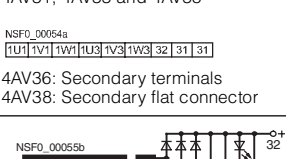
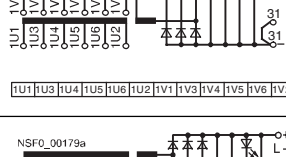


4AV30 to 4AV33 (figure on the left) and 4AV38 (figure on the right)

1) EN 61131-2: equipment specification for power supply and interface for programmable controllers. Limit values for 24 V DC see "Technical Specifications".

Schematics

Connector designations and terminal assignments

	Rated input voltage U_{1N} V	Primary connections and links		
		Rated voltage U_{1N} V	Connections	Circuit terminals
 <p>NSFO_00049b</p> <p>4AV30 to 4AV35</p>	400 (415) ± 20 Y	Type 4AV3. 00		
		420	1U1-1V1-1W1	1U2-1V2-1W2
		400 (415)	1U1-1V1-1W1	1U4-1V4-1W4 (=factory setting)
		380	1U1-1V1-1W1	1U3-1V3-1W3
 <p>NSFO_00052a</p> <p>4AV31, 4AV33 and 4AV35</p>	500- 400 (415)	Type 4AV3. 01		
		500	1U1-1V1-1W1	--
		400 (415)	1U3-1V3-1W3	--
 <p>NSFO_00054a</p> <p>4AV36: Secondary terminals 4AV38: Secondary flat connector</p>	575 (600) - 500 - 460 (480) - 400 (415) - 230 (240) - 200	Type 4AV3. 02		
		575 (600)	1U1-1V1-1W1	1U2-1V2, 1V2-1W2
		500	1U3-1V3-1W3	1U2-1V2, 1V2-1W2
		460 (480)	1U4-1V4-1W4	1U2-1V2, 1V2-1W2
 <p>NSFO_00179a</p> <p>4AV51</p>	400 ± 20	Type 4AV51 . 05		
		420	420 V-420 V-420 V	--
		400	400 V-400 V-400 V	--
		380	380 V-380 V-380 V	--


1) Link Δ is possible, Δ jumpers are not included in the scope of supply.

4AV Non-Stabilized Power Supplies Unfiltered for Supply of General Loads

4AV98 power supplies, unfiltered, single-phase

Overview

The 4AV98 power supplies comprise single-phase safety transformers according to EN 61558-2-6 with downstream bridge connection rectifiers without capacitor filtering.

- Rated output voltage U_d 24 V DC
- Safety transformer according to EN 61558-2-6
- CE, 
- $t_a = 50$ °C/B
- Varistor suppressor circuit
- Short-circuit and overload protection on the output side with top-mounted fuse
- Ripple 48 %.



4AV98

Design

The 4AV98 power supplies comply with safety class I. The safety transformers used have been designed according to EN 61558-2-6. The transformers are completely impregnated with polyester resin for protection against harmful environmental influences.

The terminals with the SIGUT connection method are

- Finger-safe to DIN VDE 0106 Part 100
- Suitable for conductor cross-sections to DIN VDE 0100 Part 430 Sheet 1 and EN 60204 (VDE 0113 Part 1).

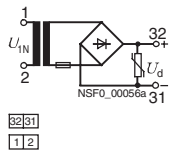
Protective devices

For reliable protection against short-circuits, overload and touch, the cables between the output terminals of the power supply and the load must have a negligible line impedance. For more details see DIN VDE 0100 (Erection of low-voltage systems) Part 410, Part 520 (particularly section 525) and Part 610.

The integrated rectifier in a two-pulse bridge connection supplies an unstabilized, unfiltered DC voltage with an arithmetic mean value of 24 V DC and a ripple of 48.3 %.

- Short-circuit and overload protection on the output side with top-mounted fuse
- Varistor protection circuit.

Schematics




4AV Non-Stabilized Power Supplies Unfiltered for Supply of General Loads

4AV96 power supplies, unfiltered, three-phase

Overview

The 4AV96 power supplies comprise three-phase safety transformers according to EN 61558-2-6 with downstream bridge connection rectifiers without capacitor filtering.

- Rated output voltage U_d 30-27-24 V DC
- Safety transformer according to EN 61558-2-6
- CE, 
- $t_a = 50$ °C/B
- Shield winding between input and output winding
- Varistor suppressor circuit
- Designed and approved according to VW equipment specification
- Ripple < 5 %.



4AV96

Design

The 4AV96 power supplies comply with safety class I. The safety transformers used have been designed according to EN 61558-2-6. The transformers are completely impregnated with polyester resin for protection against harmful environmental influences.

The terminals with the SIGUT connection method are

- Finger-safe to DIN VDE 0106 Part 100
- Suitable for conductor cross-sections to DIN VDE 0100 Part 430 Sheet 1 and EN 60204 (VDE 0113 Part 1).

Protective devices

For reliable protection against short-circuits, overload and touch, the cables between the output terminals of the power supply and the load must have a negligible line impedance. For more details see DIN VDE 0100 (Erection of low-voltage systems) Part 410, Part 520 (particularly section 525) and Part 610.

The integrated rectifier in a six-pulse bridge connection supplies an unfiltered, unfiltered DC voltage with an arithmetic mean value of 30/27/24 V DC and a ripple of < 5 %.

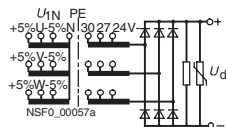
- Shield winding between input and output winding
- Varistor protection circuit
- In accordance with VW equipment specification.

Technical specifications

Primary-side short-circuit and overload protection

Rectifier unit	Rated output current I_d	Primary-side short-circuit and overload protection by motor starter protectors	
		Motor starter protector	Set value at 400 V AC
Type	A DC	Type	A
4AV96 04-1CB00-2N	4	3RV10 11-0EA10	0.28
4AV96 04-5CB00-2N	12	3RV10 11-0JA10	0.8
4AV96 04-2CB00-2N	25	3RV10 11-1CA10	1.8

Schematics



4AV Non-Stabilized Power Supplies

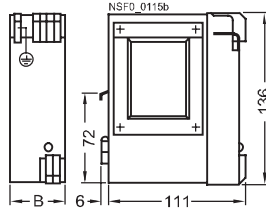
Project planning aids

Dimensional drawings

Filtered for supply of electronic controls

4AV2, 4AV4 power supplies, filtered, single-phase

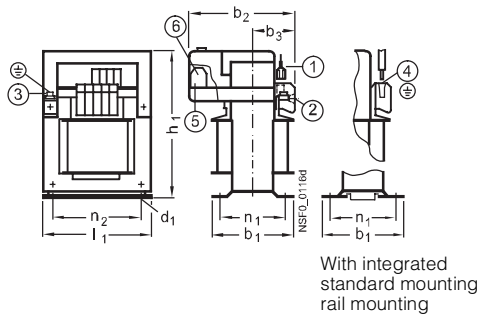
4AV21, 4AV23, for any arrangement
For snapping onto EN 50022-35 × 7.5 standard mounting rails



Type	Rated current DC A	B
4AV21	1	45
4AV23	3.5	72

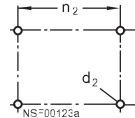
Connections:
Terminal size 4
– for flat connectors
DIN 46244-A 6.3-0.8
– screw terminal:
solid 0.5 mm² ... 6 mm²
finely stranded 0.5 mm² ... 4 mm²

4AV2, arrangement: any mounting position



Type	Rated current DC A	Designation acc. to DIN 41302	b ₁	b ₂	b ₃	d ₁	d ₂	h ₁	l ₁	n ₁	n ₂
4AV20	2.5	EI 84/42	89	100	51	4.8×9	M4	142	84	64	64
4AV22	5	EI 105/60	103	113	60	5.8×9	M5	157	105	83	80.5
4AV24	10	EI 120/72	122	128	67	5.8×9	M5	170	120	104	90
4AV26	15	EI 150N/48	110.5	140	58	7 × 13	M6	200	150	90	122

Mounting holes



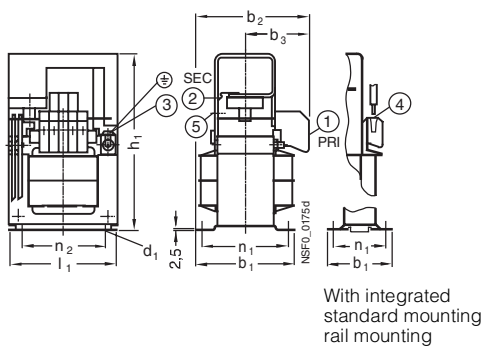
Input

- ① For flat connector DIN 46244-A 6.3-0.8
- ② Screw terminals:
solid 0.5 mm² ... 6 mm²,
finely stranded 0.5 mm² ... 4 mm²
- ③ Screw terminal:
solid, finely-stranded 2.5 mm²
- ④ Cage Clamp terminal (also as ground connection) from the top:
solid, finely stranded 0.08 mm² ... 4 mm²

Output

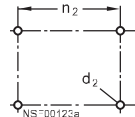
- ⑤ Screw terminal:
for 4AV20 ... 4AV24
solid 0.2 mm² ... 4 mm²
finely stranded 0.2 mm² ... 2.5 mm²
for 4AV26
solid, finely stranded 0.5 mm² ... 10 mm²
- ⑥ Cage Clamp terminal for 4AV20 ... 4AV24
solid, finely stranded 0.08 mm² ... 2.5 mm²
for 4AV26
solid, finely stranded 0.2 mm² ... 6 mm²

4AV41, for suspension



Type	Rated current DC A	Designation acc. to DIN 41302	b ₁	b ₂	b ₃	d ₁	d ₂	h ₁	l ₁	n ₁	n ₂
4AV41 01	1.5	EI 78/26	59.5	73	35	8	M4	123	78	48.5	56
4AV41 03	3	EI 84/42	89.0	88	51	8	M4	140	84	64	64
4AV41 06	6	EI 96/58	103.0	108	57	9	M5	152	96	86.5	84
4AV41 10	10	EI 120/52	101.5	105	54	9	M5	170	120	85	90

Mounting holes



Input

- ① For flat connectors DIN 46244-A 6.3-0.8 only applies to 4AV41 01
- ① Screw terminal:
solid 0.5 mm² ... 6 mm²
finely stranded 0.5 mm² ... 4 mm²
- ③ Screw terminal:
solid, finely-stranded 2.5 mm²
- ④ Cage Clamp terminal (from the top):
solid, finely stranded 0.08 mm² ... 4 mm²

Output

- ② GMKDS 3 terminal (Phoenix)
solid 0.2 mm² ... 4 mm²
flexible 0.2 mm² ... 2.5 mm²
current carrying capacity 10 A
- ⑤ Cage Clamp terminal (from the top):
solid, finely stranded 0.08 mm² ... 2.5 mm²

4AV Non-Stabilized Power Supplies

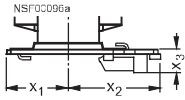
Project planning aids

4AV2, 4AV4 power supplies, filtered, single-phase (continued)

Standard mounting rail fixing

For 4AV DC power supply in a special design with a preassembled adapter plate.

Arrangement: horizontal mounting position



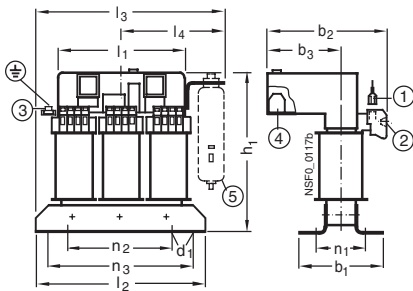
Type	x ₁ max.	x ₂ max.	x ₃	Standard mounting rail mm
4AV22	b ₁ /2+3	b ₁ /2+8	15	35 × 15
4AV24	b ₁ /2+3	b ₁ /2+3	15	35 × 15
4AV41 01	b ₁ /2+4	b ₁ /2+16	9	35 × 7.5
4AV41 10	b ₁ /2+3	b ₁ /2+3	15	35 × 15

4AV20 with integrated standard mounting rail fixing, see dimensional drawing for 4AV2.

4AV3, 4AV5 power supplies, filtered, three-phase

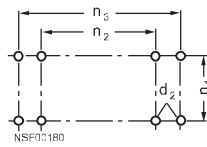
4AV30 to 4AV33, arrangement:

60 °C ambient temperature on vertical surfaces
40 °C ambient temperature on horizontal surfaces



Type	Rated current DC A	Designation acc. to DIN 41302	b ₁	b ₂	b ₃	d ₁	d ₂	h ₁	l ₁	l ₂	l ₃	l ₄	n ₁	n ₂	n ₃
4AV30	10	3UI 75/25	68	115	72	5.8×11	M5	190	136	164	200	110	48	113	150
4AV31	15	3UI 75/40	81	115	65	5.8×11	M5	190	136	164	200	110	63	113	150
4AV32	20	3UI 90/30	71	115	70	7 × 13	M6	220	162	216	232	124	55	136	200
4AV33	30	3UI 90/50	95	158	102	7 × 13	M6	220	162	216	232	124	75	136	200

Mounting holes



Input

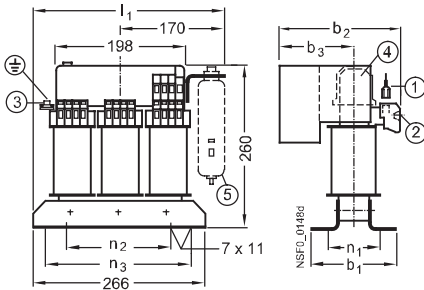
- ① For flat connector DIN 46244-A 6.3-0.8
- ② Screw terminal: solid, finley stranded 0.5 mm² ... 4 mm²
- ③ Screw terminal: solid, finely-stranded 2.5 mm²

Output

- ④ Screw terminal: solid, finely stranded 0.5 mm² ... 10 mm²
- ⑤ Option: back-up capacitor

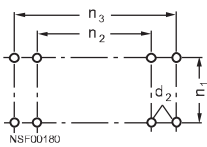
4AV34, 4AV35, arrangement:

60 °C ambient temperature on horizontal surfaces
40 °C ambient temperature on vertical surfaces



Type	Rated current DC A	Designation according to DIN 41302	b ₁	b ₂	b ₃	d ₂	l ₁	n ₁	n ₂	n ₃
4AV34	40	3UI 114/38	90	165	115	M6	287	70	176	250
4AV35	50	3UI 114/62	114	190	127	M6	295	94	176	250

Mounting holes



Input

- ① For flat connector DIN 46244-A 6.3-0.8
- ② Screw terminal: solid, finley stranded 0.5 mm² ... 4 mm²
- ③ Screw terminal: solid, finely-stranded 2.5 mm²

Output

- ④ Screw terminal: solid 1 mm² ... 16 mm² finely-stranded 2.5 mm² ... 16 mm²
- ⑤ Option: back-up capacitor

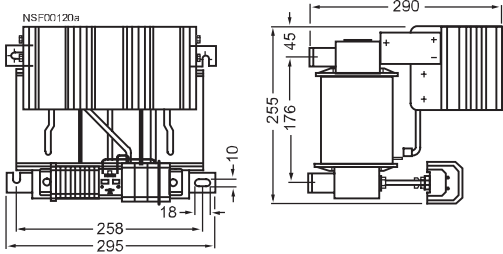
4AV Non-Stabilized Power Supplies

Project planning aids

4AV3, 4AV5 power supplies, filtered, three-phase (continued)

4AV36 (80 A)

for arrangement on vertical surfaces, cooling fins vertical



Permissible continuous current when arranged on horizontal surfaces:
 52 A at $t_a = 60\text{ °C}$
 80 A at $t_a = 25\text{ °C}$

Input

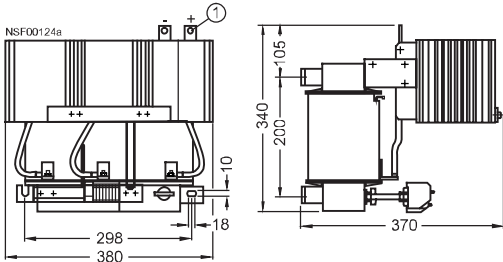
8WA1 011-1DG11 modular terminals
 Terminal size 4
 – screw terminal:
 solid $0.5\text{ mm}^2 \dots 6\text{ mm}^2$
 finely stranded $0.5\text{ mm}^2 \dots 4\text{ mm}^2$
 (with or without end sleeves)

Output

8WA1 305 modular terminals
 Terminal size 35
 – screw terminal:
 solid $4\text{ mm}^2 \dots 16\text{ mm}^2$
 finely stranded $6\text{ mm}^2 \dots 35\text{ mm}^2$
 (with or without end sleeves)

4AV38 (150 A)

for arrangement on vertical surfaces, cooling fins vertical



Permissible continuous current when arranged on horizontal surfaces:
 100 A at $t_a = 60\text{ °C}$
 150 A at $t_a = 25\text{ °C}$

Input

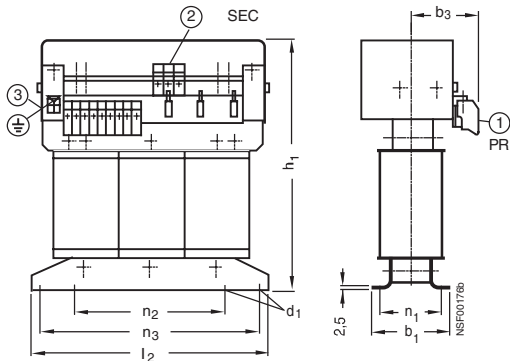
8WA1 011-1DG11 modular terminals with screw terminal
 Terminal size 4
 – screw terminal:
 solid $0.5\text{ mm}^2 \dots 6\text{ mm}^2$
 finely stranded $0.5\text{ mm}^2 \dots 4\text{ mm}^2$
 (with or without end sleeves)

Output

Flat connectors with through-hole for M8 screw
 Suitable for 3TX6 526-3B terminal cover
 ① Flat connectors

4AV51

for standing/hanging arrangement



Input

- ① For flat connector
 DIN 46244-A 6.3-0.8
- ② Screw terminal:
 solid $0.5\text{ mm}^2 \dots 6\text{ mm}^2$
 finely stranded $0.5\text{ mm}^2 \dots 4\text{ mm}^2$
- ③ Screw terminal:
 solid, finely-stranded 2.5 mm^2

Output

- ② LUL 10.16 terminal (Weidmüller)
 solid: $0.5\text{ mm}^2 \dots 10\text{ mm}^2$
 flexible: $0.5\text{ mm}^2 \dots 10\text{ mm}^2$

Type	Rated current DC A	Designation acc. to DIN 41302	b ₁	b ₃	d ₁	d ₂	h ₁	l ₂	n ₁	n ₂	n ₃
4AV51 25	25	3UI 90/50	96	84	11	M6	240	216	76	136	200
4AV51 35	35	3UI 114/38	90	78	11	M6	294	266	70	176	250

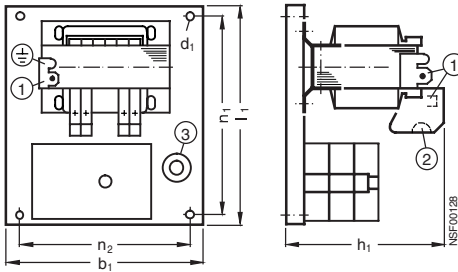
4AV Non-Stabilized Power Supplies

Project planning aids

Unfiltered for supply of general loads

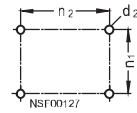
4AV98 power supplies, unfiltered, single-phase

4AV98 00 and 4AV98 02
for any arrangement



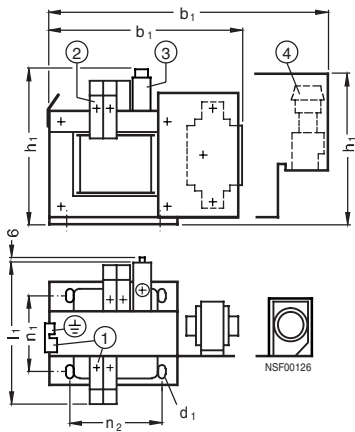
Type	Rated power W	Designation acc. to DIN 41302	b ₁	d ₁	d ₂	h ₁	l ₁	n ₁	n ₂	Fuses
4AV98 00-5CB.. 4AV98 02-5CB..	500	EI 150N/48	193	6.4	M6	160	228	200	174	③

Mounting holes



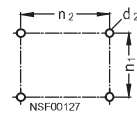
- ① Flat connector DIN 46244-A 6.3-0.8
- ② Screw terminals: terminal size 4
solid 0.5 mm² ... 6 mm²
finely stranded 0.5 mm² ... 4 mm²
- ③ D fuse DIN 49360

4AV98 06 and 4AV98 07
for any arrangement



Type	Rated power W	Designation acc. to DIN 41302	b ₁	d ₁	d ₂	h ₁	l ₁	n ₁	n ₂	Fuses
4AV98 06-4CB..	50	EI 78/26	121	4.8 × 9	M4	91	76	48.5	56	③
4AV98 07-0CB..	50	EI 78/26	121	4.8 × 9	M4	91	76	48.5	56	③
4AV98 06-5CB..	80	EI 84/42	127	4.8 × 9	M4	95	93	63.5	64	③
4AV98 07-1CB..	80	EI 84/42	127	4.8 × 9	M4	95	93	63.5	64	③
4AV98 06-6CB..	125	EI 96/44	138	5.8 × 11	M5	106	100	73	84	③
4AV98 07-2CB..	125	EI 96/44	138	5.8 × 11	M5	106	100	73	84	③
4AV98 06-7CB..	200	EI 96/58	138	5.8 × 11	M5	106	115	86.5	84	④
4AV98 07-3CB..	200	EI 96/58	138	5.8 × 11	M5	106	115	86.5	84	④
4AV98 06-8CB..	315	EI 120/52	204	5.8 × 11	M5	134	107	85	90	④
4AV98 07-4CB..	315	EI 120/52	204	5.8 × 11	M5	134	107	85	90	④

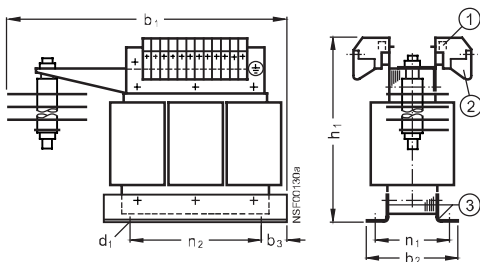
Mounting holes



- ① Flat connector DIN 46244-A 6.3-0.8
- ② Screw terminal: terminal size 4
solid 0.5 mm² ... 6 mm²
finely stranded 0.5 mm² ... 4 mm²
- ③ G fuse DIN VDE 0820 Part 22
- ④ D fuse DIN 49360

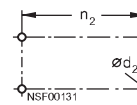
4AV96 power supplies, unfiltered, three-phase

4AV96 04
for any arrangement



Type	Rated current DC A	Designation acc. to DIN 41302	b ₁	b ₂	b ₃	d ₁	d ₂	h ₁	n ₁	n ₂
4AV96 04-1CB..	4	3UI 60/30	180	90	15	5 × 10	M4	140	49	90
4AV96 04-5CB..	12	3UI 75/40	149	112	7	6.5 × 12	M6	190	94	111
4AV96 04-2CB..	25	3UI 90/50	300	114	35	9 × 14	M8	190	90	139

Mounting holes



- ① Flat connector DIN 46244-A 6.3-0.8
- ② Screw terminal: terminal size 4
solid 0.5 mm² ... 6 mm²
finely stranded 0.5 mm² ... 4 mm²
- ③ 4AV96 04-1CB:
Snap-on mounting for standard mounting rail according to EN 50022-35 × 7.5

4AV Non-Stabilized Power Supplies

Notes