

Communication

Wide-Range Power-Supply Unit – 7XV5810

Description

The primary switch mode wide-range power supply unit offers an extremely broad input voltage range and is thus suitable for universal applications. The power supply unit is used for low power consumers (**output power: 6 W**) that require a power failure stored-energy time in excess of 50 ms. The output is short-circuit-proof and stable at no load.

Output power

- 7XV5810-0BA: Output power 6 W
- 7XV5810-0CA: Output power to 3 W

The output voltage is monitored and displayed using an indicator LED. If the output voltage drops by 10 %, a relay contact opens and the LED goes out.

Benefits

- Universal supply voltage
7XV5810-0BA: **DC 48 V to 250 V** ±20 %, AC 60 V to 230 V ± 20 %
7XV5810-0CA: **DC 26 V to 250 V** ±20 %, AC 60 V to 230 V ± 20 %
- Monitored output voltage with LED and isolated relay
- The output is short-circuit-proof and stable at no load
- Power system failure bridging (t > 50 ms)
- Overvoltage category III

Functions

The wide-range power supply unit in the plastic case is a permanently wired and tested functional unit. It has a snap-on fastener for a 35-mm DIN rail according to DIN EN 60715. The auxiliary power supply, the electrical consumer, and the supervisory relay can be connected at the screw terminals. The devices contain no silicone, are halogen-free and flame-resistant (UL94-V0).



[img_7XV5810_2_1_1]

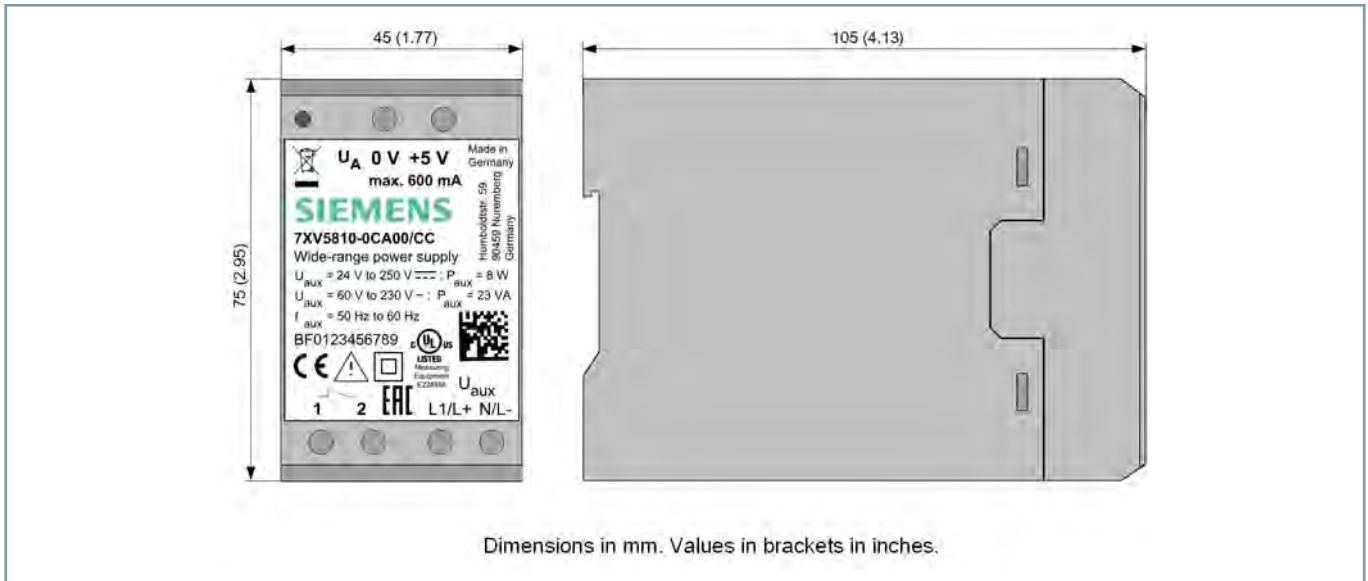
Figure 3.6/1 Wide-Range Power Supply Unit

Applications

The wide-range power supply unit is designed for use in industrial applications and in residential areas (residences, businesses and commercial areas, small enterprises) and meets the following requirements:

Field of Application	Requirements	
	Emitted Interference	Immunity
Industry	EN 60255-26	EN 60255-26
Residential area	EN 60255-26	EN 60255-26

Dimensions



[dw_dimensions_7XV5810-0CA00(CC_small)_1_en_US]

Figure 3.6/2 Dimension and Layout of the Wide-Range Power-Supply Unit (in mm)

Technical Data

Power supply 7XV5810 0BA00 (24 V)

Input	
Power supply (V_{aux}) – Direct-current voltage (DC)	
	24 V to 250 V ($\pm 20\%$)
Ripple allowed for the DC input voltage	15 %
Maximum inrush current at ≤ 110 V	< 15 A
Maximum inrush current at 220 V to 300 V	≤ 22 A; after 250 μ s: < 5 A
Power input	12 W
Degree of efficiency	> 50 % at nominal load
Power supply (V_{aux}) – Alternative current (AC)	
	60 V to 230 V ($\pm 20\%$), 45 Hz to 65 Hz
Higher harmonics allowed	2 kHz
Maximum inrush current at ≤ 115 V	< 15 A
Maximum inrush current at 230 V	≤ 22 A; after 250 μ s: < 5 A
Power input	25 VA
Output	
Connection rated output voltage	2-pole terminal
Rated output current	Max. 250 mA
Behavior in case of short-circuit	Permanent

Output	
Power supply failure	Min. 50 ms at nominal load
Status display of the output voltage	1 green operating LED
Rated output voltage	DC 24 V; $I_{max} = 125$ mA (at $U_{aux} =$ DC 24 V to 35 V) DC 24 V; $I_{max} = 250$ mA (at $U_{aux} =$ DC 35 V to 250 V or AC 60 V to 230 V)

Power supply 7XV5810 0CA00 (5V)

Input	
Power supply (V_{aux}) – Direct-current voltage (DC)	
	24 V to 250 V ($\pm 20\%$)
Ripple allowed for the DC input voltage	15 %
Maximum inrush current at ≤ 110 V	< 15 A
Maximum inrush current at 220 V to 300 V	≤ 22 A; after 250 μ s: < 5 A
Power input	8 W
Degree of efficiency	> 50 % bei Nennlast
Power supply (V_{aux}) – Alternative current (AC)	
	60 V to 230 V ($\pm 20\%$), 45 Hz to 65 Hz
Higher harmonics allowed	2 kHz
Maximum inrush current at ≤ 115 V	< 15 A

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Input	
Maximum inrush current at 230 V	≤ 22 A; after 250 μs: < 5 A
Power input	12 VA

Output	
Connection rated output voltage	2-pole terminal
Rated output current	250 mA
Behavior in case of short-circuit	permanent
Power supply failure	Min. 50 ms at nominal load
Status display of the output voltage	1 green operating LED
Rated output voltage	DC 5 V; I _{max} = 600 mA

Combined specifications

Environmental conditions (operate only in rooms)	
Ambient Temperatures	
Temperature recommended during the operation	-5 °C to +55 °C (23 °F to 131 °F)

Environmental conditions (operate only in rooms)	
Temperature during the transport and the storage	-25 °C to +70 °C (-13 °F to 158 °F)
Humidity	
Mean value per year	≤ 75 %
Maximum value per year	95 % relative humidity on 30 days per year
Condensation during operation	Not allowed
Condensation during transport and storage	Allowed
Other environmental indications	
Maximum height over sea level	2000 m
Degree of pollution	2
Class of protection according to IEC 60529	IP 20
Overvoltage category	III

You can find additional technical data in the manual under: www.siemens.com/accessories

Selection and Ordering Data

Description	Order no.															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Wide-range Power Supply Unit	7	X	V	5	8	1	0	-	0	□	A	0	0			
										▲						
										I						
24 V / 6 W										B						
5 V / 3 W										C						