

A.1.1 Programmable Controller

Technical Specifications AG S5-95F

(6ES5 095-8FB01)

Dimensions and Weight		Output current	
Dimensions WxHxD (in mm)	145×135×146	- from V 1	1 A
(in in.)	5.7 × 5.3 × 5.7	- from V 2	0,65 A
Weight - S5-95F	approx. 1.5 kg (3.3 lbs.)	Short-circuit protection	electronic
Internal Technical Specifications		Class of protection	Class I
Memory capacity - internal RAM 16 KB, 8 KB for control program - EPROM submodule Clock - accuracy t _g ±1 s/day at 25 °C (77 °F) - variation due to temp. change t _A 0 to 60 °C (32 to 140 °F) Execution time - per binary operation approx. 1.2 μs Cycle monitoring time - defined via hardware approx. 680 ms - programmable via software 10 to 2550 ms Flags 2048 (512 retentive) Timers number/range 128; 0.01 to 9990 s Counters number/range 128; 0 to 999 (8 retentive) Inputs/outputs (onboard) Digital inputs, failsafe 16 Digital outputs - failsafe 8 - single-channel 2×4 Interrupt inputs, failsafe 4 Counter inputs, failsafe 2 External I/O modules Digital modules max. 32 Analog modules max. 8 Permissible blocks Organization blocks 1, 2, 3, 13, 21, 22, 31, 34, 37, 251 Program blocks 0 to 255 Function blocks 0 to 255 - integrated 240 to 243, 250 to 252, and 255 Sequence blocks 0 to 255 Data blocks 1 to 255 - reserved 1, 252 to 255 Operation set approx. 140		Floating no Back-up battery Lithium battery (3.4 V/850 mAh) - life expectancy min. 1 year - service life (at 25 °C/77° F) approx. 5 years Power loss of the module typ. 12 W	
		Specific Onboard I/O Specifications	
		For digital inputs: Floating yes - isolated in groups of 16 - Isolation voltage max. 60 V DC against shield Input voltage - rated value 24 V - at "0" signal - 30 V to +5 V DC - at "1" signal +13 V to +30 V DC Input current - at "0" signal <1.5 mA (Input zero-signal current, 2-wire BERO) - at "1" signal <6.5 mA (at 30 V) Delay time - from "0" to "1" typ. 2.5 ms - from "1" to "0" typ. 2.0 ms Cable length unshielded max. 200 m (660 ft.)	
		For digital outputs Floating yes - isolated in groups of 16 - Isolation voltage max. 60 V DC against shield Load voltage L+ - rated value 24 V DC - permissible range 20 to 30 V DC (including ripple) Output current for "1" signal in horiz. mounting position at 0 to 40° C with L + 24 V DC - failsafe outputs max. 2.0 A - single-channel outputs max. 0.5 A in horiz. mounting position at 0 to 40° C with L + 30 V DC - failsafe outputs max. 2.0 A - single-channel outputs max. 0.5 A in horiz. mounting position at 40 to 60° C with L + 24 V DC - failsafe outputs max. 1.5 A - single-channel outputs max. 0.5 A in horiz. mounting position at 40 to 60° C with L + 30 V DC - failsafe outputs max. 1.0 A - single-channel outputs max. 0.5 A in vert. mounting position at 0 to 40° C with L + 30 V DC - failsafe outputs max. 1.0 A - single-channel outputs max. 0.5 A	

For digital outputs (continued): Total current (simultaneity factor) - failsafe outputs 100 % - single-channel outputs 100 % Lamp load - failsafe outputs - source output max. 4 W - sink output max. 10 W - single-channel outputs max. 10 W Residual current for "0" signal max. 50 μA Output voltage - for "0" signal max. 0.5 V (at 6k ohms load resistance) - for "1" signal max. L+ minus 0.5 V max. M plus 0.5 V Short-circuit protection for failsafe outputs - source output electronic - sink output thermoelectronic Short-circuit protection for - single-channel outputs thermoelectronic Overload withstand capability - failsafe outputs no - single-channel outputs no Polarity reversal protection - for failsafe outputs no - for single-channel outputs no Restriction of the inductive circuit interruption (internal) - for failsafe outputs to - 11 V - for single-channel outputs to - 16 V Switching frequency - resistive load max. 100 Hz - inductive load max. 2 Hz Direct digital output control possible Paralleling of outputs - failsafe outputs possible when outputs are de-coupled by a diode - single-channel outputs each 0.5 A Cable length, unshielded max. 200 m (660 ft.) Current consumption from 24 V - failsafe outputs 50 mA (all outputs "0") - single-channel outputs 20 mA (all outputs "0")	Counter inputs Floating yes Input voltages and currents as for digital inputs (see Specific Onboard I/O Specifications) Delay time - from "0" to "1" typ. 1 ms - from "1" to "0" typ. 1 ms Counter frequency* - counter A: max. 900 Hz - counter B: max. 900 Hz Pulse duration 1.4 ms Cable length (shielded) 100 m For interrupt inputs Floating yes Input voltages and currents as for digital inputs (see Specific Onboard I/O Specifications) Delay time - from "0" to "1" typ. 1 ms - from "1" to "0" typ. 1 ms Pulse duration* 2 ms Cable length (shielded) 100 m (330 ft.)
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* without connection of a programmer, operator panel, text display or SINEC L1