

14.7.2 Analog Output Modules

Analog Output Module 2 x ±10 V

(6ES5 470-8MA12)

ANALOG OUTPUT
2 x ±10 V
6ES5 470-8MA12

1 2 3 4 5 6

Technical specifications

Output range (rated values)		±10 V
Number of outputs		2
Galvanic isolation		yes (outputs to grounding point and between outputs)
Input resistance	min.	3.3 k
Connection method		two or four-wire connection
Digital representation of output signal		11 bits + sign (1024 units = rated value)
Measured value representation		two's complement (left-justified)
Conversion time (0 to 100%)	max.	0.15 ms
Permissible overload		25%
Short-circuit protection		yes
Short-circuit current		±30 mA
Permissible voltage difference to ground and between outputs	max.	75 V DC/60 V AC
Basic error limits		±0.3%
Operational error limits (0 to 60 °C) (32 to 140 °F)		±0.6%
Single errors		
- linearity		±0.2%
- polarity reversal error		±0.1%
- temperature error		±0.01%/K
Length of cable - shielded	max.	200 m (660 ft.)
Supply voltage L+ (peripheral)		
- rated value		24 V DC
- ripple V _{PP}		3.6 V
- permissible range (ripple included)		20 to 30 V
Insulation rating		VDE 0160
Rated insulation voltage (+9 V to ⚬)		12 V AC
- insulation group		1 x B
- tested with		500 V AC
Rated insulation voltage (Output to L+, between outputs, output to +9V)		60 V AC
- insulation group		1 x B
- tested with		500 V AC
Current consumption		
- from +9 V (CPU)	typ.	120 mA
- from L+	typ.	100 mA
Power loss of the module	typ.	3.1 W
Weight	approx.	220 g (8 oz.)

Legend:
QV: Analog output "voltage"