

Template:FMA110 Electrical characteristics

Electrical characteristics

Characteristic description	Value			
	Min.	Typ.	Max.	Unit
Supply Voltage:				
Supply Voltage (Recommended Operating Conditions)	5		30	V
Digital Input:				
Input resistance (DIN1, DIN2, DIN3)	15			kOhm
Input Voltage (Recommended Operating Conditions)	0		Supply voltage	V
Input Voltage threshold (DIN1)		7.5		V
Input Voltage threshold (DIN2, DIN3)		2.5		V
Digital Output (Open Drain grade):				
Drain Current (Digital Output OFF)			120	uA
Drain Current (Digital Output ON, Recommended Operating Conditions)			300	mA
Static Drain-Source Resistance (Digital Output ON)			300	mOhm
Analog Input:				
Input voltage (Recommended Operating Conditions), Range 1			10	V
Input resistance, Range 1		120		kOhm
Measurement error		4.43		%
Additional error		±12		mV
Input Voltage (Recommended Operating Conditions) Range2	0		30	V
Input resistance, Range2		146.7		kOhm
Measurement error		1.75		%
Additional error		±36		mV
Output Supply Voltage 1-Wire:¹				
Supply voltage	3.3		3.6	V
Output inner resistance		7		Ohm
Output current ($U_{out} > 3.0$ V)		30		mA
Short circuit current ($U_{out} = 0$)		130		mA

Analog Input error margin can increase if temperature varies. If Analog input is not connected FMA1YX will still measure certain numbers and it cannot be 0. This measurement is influenced by hardware components.

1-wire Supply voltage PIN is dedicated for 1-wire devices ONLY, do not use it for any other purpose