

Template:FMM130 Electrical characteristics

Electrical characteristics

Characteristic description	Value		Unit
	Min.	Typ. Max.	
Supply Voltage:			
Supply Voltage (Recommended Operating Conditions)	+10	+30	V
Digital Output (Open Drain grade):			
Drain current (Digital Output OFF)		120	µA
Drain current (Digital Output ON, Recommended Operating Conditions)	0.1	0.5	A
Static Drain-Source resistance (Digital Output ON)	400	600	mΩ
Digital Input:			
Input resistance (DIN1)	47		kΩ
Input voltage (Recommended Operating Conditions)	0	Supply voltage	V
Input Voltage threshold (DIN1)	7.5		V
Analog Input:			
Input voltage (Recommended Operating Conditions), Range 1	0	+10	V
Input resistance, Range 1	150		kΩ
Measurement error on 12V, Range 1	3		%
Additional error on 12 V, Range 1	360		mV
Measurement error on 30 V, Range 1	3		%
Additional error on 30 V, Range 1	900		mV
Input Voltage (Recommended Operating Conditions), Range 2	0	+30	V
Input resistance, Range 2	150		kΩ
Measurement error on 12V, Range 2	3		%
Additional error on 12 V, Range 2	360		mV
Measurement error on 30 V, Range 2	3		%
Additional error on 30 V, Range 2	900		mV
Output Supply Voltage 1-Wire:			
Supply voltage	+4.5	+4.7	V

Output inner resistance	7	Ω
Output current ($U_{\text{out}} > 3.0 \text{ V}$)	30	mA
Short circuit current ($U_{\text{out}} = 0$)	75	mA

✘ Analog Input error margin can increase if temperature varies.

Absolute maximum ratings

Characteristic description	Value		
	Min.	Typ.	Max. Unit
Supply Voltage (Absolute Maximum Ratings)	-32	+32	V
Drain-Source clamp threshold voltage (Absolute Maximum Ratings), ($I_{\text{drain}} = 2 \text{ mA}$)		+36	V
Digital Input Voltage (Absolute Maximum Ratings)	-32	+32	V
Analog Input Voltage (Absolute Maximum Ratings)	-32	+32	V