

Template:FMB125 Electrical characteristics

Electrical characteristics

Characteristic description	Value		
	Min.	Typ.	Max. Unit
Supply Voltage:			
Supply Voltage (Recommended Operating Conditions)	+10		+30 V
Digital Output (Open Drain grade):			
Drain current (Digital Output OFF)			120 μ A
Drain current (Digital Output ON, Recommended Operating Conditions)	0.1		0.5 A
Static Drain-Source resistance (Digital Output ON)		400	600 m Ω
Digital Input:			
Input resistance (DIN1)	47		k Ω
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			+10 V
Input resistance, Range 1		150	k Ω
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			+30 V
Input resistance, Range 2		150	k Ω
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
RS232/RS485 Input Voltage:			
RS232 input voltage range (common-mode voltage)	-15	+15	V
RS485 input voltage range on A or B pin (common-mode voltage)	-7	+12	V

 **Analog Input error margin can increase if temperature varies.**

Absolute maximum ratings

Characteristic description	Value			Unit
	Min.	Typ.	Max.	
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
RS232 Input Voltage (Absolute Maximum Ratings)	-25		+25	V