

Template:FMC13A 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 resistance (DIN2)	38.45			kΩ
Input resistance (DIN3)	150			kΩ
Input voltage (Recommended Operating Conditions)	0		Supply voltage	V
Input Voltage threshold (DIN1)		7.5		V
Input Voltage threshold (DIN2)		2.5		V
Input Voltage threshold (DIN3)		2.5		V
Analog Input:				
Input voltage (Recommended Operating Conditions), Range 1	0		+10	V
Input resistance, Range 1		38.45		kΩ
Measurement error on 12V, Range 1		0.9		%
Additional error on 12 V, Range 1		108		mV
Measurement error on 30 V, Range 1		0.33		%
Additional error on 30 V, Range 1		88		mV
Input Voltage (Recommended Operating Conditions), Range 2	0		+30	V
Input resistance, Range 2		150		kΩ
Measurement error on 12V, Range 2		0.9		%
Additional error on 12 V, Range 2		108		mV

Measurement error on 30 V, Range 2	0.33	%
Additional error on 30 V, Range 2	88	mV
Output Supply Voltage 1-Wire:		
Supply voltage	+4.5	+4.7 V
Output inner resistance	7	Ω
Output current ($U_{out} > 3.0$ V)	30	mA
Short circuit current ($U_{out} = 0$)	75	mA
Ground sense:		
Input resistance	38.45	k Ω
Input voltage (Recommended operating conditions)	0	Supply voltage V
Input voltage threshold	0.5	V
Sink current	180	nA

CAN interface:

Internal terminal resistor CAN bus (no internal termination resistor)	-	-	-	Ω
Differential input resistance	19	30	52	k Ω
Recessive output voltage	2	2.5	3	V
Differential receiver threshold Voltage	0.5	0.7	0.9	V
Common mode input voltage	-30	-	30	V

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