MicroPlex® 7X, 7H, & 7L

9-30V DC • Micro 280 Form Factor

MicroPlex®	DESCRIPTION
7X	4 PWM capable High Side Driver Output 3 Analog or Digital inputs which can be configured as a frequency counter, a switch to ground detector with pull up
7H	7 PWM capable High Side Driver Outputs Outputs 1-6 PWM Speed up to 2kHz Output 7 up to 200Hz using software controlled PWM
7L	7 PWM capable Low Side Driver Outputs Outputs 1-6 PWM Speed up to 2kHz Output 7 up to 200Hz using software controlled PWM

Dimensions in millimeters

Front View

R0.25
13.05
1.82

Top View

20.94
23.60
27.74
30.40

Bottom View

7.80
8.10

Side View

25.75
10.59

Description

The MicroPlex® is one of the smallest automotive grade CAN controllers on the market. The innovative module is well suited for a wide range of automotive applications. Users are able to easily configure and or program special features to customize the MicroPlex® to better suit their needs.

Features and Benefits

- 7 total configurable I/Os, 1 CAN interface, 1 Ignition input
- Standard functions and parameters can easily be modified with the MicroPlex® Lab
- Complex applications can be implemented with C code
- Special programs/programming support are available upon request

Specifications

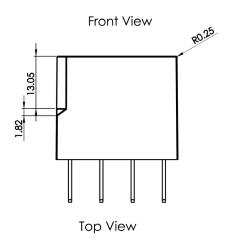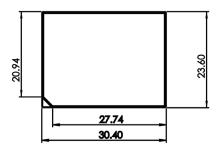|	
Input Voltage Range:	9V - 30V DC
Power Consumption:	Ignition ON: 6mA
	Ignition OFF: 0.14mA
Operating Temp:	-40° to +85° C
IP Class:	IP67 when used with standard Micro 280 Relay and Fuse Box Housing
Housing:	PA66 - GF33
Footprint:	Side by Side 2x Micro 280 Relay Form Factor
Protection:	Short Circuit, Battery Reverse Polarity, and Load Dump
Clock Frequency:	40 MHZ
Flash:	4K
EEPROM:	2K
Band Rate:	User Configurable

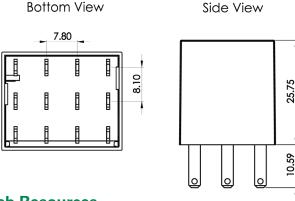| PART NUMBER	DESCRIPTION
LFMCRPLXKIT7X	MicroPlex® Starter Kit 7X
LFMCRPLXKIT7L	MicroPlex® Starter Kit 7L
LFMCRPLXKIT7H	MicroPlex® Starter Kit 7H
LFMCRPLX001	CAN Controller 7X
LFMCRPLX002	CAN Controller 7H
LFMCRPLX003	CAN Controller 7L

Web Resources

Download 2D print, 3D model and more at:
littelfuse.com/Microplex

*MicroPlex® is a registered trademark.

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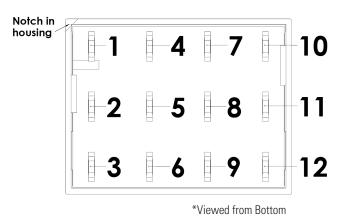
Input/Output Features

PIN NUMBER	MicroPlex® 7X		
	DESCRIPTION	INPUT	RATINGS
2	Voltage input 0 to 12.1V Voltage input 0 to 32V	Input resistance Input resistance	80 kΩ 54.7 kΩ
	Frequency Counter Input	Input resistance Input frequency	112 kΩ <2.2kHz @ 3% >2.2kHz to 10kHz @ 10%
	Digital Input Positive	Input resistance Turn-on threshold Turn-off threshold	80 kΩ >8 V <4 V
	0-20mA input	Input resistance Resolution Accuracy	500Ω 12 bit ± 1 % full scale
7	Voltage input 0 to 12.1V Voltage input 0 to 32V	Input resistance Input resistance	80 kΩ 54.7 kΩ
	Digital Input Positive	Input resistance Turn-on threshold Turn-off threshold	80 kΩ >8 V <4 V
	Switch to GND Digital Input	Pull-up resistance Resolution Accuracy	1 kΩ 12 bit ± 1 % full scale
8	Voltage input 0 to 12.1V Voltage input 0 to 32V	Input resistance Input resistance	80 kΩ 54.7 kΩ
	Digital Input Positive	Input resistance Turn-on threshold Turn-off threshold	80 kΩ >8 V <4 V
	0-20mA input	Input resistance Resolution Accuracy	500Ω 12 bit ± 1 % full scale
9, 10, 11, 12	Voltage input 0 to 11.4 V	Resolution Accuracy Input resistance	12 bit ± 1 % full scale 66 kΩ
	Digital/PWM High Side Driver Output	Switching voltage Switching current Output Frequency	9-30 V DC 0.02 - 2.5 A Up to 200 Hz

Note: The >7 V and <3 V values appear in the RATINGS column of the Frequency Counter Input row.

PIN NUMBER	MicroPlex® 7H	
	OUTPUT	RATINGS
2, 7, 8	Switching voltage Switching current	9-30V DC Up to 1A each output
	Short circuit protected against GND and VB Fault diagnostic possible via current sense	
9, 10, 11, 12	Switching voltage Switching current	9-30V DC Up to 2.5A each output
	Short circuit protected against GND and VB Fault diagnostic possible via current sense	

PIN NUMBER	MicroPlex® 7L	
	OUTPUT	RATINGS
2, 7, 8, 9, 10, 11, 12	Sinking current	Up to 0.5A each output
	Short circuit protected against GND and VB Fault diagnostic for over current and over temperature.	

Notch in housing

1 4 7 10
2 5 8 11
3 6 9 12

*Viewed from Bottom

PIN NUMBER	MicroPlex®		
	7X	7H	7L
1	GND	GND	GND
2	Analog or Digital Input 1 (or Frequency Counter Input, or 0-20mA Input)	PWM High Side Driver Output 6	Low Side Driver Output 6
3	BATT	BATT	BATT
4	CAN L -	CAN L -	CAN L -
5	CAN H +	CAN H +	CAN H +
6	IGN	IGN	IGN
7	Analog or Digital Input 3 (or Switch-to-GND Input)	High Side Driver Output 7	Low Side Driver Output 7
8	Analog or Digital Input 2 (or 0-20mA input)	High Side Driver Output 5	Low Side Driver Output 5
9	High Side Driver Output 4 (or Analog Input)	High Side Driver Output 4	Low Side Driver Output 4
10	High Side Driver Output 3 (or Analog Input)	High Side Driver Output 3	Low Side Driver Output 3
11	High Side Driver Output 2 (or Analog Input)	High Side Driver Output 2	Low Side Driver Output 2
12	High Side Driver Output 1 (or Analog Input)	High Side Driver Output 1	Low Side Driver Output 1

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