ADL7103 THREE INSTRUMENTS IN ONE

- □ 2 Channel Digital Storage Oscilloscope
- □ TRMS Graphing Multimeter
- □ OBDII Code Reader

Quickly diagnose automotive faults from making voltage checks, reading codes, resetting malfunction indicator lamps to viewing signal waveforms.

The ADL7103's combination of features also includes a library of known good patterns with preset test parameters for common automotive signals. Each test can be fine tuned to view any portion of the signal for further analysis.

You won't find many dual channel scopes that offer these powerful features and none provide the combination of useful tools, creating a new level of value not found in the market today.







Digital Storage Oscilloscope

- Sample rate 25 Meg per second
- 51 Pre-set waveforms that include sensor, actuator, electrical and ignition patterns
- DC to 5 MHz Bandwidth
- Sweep rate 1µS to 50 seconds in the scope mode
- "Glitch Snare" mode captures, displays and optionally saves abnormal signal patterns in Scope or Component Test modes
- Secondary Ignition displays the waveform and includes spark voltage, RPM, burn time and burn voltage
- · Parade pattern on secondary ignition "Parade" mode
- Built in 'Help' includes test procedure showing how to connect to the circuit, a sample of the expected waveform, theory of operation and troubleshooting tips
- Optional Diesel accessory to test injector pump timing and RPM

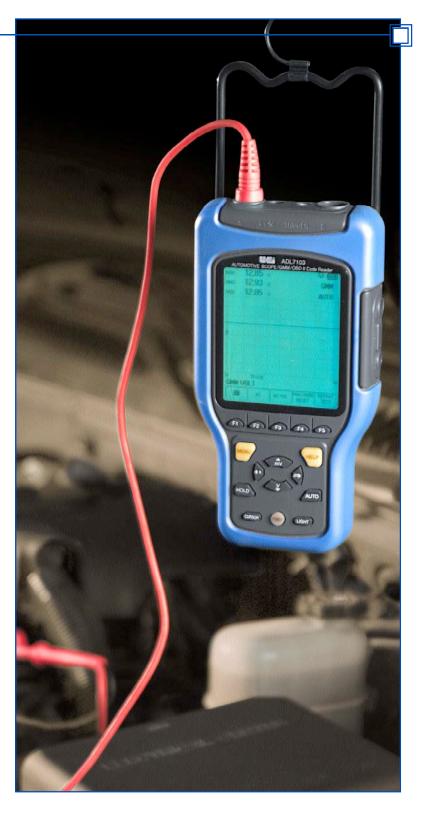
Specifications Horizontal

Horizonte	al .	
	Sample Rate:	25 Mega sample/second
	Record Length:	1000 points
	Update Rate:	Real time roll
	Accuracy:	$\pm (0.1\% + 1 \text{ pixel})$
	Sweep Rate:	1μs to 50 sec in a 1,2,5
		sequence (scope mode)
		5 s to 24 hours in a 1. 2. 5
		sequence (GMM mode)
Vertical		
	Band Width:	DC to 5MHz; -3 Db
	Resolution:	8 bit
	Channel:	2 Channel
	Coupling:	AC, DC, GND
	Input Impedance:	1 ΜΩ
	Max Input Voltage:	DC or AC 600 Vrms
	Volt Division:	50mV~100V in a 1,2,5
		sequence
	Accuracy:	±3%
Trigger		
	Trigger Source:	CH A, CH B, External
	Modes:	Single shot, normal, auto
	Coupling:	AC, DC
	Slop:	Rising and falling edge
Others		
	Glitch Snare:	Scope mode
	Setup Memory:	8 Waveform & setup
	Reference Waveform:	51 Waveform & setup
	Cursor:	Time & Volt
	Instrument Setup:	Language, Contrast, Graticule
	Screen Size:	280 x 240 pixels (active area)
		with backlight (EL)
	Battery Life:	4 hours without backlight
	Battery:	Rechargeable NiMH

Graphing Multimeter

- TRMS Graphing Multimeter
- 5 seconds to 24 hour sweep rate
- AC / DC Volts
- Ohms, Continuity, Diodes
- Frequency, Duty Cycle, DwellIgnition Peak and Burn Volts, Ignition Burn Time
- Amps (with optional adapter)
- Temperature (with optional adapter)

РМ				
	Range	Resolution	Accuracy	
	120~12,000	1 RPM	±2 RPM	
REQU	ENCY			
	Function	Range	Resolution	Accuracy
	Frequency	10Hz	0.001Hz	±0.1% +3d
		100Hz	0.01Hz	
		1kHz	0.1Hz	
		10kHz	1Hz	
		100kHz	10Hz	,,
		1MHz	100Hz	"
	n/ Dut	5MHz	1kHz	
	% Duty	2.0~98% 3.6°~356.4°	0.1% 0.1°	1 20 // 24
	Dwell Pulse Width			1.2°/krpm+2d
	ruise vviuui	2μs∼450ms (Pulse Width	> 2µs)	
c v	DLTAGE			
	Range	Resolution	Accuracy	
	500mV	0.1mV	±0.3% +5d	
	5V	0.001V	_U.J /0U	
	50V	0.01V		
	600V	0.1V		
	> Input Impedance 10MΩ			
	put iiipuunioo Tuitii			
C V	OLTAGE			
	Range	Resolution	Accuracy	Accuracy
	J.		40~400Hz	400Hz~20kHz
	500mV	0.1mV	±0.5% +5d	±0.2% +5d
	5V	0.001V		"
	50V	0.01V		
	600V	0.1V	и	
	> Input Impedance 10MΩ			
C+D	C			
	Range	Resolution	Accuracy	Accuracy
			40~40ÓHz	400Hz~10kHz
	500mV	0.1mV	±0.8% +5d	±3.0% +5d
	5V	0.001V		
	50V	0.01V		
	600V	0.1V		"
	000 ¥			
нмѕ	_			
нмѕ	Range	Resolution	Accuracy	
нмѕ	Range 500Ω	Resolution 0.1Ω	Accuracy ±0.5% +5d	
нмѕ	Range 500Ω 5kΩ	Resolution 0.1Ω $0.001k\Omega$		
)нмs	Range 500Ω 5kΩ 50kΩ	Resolution 0.1Ω 0.001kΩ 0.01kΩ		
)HMS	Range 500Ω 5kΩ 50kΩ 500 kΩ	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ	±0.5% +5d "	
)HMS	Range 500Ω 5kΩ 50kΩ 500 kΩ 5MΩ	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.001MΩ	±0.5% +5d " " ±0.75% +5d	
)нмs	Range 500Ω 5kΩ 50kΩ 500 kΩ	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ	±0.5% +5d "	
	Range 500Ω 5kΩ 50kΩ 500 kΩ 5MΩ 30MΩ	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.001MΩ 0.001MΩ	±0.5% +5d " " ±0.75% +5d	
	Range 500Ω 5kΩ 50kΩ 500 kΩ 5MΩ 30MΩ	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.001MΩ 0.001MΩ 0.001MΩ	±0.5% +5d " " ±0.75% +5d ±0.75% +10d	
	Range 500Ω 5kΩ 50kΩ 500 kΩ 500 kΩ 5MΩ 30MΩ	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ	±0.5% +5d ±0.75% +5d ±0.75% +10d	
	Range 500Ω 5kΩ 50kΩ 500 kΩ 5MΩ 30MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.01MΩ 0.001MΩ 0.00TMC 0.00TMC 0.00TLET) Resolution 1mV~10mA	±0.5%+5d ±0.75%+5d ±0.75%+10d Accuracy ±1.5%+20mA	
	Range 500Ω 5kΩ 50kΩ 500 kΩ 500 kΩ 5MΩ 30MΩ wps (current probe Range 30mA~20A 100mA~40A	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ OUTLET) Resolution 1mV~10mA 1mV~100mA	±0.5% +5d ±0.75% +50 ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA	
	Range 500Ω 5kΩ 50kΩ 500 kΩ 5MΩ 30MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.01MΩ 0.001MΩ 0.00TMC 0.00TMC 0.00TLET) Resolution 1mV~10mA	±0.5%+5d ±0.75%+5d ±0.75%+10d Accuracy ±1.5%+20mA	
OC A	Range 500Ω 5kΩ 50kΩ 500 kΩ 500 kΩ 30MΩ 30MΩ 8 Range 30mA~20A 100mA~40A 40A~60A	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.1kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~100mA	±0.5% +5d ±0.75% +50 ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA	
	Range 500Ω 5kΩ 50kΩ 500 kΩ 500 kΩ 5MΩ 30MΩ 30MΩ 40A-20A 100MA~40A 40A-60A	Resolution 0.1Ω 0.01kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~10mA 1mV~100mA	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A	Annuary
OC A	Range 500Ω 5kΩ 50kΩ 500 kΩ 500 kΩ 30MΩ 30MΩ 8 Range 30mA~20A 100mA~40A 40A~60A	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.1kΩ 0.1kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~100mA	±0.5% +5d " ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A	Accuracy
OC A	Range 500Ω 5kΩ 50kΩ 500 kΩ 5MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~100mA 00/ILET) Resolution	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz ~ 1kHz	1∼5kHz
OC A	Range 500Ω 5kΩ 50kΩ 500 kΩ 5MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~100mA 00/ILET) Resolution	±0.5% +5d " ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A	1~5kHz ±4.0% +30mA
OC A	Range 500Ω 5kΩ 50kΩ 500 kΩ 500 kΩ 5MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ OUTLET) Resolution 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA	±0.5% +5d " ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz ~ 1kHz ±2.0% +20mA	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC A	Range 500Ω 5kΩ 50kΩ 500 kΩ 5MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~100mA 00/ILET) Resolution	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz ~ 1kHz	1~5kHz ±4.0% +30mA
OC AI	Range 500Ω 5kΩ 50kΩ 50kΩ 50kΩ 500 kΩ 5MΩ 30MΩ MPS (CURRENT PROBE Range Range 100mA~40A 40A-60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ OUTLET) Resolution 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA	±0.5% +5d " ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz ~ 1kHz ±2.0% +20mA	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC AI	Range 500Ω 5kΩ 50kΩ 500 kΩ 500 kΩ 5MΩ 30MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A	Resolution 0.1Ω 0.01kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ OUTLET) Resolution 1mV~10mA 1mV~100mA 1mV~10mA 1mV~10mA 1mV~10mA 1mV~10mA	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz~1kHz ±2.0% +20mA ±8.0% +0.3A	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC AI	Range 500Ω 5kΩ 5kΩ 50kΩ 500 kΩ 500 kΩ 5MΩ 30MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~10mA 1mV~10mA 1mV~10mA 1mV~10mA	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz-1kHz ±2.0% +20mA ±8.0% +0.3A	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC AI	Range 500Ω 5kΩ 50kΩ 500 kΩ 500 kΩ 5MΩ 30MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A	Resolution 0.1Ω 0.01kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ OUTLET) Resolution 1mV~10mA 1mV~100mA 1mV~10mA 1mV~10mA 1mV~10mA 1mV~10mA	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz~1kHz ±2.0% +20mA ±8.0% +0.3A	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC AI	Range 500Ω 5kΩ 50kΩ 50kΩ 500 kΩ 500 kΩ 5MΩ 30MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A NUITY Test Voltage 1.2V	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~10mA 1mV~10mA 1mV~10mA 1mV~10mA	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz-1kHz ±2.0% +20mA ±8.0% +0.3A	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC AI	Range 500Ω 5kΩ 5kΩ 50kΩ 500 kΩ 500 kΩ 500 mΩ 30MΩ 30MΩ 30MΩ 30MA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A NUITY Test Voltage 1.2V	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.1kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40H2~1kH2 ±2.0% +20mA ±8.0% +0.3A Response Time 1mS	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC AI	Range 500Ω 5kΩ 50kΩ 50kΩ 50kΩ 500 kΩ 5MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A NUITY Test Voltage 1.2V Test Range	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001M	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz ~ 1kHz ±2.0% +20mA *** *** *** *** *** *** *	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC AI	Range 500Ω 5kΩ 5kΩ 50kΩ 500 kΩ 500 kΩ 500 mΩ 30MΩ 30MΩ 30MΩ 30MA~20A 100mA~40A 40A~60A MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A NUITY Test Voltage 1.2V	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.1kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~10mA 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA 1mV~100mA	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40H2~1kH2 ±2.0% +20mA ±8.0% +0.3A Response Time 1mS	1~5kHz ±4.0% +30mA ±6.0% +30mA
C AI	Range 500Ω 5kΩ 5kΩ 50kΩ 500 kΩ 500 kΩ 500 mΩ 30MΩ 30MΩ 30MΩ 30MA~20A 100mA~40A 40A~60A 40A~60A NUTY Test Voltage 1.2V 1 Test Range 2.0V	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001M	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz ~ 1kHz ±2.0% +20mA *** *** *** *** *** *** *	1~5kHz ±4.0% +30mA ±6.0% +30mA
C A	Range 500Ω 5kΩ 5bkΩ 50kΩ 50kΩ 500 kΩ 5MΩ 30MΩ 30MΩ MPS (CURRENT PROBE Range 30mA~20A 100mA~40A 40A~60A 100mA~40A 40A~60A NUITY Test Voltage 1.2V Test Range 2.0V	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 0.001MΩ 1mV~100mA	±0.5% +5d ±0.75% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz ~ 1kHz ±2.0% +20mA *** *** *** *** *** *** *	1~5kHz ±4.0% +30mA ±6.0% +30mA
OC A	Range 500Ω 5kΩ 5kΩ 50kΩ 500 kΩ 500 kΩ 500 mΩ 30MΩ 30MΩ 30MΩ 30MA~20A 100mA~40A 40A~60A 40A~60A NUTY Test Voltage 1.2V 1 Test Range 2.0V	Resolution 0.1Ω 0.001kΩ 0.01kΩ 0.01kΩ 0.01kΩ 0.001MΩ 0.001M	±0.5% +5d ±0.75% +5d ±0.75% +10d Accuracy ±1.5% +20mA ±2.0% +20mA ±4.0% +0.3A Accuracy 40Hz ~ 1kHz ±2.0% +20mA *** *** *** *** *** *** *	1~5kHz ±4.0% +30mA ±6.0% +30mA





_OBDII Code Reader

- Active and Pending Codes
- Generic and Manufacture Specific Definitions (GM, Ford, Chrysler, Toyota and Honda)
- I/M Readiness Monitor Status Indication
- Erase DTC's (diagnostic trouble codes) and reset MIL capability
- USB Interface easily supports future updates (software sold seperatly)





Accessories



Standard

Inductive Pick-up	ADL7100A10
	ADL7103AC5W
	ADL7103ACDC
	ADL7103BAT
Back-probe tips (1 red, 1, blac	:k, 1 yellow) ADL7103BP
Ground Lead	ADL7103GL
OBD II Cable	ADL7103OBD
2mm Probe Tip (1 red, 1 blac	k, 1 yellow) ADL7103PT
Secondary Ground Probe	ADL7103SG
Secondary Ignition Probe	ADL7103SIP
Test Leads (1 red, 1 yellow)	ADL7103TL
Carry Case	ADL7103CC

Optional

Diesel Interface Probe	ADL7103ADP
Battery to Cigarette Plug Adapter	ADL7103BCA
Cigarette Lighter adapter	
Temperature Probe	
USB Interface Kit	ADL7103USB

USA

EUROPE

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