

# EMX-7000 SERIES

PXIe PRECISION PROGRAMMABLE  
RESISTOR LADDER



## FEATURES

- (4) Independent Channels
- 1 $\Omega$  Resistance Increments
- Precision Sensor Simulation Capability
- Low Thermal Offset
- Independent Sense Feedback
- Parallel and Series Operation
- Dynamic Soft Front Panel
- IVI-COM, IVI-C, LabVIEW™ Drivers
- Monitoring the Set Values Without Disconnecting Channels Connections
- 3-Year Warranty

## APPLICATIONS

- Sensor Simulation
- Process Control
- ATE Calibration
- Device Loading
- Potentiometer Control

# EMX-7000 SERIES PXIe PRECISION PROGRAMMABLE RESISTOR LADDER

## Overview

The AMETEK VTI Instruments EMX-7000 SERIES PXIe Precision Programmable Resistor Ladder modules provide four independent channels of programmable resistors. The EMX-7004 is capable of delivering exceptional stability and accuracy for any resistance value between 1  $\Omega$  to 16,383  $\Omega$  and can be adjusted in 1  $\Omega$  increments through the software application programming interface (API) or dynamic soft front panel. The EMX-7005, EMX-7006 and EMX-7007 are perfect for applications requiring higher resistance values, with programmable settings ranging from 163 k $\Omega$  to 16.383 Mohms, while the EMX-7014, 7015 and 7016 are ideal for general purpose applications not requiring ultra high accuracies.

Models	Range	Step Size	Power	Accuracy		
				Resistor Range	% of Programmed Value	Offset in Ohms
EMX-7004	1 $\Omega$ to 16,383 $\Omega$	1 $\Omega$	0.4W @ 70 °C Thermal	<=7	0.50%	0.125
				>7	0.20%	0.25
				>31	0.07%	0.5
				>64	0.05%	0.5
				>256	0.02%	0.5
			>=3135	0.01%	0.5	
EMX-7005	10 $\Omega$ to 163,830 $\Omega$	10 $\Omega$	0.4W @ 70 °C Thermal	<=70	0.05%	0.125
				>70	0.02%	0.25
				>310	0.02%	0.5
				>2000	0.01%	0.5
EMX-7006	100 $\Omega$ to 1,638,300 $\Omega$	100 $\Omega$	0.3W @ 70 °C Thermal	<=700	0.01%	0.125
				<=3100	0.01%	0.25
				>3100	0.01%	0.5
EMX-7007	1000 $\Omega$ to 16,383,000 $\Omega$	1000 $\Omega$	0.3W @ 70 °C Thermal	<=7000	0.01%	0.125
				<=31000	0.01%	0.25
				<4096000	0.01%	0.5
				>=4096000	0.02%	0.5
EMX-7014	1 $\Omega$ to 16,383 $\Omega$	1 $\Omega$	0.25W @ 70 °C Thermal	<=7	1.00%	0.125
				>7	0.75%	0.25
				>31	0.62%	0.5
				>=367	0.51%	0.5
EMX-7015	10 $\Omega$ to 163,830 $\Omega$	10 $\Omega$	0.25W @ 70 °C Thermal	<=70	0.51%	0.125
				<=310	0.51%	0.25
				>310	0.51%	0.5
EMX-7016	100 $\Omega$ to 1,638,300 $\Omega$	100 $\Omega$	0.25W @ 70 °C Thermal	<=700	0.52%	0.125
				<=3100	0.52%	0.25
				>3100	0.52%	0.5

Specifications subject to change without notice.

## Ordering Information

Model	Part No.	Configuration
EMX-7004	70-0409-119R	4-Channel, 1 $\Omega$ - 16,383 $\Omega$ Precision Programmable Resistor Ladder Card, 0.4 W
EMX-7005	70-0409-120R	4-Channel, 10 $\Omega$ - 163,830 $\Omega$ Precision Programmable Resistor Ladder Card, 0.4 W
EMX-7006	70-0409-121R	4-Channel, 100 $\Omega$ - 1,638,300 $\Omega$ Precision Programmable Resistor Ladder Card, 0.3 W
EMX-7007	70-0409-122R	4-Channel, 1000 $\Omega$ - 16,383,000 $\Omega$ Precision Programmable Resistor Ladder Card, 0.3 W
EMX-7014	70-0409-170R	4-Channel, 1 $\Omega$ - 16,383 $\Omega$ Precision Programmable Resistor Ladder Card, 0.25 W
EMX-7015	70-0409-171R	4-Channel, 10 $\Omega$ - 163,830 $\Omega$ Precision Programmable Resistor Ladder Card, 0.25 W
EMX-7016	70-0409-172R	4-Channel, 100 $\Omega$ - 1,638,300 $\Omega$ Precision Programmable Resistor Ladder Card, 0.25 W



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