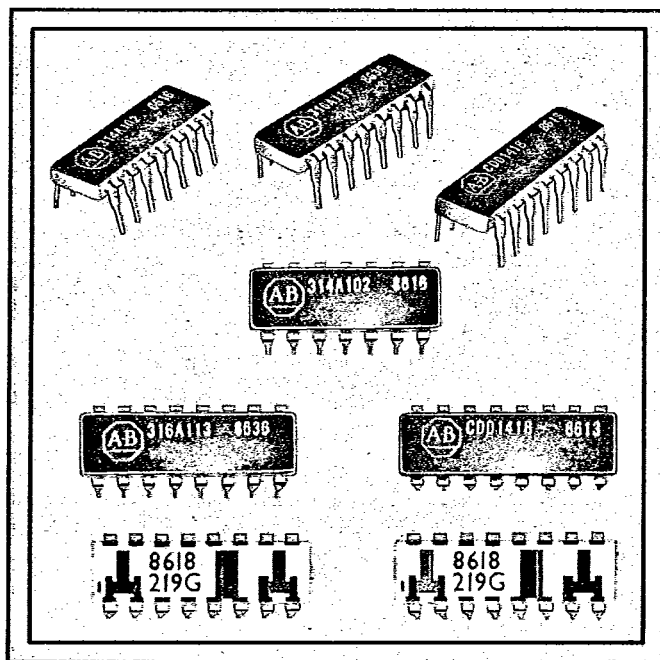




Series 314, 316

Cermet Resistor Networks



I-DIP

Dual In-Line Package

FEATURES

- Solid Ceramic Body
- Custom Circuit Compatible
- 0.100 Inch (2,54mm) Lead Spacing
- Low Profile
- 14, 16 and 18 Pin Construction
- Automatically Insertable
- Exclusive Allen-Bradley Cermet Ink Performance

SPECIFICATIONS

Standard Network Applications

NETWORK

314A 316A	314B 316B	314E 316E	316LR8 316L08 314L10	314M110 314M120 314M125	314M130	316T110	314X101 316X101	314Z
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APPLICATIONS

Pull-Up Resistor Arrays for Unused TTL Gates Parallel High Speed Circuitry Wired OR Configurations Pull-Down Applications TTL-MOS Interfacing Digital Pulse Squaring	Transmission Line Termination Power Gate Pull-Up Current Limiting Logic Level Translation	Digital Line Termination ECL and TTL Applications	8 BIT R/2R Ladder 10 BIT R/2R Ladder Network for D/A and A/D Converter with Bi Polar or CMOS Switches	Complement the 7520 Series of Core Memory Sense Amps	Core-Memory Sense Line Applications with Two 711 Dual Voltage Comparators	TTL to ECL Translator Network	Interconnect Networks Shorting Applications Matrix Interconnections Test Plugs	Fixed Voltage Attenuation with Impedance Matching
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Applications Information

For application information refer to the following Allen-Bradley Application Notes:

- Digital System Resistor Arrays: EC5410-4.1
- ECL Terminator Networks: EC5410-4.2
- Resistive Attenuator Pads: EC5410-4.3

Custom Resistor Networks

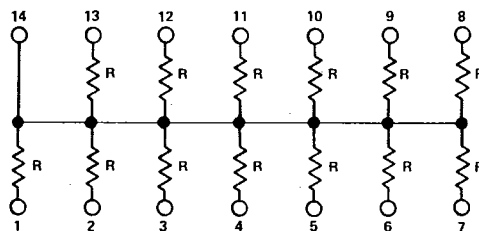
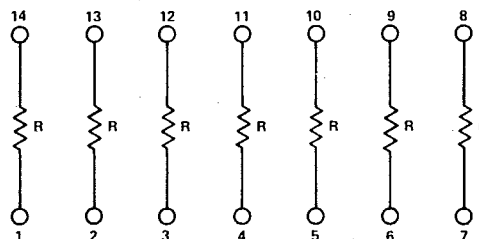
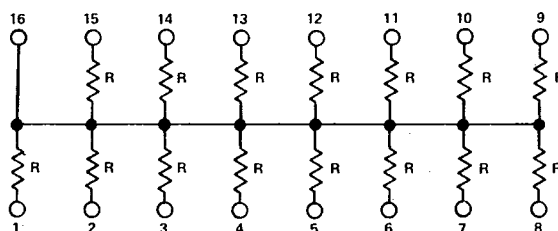
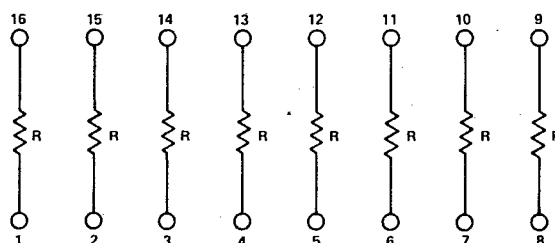
When a standard Allen-Bradley network does not meet your requirements, a custom network can be designed to your specifications. See suggestions as shown later in this publication.

SERIES 314A, 314B, 316A and 316B**Applications****Series 314A and 316A —**

Pull-Up resistor arrays for unused TTL gates.
 Parallel high speed circuitry.
 Wired OR configurations.
 Pull-Down applications.
 TTL-MOS interfacing.
 Digital pulse squaring.

Series 314B and 316B —

Transmission line termination.
 Power gate pull-up.
 Current limiting.
 Logic level translation.

Standard Network Schematic Diagrams**Series 314A****Series 314B****Series 316A****Series 316B****Standard Network Specifications**

Resistor tolerance — $\pm 2\%$, also optional tolerance of $\pm 1\%$ available for certain values.

Temperature coefficient of resistance — $\pm 100 \text{ ppm}/^\circ\text{C}$.

Operating temperature range — -55°C to $+125^\circ\text{C}$.

Power dissipation rating — Up to 70°C ambient **1**.

Series	Individual Resistor Rating	Total Package Rating
314A	125 mw 2	1.6 watts
314B	250 mw 3	1.6 watts
316A	125 mw 2	1.8 watts
316B	250 mw 3	1.8 watts

1 At $+70^\circ\text{C}$ power derates linearly from full rated power to 0 wattage at $+130^\circ\text{C}$.

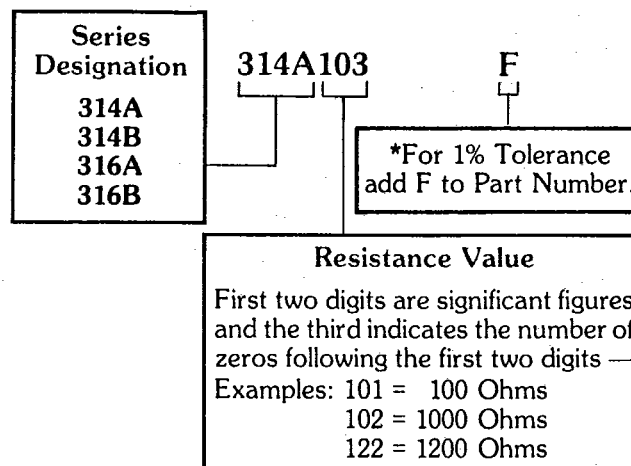
2 Rated continuous working voltage (RCWV), based on nominal resistance (R) in ohms, is $\sqrt{125 \times R}$ or 100 volts, whichever is less.

3 Rated continuous working voltage (RCWV), based on nominal resistance (R) in ohms, is $\sqrt{25 \times R}$ or 250 volts, whichever is less.

Standard Resistance Values*

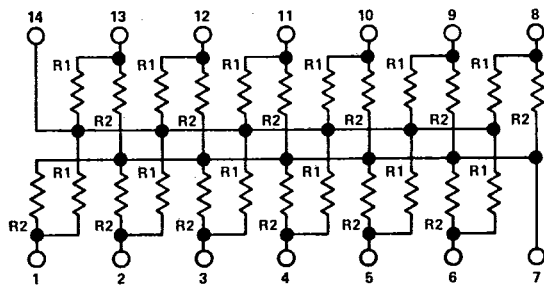
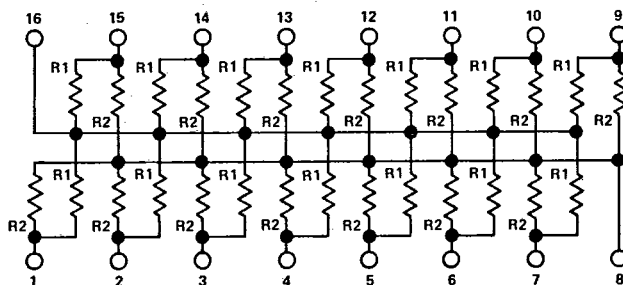
22	110	560	3000	13K	68K
24	120	620	3300	15K	75K
27	130	680	3600	16K	82K
30	150	750	3900	18K	91K
33	160	820	4300	20K	100K
36	180	910	4700	22K	120K
39	200	1000	5100	24K	150K
43	220	1100	5600	27K	180K
47	240	1200	6000	30K	220K
51	270	1300	6200	33K	270K
56	300	1500	6800	36K	330K
62	330	1600	7500	39K	390K
68	360	1800	8200	43K	470K
75	390	2000	9100	47K	560K
82	430	2200	10K	51K	680K
91	470	2400	11K	56K	1M
100	510	2700	12K	62K	

*All standard values available in 1% tolerance.

Explanation of Part Numbers

SERIES 314E AND 316E**Applications** _____

Series 314E and 316E —
Digital line termination.
ECL and TTL applications.

Standard Network Schematic Diagrams _____**Series 314E****Series 316E****Standard Network Specifications** _____

Resistor tolerance — $\pm 2\%$.

Temperature coefficient of resistance —
 $\pm 100\text{ppm}/^\circ\text{C}$.

Operating temperature range — -55°C to $+125^\circ\text{C}$.

Power dissipation rating — Up to 70°C ambient ■.

Series	Individual Resistor Rating	Total Package Rating
314E	125 mw	1.6 watts
316E	125 mw	1.8 watts

■ At $+70^\circ\text{C}$ power derates linearly from full rated power to 0 wattage at $+130^\circ\text{C}$.

Standard Resistance Values _____

R (Ohms)

R1/R2	(Characteristic Z_0 Impedance)	R1/R2	(Characteristic Z_0 Impedance)
81/130	50	220/330	132
120/200	75	330/390	179
90/660	80	330/470	194
130/210	80	330/680	222
160/260	100	1.5K/3.3K	1.03K
220/270	121	3K/6.2K	2.02K
180/390	123		

Explanation of Part Numbers _____