

Bondable Resistors for Transducers - Selection Chart

N2B Balco resistors are available in our LT02 and LT06 sizes.

N2T Nickel resistors are available in our LT02, LT06, LT09 and LT10 sizes. The standard resistance values for each are as shown. Custom resistance values are available for a small set-up charge and 500-piece minimum order.

Resistance tolerance is ±1% at +75°F (+24°C).

Recommended Uses:

- span-shift-versus-temperature compensation
- temperature sensing

Construction

Fixed pattern resistors are normally manufactured and stocked with E5 encapsulation as standard. Solder tabs are left exposed for leadwire connections.

Examples:

N2B-TR-LT06-00200/E5, N2T-TR-LT02-00250/E5.

Resistance tolerance on Option E5 versions is $\pm 1\%$ at $+75^{\circ}F$ (+ 24°C).

GAGE PATTERN ANI	STANDARD RESISTANCE RANGE IN OHMS	DIM	IENSIONS	inch	millimeter		
Matrix is shown at actual size. Insert Desired Resistors Size in Spaces Marked XX.		PATTERN		MATRIX			
		Length	Width	Length	Width		
	Nickel options:		LT02				
LT02	N2T-TR-LTXX-00150 N2T-TR-LTXX-00175	15 17.5	0.24	0.13	0.30	0.19	
nnnn	N2T-TR-LTXX-00200 N2T-TR-LTXX-00250 N2T-TR-LTXX-00300 N2T-TR-LTXX-00400 N2T-TR-LTXX-00600 N2T-TR-LTXX-00650 N2T-TR-LTXX-00700	20 25 30 40 60 65 70	6.1	3.2	7.5	4.7	
			LT06				
			0.19	0.13	0.24	0.18	
			4.8	3.3	6.1	4.6	
LT06	Balco options: N2B-TR-LTXX-00150 N2B-TR-LTXX-00175 N2B-TR-LTXX-00200 N2B-TR-LTXX-00250 N2B-TR-LTXX-00300 N2B-TR-LTXX-00400 N2B-TR-LTXX-00600 N2B-TR-LTXX-00650 N2B-TR-LTXX-00700	15 17.5 20 25 30 40 60 65 70	RoHS compliant.				
			LT09				
			0.12	0.11	0.13	0.12	
LT09	Nickel options: N2T-TR-LTXX-00100	10	3.0	2.7	3.3	3.0	
LIOS	N2T-TR-LTXX-00125	12.5	LT10				
·	N2T-TR-LTXX-00150 N2T-TR-LTXX-00200	15 20	0.08	0.07	0.09	0.07	
	N2T-TR-LTXX-00225 N2T-TR-LTXX-00300	22.5 30	2.1	1.8	2.5	1.9	
LT10 ∭∭∭ ⊟ ■.■	N2T-TR-LTXX-00400 N2T-TR-LTXX-00450 N2T-TR-LTXX-00500 N2T-TR-LTXX-00600 N2T-TR-LTXX-00720 N2T-TR-LTXX-00800 N2T-TR-LTXX-00900	40 45 50 60 72 80 90	RoHS compliant.				



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GAGE PATTERN AND DESIGNATION Actual size shown on right Insert Desired S-T-C No. in Spaces Marked XX. See Note 1		RESISTANCE IN OHMS		DIMENSIONS		inch millimeter		
				PATTERN		MATRIX		
				Length	Width	Length	Width	
A В С D	.,		Before	After	0.30	0.20	0.34	0.23
			Cut	Cut	7.6	5.1	8.6	5.9
		N2B-TR-C11A-00050 N2B-TR-C12A-00100 N2B-TR-C12A-00200 N2B-TR-C13A-00400 N2B-TR-C13A-00800	5 12 10 24 20 48 40 96 80 192		C Pattern grid and adjustable ladder resistors are available in various nominal resistances adjustable to 240% of the initial value. Nominal cutting steps: 4 at 20%; 4 at 10%; and 20 at 1% (see Resistor Adjustment Instructions). Recommended Uses: • span-shift-versus-temperature compensation			
			2.5		0.35	0.14	0.41	0.20
		NOT TO DOLLA COOCE			8.9	3.6	10.4	5.1
		N2F-TR-D01A-00005 N2B-TR-D01A-00060 N2A-XX-D01A-00180 EA-XX-D01A-00360 N2K-XX-D01A-00500/DP N2K-XX-D01A-00750/DP	0.5 6 18 36 50 75		The D Pattern adjustable ladder resistor is a small, single-network pattern available in various alloys and resistances (see Resistor Adjustment Instructions). Resistances listed are nominal fully cut values. Recommended Uses: • zero-shift compensation (N2F) • span-shift-versus-temperature compensation (N2B) • span set (EA, N2A, and N2K)			
				0.35	0.30	0.41	0.36	
дис пер	диспер				8.9	7.6	10.4	9.1
	N2F-TR-E01A-00005 N2A-XX-E01A-00060 N2A-XX-E01A-00180 EA-XX-E01A-00360 N2K-XX-E01A-00500/DP N2K-XX-E01A-00750/DP	0.5 6 18 36 50 75		E Pattern adjustable ladder resistors are similar to the D Pattern but incorporate two adjustable networks on one matrix to provide the differential adjustment capability often required in bridge balance and zero-shift compensation (see Resistor Adjustment Instructions). Resistances listed are nominal fully cut values per network. Recommended Uses: • zero-shift compensation (N2F) • bridge balance (EA, N2A, and N2K)				
	N2A-XX-H21A-00025 N2A-XX-H21A-00060 N2B-TR-H22A-00010			0.15	0.29	0.21	3.5	
				3.8	7.4	5.3	8.9	
		2. 6. 1.	0	H Pattern resistors are adjusted upward in resistance value by rubbing the foil loops with a hand-held or electric pencil eraser. The H21 patterns, produced in constantan alloy, are used for bridge-balance adjustment. (2.5-ohm resistors are typically employed in 350-ohm bridges, and 6.0 ohm in 1000-ohm bridges.) The H22, produced in Balco alloy, is used for bridge zero-versus-temperature adjustment (see Resistor Adjustment Instructions). Resistance values are nominal. Recommended Uses: bridge balance (H21) bridge zero-shift compensation (H22)				

RESISTANCE WIRE

While wire does not track the temperature of the strain gages as closely as bondable resistors, there are instances where bondable resistors cannot be used due to limited mounting space. Micro-Measurements stocks two types of resistance wire alloys.

CATALOG NO./ WIRE ALLOY	QTY PER SPOOL	RESISTANCE PER FT (M) NOMINAL	TCR [-10° TO +50°C]	INSULATION	TEMPERATURE RANGE
137-HWN/Manganin	200 ft [61m]	14Ω (46Ω)	± 0.0011%/°F [± 0.002%/°C]	Enamel	+15° to +120°F [-10° to +50°C] (up to +175°F [+80°C] if proper aging is done)
142-JWN/Balco	500 ft [152m]	19Ω (62Ω)	+0.25%/°F [+0.45%/°C]	Enamel	−15° to +300°F [−10° to +150°C]

NOTE 1: All products are RoHS compliant.



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Document No.: 63999 Revision: 15-Jul-2014