Thermocouple and Extension Grade Alloy

American standard ANSI MC96-1

Type of extension	Nominal composition	American standard ANSI MC 96-1			
		mv	At temp ℃	Tolerance	
				Standard	Special
KX(+CHROMEL vs -ALUMEL)	(KPX):90%Ni-10%Cr (KNX):95%Ni+Al-Mn-Si	4.096 8.139	100 200	±2.2℃ from 0℃ to 200℃	
VX(+COPPER vs -CONSTANTAN)	(VPX):100% Cu (VNX):44% Ni-balance Cu	4.096 -	100	±2.2℃ from 0℃ to 100℃	
EX(+CHROMEL vs -CONSTANTAN)	(EPX):90%Ni-10%Cr (ENX):44% Ni-balance Cu	6.319 13.421	100 200	±1.7℃ from 0℃ to 200℃	
TX(+COPPER vs -CONSTANTAN)	(TPX):100%Cu (TNX):44%Ni-balance Cu	4.279	100	±1℃ from 0℃ to 100℃	±0.5℃ from 0℃ to 100℃
JX(+IRON vs -CONSTANTAN)	(JPX):100%Fe (JNX):44%Ni-balance Cu	5.269 10.779	100 200	±2.2℃ from 0℃ to 200℃	±1.1℃ from 0℃ to 200℃
NX(+NICROSIL vs -NISIL)	(NPX):84%Ni-14.2%Cr-Si (NNX):95%Ni-4.3%Si	2.774 5.913	100 200	±2.2℃ from 0℃ to 200℃	

Type VX is not included in the recent American standard but it is still used

Thermocouple and Extension Grade Alloy

European standard IEC 584-3(DIN EN 60584-3;BS 4937;NFC 42324)

Type of extension	Nominal composition	American standard ANSI MC 96-1			
		mv	At temp ℃	Tolerance	
				Standard	Special
KX(+CHROMEL vs -ALUMEL)	(KPX):90%Ni-10%Cr (KNX):95%Ni+Al-Mn-Si	4.096 8.139	100 200	±2.5℃ from -25℃ to 200℃	±1.5℃ from -25℃ to 200℃
WX(+IRON vs -CONSTANTAN)	(WPX):100%Fe (WNX):43%Ni--2%Mn 2%Fe-banlance Cu	4.096 8.139	100 200	±2.5℃ from 0℃ to 150℃	
VX(+COPPER vs -CONSTANTAN)	(VPX):100% Cu (VNX):44% Ni-balance Cu	4.096 -	100	±2.2℃ from 0℃ to 100℃	
EX(+CHROMEL vs -CONSTANTAN)	(EPX):90%Ni-10%Cr (ENX):44% Ni-balance Cu	6.319 13.421	100 200	±2.5℃ from -25℃ to 200℃	±1.5℃ from -25℃ to 200℃
TX(+COPPER vs -CONSTANTAN)	(TPX):100%Cu (TNX):44%Ni-balance Cu	4.279	100	±1℃ from -25℃ to 100℃	±0.5℃ from -25℃ to 100℃
JX(+IRON vs -CONSTANTAN)	(JPX):100%Fe (JNX):44%Ni-balance Cu	5.269 10.779	100 200	±2.5℃ from -25℃ to 200℃	±1.5℃ from -25℃ to 200℃
NX(+NICROSIL vs -NISIL)	(NPX):84%Ni-14.2%Cr-Si (NNX):95%Ni-4.3%Si	2.774 5.913	100 200	±2.5℃ From -25℃ To 200℃	±1.5℃ from -25℃ to 200℃

Thermocouple and Extension Grade Alloy

Japanese standard JIS C1610

Type of extension	Nominal composition	American standard ANSI MC 96-1			
		mv	At temp ℃	Tolerance	
				Standard	Special
KX(+CHROMEL vs -ALUMEL)	(KPX):90%Ni-10%Cr (KNX):95%Ni+Al-Mn-Si	4.096 8.139	100 200	±100MV from -25℃ to 200℃	±60MV from -25℃ to 200℃
WX(+IRON vs -CONSTANTAN)	(WPX):100%Fe (WNX):43%Ni--2%Mn 2%Fe-banlance Cu	4.096 8.139	100 200	±100MV from 0℃ to 150℃	
VX(+COPPER vs -CONSTANTAN)	(VPX):100% Cu (VNX):44% Ni-balance Cu	4.096 -	100	±100MV from 0℃ to 100℃	
EX(+CHROMEL vs -CONSTANTAN)	(EPX):90%Ni-10%Cr (ENX):44% Ni-balance Cu	6.319 13.421	100 200	±200MV from -25℃ to 200℃	±120MV from -25℃ to 200℃
TX(+COPPER vs -CONSTANTAN)	(TPX):100%Cu (TNX):44%Ni-balance Cu	4.279	100	±160MV from -25℃ to 100℃	±30MV from -25℃ to 100℃
JX(+IRON vs -CONSTANTAN)	(JPX):100%Fe (JNX):44%Ni-balance Cu	5.269 10.779	100 200	±140MV from -25℃ to 200℃	±185MV from -25℃ to 200℃
NX(+NICROSIL vs -NISIL)	(NPX):84%Ni-14.2%Cr-Si (NNX):95%Ni-4.3%Si	2.774 5.913	100 200	±200MV from -25℃ to 200℃	±60MV from -25℃ to 200℃