



NJX12 Series Miniature Relays

1. Product Overview

- NJX12 is a new generation relay with 12mm width, available for AC and DC voltage, can be used for PLC control, with matching socket.
- Mechanical locking and power indication function are available for selection.
- Conformity certification: CE.

2. Normal operating conditions and installation conditions

Temperature range	-40°C ~ +70°C
Relative humidity	+25°C up to 95%
Atmospheric pressure	86kPa~106kPa
Altitude	≤2000m (above 2000m, see elevation coefficient of reduction graph)

3. Main parameters and technical performance

3.1 Contact parameters

Contact form	1Z(C), 2Z(C)
Contact resistance	50mΩ(DC6V, 1A)
Contact material	Silver alloy
Contact load (resistive)	1Z: 12A 250VAC/30VDC 2Z: 8A 250VAC/30VDC
Maximum switching voltage	250VAC/30VDC
Maximum switching current	1Z: 12A 2Z: 8A
Maximum switching power	1Z: 3000VA/360W 2Z: 2000VA/240W
Electrical life (cycles)	1×10 ⁵ (ambient temperature: 25°C ±2°C)
Mechanical life (cycles)	1X10 ⁷

3.2 Performance, characterization parameters

Insulation resistance	100MΩ(500VDC)	
Withstand pressure	Between coil and contact	5000VAC, 1min
	Between different contacts	3000VAC
	Breaking contacts	1000VAC
Operating time (25°C, rated voltage)	≤ 20ms	
Release time (25°C, rated voltage)	≤ 20ms	
Shock (Stability)	Acceleration 100m/s ² , pulse duration 11ms	
Vibration	Double amplitude 1mm, (10~55)Hz	
Terminal forms	Plug-in	
Maximum external dimensions (mm)	29 x 13 x 30.5 (standard)	

3.3 Coil parameters

Rated power consumption	0.64W、1.2VA
Operating voltage	DC: ≤ 75% of rated voltage; AC: ≤ 80% of rated voltage
Release voltage	DC: ≥ 10% of rated voltage; AC: ≥ 20% of rated voltage
Maximum voltage	110% rated voltage

3.4 Coil specification sheet

Rated voltage VDC	Operating Voltage VDC (≤)	Release Voltage VDC (≥)	Coil resistance Ω
6	4.5	0.6	67.9×(1±10%)
9	6.75	0.9	152.8×(1±10%)
12	9	1.2	271.7×(1±10%)
24	18	2.4	1087×(1±10%)
36	27	3.6	2445×(1±15%)
48	36	4.8	4347×(1±15%)
110	82.5	11	22830×(1±15%)

Rated voltage VAC	Operating Voltage VAC (≤)	Release Voltage VAC (≥)	Coil resistance Ω
6	4.8	1.2	16×(1±10%)
12	9.6	2.4	63×(1±10%)
24	19.2	4.8	243×(1±10%)
48	38.4	9.6	1085×(1±10%)
115	92	23	6030×(1±15%)
220	176	44	21530×(1±15%)
230	184	46	24100×(1±15%)
240	192	48	25570×(1±15%)

Note 1: Coil parameters and specifications are values at 25°C coil temperature.

Note 2: In high temperature and high humidity environment, when the surrounding temperature changes drastically, condensation may occur inside the relay, then appropriate dehumidification measures should be taken.

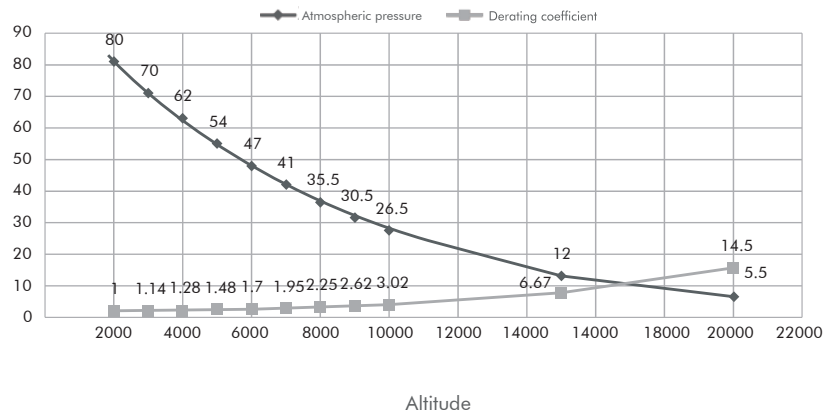
Note 3: The operating voltage is predicted to be 80% or less of the actual value due to individual product variations. The relay will operate normally when a voltage of 80% or more of the rated value is applied, but to realize the specified performance, apply the rated voltage to the coil when using the relay.

Note 4: The actual values of release voltage are predicted to be 20% or more of AC and 10% or more of DC, depending on the product. Make sure that the actual release voltage is less than this value.

Note 5: Maximum voltage is the maximum voltage value that the relay coil can withstand in a short period of time.

Note 6: Elevation derating coefficient graph (product derating reference multiplication factor)

Derating curve for altitude

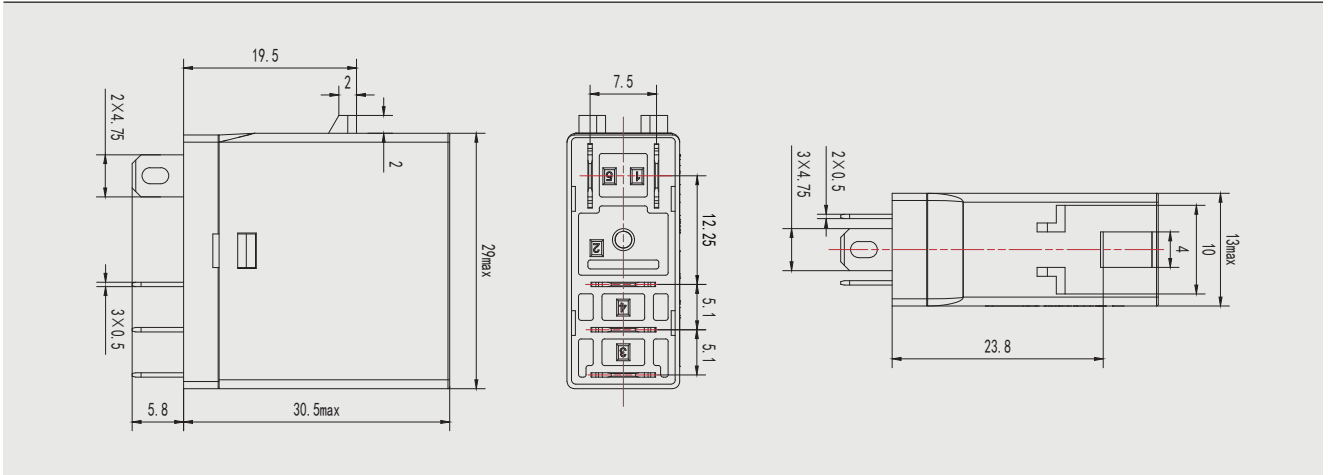


4. Sockets

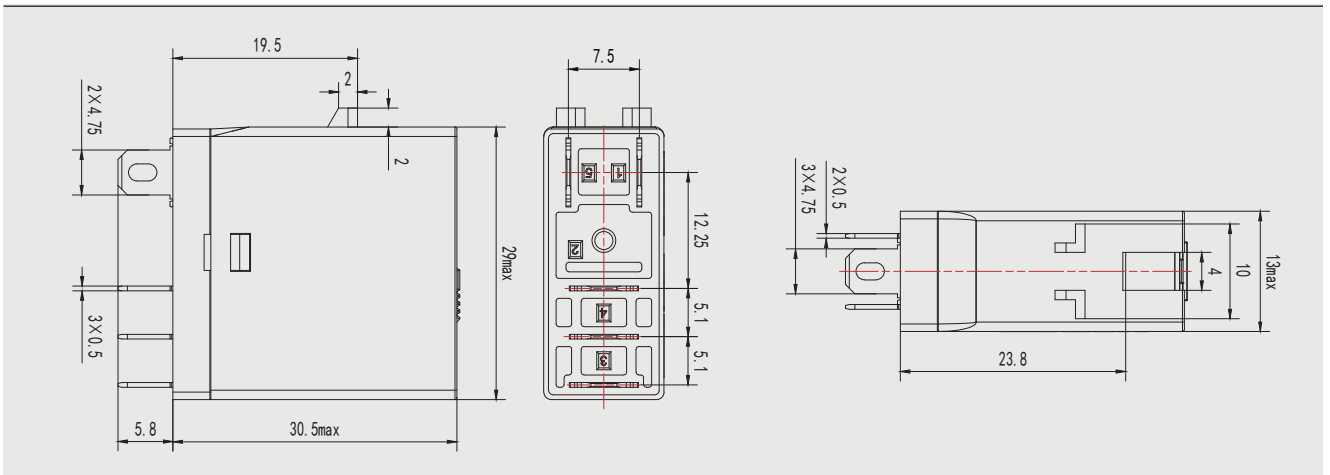
Relay Model	NJX12/1Z	Relay Model	NJX12/2Z
Socket model	NTC12-17	Socket model	NTC12-27

5. Dimensions

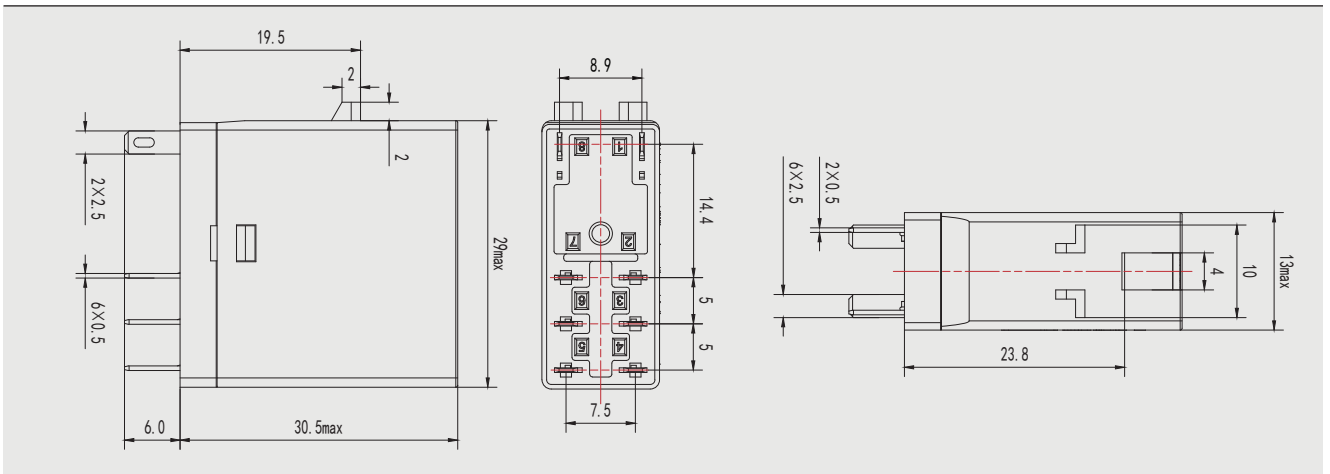
1Z (Standard)



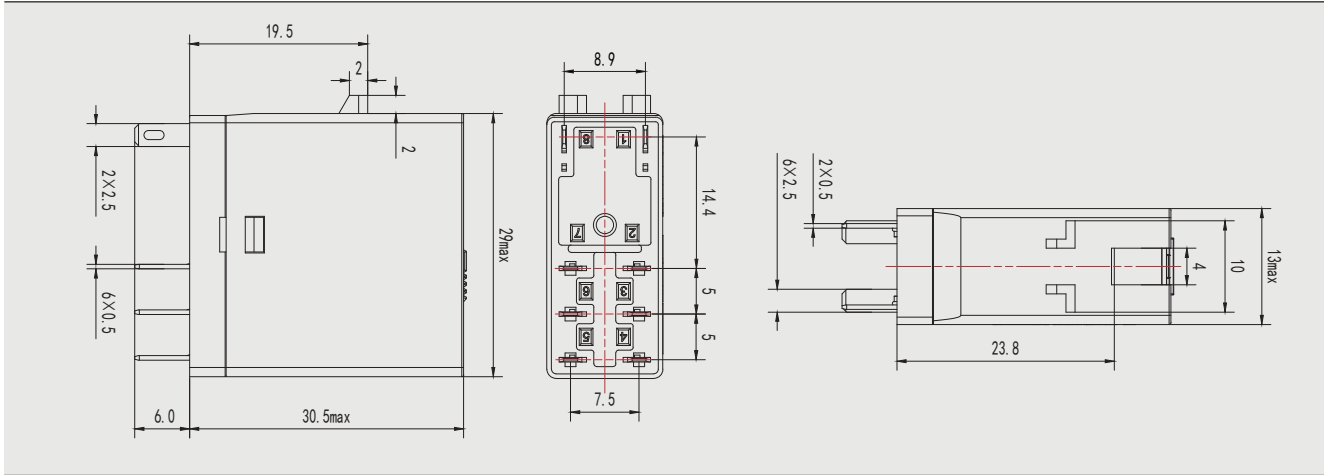
1Z (With mechanical locking)



2Z (Standard)

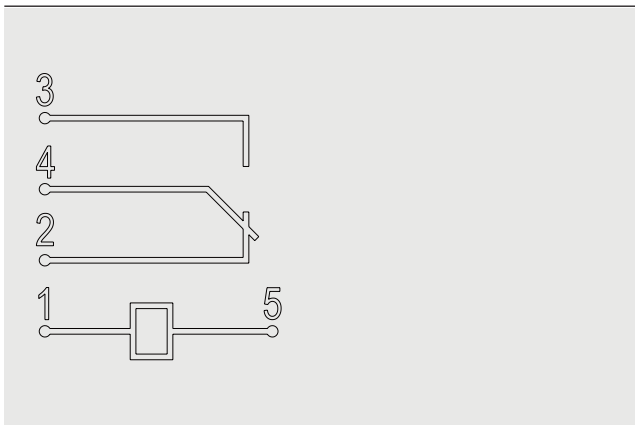


2Z (With mechanical locking)

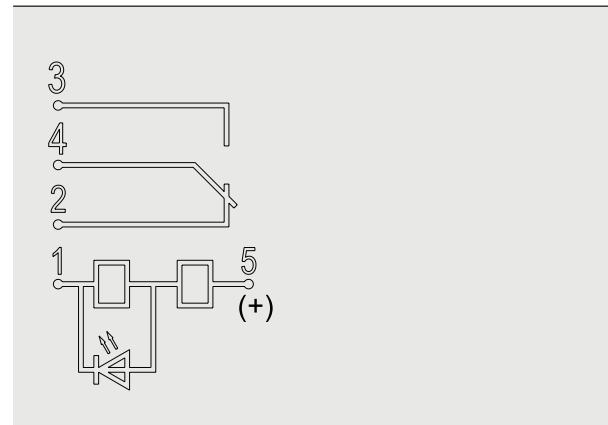


6. Wiring Diagram

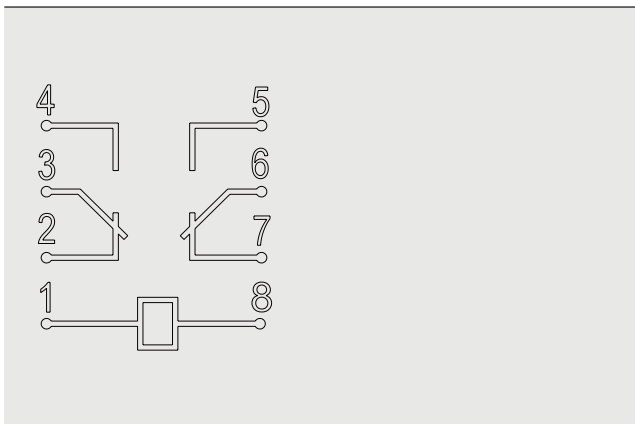
NJX12/1Z



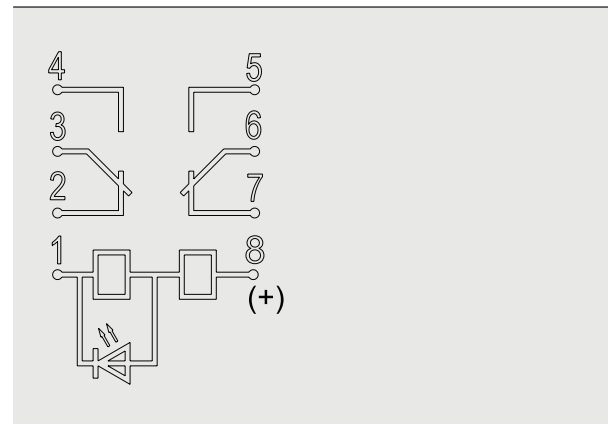
NJX12/1Z(D)



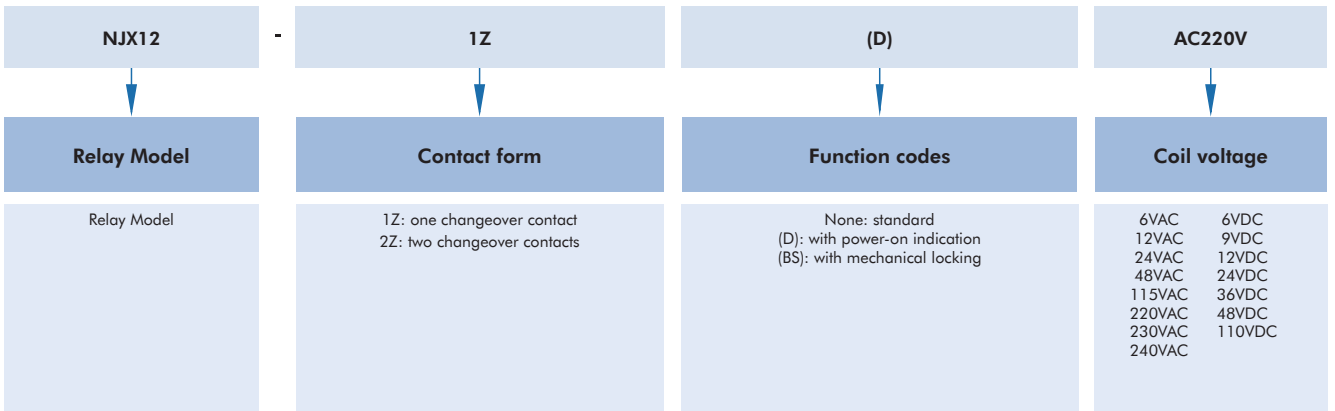
NJX12/2Z



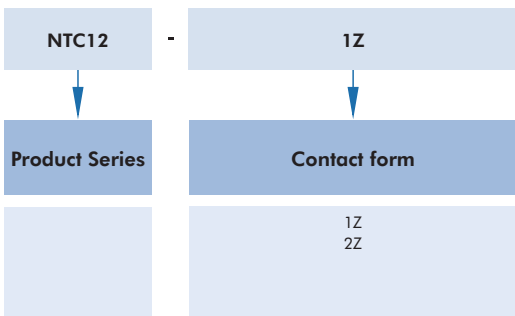
NJX12/2Z(D)



Relay:



Socket:



Contact	Rated current	Function	Coil	Model Description	Code
1Z	12A	-	115VAC	NJX12/1Z 115VAC	526070
1Z	12A	-	12VAC	NJX12/1Z 12VAC	526067
1Z	12A	-	220VAC	NJX12/1Z 220VAC	526071
1Z	12A	-	230VAC	NJX12/1Z 230VAC	526072
1Z	12A	-	240VAC	NJX12/1Z 240VAC	526073
1Z	12A	-	24VAC	NJX12/1Z 24VAC	526068
1Z	12A	-	48VAC	NJX12/1Z 48VAC	526069
1Z	12A	-	6VAC	NJX12/1Z 6VAC	526066
1Z	12A	-	110VDC	NJX12/1Z 110VDC	526080
1Z	12A	-	12VDC	NJX12/1Z 12VDC	526076
1Z	12A	-	24VDC	NJX12/1Z 24VDC	526077
1Z	12A	-	36VDC	NJX12/1Z 36VDC	526078
1Z	12A	-	48VDC	NJX12/1Z 48VDC	526079
1Z	12A	-	6VDC	NJX12/1Z 6VDC	526074
1Z	12A	-	9VDC	NJX12/1Z 9VDC	526075
1Z	12A	Mechanical latching	115VAC	NJX12/1Z(BS) 115VAC	526130
1Z	12A	Mechanical latching	12VAC	NJX12/1Z(BS) 12VAC	526127
1Z	12A	Mechanical latching	220VAC	NJX12/1Z(BS) 220VAC	526131
1Z	12A	Mechanical latching	230VAC	NJX12/1Z(BS) 230VAC	526132
1Z	12A	Mechanical latching	240VAC	NJX12/1Z(BS) 240VAC	526133
1Z	12A	Mechanical latching	24VAC	NJX12/1Z(BS) 24VAC	526128
1Z	12A	Mechanical latching	48VAC	NJX12/1Z(BS) 48VAC	526129
1Z	12A	Mechanical latching	6VAC	NJX12/1Z(BS) 6VAC	526126
1Z	12A	Mechanical latching	110VDC	NJX12/1Z(BS) 110VDC	526140
1Z	12A	Mechanical latching	12VDC	NJX12/1Z(BS) 12VDC	526136
1Z	12A	Mechanical latching	24VDC	NJX12/1Z(BS) 24VDC	526137
1Z	12A	Mechanical latching	36VDC	NJX12/1Z(BS) 36VDC	526138
1Z	12A	Mechanical latching	48VDC	NJX12/1Z(BS) 48VDC	526139
1Z	12A	Mechanical latching	6VDC	NJX12/1Z(BS) 6VDC	526134
1Z	12A	Mechanical latching	9VDC	NJX12/1Z(BS) 9VDC	526135
1Z	12A	LED indicator	115VAC	NJX12/1Z(D) 115VAC	526100
1Z	12A	LED indicator	12VAC	NJX12/1Z(D) 12VAC	526097
1Z	12A	LED indicator	220VAC	NJX12/1Z(D) 220VAC	526101
1Z	12A	LED indicator	230VAC	NJX12/1Z(D) 230VAC	526102
1Z	12A	LED indicator	240VAC	NJX12/1Z(D) 240VAC	526103
1Z	12A	LED indicator	24VAC	NJX12/1Z(D) 24VAC	526098
1Z	12A	LED indicator	48VAC	NJX12/1Z(D) 48VAC	526099
1Z	12A	LED indicator	6VAC	NJX12/1Z(D) 6VAC	526096
1Z	12A	LED indicator	110VDC	NJX12/1Z(D) 110VDC	526110
1Z	12A	LED indicator	12VDC	NJX12/1Z(D) 12VDC	526106
1Z	12A	LED indicator	24VDC	NJX12/1Z(D) 24VDC	526107
1Z	12A	LED indicator	36VDC	NJX12/1Z(D) 36VDC	526108
1Z	12A	LED indicator	48VDC	NJX12/1Z(D) 48VDC	526109
1Z	12A	LED indicator	6VDC	NJX12/1Z(D) 6VDC	526104
1Z	12A	LED indicator	9VDC	NJX12/1Z(D) 9VDC	526105

Contact	Rated current	Function	Coil	Model Description	Code
1Z	12A	LED indicator, with mechanical latching	115VAC	NJX12/1Z(D)(BS) 115VAC	526160
1Z	12A	LED indicator, with mechanical latching	12VAC	NJX12/1Z(D)(BS) 12VAC	526157
1Z	12A	LED indicator, with mechanical latching	220VAC	NJX12/1Z(D)(BS) 220VAC	526161
1Z	12A	LED indicator, with mechanical latching	230VAC	NJX12/1Z(D)(BS) 230VAC	526162
1Z	12A	LED indicator, with mechanical latching	240VAC	NJX12/1Z(D)(BS) 240VAC	526163
1Z	12A	LED indicator, with mechanical latching	24VAC	NJX12/1Z(D)(BS) 24VAC	526158
1Z	12A	LED indicator, with mechanical latching	48VAC	NJX12/1Z(D)(BS) 48VAC	526159
1Z	12A	LED indicator, with mechanical latching	6VAC	NJX12/1Z(D)(BS) 6VAC	526156
1Z	12A	LED indicator, with mechanical latching	110VDC	NJX12/1Z(D)(BS) 110VDC	526170
1Z	12A	LED indicator, with mechanical latching	12VDC	NJX12/1Z(D)(BS) 12VDC	526166
1Z	12A	LED indicator, with mechanical latching	24VDC	NJX12/1Z(D)(BS) 24VDC	526167
1Z	12A	LED indicator, with mechanical latching	36VDC	NJX12/1Z(D)(BS) 36VDC	526168
1Z	12A	LED indicator, with mechanical latching	48VDC	NJX12/1Z(D)(BS) 48VDC	526169
1Z	12A	LED indicator, with mechanical latching	6VDC	NJX12/1Z(D)(BS) 6VDC	526164
1Z	12A	LED indicator, with mechanical latching	9VDC	NJX12/1Z(D)(BS) 9VDC	526165
2Z	8A	-	115VAC	NJX12/2Z 115VAC	526085
2Z	8A	-	12VAC	NJX12/2Z 12VAC	526082
2Z	8A	-	220VAC	NJX12/2Z 220VAC	526086
2Z	8A	-	230VAC	NJX12/2Z 230VAC	526087
2Z	8A	-	240VAC	NJX12/2Z 240VAC	526088
2Z	8A	-	24VAC	NJX12/2Z 24VAC	526083
2Z	8A	-	48VAC	NJX12/2Z 48VAC	526084
2Z	8A	-	6VAC	NJX12/2Z 6VAC	526081
2Z	8A	-	110VDC	NJX12/2Z 110VDC	526095
2Z	8A	-	12VDC	NJX12/2Z 12VDC	526091
2Z	8A	-	24VDC	NJX12/2Z 24VDC	526092
2Z	8A	-	36VDC	NJX12/2Z 36VDC	526093
2Z	8A	-	48VDC	NJX12/2Z 48VDC	526094
2Z	8A	-	6VDC	NJX12/2Z 6VDC	526089
2Z	8A	-	9VDC	NJX12/2Z 9VDC	526090
2Z	8A	Mechanical latching	115VAC	NJX12/2Z(BS) 115VAC	526145
2Z	8A	Mechanical latching	12VAC	NJX12/2Z(BS) 12VAC	526142
2Z	8A	Mechanical latching	220VAC	NJX12/2Z(BS) 220VAC	526146
2Z	8A	Mechanical latching	230VAC	NJX12/2Z(BS) 230VAC	526147
2Z	8A	Mechanical latching	240VAC	NJX12/2Z(BS) 240VAC	526148
2Z	8A	Mechanical latching	24VAC	NJX12/2Z(BS) 24VAC	526143
2Z	8A	Mechanical latching	48VAC	NJX12/2Z(BS) 48VAC	526144
2Z	8A	Mechanical latching	6VAC	NJX12/2Z(BS) 6VAC	526141
2Z	8A	Mechanical latching	110VDC	NJX12/2Z(BS) 110VDC	526155
2Z	8A	Mechanical latching	12VDC	NJX12/2Z(BS) 12VDC	526151
2Z	8A	Mechanical latching	24VDC	NJX12/2Z(BS) 24VDC	526152
2Z	8A	Mechanical latching	36VDC	NJX12/2Z(BS) 36VDC	526153
2Z	8A	Mechanical latching	48VDC	NJX12/2Z(BS) 48VDC	526154
2Z	8A	Mechanical latching	6VDC	NJX12/2Z(BS) 6VDC	526149
2Z	8A	Mechanical latching	9VDC	NJX12/2Z(BS) 9VDC	526150

Contact	Rated current	Function	Coil	Model Description	Code
2Z	8A	LED indicator	115VAC	NJX12/2Z(D) 115VAC	526115
2Z	8A	LED indicator	12VAC	NJX12/2Z(D) 12VAC	526112
2Z	8A	LED indicator	220VAC	NJX12/2Z(D) 220VAC	526116
2Z	8A	LED indicator	230VAC	NJX12/2Z(D) 230VAC	526117
2Z	8A	LED indicator	240VAC	NJX12/2Z(D) 240VAC	526118
2Z	8A	LED indicator	24VAC	NJX12/2Z(D) 24VAC	526113
2Z	8A	LED indicator	48VAC	NJX12/2Z(D) 48VAC	526114
2Z	8A	LED indicator	6VAC	NJX12/2Z(D) 6VAC	526111
2Z	8A	LED indicator	110VDC	NJX12/2Z(D) 110VDC	526125
2Z	8A	LED indicator	12VDC	NJX12/2Z(D) 12VDC	526121
2Z	8A	LED indicator	24VDC	NJX12/2Z(D) 24VDC	526122
2Z	8A	LED indicator	36VDC	NJX12/2Z(D) 36VDC	526123
2Z	8A	LED indicator	48VDC	NJX12/2Z(D) 48VDC	526124
2Z	8A	LED indicator	6VDC	NJX12/2Z(D) 6VDC	526119
2Z	8A	LED indicator	9VDC	NJX12/2Z(D) 9VDC	526120
2Z	8A	LED indicator, with mechanical latching	115VAC	NJX12/2Z(D)(BS) 115VAC	526175
2Z	8A	LED indicator, with mechanical latching	12VAC	NJX12/2Z(D)(BS) 12VAC	526172
2Z	8A	LED indicator, with mechanical latching	220VAC	NJX12/2Z(D)(BS) 220VAC	526176
2Z	8A	LED indicator, with mechanical latching	230VAC	NJX12/2Z(D)(BS) 230VAC	526177
2Z	8A	LED indicator, with mechanical latching	240VAC	NJX12/2Z(D)(BS) 240VAC	526178
2Z	8A	LED indicator, with mechanical latching	24VAC	NJX12/2Z(D)(BS) 24VAC	526173
2Z	8A	LED indicator, with mechanical latching	48VAC	NJX12/2Z(D)(BS) 48VAC	526174
2Z	8A	LED indicator, with mechanical latching	6VAC	NJX12/2Z(D)(BS) 6VAC	526171
2Z	8A	LED indicator, with mechanical latching	110VDC	NJX12/2Z(D)(BS) 110VDC	526185
2Z	8A	LED indicator, with mechanical latching	12VDC	NJX12/2Z(D)(BS) 12VDC	526181
2Z	8A	LED indicator, with mechanical latching	24VDC	NJX12/2Z(D)(BS) 24VDC	526182
2Z	8A	LED indicator, with mechanical latching	36VDC	NJX12/2Z(D)(BS) 36VDC	526183
2Z	8A	LED indicator, with mechanical latching	48VDC	NJX12/2Z(D)(BS) 48VDC	526184
2Z	8A	LED indicator, with mechanical latching	6VDC	NJX12/2Z(D)(BS) 6VDC	526179
2Z	8A	LED indicator, with mechanical latching	9VDC	NJX12/2Z(D)(BS) 9VDC	526180
1Z	12A	Socket		NTC12-1Z	396890
2Z	8A	Socket		NTC12-2Z	396891