

# OMRON



## NX I/O

### Component selection guide

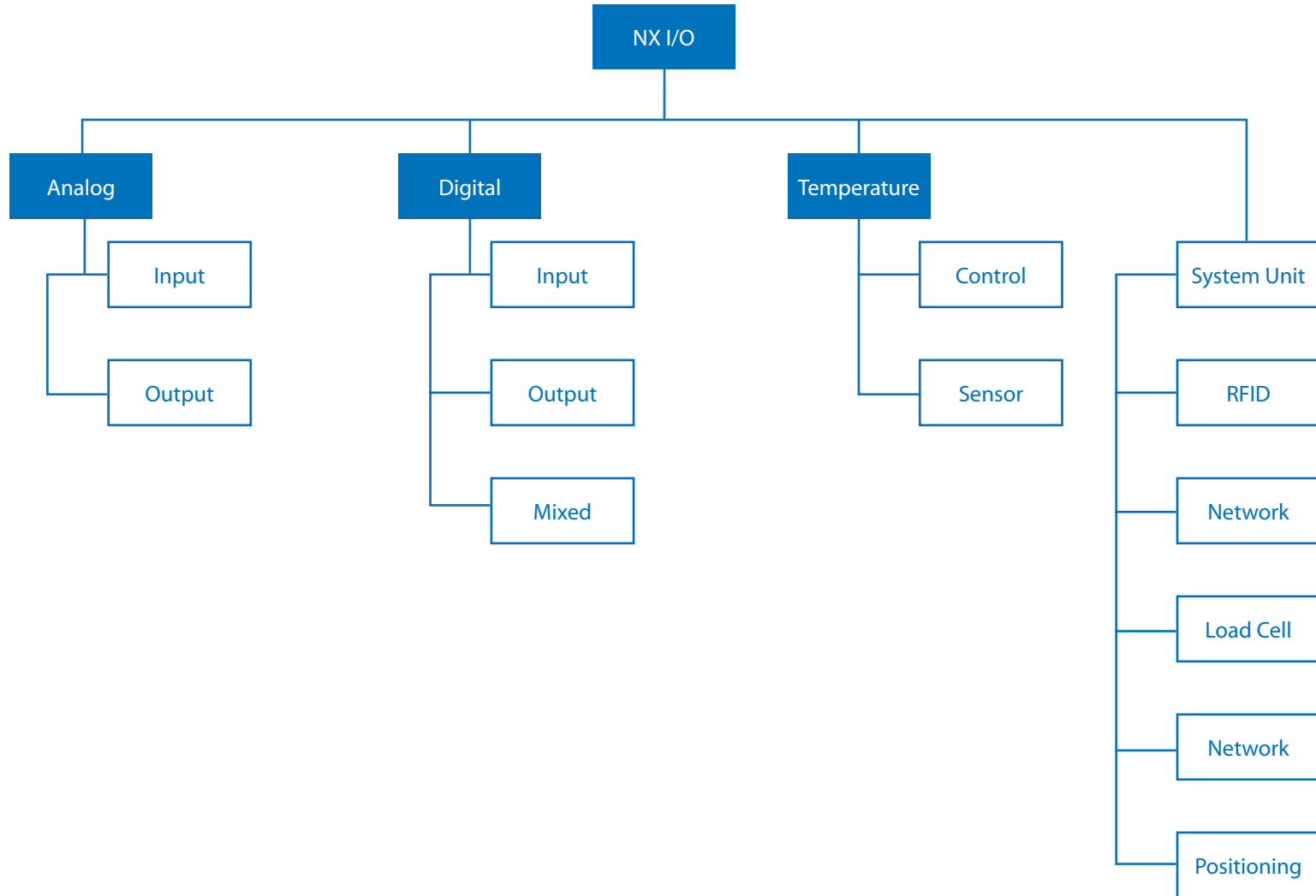


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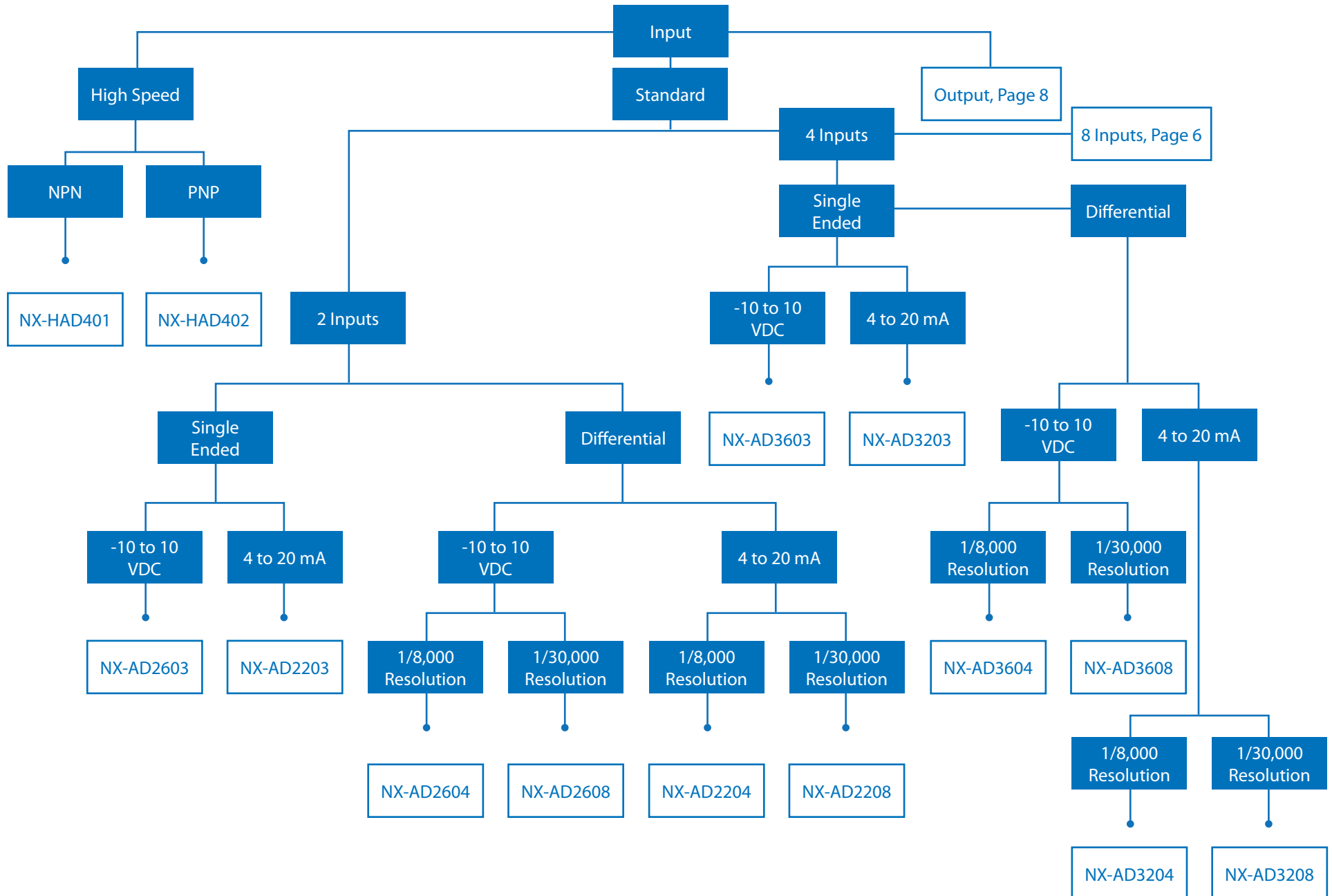
# Portfolio Overview



# Analog



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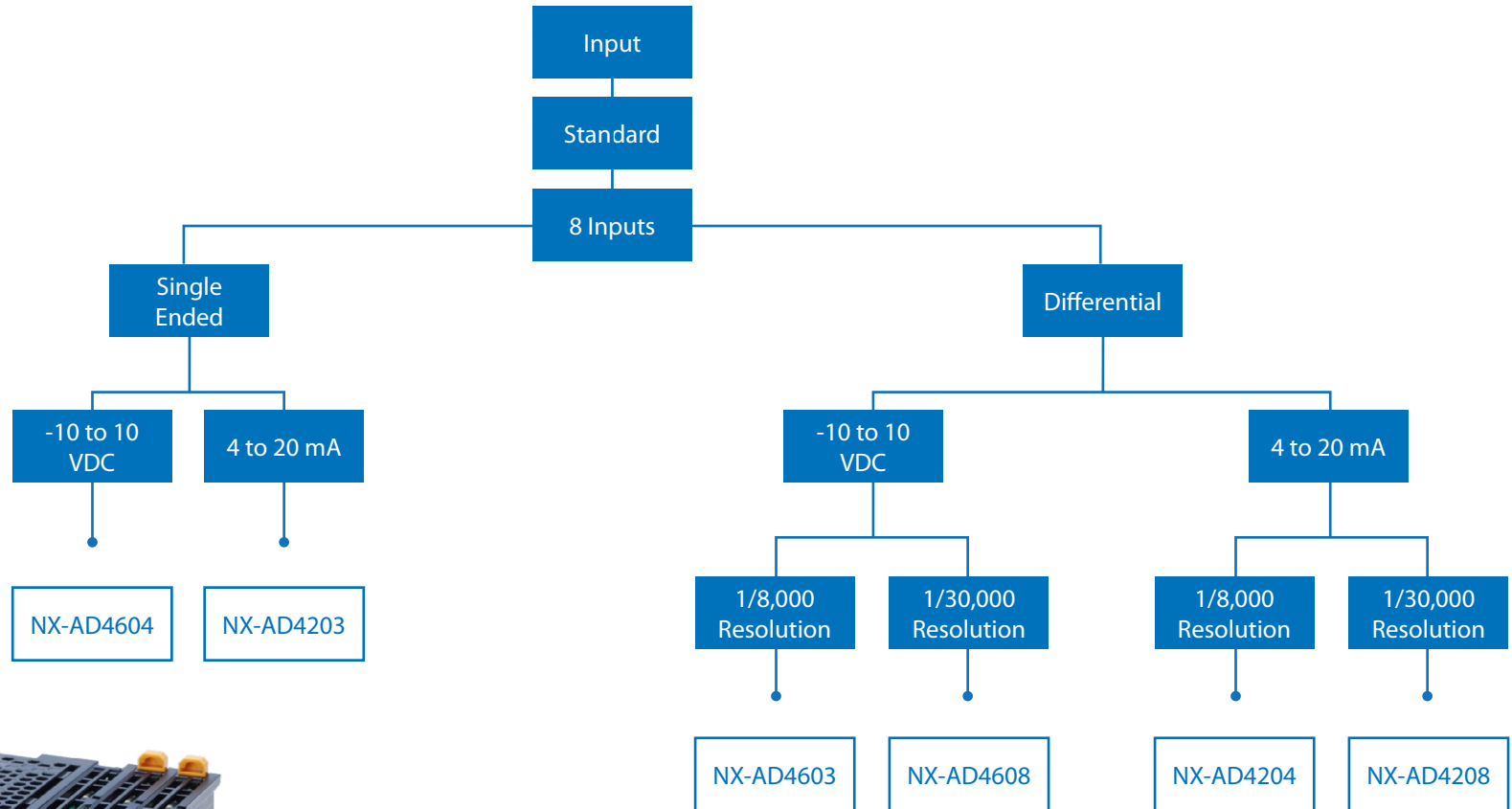
# Suggested Part Numbers

Part Number	Input/ Outpt	Number of Points	Input Method	Input Type/Range	Resolution	I/O Refreshing Method	Width
NX-AD2203	Input	2	Single Ended	4 to 20mA	1/8,000	Free-Run	12 mm
NX-AD2204	Input	2	Differential Input	4 to 20mA	1/8,000	Free-Run	12 mm
NX-AD2208	Input	2	Differential Input	4 to 20mA	1/30,000	Selectable	12 mm
NX-AD2603	Input	2	Single Ended	-10 to 10VDC	1/8,000	Free-Run	12 mm
NX-AD2604	Input	2	Differential Input	-10 to 10VDC	1/8,000	Free-Run	12 mm
NX-AD2608	Input	2	Differential Input	-10 to 10VDC	1/30,000	Selectable	12 mm
NX-AD3203	Input	4	Single Ended	4 to 20mA	1/8,000	Free-Run	12 mm
NX-AD3204	Input	4	Differential Input	4 to 20mA	1/8,000	Free-Run	12 mm
NX-AD3208	Input	4	Differential Input	4 to 20mA	1/30,000	Selectable	12 mm
NX-AD3603	Input	4	Single Ended	-10 to 10VDC	1/8,000	Free-Run	12 mm
NX-AD3604	Input	4	Differential Input	-10 to 10VDC	1/8,000	Free-Run	12 mm
NX-AD3608	Input	4	Differential Input	-10 to 10VDC	1/30,000	Selectable	12 mm
NX-HAD401	Input	4	High Speed(NPN)	-10 to 10 VDC -5 to 5 VDC 0 to 10 VDC 0 to 5 VDC 1 to 5 VDC 0 to 20 mA 4 to 20 mA		Synchronous	24 mm
NX-HAD402	Input	4	High Speed (PNP)	-10 to 10 VDC -5 to 5 VDC 0 to 10 VDC 0 to 5 VDC 1 to 5 VDC 0 to 20 mA 4 to 20 mA		Synchronous	24 mm

# Analog



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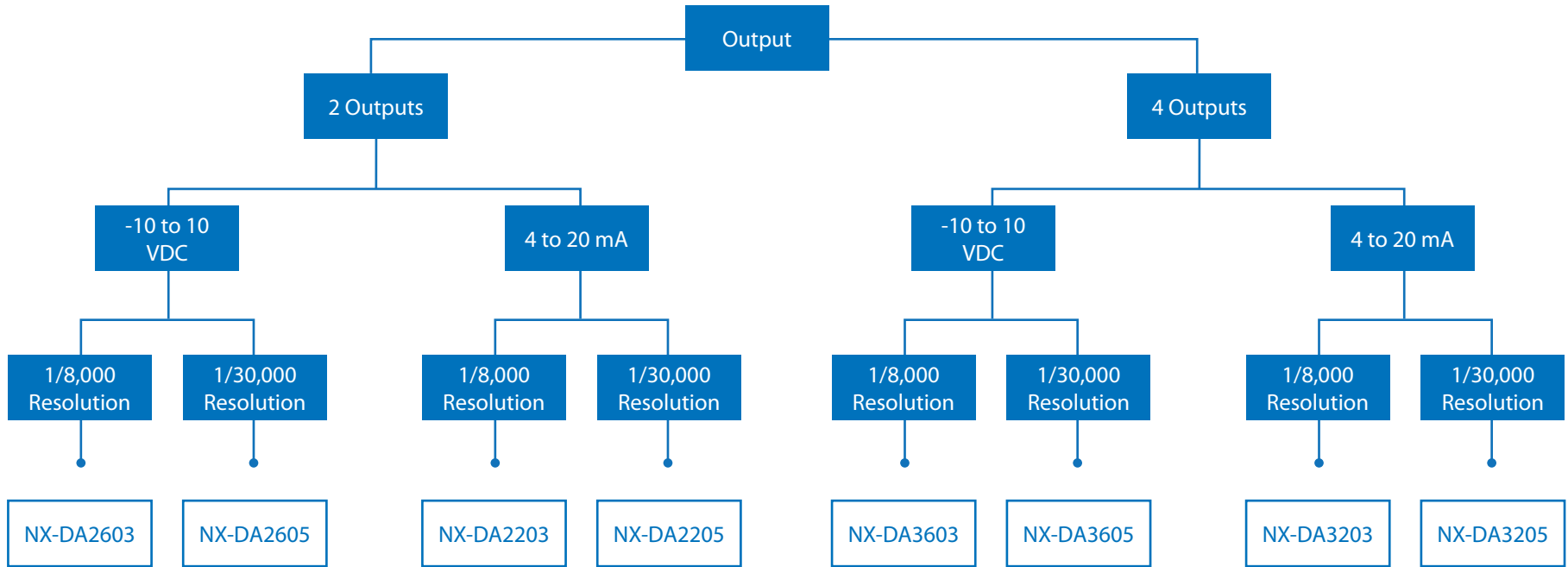
# Suggested Part Numbers

Part Number	Input/ Outpt	Number of Points	Input Method	Input Type/Range	Resolution	I/O Refreshing Method	Width
<a href="#">NX-AD4203</a>	Input	8	Single Ended	4 to 20mA	1/8,000	Free-Run	12 mm
<a href="#">NX-AD4204</a>	Input	8	Differential Input	4 to 20mA	1/8,000	Free-Run	12 mm
<a href="#">NX-AD4208</a>	Input	8	Differential Input	4 to 20mA	1/30,000	Selectable	12 mm
<a href="#">NX-AD4603</a>	Input	8	Differential Input	-10 to 10VDC	1/8,000	Selectable	12 mm
<a href="#">NX-AD4604</a>	Input	8	Single Ended	-10 to 10VDC	1/8,000	Selectable	12 mm
<a href="#">NX-AD4608</a>	Input	8	Differential Input	-10 to 10VDC	1/30,000	Selectable	12 mm

# Analog



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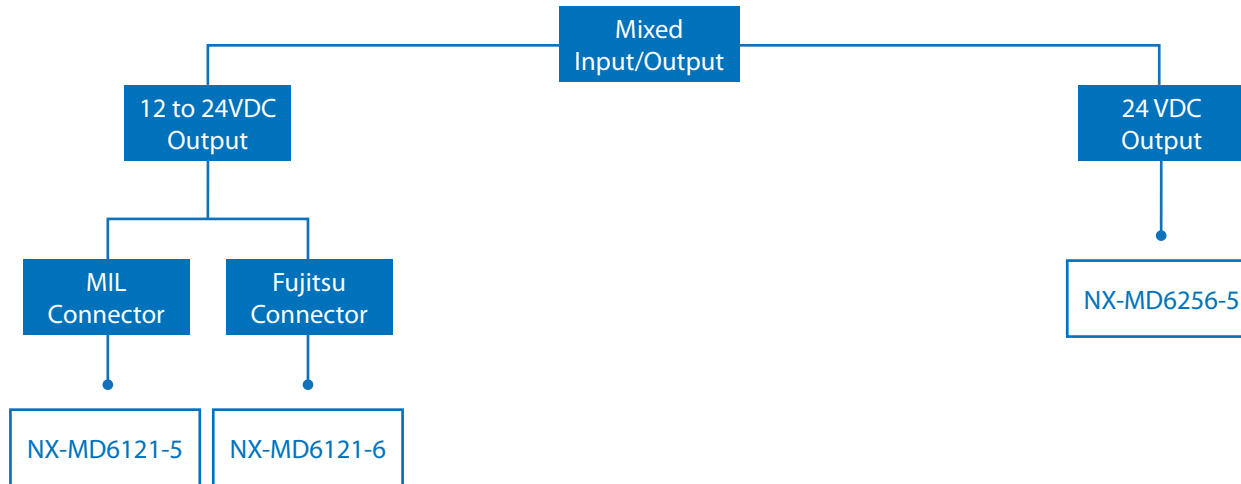
# Suggested Part Numbers

Part Number	Input/ Output	Number of Points	Range	Output Setting value	Accuracy	Resolution	I/O Refreshing Method	Width
NX-DA2603	Output	2	-10 to 10V	-4,000 to 4,000	+/- 0.30% (full scale)	1/8,000	Free-Run	12 mm
NX-DA2605	Output	2	-10 to 10V	-15,000- 15,000	+/- 0.10% (full scale)	1/30,000	Selectable	12 mm
NX-DA3603	Output	4	-10 to 10V	-4,000 to 4,000	+/- 0.30% (full scale)	1/8,000	Free-Run	12 mm
NX-DA3605	Output	4	-10 to 10V	-15,000- 15,000	+/- 0.10% (full scale)	1/30,000	Selectable	12 mm
NX-DA2203	Output	2	4 to 20mA	0 to 8,000	+/- 0.30% (full scale)	1/8,000	Free-Run	12 mm
NX-DA2205	Output	2	4 to 20mA	0 to 30,000	+/- 0.10% (full scale)	1/30,000	Selectable	12 mm
NX-DA3203	Output	4	4 to 20mA	0 to 8,000	+/- 0.30% (full scale)	1/8,000	Free-Run	12 mm
NX-DA3205	Output	4	4 to 20mA	0 to 30,000	+/- 0.10% (full scale)	1/30,000	Selectable	12 mm

# Digital



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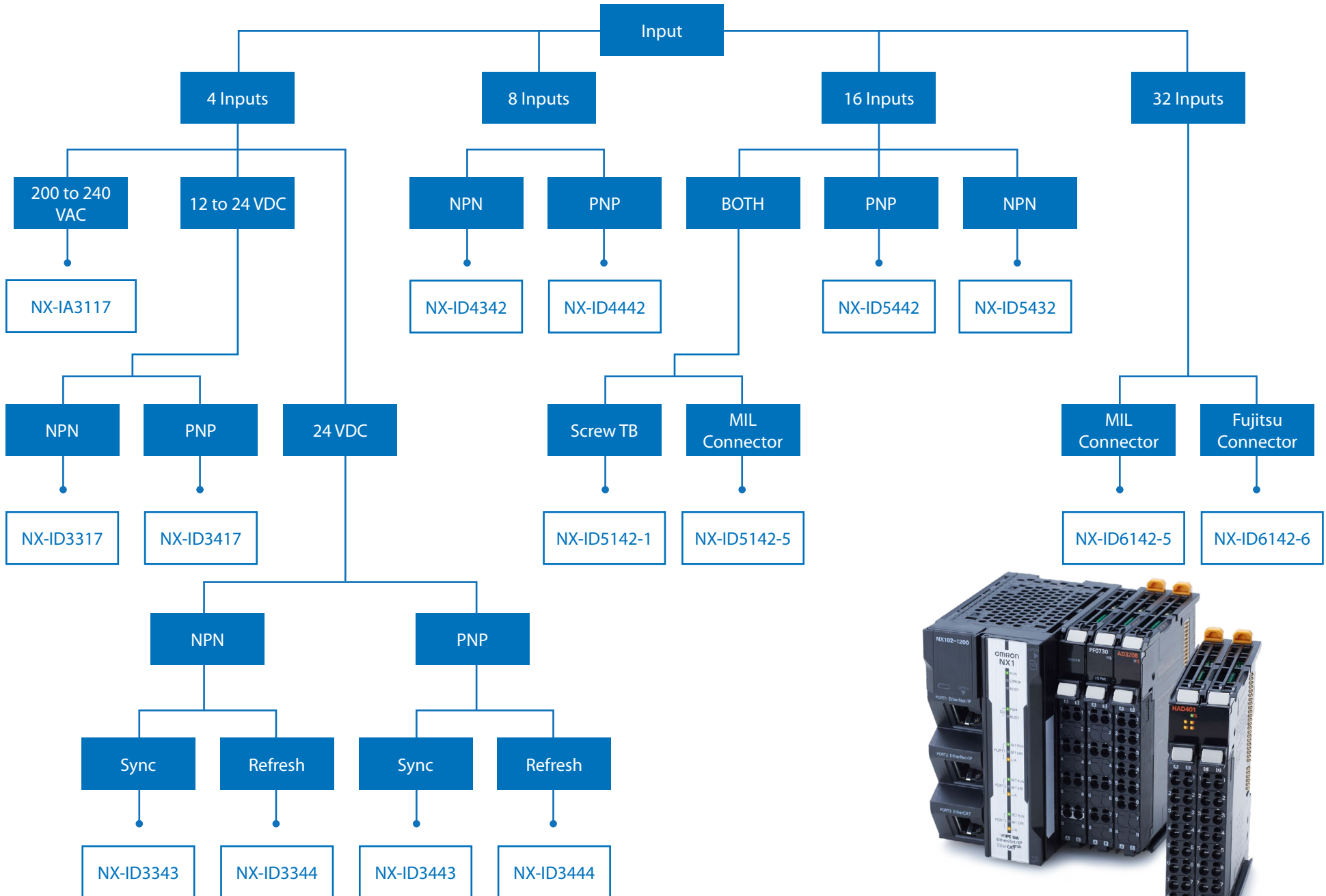
# Suggested Part Numbers

Part Number	Number of Points	NPN/PNP	Rated Voltage	IO Refresh	Connection	Width
<a href="#">NX-MD6121-5</a>	32	NPN Out, Both In	Outputs 12 to 24 VDC, inputs 24 VDC	Switching sync	MIL connector	30 mm
<a href="#">NX-MD6121-6</a>	32	NPN Out, Both In	Outputs 12 to 24 VDC, inputs 24 VDC	Switching sync	Fujitsu	30 mm
<a href="#">NX-MD6256-5</a>	32	PNP Out, Both in	Outputs 24 VDC, inputs 24 VDC	Switching sync	MIL connector	30 mm

# Digital



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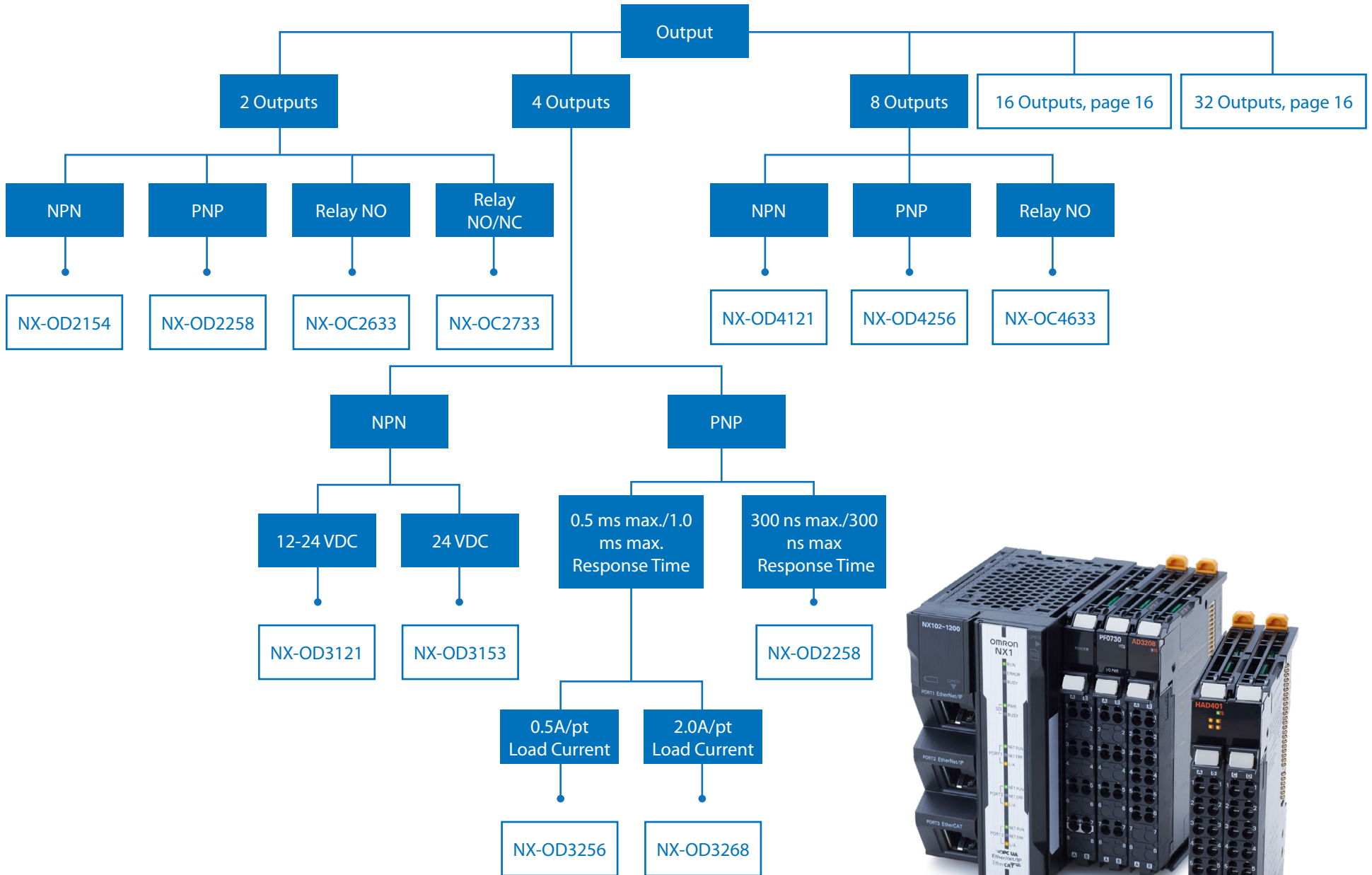
# Suggested Part Numbers

Part Number	Number of Points	NPN/PNP	Rated Voltage	IO Refresh	High Speed Input	Connection	Width
<a href="#">NX-IA3117</a>	4	VAC	200-240 VAC, 50/60 Hz	Free-Run	No	Screwless Clamp TB	12 mm
<a href="#">NX-ID3317</a>	4	NPN	12 to 24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-ID3343</a>	4	NPN	24 VDC	Switching sync	Yes	Screwless Clamp TB	12 mm
<a href="#">NX-ID3344</a>	4	NPN	24 VDC	Input refreshing with input changed time	Yes	Screwless Clamp TB	12 mm
<a href="#">NX-ID3417</a>	4	PNP	12 to 24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-ID3443</a>	4	PNP	24 VDC	Switching sync	Yes	Screwless Clamp TB	12 mm
<a href="#">NX-ID3444</a>	4	PNP	24 VDC	Input refreshing with input changed time	Yes	Screwless Clamp TB	12 mm
<a href="#">NX-ID4342</a>	8	NPN	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-ID4442</a>	8	PNP	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-ID5142-1</a>	16	BOTH	24 VDC	Switching sync	No	Screw TB	30 mm
<a href="#">NX-ID5142-5</a>	16	BOTH	24 VDC	Switching sync	No	MIL connector	30 mm
<a href="#">NX-ID5342</a>	16	NPN	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-ID5442</a>	16	PNP	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-ID6142-5</a>	32	BOTH	24 VDC	Switching sync	No	MIL connector	30 mm
<a href="#">NX-ID6142-6</a>	32	BOTH	24 VDC	Switching sync	No	Fujitsu	30 mm

# Digital



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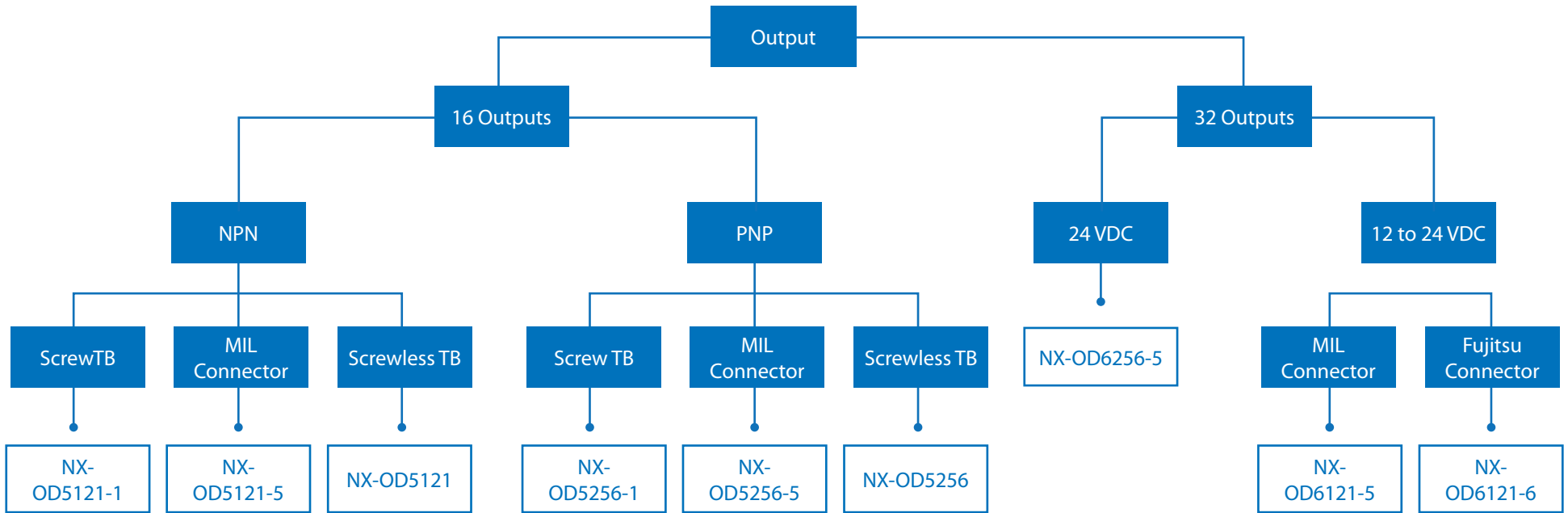
# Suggested Part Numbers

Part Number	Number of Points	NPN/PNP	Max Load Current	Rated Voltage	IO Refresh	High Speed Input	Connection	Width
<a href="#">NX-OC2633</a>	2	Relay NO	2.0 A/point	250 VAC, 24 VDC	Free-Run	No	Screwless Clamp TB	12 mm
<a href="#">NX-OC2733</a>	2	Relay NO/NC	2.0 A/point	250 VAC, 24 VDC	Free-Run	No	Screwless Clamp TB	12 mm
<a href="#">NX-OC4633</a>	8	Relay NO	2.0 A/point	250 VAC, 24 VDC	Free-Run	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD2154</a>	2	NPN	0.5A/point	24 VDC	Specified Time stamp	Yes	Screwless Clamp TB	12 mm
<a href="#">NX-OD2258</a>	2	PNP	0.5A/Point	24 VDC	Specified Time stamp	Yes	Screwless Clamp TB	12 mm
<a href="#">NX-OD3121</a>	4	NPN	0.5A/Point	12-24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD3153</a>	4	NPN	0.5A/Point	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD3256</a>	4	PNP	0.5A/Point	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD3257</a>	4	PNP	0.5A/Point	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD3268</a>	4	PNP	2.0 A/point	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD4121</a>	8	NPN	0.5A/Point	12-24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD4256</a>	8	PNP	0.5A/Point	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm

# Digital



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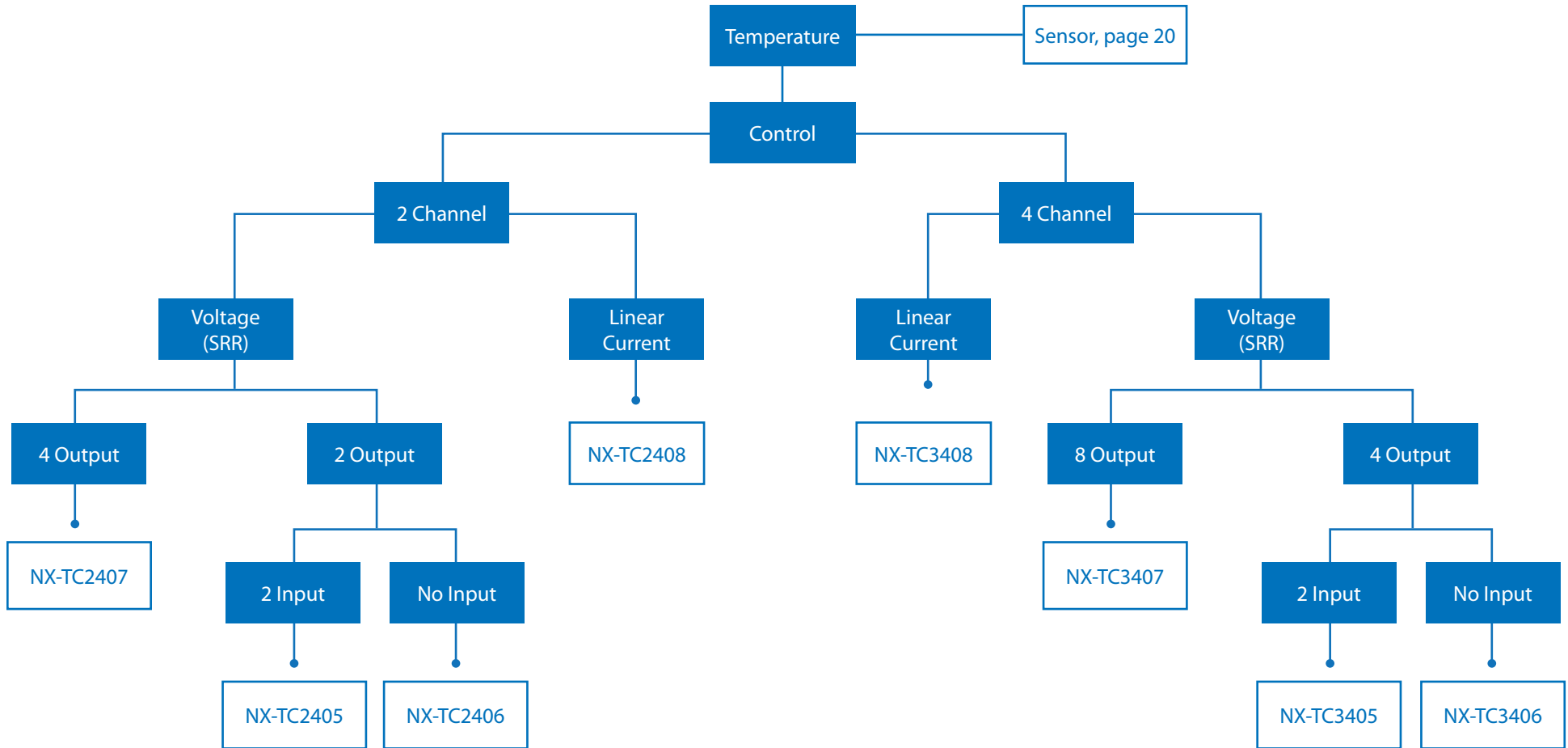
# Suggested Part Numbers

Part Number	Number of Points	NPN/PNP	Max Load Current	Rated Voltage	IO Refresh	High Speed Input	Connection	Width
<a href="#">NX-OD5121</a>	16	NPN	0.5A/Point	12 to 24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD5121-1</a>	16	NPN	0.5A/Point	12 to 24 VDC	Switching sync	No	Screw TB	30 mm
<a href="#">NX-OD5121-5</a>	16	NPN	0.5A/Point	12 to 24 VDC	Switching sync	No	MIL connector	30 mm
<a href="#">NX-OD5256</a>	16	PNP	0.5A/Point	24 VDC	Switching sync	No	Screwless Clamp TB	12 mm
<a href="#">NX-OD5256-1</a>	16	PNP	0.5A/Point	24 VDC	Switching sync	No	Screw TB	30 mm
<a href="#">NX-OD5256-5</a>	16	PNP	0.5A/Point	24 VDC	Switching sync	No	MIL connector	30 mm
<a href="#">NX-OD6121-5</a>	32	NPN	0.5A/Point	12to 24 VDC	Switching sync	No	MIL connector	30 mm
<a href="#">NX-OD6121-6</a>	32	NPN	0.5A/Point	12 to 24 VDC	Switching sync	No	Fujitsu	30 mm
<a href="#">NX-OD6256-5</a>	32	PNP	0.5A/Point	24 VDC	Switching sync	No	MIL connector	30 mm

# Temperature



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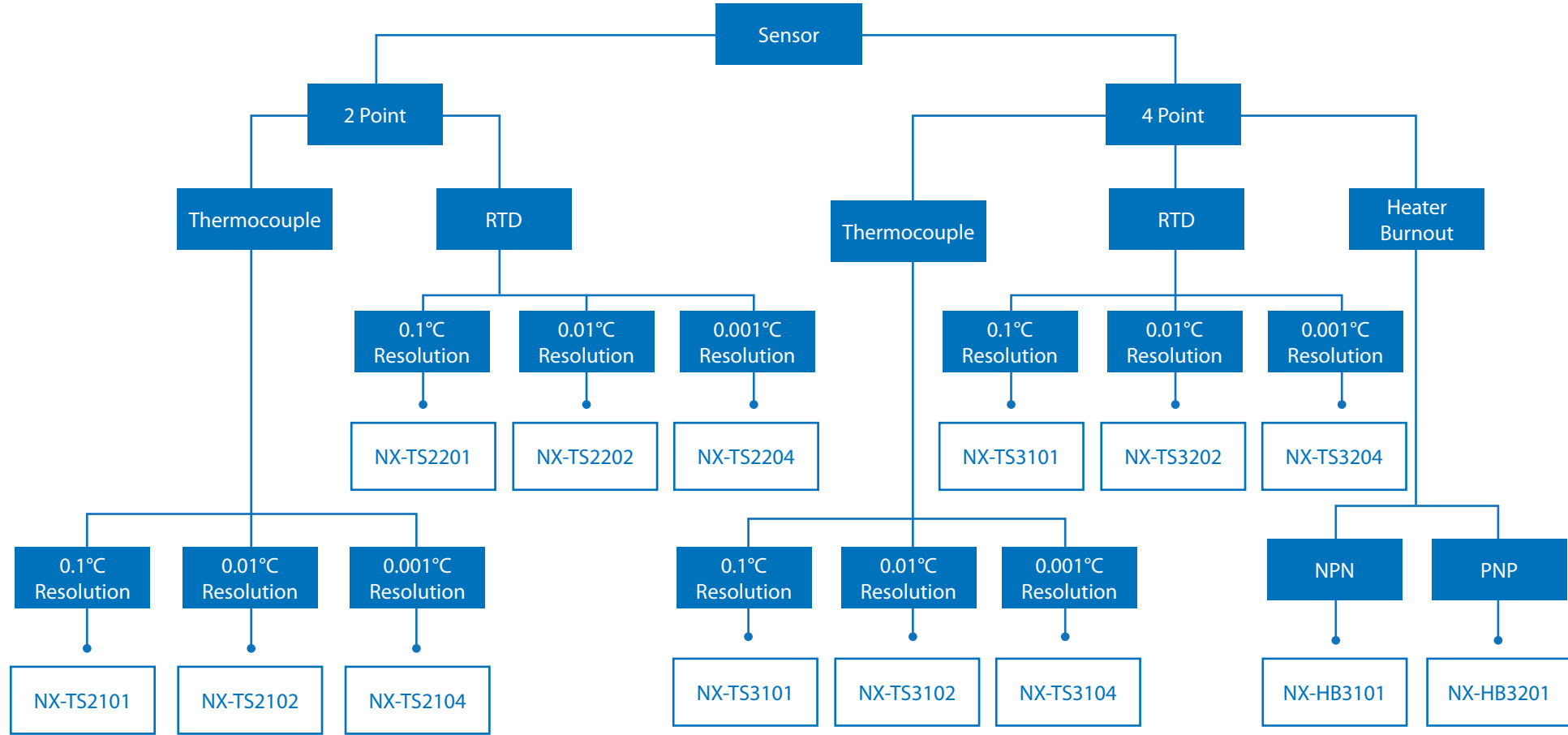
# Suggested Part Numbers

Part Number	Channels	Output type	Outputs	Inputs	Control Type	Width
<a href="#">NX-TC2405</a>	2	Voltage (SRR)	2	2	Standard	12 mm
<a href="#">NX-TC2406</a>	2	Voltage (SRR)	2	None	Standard	12 mm
<a href="#">NX-TC2407</a>	2	Voltage (SRR)	4	None	Heating and Cooling Control	12 mm
<a href="#">NX-TC2408</a>	2	Linear Current	2	None	Standard	12 mm
<a href="#">NX-TC3405</a>	4	Voltage (SRR)	4	4	Standard	24 mm
<a href="#">NX-TC3406</a>	4	Voltage (SRR)	4	None	Standard	24 mm
<a href="#">NX-TC3407</a>	4	Voltage (SRR)	8	None	Heating and Cooling Control	24 mm
<a href="#">NX-TC3408</a>	4	Linear Current	4	None	Standard	24 mm

# Temperature



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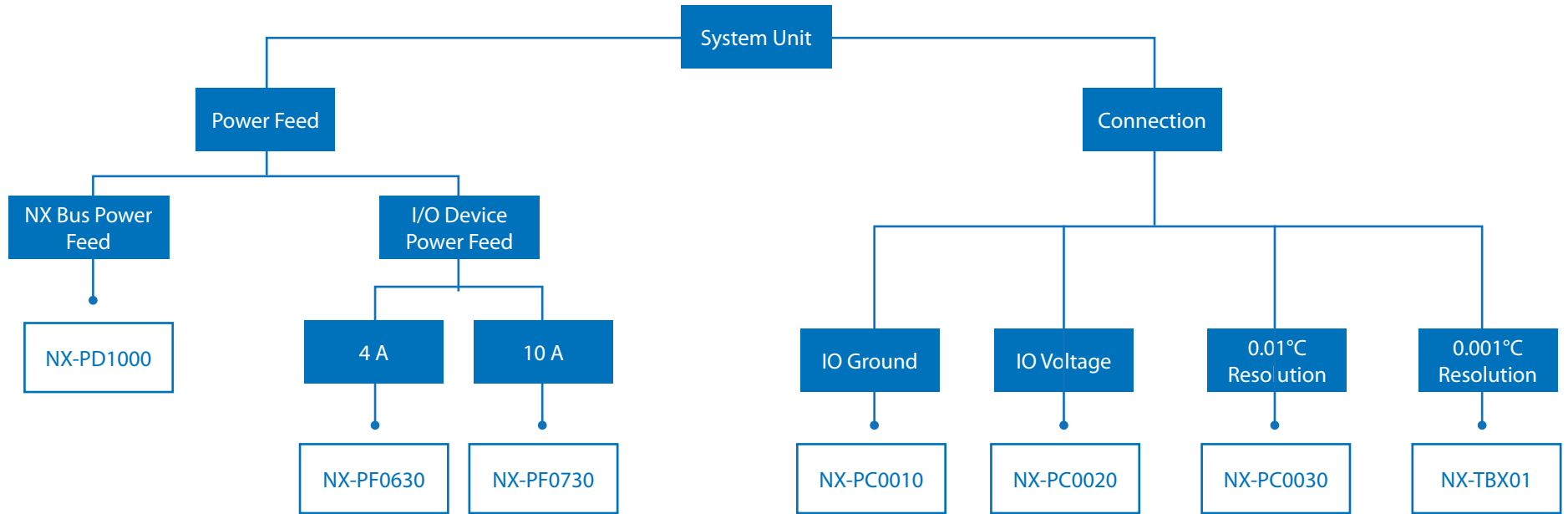
# Suggested Part Numbers

Part Number	Number of Points	Input Type	Resolution (25°C)	Terminals	NPN/PNP	Width
NX-TS2101	2	Thermocouple	0.1 °C max	16	-	12 mm
NX-TS3101	4	Thermocouple	0.1 °C max	16 x 2	-	24 mm
NX-TS2102	2	Thermocouple	0.01 °C max	16	-	12 mm
NX-TS3102	4	Thermocouple	0.01 °C max	16 x 2	-	24 mm
NX-TS2104	2	Thermocouple	0.001 °C max	16	-	12 mm
NX-TS3104	4	Thermocouple	0.001 °C max	16 x 2	-	24 mm
NX-TS2201	2	Resistance Thermometer	0.1 °C max	16	-	12 mm
NX-TS3201	4	Resistance Thermometer	0.1 °C max	16 x 2	-	24 mm
NX-TS2202	2	Resistance Thermometer	0.01 °C max	16	-	12 mm
NX-TS3202	4	Resistance Thermometer	0.01 °C max	16 x 2	-	24 mm
NX-TS2204	2	Resistance Thermometer	0.001 °C max	16	-	12 mm
NX-TS3204	4	Resistance Thermometer	0.001 °C max	16 x 2	-	24 mm
NX-HB3101	4	Heater Burnout Detection	-	-	NPN	12 mm
NX-HB3201	4	Heater Burnout Detection	-	-	PNP	12 mm

# System Unit



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# Suggested Part Numbers

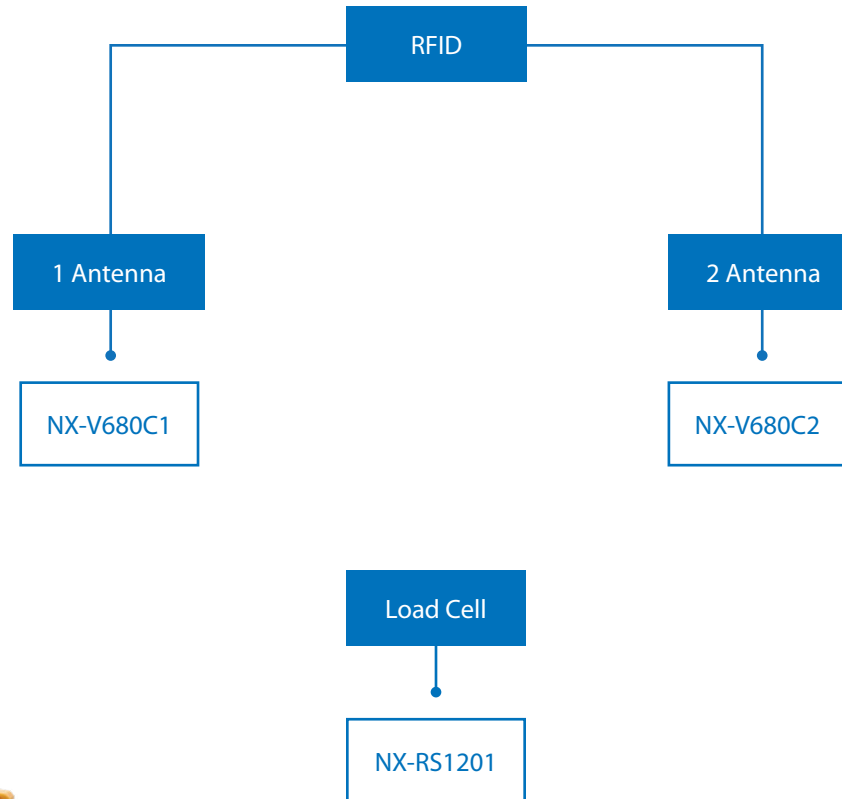
Part Number	Type	Max Current	Terminal Type	Width
<a href="#">NX-PD1000</a>	NX Unit Power Supply	-	-	12 mm
<a href="#">NX-PF0630</a>	I/O Power Supply	4 A	-	12 mm
<a href="#">NX-PF0730</a>	I/O Power Supply	10 A <sup>1</sup>	-	12 mm
<a href="#">NX-PC0010</a>	I/O Power Supply Connection	-	IOG (16)	12 mm
<a href="#">NX-PC0020</a>	I/O Power Supply Connection	-	IOV (16)	12 mm
<a href="#">NX-PC0030</a>	I/O Power Supply Connection	-	8 IOG, 8 IOV	12 mm
<a href="#">NX-TBX01</a>	Shield Connection unit			12 mm

1. Use the NX-PF0730 at 4 A or less on the CPU rack where the NX1P2 CPU unit is mounted

# System Unit



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# Suggested Part Numbers

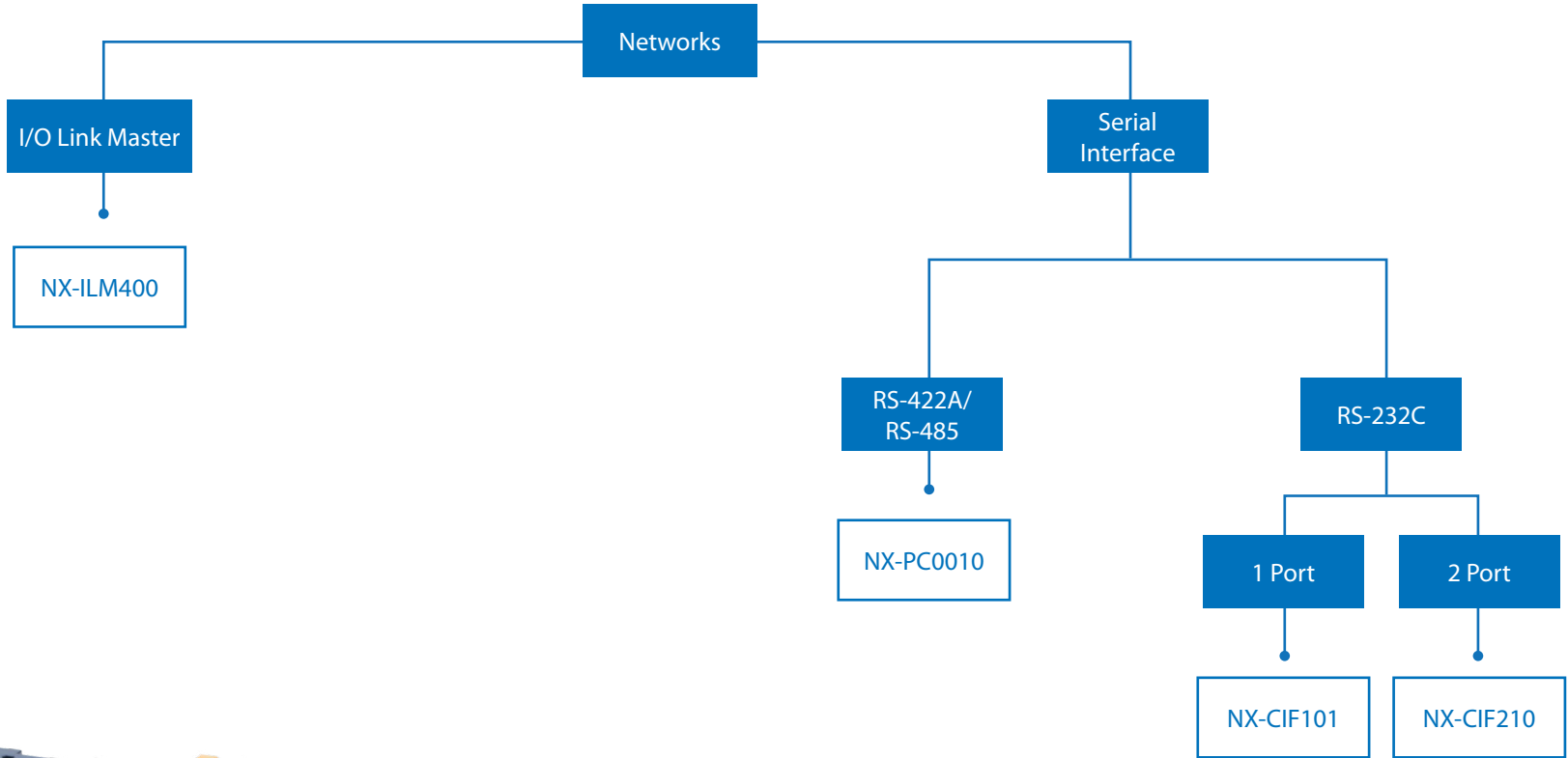
RFID		
Part Number	Units Connected	Width
NX-V680C1	1	30 mm
NX-V680C2	2	30 mm

Load Cell				
Part Number	Number of Points	Conversion Cycle	Load Cell excitation Voltage	Width
NX-RS1201	1	125 micro seconds	5 VDC	12 mm

# System Unit



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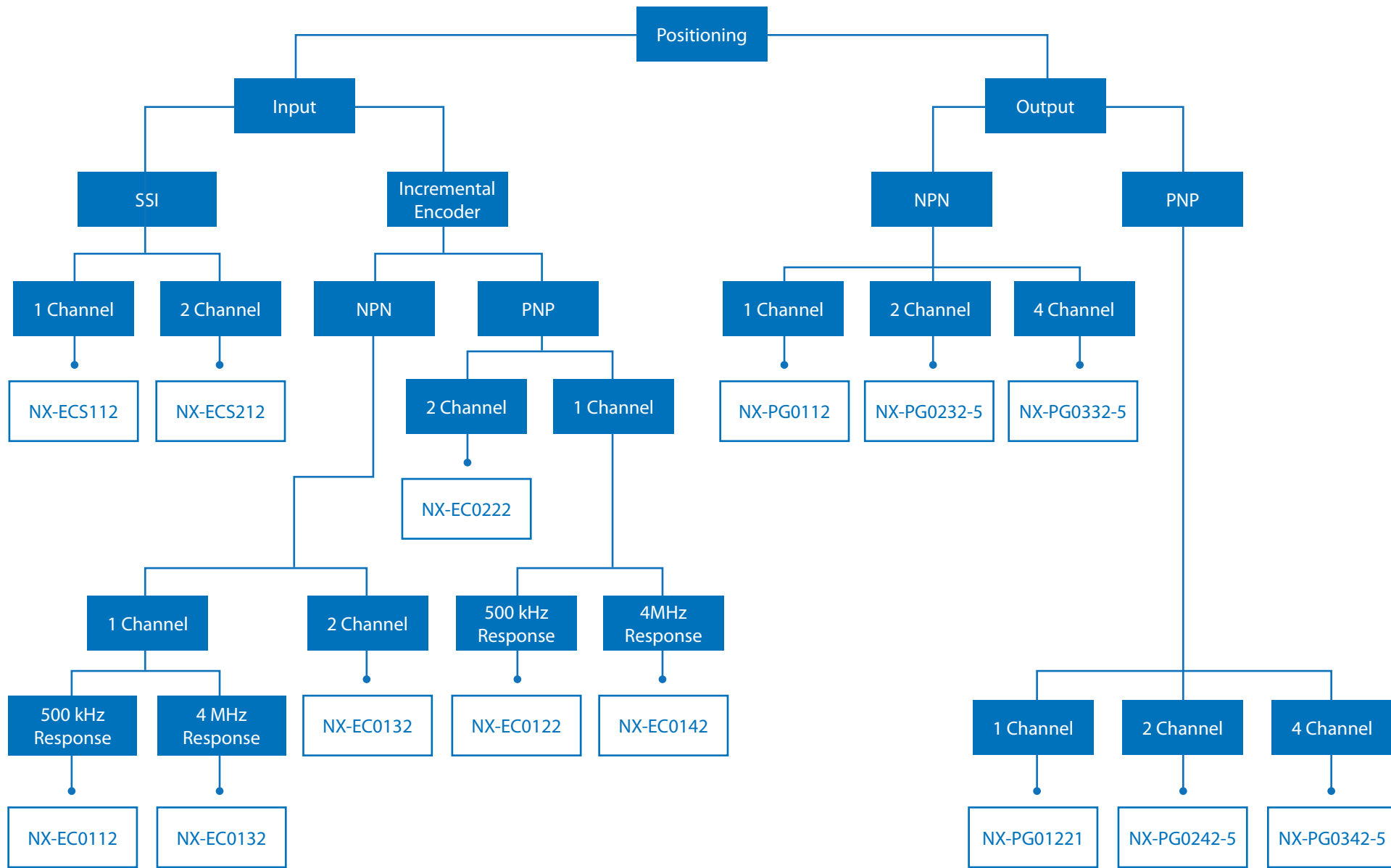
# Suggested Part Numbers

Part Number	Serial Interface	Connector	Number of I/O LinkPorts	Width
NX-CIF101	RS-232C	Screwless Clamping Terminal Block	1	12 mm
NX-CIF105	RS-422A/485	Screwless Clamping Terminal Block	1	12 mm
NX-CIF210	RS-232C	D-Sub	2	30 mm
NX-ILM400			4	12 mm

# Positioning



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# Suggested Part Numbers

Part Number	Number of Channels	I/O form	Encoder Power Supply	Width
NX-ECS112	1	EIA standard RS-422-A	24 VDC, 0.3A/ch	12 mm
NX-ECS212	2	EIA standard RS-422-A	24 VDC, 0.3A/ch	12 mm

Part Number	Number of Channels	NPN/PNP	External inputs	External Outputs	Max output speed	Control Output Interface	Width
NX-PG0112	1	NPN	2	1	500 kpps	Open collector	12 mm
NX-PG0122	1	PNP	2	1	500 kpps	Open collector	12 mm
NX-PG0232-5	2	NPN	5	3	4 Mpps	Line Driver	30 mm
NX-PG0242-5	2	PNP	5	3	4 Mpps	Line Driver	30 mm
NX-PG0332-5	4	NPN	5	3	4 Mpps	Line Driver	30 mm
NX-PG0342-5	4	PNP	5	3	4 Mpps	Line Driver	30 mm

Part Number	Number of Channels	NPN/PNP	External inputs	Response	Input Type	Width
NX-EC0112	1	NPN	3	500 kHz	24 VDC	12 mm
NX-EC0122	1	PNP	3	500 kHz	24 VDC	12 mm
NX-EC0132	1	NPN	3	4 MHz	Line receiver	12 mm
NX-EC0142	1	PNP	3	4 MHz	Line receiver	12 mm
NX-EC0212	2	NPN	None	500 kHz	24 VDC	12 mm
NX-EC0222	2	PNP	None	500 kHz	24 VDC	12 mm



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