

Robotized babyfoot I/Os connections

For each bar, we have the following wirings to the NI 6323 acquisition cards

NI 6323	#SCB68 / #terminal	conductor color	Connector pin	connector	signal name	bar reference
Grounded	Grounded	white	1	Xenus.J7	Frame GND	Goal keeper
DGND	1/54	brown	2		ref (-)	
AO1	1/21	green	3		ref(+)	
P0.1	1/17	yellow	4		[IN1]	
P0.2	1/49	grey	5		[IN2]	
P0.3	1/47	pink	6		[IN3]	
P0.4	1/19	blue	7		[IN4]	
		red	8		[IN11]	
		black	9		[IN12]	
		white-blue	10		[IN6]	
		brown-blue	11		[IN7]	
		pink-brown	12		[IN8]	
		white-red	13		[IN9]	
		white-yellow	14		[IN10]	
DGND	1/7	yellow-brown	15		signal Gnd	
		white-black	16		[OUT1]	
		brown-red	17		[OUT2]	
		white-grey	18		[OUT3]	
DGND	1/18	brown-green	19		signal Gnd	
		grey-brown	20		5Vdc	
		nc	21		Encoder /X	
		white-green	22		Encoder X	
		white-pink	23		Encoder /B	
PFI2	1/43	red-blue	24		Encoder B	
		grey-pink	25		Encoder /A	
PFI0	1/11	purple	26		Encoder A	
		red	1	nc		
		grey	2	5Vdc		
DGND	1/44	grey	3	GND		
		grey	4	nc		
		grey	5	Ch /A		
PFI8	1/37	grey	6	Ch A		
		grey	7	Ch /B		
PFI10	1/45	grey	8	Ch B		
		grey	9	nc		
		grey	10	nc		
			1	DigIn 1		
P0.0	1/52	green	2	DigIn 2		
			3	DigIn/out 3		
			4	DigIn/out 4		
DGND	1/53	green	5	Gnd		
			6	5Vdc		
AO.0	1/22	green	1	AnIn1+		
AO GND	1/55	green	2	AnIn1-		
			3	AnIn2+		
			4	AnIn2-		
			5	AnOut1		
			6	AnOut2		
			7	Gnd		
Ground	GND	white	1	Xenus.J7	Frame GND	Goal keeper
DGND	2/54	brown	2		ref (-)	
AO.3	2/21	green	3		ref(+)	
P0.9	2/17	yellow	4		[IN1]	
P0.10	2/49	grey	5		[IN2]	
P0.11	2/47	pink	6		[IN3]	
P0.12	2/19	blue	7		[IN4]	
		red	8		[IN11]	
		black	9		[IN12]	
		white-blue	10		[IN6]	
		brown-blue	11		[IN7]	
		pink-brown	12		[IN8]	
		white-red	13		[IN9]	
		white-yellow	14		[IN10]	
DGND	2/7	yellow-brown	15		signal Gnd	
		white-black	16		[OUT1]	
		brown-red	17		[OUT2]	
		white-grey	18		[OUT3]	

DGND	1/18	black	19	Maxon.J4	signal Gnd
		grey-brown	20		5Vdc
		nc	21		Encoder /X
		white-green	22		Encoder X
		white-pink	23		Encoder /B
PFI7	1/38	green	24		Encoder B
		grey-pink	25		Encoder /A
PFI5	1/6	white	26		Encoder A
		red	1		nc
		grey	2		5Vdc
DGND	1/44	grey	3	GND	
		grey	4	nc	
		grey	5	Ch /A	
PFI3	1/42	grey	6	Ch A	
		grey	7	Ch /B	
PFI11	1/46	grey	8	Ch B	
		grey	9	nc	
		grey	10	nc	
			1	DigIn 1	
P0.8	2/52	green	2	DigIn 2	
			3	DigIn/out 3	
			4	DigIn/out 4	
DGND	2/53	green	5	Gnd	
			6	5Vdc	
AO.2	2/22	green	1	AnIn1+	
AOGND	2/55	green	2	AnIn1-	
			3	AnIn2+	
			4	AnIn2-	
			5	AnOut1	
			6	AnOut2	
			7	Gnd	
ground	GND	white	1	Xenus.J7	Frame GND
DGND	3/54	brown	2		ref (-)
AO1	3/21	green	3		ref(+)
P0.1	3/17	yellow	4		[IN1]
P0.2	3/49	grey	5		[IN2]
P0.3	3/47	pink	6		[IN3]
P0.4	3/19	blue	7		[IN4]
		red	8		[IN11]
		black	9		[IN12]
		white-blue	10		[IN6]
		brown-blue	11	[IN7]	
		pink-brown	12	[IN8]	
		white-red	13	[IN9]	
		white-yellow	14	[IN10]	
DGND	3/7	yellow-brown	15	signal Gnd	
		white-black	16	[OUT1]	
		brown-red	17	[OUT2]	
		white-grey	18	[OUT3]	
AO GND	3/18	brown-green	19	signal Gnd	
		grey-brown	20	5Vdc	
		nc	21	Encoder /X	
		white-green	22	Encoder X	
		white-pink	23	Encoder /B	
PFI1	3/43	red-blue	24	Encoder B	
		grey-pink	25	Encoder /A	
PFI0	3/11	purple	26	Encoder A	
		red	1	nc	
		grey	2	5Vdc	
DGND	3/44	grey	3	GND	
		grey	4	nc	
		grey	5	Ch /A	
PFI2	3/37	grey	6	Ch A	
		grey	7	Ch /B	
PFI3	3/45	grey	8	Ch B	
		grey	9	nc	
		grey	10	nc	
			1	DigIn 1	
P0.0	3/52	green	2	DigIn 2	
			3	DigIn/out 3	
			4	DigIn/out 4	
DGND	3/53	green	5	Gnd	
			6	5Vdc	
AO.0	3/22	green	1	AnIn1+	
AO GND	3/55	green	2	AnIn1-	
			3	AnIn2+	
			4	AnIn2-	
			5	AnOut1	

Defenders

Midfielders

			6	J6	AnOut2	Forwards	
			7		Gnd		
DGND	GND	white	1		Xenus.J7		Frame GND
DGND	4/54	brown	2				ref (-)
AO.3	4/21	green	3				ref(+)
P0.9	4/17	yellow	4				[IN1]
P0.10	4/49	grey	5				[IN2]
P0.11	4/47	pink	6				[IN3]
P0.12	4/19	blue	7				[IN4]
		red	8				[IN11]
		black	9				[IN12]
		white-blue	10				[IN6]
		brown-blue	11				[IN7]
		pink-brown	12				[IN8]
		white-red	13				[IN9]
		white-yellow	14				[IN10]
DGND	3/7	black	15				signal Gnd
		white-black	16				[OUT1]
		brown-red	17				[OUT2]
		white-grey	18				[OUT3]
DGND	4/18	brown-green	19				signal Gnd
		grey-brown	20				5Vdc
		nc	21				Encoder /X
		white-green	22				Encoder X
		white-pink	23				Encoder /B
PFI4	3/38	green	24				Encoder B
		grey-pink	25	Encoder /A			
PFI5	3/6	white	26	Encoder A			
		red	1	nc			
		grey	2	5Vdc			
DGND	3/44	grey	3	GND			
		grey	4	nc			
		grey	5	Ch /A			
PFI6	3/42	grey	6	Ch A			
		grey	7	Ch /B			
PFI7	3/46	grey	8	Ch B			
		grey	9	nc			
		grey	10	nc			
			1	DigIn 1			
P0.8	4/52	green	2	DigIn 2			
			3	DigIn/out 3			
			4	DigIn/out 4			
DGND	4/53	green	5	Gnd			
			6	5Vdc			
AO.2	4/22	green	1	AnIn1+			
AOGND	4/55	green	2	AnIn1-			
			3	AnIn2+			
			4	AnIn2-			
			5	AnOut1			
			6	AnOut2			
			7	Gnd			

opponent vision: lazer measurements

NI 6323	#SCB68 / #terminal	conductor color	PCB output terminal	Lazer #	signal name	bar reference
ref+ AI16	68	white	1	1	measurement	Goal keeper
ref- AI16	34	blue	0V		ground	
ref+ AI17	33	red	2	2	measurement	
ref- AI17	66	brown	0V		ground	
ref+ AI18	65	pink	2	3	measurement	defenders
ref- AI18	31	grey	0V		ground	
ref+ AI19	30	yellow	3	4	measurement	
ref- AI19	63	green	0V		ground	
ref+ AI20	28	white	3	5	measurement	Midfielders
ref- AI20	61	blue	0V		ground	
ref+ AI21	60	red	4	6	measurement	
ref- AI21	26	brown	0V		ground	
ref+ AI22	25	pink	4	7	measurement	Forwards
ref- AI22	58	grey	0V		ground	
ref+ AI23	57	yellow	5	8	measurement	
ref- AI23	23	green	0V		ground	
PCB input terminal	description	conductor color		Lazer #		bar reference
24V	sensor supply +	brown		1		Goal keeper
0V	sensor supply -	blue				
M1	Measurement 4-20mA	white				
T.I.	teach in	NC				

24V	sensor supply +	brown		2		Goal keeper
0V	sensor supply -	blue				
M2	Measurement 4-20mA	white				
T.I.	teach in	NC				
24V	sensor supply +	brown		3		defenders
0V	sensor supply -	blue				
M3	Measurement 4-20mA	white				
T.I.	teach in	NC				
24V	sensor supply +	brown		4		defenders
0V	sensor supply -	blue				
M4	Measurement 4-20mA	white				
T.I.	teach in	NC				
24V	sensor supply +	brown		5		Midfielders
0V	sensor supply -	blue				
M5	Measurement 4-20mA	white				
T.I.	teach in	NC				
24V	sensor supply +	brown		6		Midfielders
0V	sensor supply -	blue				
M6	Measurement 4-20mA	white				
T.I.	teach in	NC				
24V	sensor supply +	brown		7		Forwards
0V	sensor supply -	blue				
M7	Measurement 4-20mA	white				
T.I.	teach in	NC				
24V	sensor supply +	brown		8		Forwards
0V	sensor supply -	blue				
M8	Measurement 4-20mA	white				
T.I.	teach in	NC				

