

BL AUTOTEC

ROTARY JOINT™

BL PN-ZERO Series

Rotary Joint for Positioners and Turntables

PN-ZERO 2/6

PN-ZERO 2/12

PN-ZERO 2/24

PN-ZERO 2/36

PN-ZERO 2/D-5

PN-ZERO 2/U-6

PN-ZERO 2/C-4



BL PN-ZERO Series is a rotary joint developed for positioners and turntables. The lightweight and compact body is equipped with electrical signal contacts and pneumatic port utilities. There are no restrictions on the angle of rotation, so its endless 360 degree rotation eliminates problems associated with electrical wire wrapping and pneumatic pipe fittings. Please select a model based on the electrical signal contacts and number of contacts needed.



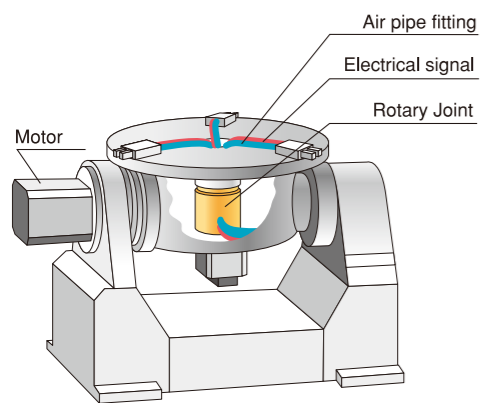
Features

- Equipped with both electrical signal contacts and pneumatic port utilities
- Lightweight and compact body
- 360 degree endless rotation (Rated 50rpm)
- Supports three wire-saving models (DeviceNet, Uni-wire, CC-Link) and four analog signal models (6, 12, 24 and 36 electrical wires)
- CC-Link Partner Association approval (PN-ZERO 2/C-4)

Usages

- Positioner turntable shafts
- Shafts for plural jigs by vertical and lateral rotation method
- Other forward/reverse rotation device shafts

Usage example (Positioner)



PN-ZERO 2/6



PN-ZERO 2/12



PN-ZERO 2/24



PN-ZERO 2/36



PN-ZERO 2/D-5 (DeviceNet spec.)



PN-ZERO 2/U-6 (Uni-wire spec.)



PN-ZERO 2/C-4 (CC-Link spec.)

Main specifications (Analog signal model)

Specifications	Model	PN-ZERO 2/6	PN-ZERO 2/12	PN-ZERO 2/24	PN-ZERO 2/36	
Angle of rotation		360 degree endless rotation				
Outside dimension		φ89mm×H132mm	φ89mm×H152mm	φ89mm×H172mm		
Product weight		2.6kg	2.8kg	2.9kg	3.0kg	
Rotational torque		About 500N·cm				
Rotational speed	(Max)	100rpm				
	(Rated)	50rpm				
Connecting utilities	Electrical signals	Number of electrical wires	6 electrical wires	12 electrical wires	24 electrical wires	36 electrical wires
		Contact capacity (max)	2A sequential (AC100V/DC100V)			
		Stationary side	Cable with shield / Plug-in type pin terminal PC2005M (Nichifu)			
		Rotational side	Cable with shield / Plug-in type pin terminal PC2005M (Nichifu)			
	Pneumatic pressure	Number of ports	2 ports			
		Minimum conduit diameter	φ14.4mm			
		Pressure range for use	0~0.98MPa (0~10kgf/cm ²)			
		Stationary side connection	Joint screw (Rc3/8)			
Rotational side connection	Joint screw (Rc3/8)					

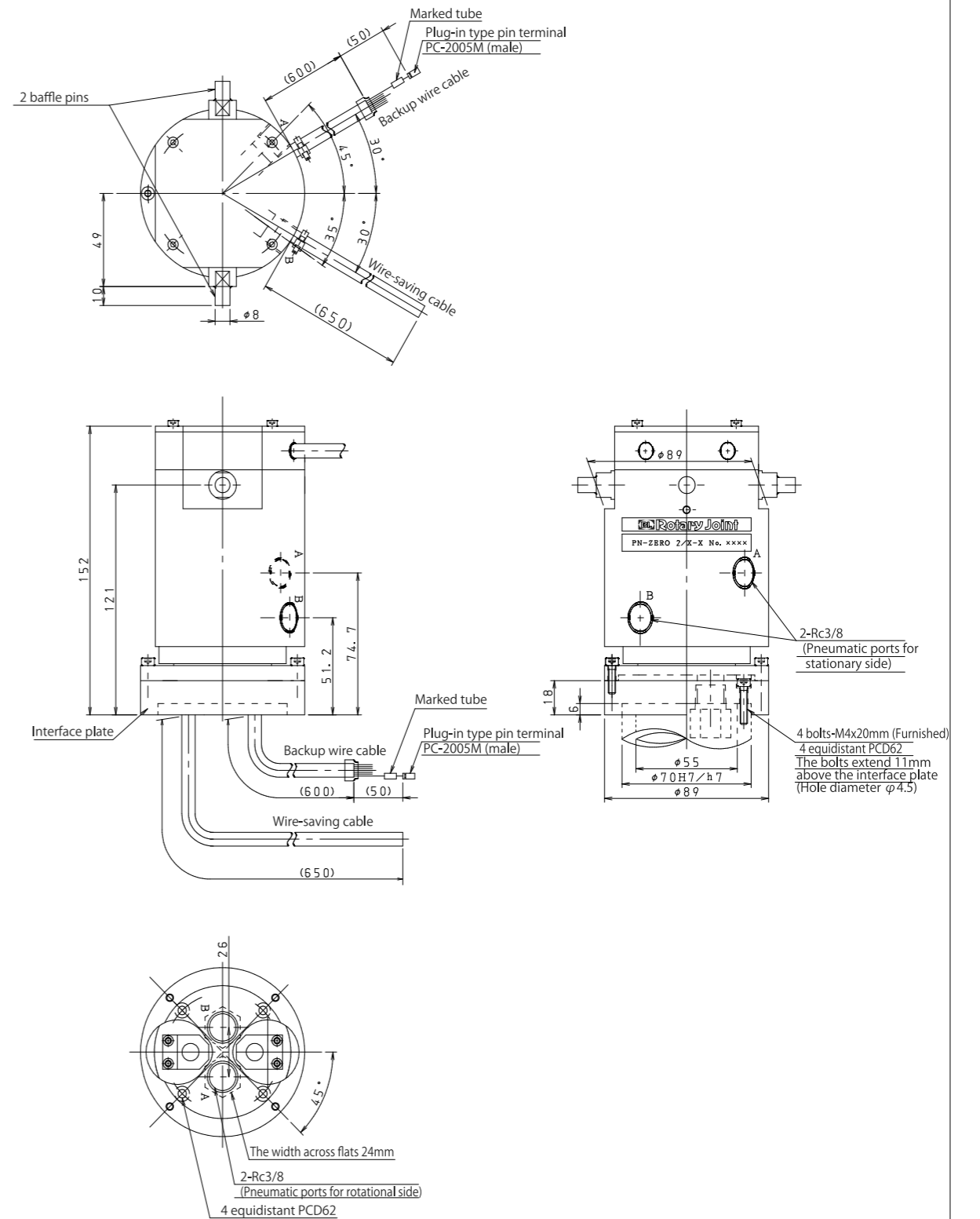
Main specifications (Wire-saving model)

Specifications	Model	PN-ZERO 2/D-5、2/U-6、2/C-4		
Angle of rotation		360 degree endless rotation		
Outside dimension		Refer to the main body outline drawing		
Product weight		About 3.0kg		
Rotational torque		About 500N·cm		
Rotational speed	(Max)	100rpm		
	(Rated)	50rpm		
Connecting utilities	Electrical signals	Number of electrical wires	Wire-saving	Standard number of wires for three models
			Backup electrical wires	Model: PN-ZERO 2/D-5: 5 electrical wires Model: PN-ZERO 2/U-6: 6 electrical wires Model: PN-ZERO 2/C-4: 4 electrical wires
		Contact capacity (max)		2A sequential (AC100V/DC100V)
		Connection	Stationary side	Wire-saving
			Backup electrical wires	Plug-in type pin terminal with insert-type (Nichifu) PC-2005M (User provided: PC-2005F)
	Rotational side	Wire-saving	Unconnected (Connect to match user specifications)	
		Backup electrical wires	Plug-in type pin terminal with insert-type (Nichifu) PC-2005M (User provided: PC-2005F)	
	Pneumatic pressure	Number of ports	2 ports	
Minimum conduit diameter		φ14.4mm		
Pressure range for use		0~0.98MPa (0~10kgf/cm ²)		
Stationary side connection		Joint screw (Rc3/8)		
Rotational side connection	Joint screw (Rc3/8)			

※ **CC-Link** PN-ZERO 2/C-4 is approved by the CC-Link Partner Association.

Wire-saving model)

PN-ZERO 2/D-5, 2/U-6, 2/C-4



Next-Generation Robots	ZEUS
Automatic Tool Changer	GIGA
1kg	
5kg	
10kg	
20kg	
40kg	
60kg	
70kg	
100kg	
150kg	
220kg	
300kg	
Press Handling Specification	100kg
Spot-Welding Gun-Changer	300kg
Options	
Wire-Saving module / Contact block	
Non-contact electric signal block	
A mechanical safety valve prevents Tool plate drops	
List	
Product Overview	
Rotary Joint	
PN-ZERO Series	
Wrist Complancher	
RCC DEVICE / LOOK-UP RCC DEVICE	
Couple Joint	
CJ2	