

**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.



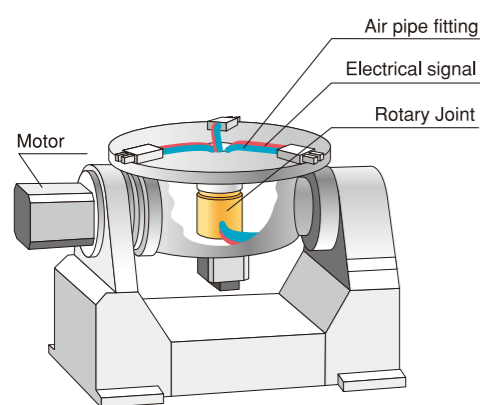
**Features**

- 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 <sup>2</sup> )			
		Stationary side connection	Joint screw (Rc3/8)			
Rotational side connection	Joint screw (Rc3/8)					

**Main specifications (Wire-saving model)**

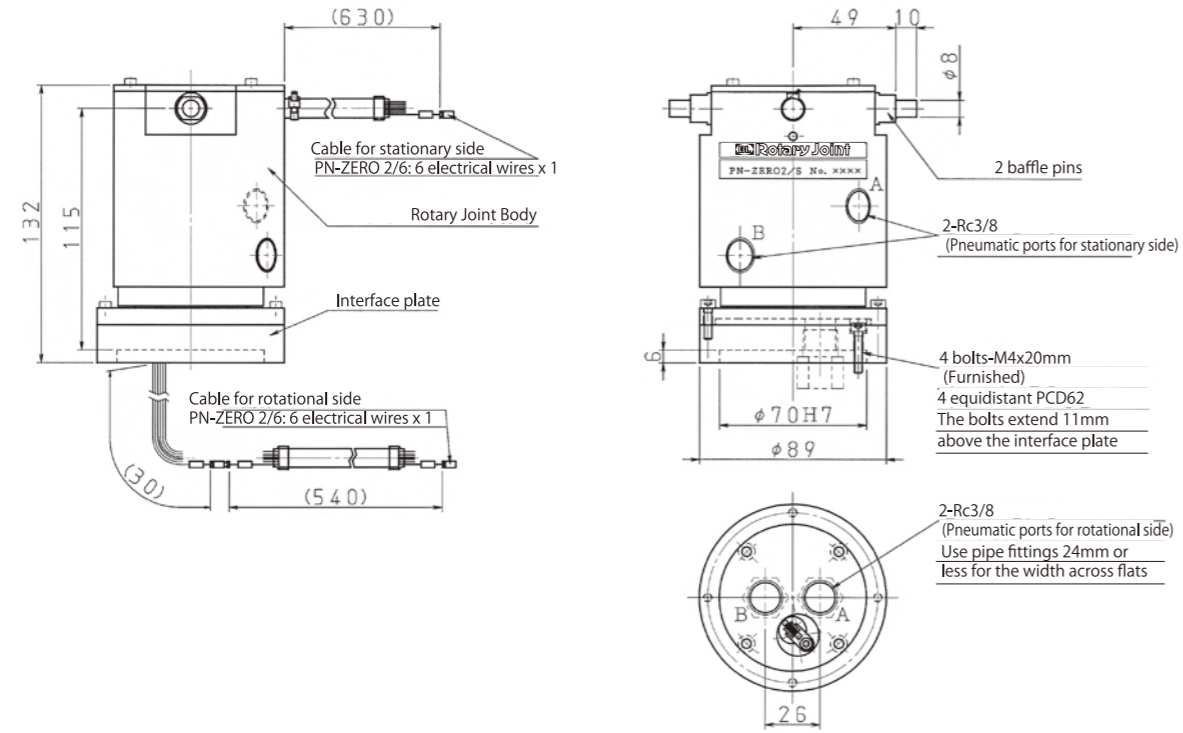
Specifications	Model	PN-ZERO 2/D-5, 2/U-6, 2/C-4			
Angle of rotation		360 degree endless rotation			
Outside dimension		Refer to the main body outline drawing			
Product weight		About 3.0kg			
Rotational torque		About 500N·cm			
Rotational speed	(Max)	100rpm			
	(Rated)	50rpm			
Connecting utilities	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	
		Connection	Contact capacity (max)		2A sequential (AC100V/DC100V)
			Stationary 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)			
	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 <sup>2</sup> )	
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.

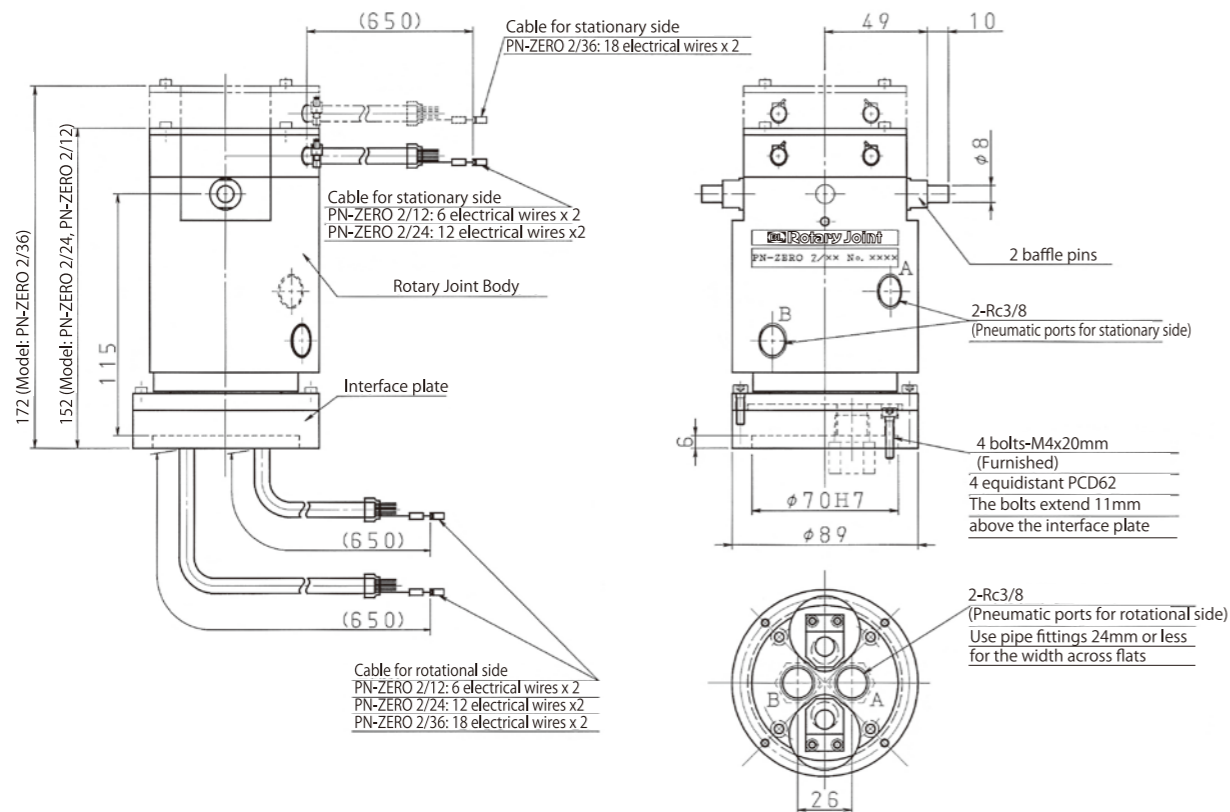


Main body dimensions (Analog signal model)

**PN-ZERO 2/6**

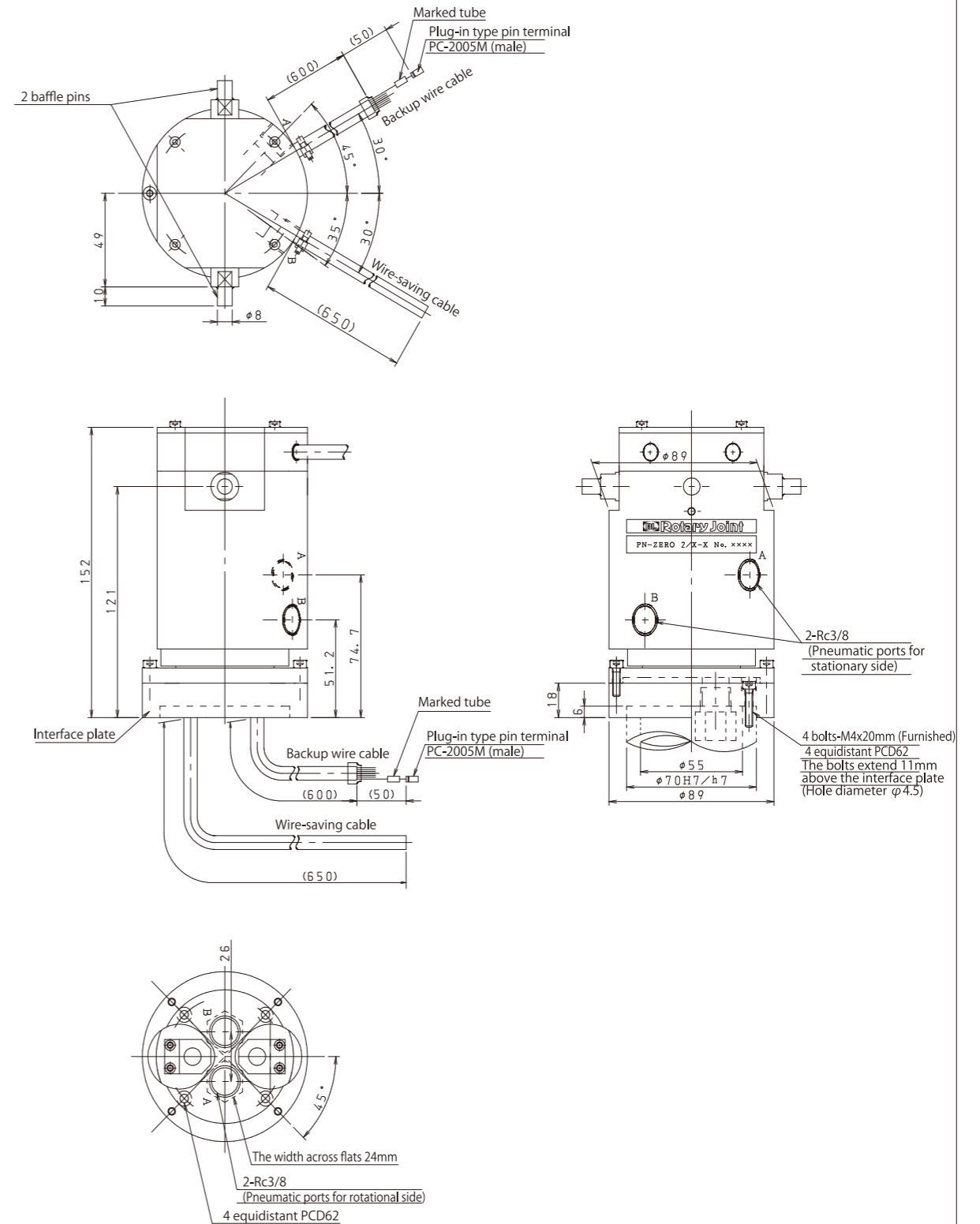


**PN-ZERO 2/12, 2/24, 2/36**



Main body dimensions (Wire-saving model)

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



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