

# CERTIFICATE OF PATENT



Patent Number **10-1577041**

Application Number **10-2015-0105669**

Filing Date **2015.07.27.**

Registration Date **2015.12.07.**

Title of the Invention

**APPARATUS FOR PROTECTING SENSOR AND HIGH SPEED DOOR HAVING THE SAME**

Patentee

**COAD Co., Ltd(134811-\*\*\*\*\*)**

202-37, Hyundaikia-ro, Namyang-eup, Hwaseong-si, Gyeonggi-do, Republic of Korea

Inventor

**KIM KYEONG DEOK**

202-37, Hyundaikia-ro, Namyang-eup, Hwaseong-si, Gyeonggi-do, Republic of Korea

**This is to certify that, in accordance with the Patent Act, a patent for the invention has been registered at the Korean Intellectual Property Office.**



2019.06.20.



Check your current  
registration with QR code

**COMMISSIONER,  
KOREAN INTELLECTUAL PROPERTY OFFICE**

# CERTIFICATE OF SERVICE MARK REGISTRATION

Registration Number    **41-0383663**

Application Number    **41-2016-0018880**

Filing Date                **2016.04.22.**

Registration Date        **2017.01.13.**

Owner of the Service Mark Right

**COAD Co., Ltd(134811-\*\*\*\*\*)**  
202-37, Hyundaikia-ro, Namyang-eup, Hwaseong-si,  
Gyeonggi-do, Republic of Korea

List Of Goods

List of Services

Class 37.

20 items, including PRODUCTION, INSTALLATION  
AND MAINTENANCE OF AUTOMATIC DOOR

**COAD**

This is to certify that, in accordance with the Trademark Act, a service mark has been registered at the Korean Intellectual Property Office.



2019.06.20.



Check your current registration with QR code

**COMMISSIONER,  
KOREAN INTELLECTUAL PROPERTY OFFICE**

# CERTIFICATE OF TRADEMARK REGISTRATION



Registration Number **40-1243276**

Application Number **40-2016-0029870**

Filing Date **2016.04.22.**

Registration Date **2017.03.31.**

Owner of the Trademark Right

**COAD Co., Ltd(134811-\*\*\*\*\*)**  
202-37, Hyundaikia-ro, Namyang-eup, Hwaseong-si,  
Gyeonggi-do, Republic of Korea

## List Of Goods

List of Goods

**Class 09.**

15 items, including **DIGITAL DOOR LOCK**

## **SNAIL DOOR**

This is to certify that, in accordance with the Trademark Act, a trademark has been registered at the Korean Intellectual Property Office.



2019.06.20.



Check your current  
registration with QR code

**COMMISSIONER,**  
**KOREAN INTELLECTUAL PROPERTY OFFICE**

**三相誘導電動機試験成績表**  
TEST REPORT OF 3 PHASE INDUCTION MOTOR

Sumitomo Drive Technologies

御注文主  
Messrs. \_\_\_\_\_  
御注文番号  
Contract No. \_\_\_\_\_  
項目  
Item No. \_\_\_\_\_

製番  
Manuf's No. VNG2A354-002  
機番  
Serial No. VN0246141~VN0246150

銘板仕様 Nameplate Rating	形式 Manuf's Type	TC-F		コイル図番 Coil No.	DP774WW-G11		
出力 (kW) Output	0.75	電圧 Volts	220	定格 Rating	S1	耐熱クラス Thermal Class	B
極数 Poles	4	電流 Amperes	3.35	枠番号 Frame No.	V-80M		
周波数 Hz	60	回転数 r/min	1740				

特性試験 Characteristics Test			保護方式 Protection	IP44
無負荷試験 No-Load Test			拘束試験 Lock Test	
周波数 Hz	60	60		
電圧 Volts	220	47.7		
電流 Amperes	2.16	3.30		
入力 Watts	127	168		

巻線抵抗 Winding Resistance		
(固定子) Stator	6.32	Ω
周囲温度 (℃) Amb. Temp.	20	℃
端子間 Between Terminals		

負荷特性(等価回路法) Load Characteristics (Equivalent Circuit Method)

負荷 (%) Load	電流 (A) Current	効率 (%) Efficiency	力率 (%) Power Factor	すべり (%) Slip
25	2.25	59.2	37.0	0.83
50	2.48	72.1	54.9	1.70
75	2.86	76.4	67.7	2.66
100	3.35	77.3	76.1	3.75
125	3.96	76.5	81.3	5.02

最大出力 (%) Max. Output	220
停動トルク (%) Breakdown Torque	253
始動トルク (%) Starting Torque	242
始動電流 (A) Starting Current	16.8

温度上昇試験 Temperature Rise Test

	時間後 Hours' Run	固定子 Stator			温度上昇値 (K) Temperature Rise (K)	抵抗法 By Resistance Method
		巻線 Windings	枠 Frame			
100% 負荷 Load	4	47	31			温度計法 ※By Thermometer Method

絶縁抵抗試験 Insulation Test 耐圧試験 Withstand Voltage Test

固定子巻線 Stator Windings	100 MΩ	500V 炎一 By 500V Megger	交流 AC 60 Hz	2400 V for 2sec	2秒間 Good
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備考 Remarks:  
WITH FB BRAKE

日付 Date

23-Jun-2015

I. Ogimara

Manager  
Quality Assurance Department

Sumitomo Heavy Industries(Vietnam)

**三相誘導電動機試験成績表**  
TEST REPORT OF 3 PHASE INDUCTION MOTOR

Sumitomo Drive Technologies

御注文主

Messrs. \_\_\_\_\_

御注文番号

Contract No. \_\_\_\_\_

項目

Item No. \_\_\_\_\_

製番

Manuf's No. VNFZA437-002

機番

Serial No. VN0232562~VN0232571

銘板仕様 Nameplate Rating	形式 Manuf's Type	コイル図番 Coil No.			DS695WW-G11		
出力 (kW) Output	0.4	電圧 Volts	220	定格 Rating	S1	耐熱クラス Thermal Class	E
極数 Poles	4	電流 Amperes	2.02	枠番号 Frame No.	V-71M		
周波数 Hz	60	回転数 r/min	1730				

特性試験 Characteristics Test

保護方式 Protection

[IP44]

	無負荷試験 No-Load Test	拘束試験 Lock Test			巻線抵抗 Winding Resistance	
	周波数 Hz	60	60		(固定子) Stator	9.76 Ω
電圧 Volts	220		57.5		周囲温度 (℃) Amb. Temp.	20 ℃
電流 Amperes	1.41		2.00		端子間 Between Terminals	
入力 Watts	80.1		126			

負荷特性(等価回路法) Load Characteristics (Equivalent Circuit Method)

負荷 (%) Load	電流 (A) Current	効率 (%) Efficiency	力率 (%) Power Factor	すべり (%) Slip	最大出力 (%) Max. Output	191
25	1.45	55.0	32.9	1.57	停動トルク (%) Breakdown Torque	257
50	1.57	68.5	49.0	3.16	始動トルク (%) Starting Torque	257
75	1.75	73.0	61.5	4.94	始動電流 (A) Starting Current	9.4
100	2.02	73.8	70.6	7.00		
125	2.36	72.4	76.6	9.46		

温度上昇試験 Temperature Rise Test

	時間後 Hours' Run	固定子 Stator		
		巻線 Windings	枠※Frame	
100% 負荷 Load	4	48.5	30	

温度上昇値 (K) 抵抗法

Temperature Rise (K) By Resistance Method

温度計法

※By Thermometer Method

絶縁抵抗試験 Insulation Test

耐圧試験 Withstand Voltage Test

固定子巻線 Stator Windings	100 MΩ	500V 炎一 By 500V Megger	交流 AC 60 Hz	2400 V for 2sec	2秒間 Good
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日付 Date

23-Jun-2015

I. Ogihara

Manager  
Quality Assurance Department

Sumitomo Heavy Industries(Vietnam)

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TEST REPORT OF 3 PHASE INDUCTION MOTOR

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御注文主 Messrs. \_\_\_\_\_  
御注文番号 Contract No. \_\_\_\_\_  
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製番 Manuf's No. \_\_\_\_\_  
機番 Serial No. \_\_\_\_\_

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周波数 Hz	60	60	
電圧 Volts	220	47.7	
電流 Amperes	2.16	3.30	
入力 Watts	127	168	

保護方式 Protection

IP44

巻線抵抗 Winding Resistance		
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温度上昇試験 Temperature Rise Test

	時間後 Hours* Run	固定子 Stator		温度上昇値 (K) Temperature Rise (K)
		巻線 Winding	枠 Frame	
100% 負荷 Load	4	47	31	

抵抗法  
By Resistance Method  
温度計法  
By Thermometer Method

絶縁抵抗試験 Insulation Test

耐圧試験 Withstand Voltage Test

固定子巻線 Stator Windings	100 MΩ	500V メガー <sup>By 500V Megger</sup>	交流 AC 60 Hz	2400 V for 2sec	2秒間 良 Good
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日付 Date

備考 Remarks:  
WITH FB BRAKE

I. Ogihara

Manager  
Quality Assurance Department

Sumitomo Heavy Industries(Vietnam)

三相誘導電動機試験成績表  
TEST REPORT OF 3 PHASE INDUCTION MOTOR

Sumitomo Drive Technologies

御注文主 Messrs. \_\_\_\_\_  
御注文番号 Contract No. \_\_\_\_\_  
項目 Item No. \_\_\_\_\_  
御注文仕様 Nameplate Rating  
形式 Manuf's Type TC-F  
コイル図番 Coil No. DS695WW-G11  
機番 Serial No. \_\_\_\_\_

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周波数 Hz	60	60		
電圧 Volts	220	57.5		
電流 Amperes	1.41	2.00		
入力 Watts	80.1	126		

巻線抵抗 Winding Resistance		
(固定子) Stator	9.76	Ω
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最大出力 (%) Max. Output	191
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始動トルク (%) Starting Torque	257
始動電流 (A) Starting Current	9.4

負荷 Load	時間後 Hours' Run	固定子 Stator		温度上昇値 (K) Temperature Rise (K)	抵抗法 By Resistance Method
		巻線 Windings	枠 Frame		
100%	4	48.5	30		温度計法 By Thermometer Method

絶縁抵抗試験 Insulation Test		耐圧試験 Withstand Voltage Test		日付 Date	
固定子巻線 Stator Windings	100 MΩ By 500V Megger	500V AC	60 Hz	2400 V for 2sec	良 Good

備考 Remarks:  
WITH FB BRAKE

I. Ogihara

Manager  
Quality Assurance Department

Sumitomo Heavy Industries(Vietnam)

# EC(EU) DECLARATION OF CONFORMITY

SINCE 1999

AS DEFINED BY ELECTROMAGNETIC COMPATIBILITY

## Autonics Corporation

#41-5 Yongdang-Dong, Yangsan-shi, Kyungsangnamdo, Korea 626-290

**Multiple listee: Autonics Electronics(jiaxing)Corporation**

#301 Yun Hai Road, Jiaxing, Zhejiang, China 314-001

Herewith we declare that

Name of product: Rotary Encoder

Type: E40 Series

Comply with the following provisions applying to it

Council Directive 2004/108/EC

Applied national technical standards and specifications

EMC standard : EN 61000-6-2:2005

: EN 61000-6-4:2007

EMC test Lab : **Autonics Corporation**

#41-5 Yongdang-Dong, Yangsan-shi, Kyungsangnamdo, Korea 626-290

Test Report Number : ATS-EMC-2009-34

**Autonics CORPORATION**

*H.K.Park*

SIGNED BY H.K.PARK/PRESIDENT

Kyungsangnamdo, Korea

(contact us <http://www.autonics.com>)

18. May, 2009

BASI instrument AB

*H.K.Park*



BASI Instrument AB  
Box 53, SE-270 33 Västervik  
Tel. +46 (0)40-880 09  
Fax +46 (0)40-52 98 77  
Web: [www.basi.se](http://www.basi.se)



# E40 Series

## Shaft Type/Hollow Shaft Type/Blind Hollow Shaft Type Ø40mm Incremental Rotary Encoder

### Features

- Easy installation at narrow space
- Low moment of inertia
- Power supply: 5VDC, 12-24VDC ±5%
- Various output types

**⚠ Please read "Safety Considerations" in operation manual before using.**



### Ordering Information

E40	H	8	-	5000	-	3	-	N	-	24	-	
Series		Shaft diameter		Pulses/revolution		Output phase		Control output		Power supply		Cable
Ø40mm S: shaft type	External	6: Ø6mm 8: Ø8mm		Refer to resolution	2: A, B 3: A, B, Z 4: A, $\bar{A}$ , B, $\bar{B}$ 6: A, $\bar{A}$ , B, $\bar{B}$ , Z, $\bar{Z}$	T: Totem pole output N: NPN open collector output V: Voltage output L: Line driver output	5 : 5VDC ±5% 24: 12-24VDC ±5%	No mark : Radial cable type C: Radial cable connector type				
Ø40mm H: hollow shaft type, HB: blind hollow shaft type	Inner	6: Ø6mm 8: Ø8mm 10: Ø10mm 12: Ø12mm										

### Specifications

Item	Shaft Type/Hollow Shaft Type/Blind Hollow Shaft Type Ø40mm Incremental Rotary Encoder																														
Resolution (PPR) <sup>※1</sup>	*1, *2, *5, 10, *12, 15, 20, 23, 25, 30, 35, 40, 45, 50, 60, 75, 100, 120, 150, 192, 200, 240, 250, 256, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 1500, 1800, 2000, 2048, 2500, 3000, 3600, 5000																														
Electrical specification	Output phase		A, B, Z phase (line driver A, $\bar{A}$ , B, $\bar{B}$ , Z, $\bar{Z}$ phase)																												
	Phase difference of output		Phase difference between A and B: $\frac{T}{4} \pm \frac{T}{8}$ (T=1 cycle of A phase)																												
	Control output	Totem pole output		• [Low] - Load current: max. 30mA, residual voltage: max. 0.4VDC=• • [High] - Load current: max. 10mA, output voltage (power voltage 5VDC=): min. (power voltage-2.0)VDC=, Output voltage (power voltage 12-24VDC=): min. (power voltage-3.0)VDC=																											
		NPN open collector output		Load current: max. 30mA, residual voltage: max. 0.4VDC=																											
	Response time (rise/fall)	Voltage output		Load current: max. 10mA, residual voltage: max. 0.4VDC=																											
		Line driver output		• [Low] - Load current: max. 20mA, residual voltage: max. 0.5VDC=• • [High] - Load current: max. -20mA, output voltage (power voltage 5VDC=): min. 2.5VDC=, Output voltage (power voltage 12-24VDC=): min. (power voltage-3.0)VDC=																											
	Max. response frequency	Totem pole output		Max. 1μs (cable length: 2m, I sink = 20mA)																											
		NPN open collector output		Max. 1μs (cable length: 2m, I sink = 20mA)																											
	Current consumption	Voltage output		Max. 80mA (disconnection of the load), line driver output: max. 50mA (disconnection of the load)																											
		Line driver output		Over 100MΩ (at 500VDC megger between all terminals and case)																											
	Dielectric strength	Max. response frequency		750VAC 50/60Hz for 1 minute (between all terminals and case)																											
		Connection		Radial cable type, Radial cable connector type																											
Mechanical specification	Starting torque		• S type: max. 40gf·cm (0.004N·m) • H/HB type: max. 50gf·cm (0.005N·m)																												
	Moment of inertia		Max. 40g·cm <sup>2</sup> (4×10 <sup>-6</sup> kg·m <sup>2</sup> )																												
	Shaft loading		Radial: max. 2kgf, Thrust: max. 1kgf																												
	Max. allowable revolution <sup>※2</sup>		5,000rpm																												
Vibration		1.5mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours																													
Shock		Approx. max. 50G																													
Environment	Ambient temperature		-10 to 70°C, storage: -25 to 85°C																												
	Ambient humidity		35 to 85%RH, storage: 35 to 90%RH																												
Protection structure		IP50 (IEC standard)																													
Cable		$\varnothing 5\text{mm}$ , 5-wire (line driver output: 8-wire), 2m, Shield cable (AWG24, core diameter: 0.08, number of cores: 40, insulator outer diameter: $\varnothing 1\text{mm}$ )																													
Accessory		• S type: Ø6mm coupling, Ø8mm coupling • H/HB type: bracket																													
Approval		CE (except line driver output)																													
Unit weight		Approx. 120g																													

※1: \*<sup>1</sup> pulse is only for A, B phase (line driver output is for A,  $\bar{A}$ , B,  $\bar{B}$  phase). Not indicated resolutions are customizable.

※2: Make sure that max. response revolution should be lower than or equal to max. allowable revolution when selecting the resolution.

$$\text{[Max. response revolution (rpm)} = \frac{\text{Max. response frequency}}{\text{Resolution}} \times 60 \text{ sec}]$$

※Environment resistance is rated at no freezing or condensation.

# EC(EU) DECLARATION OF CONFORMITY

SINCE 2001

AS DEFINED BY ELECTROMAGNETIC COMPATIBILITY

## Autonics Corporation

#41-5 Yongdang-Dong, Yangsan-shi, Kyungsangnamdo, Korea 626-290

**Multiple listee: Autonics Electronics(jiaxing)Corporation**

#301 Yun Hai Road, Jiaxing, Zhejiang, China 314-001

Herewith we declare that

Name of product: Photo Sensor

Type: BR Series

Comply with the following provisions applying to it

Council Directive 2004/108/EC

Applied national technical standards and specifications

EMC standard : EN 61000-6-2:2005

: EN 61000-6-4:2007

EMC test Lab : RWTUV Korea Ltd.

#51-19, Sangrim-3Ri, Dochuck-Myun, Kwangju-Kun, Kyungkido, Korea

**Autonics CORPORATION**

*H.K.Park*

SIGNED BY H.K.PARK / PRESIDENT

03. July, 2009

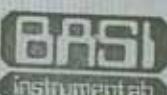
Test Report Number : KB-01-E-00490

Kyungsangnamdo, Korea

(contact us <http://www.autonics.com>)

BASI instrument AB

*H.K.Park*



BASI Instrument AB  
Box 53, SE-270 33 Växjö  
Tel. +46 (0)40-880 09  
Fax +46 (0)40-92 98 77  
Web: [www.basi.se](http://www.basi.se)



# Autonics

## PHOTOELECTRIC SENSOR

### BRE SERIES

M A N U A L



Thank you very much for selecting Autonics products.

### For your safety, please read the following before using.

#### Caution for your safety

\*Please keep these instructions and review them before using this unit.

#### Warning

\*Please observe the cautions that follow;

#### Caution

Product may be damaged, or injury may result if instructions are not followed.

#### Delta symbol

\*The following is an explanation of the symbols used in the operation manual.

#### Delta symbol

Injury or danger may occur under special conditions.

#### Warning

In case of using this unit with machinery (Ex: nuclear power control, medical equipment, ship, vehicle, train, airplane, combustion apparatus, safety device, crime/danger prevention equipment, etc) which cause damages to human life or property, it is required to install fail-safe device which can prevent damage to human life or property.

It may cause a fire, human injury or damage to property.

#### Do not disassemble or modify this unit. Please contact us if it is required.

If it may cause a fire or give an electric shock.

#### Caution

This unit shall not be used outdoors.

It might shorten the life cycle of the product or cause electric shock.

Please use this product inside only. Do not use the product outdoors or location subject to temperatures or humidity outside. (Example; rain, dirty, frost, sunlight, condensation, etc.)

#### Do not use this unit in place where there is flammable or explosive gas.

It may cause a fire or explosion.

#### Do not use the rated voltage and do not supply AC power.

It may cause damage to this unit.

#### Please check the polarity of power and wrong wiring.

It may cause damage to this unit.

#### Do not use this unit in place where there is vibration or impact.

It may cause damage to this unit.

6. In cleaning the unit, do not use water or an oil-based detergent.  
It may cause electric shock or a fire.

#### Ordering information

**BRE 5M - T D T P**

Control output P

NPN open collector output

Operation mode D

Light ON

Output Solid-state out (TR)

Power supply DC Power

Sensing type Through-beam

Sensing distance 10m

Sensing distance 5m

Photo sensor BRE Series

## Specifications

Model	BRE5M-TDTL	BRE5M-TDOD	BRE10M-TDTL	BRE10M-TDOD
Sensing type	Through-beam			

Sensing distance 5m

Response time Max. 1ms

Power supply Infrared LED(850nm)

Light source Light-ON

Operation mode NPN or PNP open collector output

Control output Load voltage:Max. 30VDC  
Load current Max. 10mA

Power consumption Emitter : Max. 20mA , Receiver : Max. 16mA (Max. 30mA when the output is ON)

Light source Light-ON

Operation mode NPN open collector output

Control output Load voltage:Max. 30VDC  
Load current Max. 10mA

Power consumption Emitter : Max. 20mA , Receiver : Max. 16mA (Max. 30mA when the output is ON)

Light source Light-ON

Operation mode NPN open collector output

Control output Load voltage:Max. 30VDC  
Load current Max. 10mA

Power consumption Emitter : Max. 20mA , Receiver : Max. 16mA (Max. 30mA when the output is ON)

Light source Light-ON

Operation mode NPN open collector output

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Light source Light-ON

Operation mode NPN open collector output

Control output Load voltage:Max. 30VDC  
Load current Max. 10mA

Power consumption Emitter : Max. 20mA , Receiver : Max. 16mA (Max. 30mA when the output is ON)

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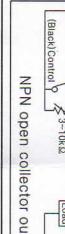
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Light source Light-ON

## Connection

### For mounting



① Push the unit into the mounting hole according to panel cut-out dimensions. Install this unit to not make any space between panel and sensor. Sensor is tilted, and optical axis may not coincide.

② Supply the power after setting the emitter and receiver in opposite each other.

③ Move emitter and receiver from side to side and check operating range of operation indicating lamp to adjust the right sensing position.

④ Move emitter and receiver up and down to adjust the right sensing position.

⑤ After adjusting the right position, put the object on optical axis to make sure the sensor operates properly. If the sensor operates well, fix the position.

\* If sensing object is translucent, or smaller than 10 mm, the sensor might not be able to sense the object.

⑥ Connect resistance between emitter's control line and GND to adjust sensitivity.

⑦ When emitter's Control input (black wire) is 0V, emitting will stop and emitter power indicator (Green) will flicker. TEST function is to make possible to check whether the sensor operates properly from external system while emitter's Control is 0V.

(When emitting stops, if the mode is Light ON, the receiver's output is ON)

⑧ Connect a strong source of light such as sunlight, spotlight within inclination angle range of photoelectric sensor.

⑨ Use this product inside only. Do not use the product outdoors or location subject to temperatures or humidity outside. (Example; rain, dirty, frost, sunlight, condensation, etc.)

⑩ When more than 2 sets of photoelectric sensor are used closely, it might cause mutual interference. Be sure to put enough space between them in order to avoid malfunction.

⑪ If photoelectric sensor is installed at flat part, it might cause malfunction by reflection light from flat part. Be sure to put space between photoelectric sensor with high voltage line, power line in the same conduit, it use cut-off joint with panel.

⑫ When wire the photoelectric sensor with high voltage line, so be sure to avoid installing the unit as following place. Corrosive gas, oil or dust, strong flux, noise, sunlight, or varistor.

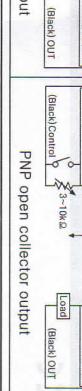
⑬ The photoelectric sensor cable shall be used as short as possible, unless it may cause malfunction by noise through the cable.

⑭ When it is stained by dirt at lens, please clean the lens with dry cloth, but don't use an organic materials such as alkali acid, chromic acid.

⑮ When use switching power supply as the source of supplying power, F.G terminal shall be good earth ground and connector for removing noise shall be installed between OV and F.G terminal.

⑯ If it shall be used indoor, @Altitude Max. 2,000m @Pollution Degree 2 @Installation Category II

\* If it may cause malfunction if above instructions are not followed.



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\* If it may cause malfunction if above instructions are not followed.

① Intercept a strong source of light such as sunlight, spotlight within inclination angle range of photoelectric sensor.

② The photoelectric sensor may cause malfunction under the fluorescent lamp light, so be sure to use cut-off joint with panel.

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# Product Data Sheet

Type: P21-47ZI(ACO4005)

## Belt Applications

Rapid roll door

## Fabric

Number of plies	: 2
Top Fabric	: Polyester monofilament, flexible fabric, light construction
Bottom Fabric	: Polyester monofilament, flexible fabric, light construction

## Basic technical data

Total thickness	: 2.0 mm
Weight	: 2.2 Kg/m <sup>2</sup>
Production width	: 3000 mm

## Belt strength

Breaking strength	: 150 N/mm
Tension for 1% elongation	: 8 N/mm
Max. admissible belt tension	: 15 N/mm
which is equal to	: 1.8 %

## Belt structure

Top Cover	
- Thickness	: 0.1 mm
- Material	: Fabric impregnated
- Hardness	: 80 Shore A
- Color	: Light Grey
- Surface	: Matt
Bottom Cover	
- Thickness	: 0.1 mm
- Material	: Fabric impregnated
- Hardness	: 80 Shore A
- Color	: Light Grey
- Surface	: Matt

## Support

Roller	No
Slider bed	No
Troughed	No

## Suggested joining methods

Joining method	-
Pressing Temperature	
-Top	-
-Thermo-coupling	-
-Bottom	-
Pressure	-

## Minimum roll diameter

Normal flexing	: -
Counter flexing	: -

## Chemical resistance and other characteristics

* Temperature range of -30° C to +80° C.
* Accord to ISO340 Flame retardant.



# TEST REPORT



1. NO : CT18-049979

Reissuance(R2)

## 2. Client

Date : 2018.06.05

Name : COAD Co., LTD

Address : 202-37, Hyundaikia-ro, Namyang-eup, Hwaseong-si, Gyeonggi-do, Republic of Korea

3. Date of Test : 2018.04.24 ~ 2018.06.05

4. Use of Report : Quality Control

5. Test Sample : Transparent sheet for automatic doors

## 6. Test Method

(1) KS L 9016:2010

## 7. Test Results

1) Transparent sheet for automatic doors

Test Item(s)	Unit	Test Method	Test Results	Remark
✓ Thermal conductivity [Mean temperature : 20 °C]	W/(m · K)	(1)	0.10	(23 ± 2)°C, (50 ± 5)% R.H.

The checked test property with the mark of "✓" is the recognized test property by the KOLAS.

---- End of Report ----

Affirmation	Tested By Name : Soon Hyun, Lim		Technical Manager Name : Byoung Young, Cho	
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Our report apply only to the standards or procedures identified and to the sample(s) tested unless otherwise specified. The test results are not indicative of representative of the qualities of the qualities of the lot from which the sample was taken or of apparently identical or similar products.

The above test certificate is the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

2018.06.05

Korea Conformity Laboratories President Kyung Sik Kim

Accredited by KOLAS, Republic of KOREA

Address : 28115 73, Yangcheong 3-gil, Ochang-eup, Cheongwon-Gu, Cheongju-Si, Chungbuk, Korea 82-43-718-9005

Result Inquiry : Building Envelope Technology Center 82-43-210-8913



## 会員証

株式会社コアド

JSDA-2160

貴社は、当協会の会員であることを証明します。

一般社団法人 日本シャッター・ドア協会

会長 木下和彦

