

# EC DECLARATION OF CONFORMITY

According to EMC Directive 89/336/EEC

Koyo Electronics Industries Co., Ltd.

(Name of Company)

1-171 Tenjin-cho Kodaira, Tokyo, JAPAN

(Address)

Rotary Encoder

(Kind of Product)

TRD-S/SH Series

(Type Designation)

JAPAN

(Country of Origin)

**This declaration conforms to the following standard.**

Generic standard EMC: EMS EN50082-2 (1995)

/ENV50140, ENV50141, ENV50204

EN61000-4-4, EN61000-4-8

Date to begin affixing CE Marking: August 20, 1999

We, Koyo Electronics Industries Co., Ltd. declare under our sole responsibility that the product to which this declaration relates is in conformity with the standard listed.

Note: This declaration will become invalid if any modification or repair is performed to the encoders without Koyo's permission.

Tokyo/April 24, 2000  
(Place and date issued)

Y. Kishi  
Yoshio Kishi, Manager of Encoder Business Division.  
(Name and signature as well as position of declarant)

Koyo Ref. No.EA-0047-1

1). TRD-S/SH Series

(a). Sample model: TRD-S2500AD

The same circuit is used for all types of the TRD-S/SH\_AD series, although disk varies with encoder resolution.

(a-1) Koyo Brand for oversea market

Pulse/revolution	Type	Pulse/revolution	Type
100	TRD-S100AA	1000	TRD-S1000AA
200	TRD-S200AA	1024	TRD-S1024AA
240	TRD-S240AA	1200	TRD-S1200AA
250	TRD-S250AA	2000	TRD-S2000AA
300	TRD-S300AA	2500	TRD-S2500AA
360	TRD-S360AA		
400	TRD-S400AA		
500	TRD-S500AA		
600	TRD-S600AA		
800	TRD-S800AA		

(a-2) Products of Original Equipment Manufacturer (OEM)

Pulse/revolution	Type	Pulse/revolution	Type
100	TRD-S100AD	1000	TRD-S1000AD
200	TRD-S200AD	1024	TRD-S1024AD
240	TRD-S240AD	1200	TRD-S1200AD
250	TRD-S250AD	2000	TRD-S2000AD
300	TRD-S300AD	2500	TRD-S2500AD
360	TRD-S360AD		
400	TRD-S400AD		
500	TRD-S500AD		
600	TRD-S600AD		
800	TRD-S800AD		

(a-3) Koyo Brand for oversea market

Hollow-shaft: Directly connected to the other shaft without coupling.

Pulse/revolution	Type	Pulse/revolution	Type
100	TRD-SH100AA	1000	TRD-SH1000AA
200	TRD-SH200AA	1024	TRD-SH1024AA
240	TRD-SH240AA	1200	TRD-SH1200AA
250	TRD-SH250AA	2000	TRD-SH2000AA
300	TRD-SH300AA	2500	TRD-SH2500AA
360	TRD-SH360AA		
400	TRD-SH400AA		
500	TRD-SH500AA		
600	TRD-SH600AA		
800	TRD-SH800AA		

(a-4) Products of Original Equipment Manufacturer (OEM)

Hollow-shaft: Directly connected to the other shaft without coupling

Pulse/revolution	Type	Pulse/revolution	Type
100	TRD-SH100AD	1000	TRD-SH1000AD
200	TRD-SH200AD	1024	TRD-SH1024AD
240	TRD-SH240AD	1200	TRD-SH1200AD
250	TRD-SH250AD	2000	TRD-SH2000AD
300	TRD-SH300AD	2500	TRD-SH2500AD
360	TRD-SH360AD		
400	TRD-SH400AD		
500	TRD-SH500AD		
600	TRD-SH600AD		
800	TRD-SH800AD		

(b). Sample model: TRD-S2500BD

The same circuit is used for all types of the TRD-S/SH\_\_BD series, although disk varies with encoder resolution.

(b-1) Koyo Brand for oversea market

Pulse/revolution	Type	Pulse/revolution	Type
100	TRD-S100BA	1000	TRD-S1000BA
200	TRD-S200BA	1024	TRD-S1024BA
240	TRD-S240BA	1200	TRD-S1200BA
250	TRD-S250BA	2000	TRD-S2000BA
300	TRD-S300BA	2500	TRD-S2500BA
360	TRD-S360BA		
400	TRD-S400BA		
500	TRD-S500BA		
600	TRD-S600BA		
800	TRD-S800BA		

(b-2) Products of Original Equipment Manufacturer (OEM)

Pulse/revolution	Type	Pulse/revolution	Type
100	TRD-S100BD	1000	TRD-S1000BD
200	TRD-S200BD	1024	TRD-S1024BD
240	TRD-S240BD	1200	TRD-S1200BD
250	TRD-S250BD	2000	TRD-S2000BD
300	TRD-S300BD	2500	TRD-S2500BD
360	TRD-S360BD		
400	TRD-S400BD		
500	TRD-S500BD		
600	TRD-S600BD		
800	TRD-S800BD		

**(b-3) Koyo Brand for oversea market**

**Hollow-shaft: Directly connected to the other shaft without coupling.**

<b>Pulse/revolution</b>	<b>Type</b>	<b>Pulse/revolution</b>	<b>Type</b>
100	TRD-SH100BA	1000	TRD-SH1000BA
200	TRD-SH200BA	1024	TRD-SH1024BA
240	TRD-SH240BA	1200	TRD-SH1200BA
250	TRD-SH250BA	2000	TRD-SH2000BA
300	TRD-SH300BA	2500	TRD-SH2500BA
360	TRD-SH360BA		
400	TRD-SH400BA		
500	TRD-SH500BA		
600	TRD-SH600BA		
800	TRD-SH800BA		

**(b-4) Products of Original Equipment Manufacturer (OEM)**

**Hollow-shaft: Directly connected to the other shaft without coupling**

<b>Pulse/revolution</b>	<b>Type</b>	<b>Pulse/revolution</b>	<b>Type</b>
100	TRD-SH100BD	1000	TRD-SH1000BD
200	TRD-SH200BD	1024	TRD-SH1024BD
240	TRD-SH240BD	1200	TRD-SH1200BD
250	TRD-SH250BD	2000	TRD-SH2000BD
300	TRD-SH300BD	2500	TRD-SH2500BD
360	TRD-SH360BD		
400	TRD-SH400BD		
500	TRD-SH500BD		
600	TRD-SH600BD		
800	TRD-SH800BD		

2). **Applicability**

The following tests were not carried out and the reason is described as bellow.

a. **Electromagnetic compatibility-Generic immunity standard**

Part 1 : Residential ,commercial and light industry EN50081-1

/Table 1 : Emission Enclosure

Table A.1 : Emission Signal ,control ,DC power input ,DC power output

This test is not carried out, because no noise sources such as oscillating and switch circuit exist in TRD-S/SH encoders.

b. EN50082-2 / Electrostatic discharge EN61000-4-2

This test is not carried out, because no operation switches and buttons will be touched by hands.

c. **Low Voltage Directive 73/23/EEC**

EN61010-1 (1993)

Because TRD-S/SH encoder are designed with supply voltage under

TRD-S/SH \_\_AD: 12V DC,

TRD-S/SH \_\_BD: 24V DC,

the requirement of 75V DC or more is beyond application.