

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-N/NH 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/ April24, 2000
(Place and date issued)


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

Koyo Ref. No.EA-0046-1

1). TRD-N/NH Series

(a). Sample model: TRD-N500-RZWD

The same circuit is used for all types of the TRD-N/NH series, although disk varies with encoder resolution.

(a-1) Koyo Brand for oversea market

Pulse/revolution	Type	Pulse/revolution	Type
10	TRD-N10-RZWA	300	TRD-N300-RZWA
30	TRD-N30-RZWA	360	TRD-N360-RZWA
40	TRD-N40-RZWA	400	TRD-N400-RZWA
50	TRD-N50-RZWA	480	TRD-N480-RZWA
60	TRD-N60-RZWA	500	TRD-N500-RZWA
100	TRD-N100-RZWA		
120	TRD-N120-RZWA		
200	TRD-N200-RZWA		
240	TRD-N240-RZWA		
250	TRD-N250-RZWA		

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

Pulse/revolution	Type	Pulse/revolution	Type
10	TRD-N10-RZWD	300	TRD-N300-RZWD
30	TRD-N30-RZWD	360	TRD-N360-RZWD
40	TRD-N40-RZWD	400	TRD-N400-RZWD
50	TRD-N50-RZWD	480	TRD-N480-RZWD
60	TRD-N60-RZWD	500	TRD-N500-RZWD
100	TRD-N100-RZWD		
120	TRD-N120-RZWD		
200	TRD-N200-RZWD		
240	TRD-N240-RZWD		
250	TRD-N250-RZWD		

(a-3) Koyo Brand for oversea market

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

Pulse/revolution	Type	Pulse/revolution	Type
10	TRD-NH10-RZWA	300	TRD-NH300-RZWA
30	TRD-NH30-RZWA	360	TRD-NH360-RZWA
40	TRD-NH40-RZWA	400	TRD-NH400-RZWA
50	TRD-NH50-RZWA	480	TRD-NH480-RZWA
60	TRD-NH60-RZWA	500	TRD-NH500-RZWA
100	TRD-NH100-RZWA		
120	TRD-NH120-RZWA		
200	TRD-NH200-RZWA		
240	TRD-NH240-RZWA		
250	TRD-NH250-RZWA		

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

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

Pulse/revolution	Type	Pulse/revolution	Type
10	TRD-NH10-RZWD	300	TRD-NH300-RZWD
30	TRD-NH30-RZWD	360	TRD-NH360-RZWD
40	TRD-NH40-RZWD	400	TRD-NH400-RZWD
50	TRD-NH50-RZWD	480	TRD-NH480-RZWD
60	TRD-NH60-RZWD	500	TRD-NH500-RZWD
100	TRD-NH100-RZWD		
120	TRD-NH120-RZWD		
200	TRD-NH200-RZWD		
240	TRD-NH240-RZWD		
250	TRD-NH250-RZWD		

(b). Sample model: TRD-N2500-RZWD

The same circuit is used for all types of the TRD-N/NH series, although disk varies with encoder resolution.

(b-1) Koyo Brand for oversea market

Pulse/revolution	Type
600	TRD-N600-RZWA
750	TRD-N750-RZWA
1000	TRD-N1000-RZWA
1024	TRD-N1024-RZWA
1200	TRD-N1200-RZWA
2000	TRD-N2000-RZWA
2500	TRD-N2500-RZWA

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

Pulse/revolution	Type
600	TRD-N600-RZWD
750	TRD-N750-RZWD
1000	TRD-N1000-RZWD
1024	TRD-N1024-RZWD
1200	TRD-N1200-RZWD
2000	TRD-N2000-RZWD
2500	TRD-N2500-RZWD

(b-3) Koyo Brand for oversea market

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

Pulse/revolution	Type
600	TRD-NH600-RZWA
750	TRD-NH750-RZWA
1000	TRD-NH1000-RZWA
1024	TRD-NH1024-RZWA
1200	TRD-NH1200-RZWA
2000	TRD-NH2000-RZWA
2500	TRD-NH2500-RZWA

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

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

Pulse/revolution	Type
600	TRD-NH600-RZWD
750	TRD-NH750-RZWD
1000	TRD-NH1000-RZWD
1024	TRD-NH1024-RZWD
1200	TRD-NH1200-RZWD
2000	TRD-NH2000-RZWD
2500	TRD-NH2500-RZWD

(c). Sample model: TRD-N500-RZVWD

The same circuit is used for all types of the TRD-N/NH series, although disk varies with encoder resolution.

(c-1) Koyo Brand for oversea market

Pulse/revolution	Type	Pulse/revolution	Type
10	TRD-N10-RZVWA	300	TRD-N300-RZVWA
30	TRD-N30-RZVWA	360	TRD-N360-RZVWA
40	TRD-N40-RZVWA	400	TRD-N400-RZVWA
50	TRD-N50-RZVWA	480	TRD-N480-RZVWA
60	TRD-N60-RZVWA	500	TRD-N500-RZVWA
100	TRD-N100-RZVWA		
120	TRD-N120-RZVWA		
200	TRD-N200-RZVWA		
240	TRD-N240-RZVWA		
250	TRD-N250-RZVWA		

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

Pulse/revolution	Type	Pulse/revolution	Type
10	TRD-N10-RZVWD	300	TRD-N300-RZVWD
30	TRD-N30-RZVWD	360	TRD-N360-RZVWD
40	TRD-N40-RZVWD	400	TRD-N400-RZVWD
50	TRD-N50-RZVWD	480	TRD-N480-RZVWD
60	TRD-N60-RZVWD	500	TRD-N500-RZVWD
100	TRD-N100-RZVWD		
120	TRD-N120-RZVWD		
200	TRD-N200-RZVWD		
240	TRD-N240-RZVWD		
250	TRD-N250-RZVWD		

(c-3) Koyo Brand for oversea market

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

Pulse/revolution	Type	Pulse/revolution	Type
10	TRD-NH10-RZVWA	300	TRD-NH300-RZVWA
30	TRD-NH30-RZVWA	360	TRD-NH360-RZVWA
40	TRD-NH40-RZVWA	400	TRD-NH400-RZVWA
50	TRD-NH50-RZVWA	480	TRD-NH480-RZVWA
60	TRD-NH60-RZVWA	500	TRD-NH500-RZVWA
100	TRD-NH100-RZVWA		
120	TRD-NH120-RZVWA		
200	TRD-NH200-RZVWA		
240	TRD-NH240-RZVWA		
250	TRD-NH250-RZVWA		

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

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

Pulse/revolution	Type	Pulse/revolution	Type
10	TRD-NH10-RZVWD	300	TRD-NH300-RZVWD
30	TRD-NH30-RZVWD	360	TRD-NH360-RZVWD
40	TRD-NH40-RZVWD	400	TRD-NH400-RZVWD
50	TRD-NH50-RZVWD	480	TRD-NH480-RZVWD
60	TRD-NH60-RZVWD	500	TRD-NH500-RZVWD
100	TRD-NH100-RZVWD		
120	TRD-NH120-RZVWD		
200	TRD-NH200-RZVWD		
240	TRD-NH240-RZVWD		
250	TRD-NH250-RZVWD		

(d). Sample model: TRD-N2500-RZVWD

The same circuit is used for all types of the TRD-N/NH series, although disk varies with encoder resolution.

(d-1) Koyo Brand for oversea market

Pulse/revolution	Type
600	TRD-N600-RZVWA
750	TRD-N750-RZVWA
1000	TRD-N1000-RZVWA
1024	TRD-N1024-RZVWA
1200	TRD-N1200-RZVWA
2000	TRD-N2000-RZVWA
2500	TRD-N2500-RZVWA

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

Pulse/revolution	Type
600	TRD-N600-RZVWD
750	TRD-N750-RZVWD
1000	TRD-N1000-RZVWD
1024	TRD-N1024-RZVWD
1200	TRD-N1200-RZVWD
2000	TRD-N2000-RZVWD
2500	TRD-N2500-RZVWD

(d-3) Koyo Brand for oversea market

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

Pulse/revolution	Type
600	TRD-NH600-RZVWA
750	TRD-NH750-RZVWA
1000	TRD-NH1000-RZVWA
1024	TRD-NH1024-RZVWA
1200	TRD-NH1200-RZVWA
2000	TRD-NH2000-RZVWA
2500	TRD-NH2500-RZVWA

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

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

Pulse/revolution	Type
600	TRD-NH600-RZVWD
750	TRD-NH750-RZVWD
1000	TRD-NH1000-RZVWD
1024	TRD-NH1024-RZVWD
1200	TRD-NH1200-RZVWD
2000	TRD-NH2000-RZVWD
2500	TRD-NH2500-RZVWD

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-N/NH 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-N/NH encoder are designed with supply voltage under 35V DC, the requirement of 75V DC or more is beyond application.