

# 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-NA\*NW Series

(Type Designation)

JAPAN

(Country of Origin)

This declaration conforms to the following standard.

Generic standard EMC

EN50081-2:1993/EN55011:1998,A1:1999 ClassA

EN61000-6-2:1999

/EN61000-4-2:1995,A1:1998 EN61000-4-3:1996,A1:1998 EN61000-4-4:1995

EN61000-4-5:1995 EN61000-4-6:1996 EN61000-4-8:1993 EN61000-4-11:1994

Date to begin affixing CE Marking: August20, 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.

Yuichi Watanabe

Tokyo/September28,2001

(Place and date issued)

Yuichi Watanabe, Manager of Encoder Business Division.

(Name and signature as well as position of declaring)

Koyo Ref. No.EA-0044-3

1). TRD-NA Series

Sample model: TRD-NA720NW

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

(a). Conventional products

Resolution	Direction	With cable	
		Cable length 2m	Cable length 5m
32 (5bit)	CW	TRD-NA32NW	TRD-NA32NW5M
	CCW	TRD-NA32RNW	TRD-NA32RNW5M
64 (6bit)	CW	TRD-NA64NW	TRD-NA64NW5M
	CCW	TRD-NA64RNW	TRD-NA64RNW5M
128 (7bit)	CW	TRD-NA128NW	TRD-NA128NW5M
	CCW	TRD-NA128RNW	TRD-NA128RNW5M
180 (8bit)	CW	TRD-NA180NW	TRD-NA180NW5M
	CCW	TRD-NA180RNW	TRD-NA180RNW5M
256 (8bit)	CW	TRD-NA256NW	TRD-NA256NW5M
	CCW	TRD-NA256RNW	TRD-NA256RNW5M
360 (9bit)	CW	TRD-NA360NW	TRD-NA360NW5M
	CCW	TRD-NA360RNW	TRD-NA360RNW5M
512 (9bit)	CW	TRD-NA512NW	TRD-NA512NW5M
	CCW	TRD-NA512RNW	TRD-NA512RNW5M
720 (10bit)	CW	TRD-NA720NW	TRD-NA720NW5M
	CCW	TRD-NA720RNW	TRD-NA720RNW5M
1024 (10bit)	CW	TRD-NA1024NW	TRD-NA1024NW5M
	CCW	TRD-NA1024RNW	TRD-NA1024RNW5M

Direction

Blank : Normal revolution(CW)

R : Reverse revolution(CCW)

(b). Koyo Brand for oversea market

Resolution	Model number
32 (5bit)	TRD-NA32NWA
64 (6bit)	TRD-NA64NWA
128 (7bit)	TRD-NA128NWA
180 (8bit)	TRD-NA180NWA
256 (8bit)	TRD-NA256NWA
360 (9bit)	TRD-NA360NWA
512 (9bit)	TRD-NA512NWA
720 (10bit)	TRD-NA720NWA
1024 (10bit)	TRD-NA1024NWA

(c). Products of Original Equipment Manufacturer (OEM)

Resolution	Model number
32 (5bit)	TRD-NA32NWD
64 (6bit)	TRD-NA64NWD
128 (7bit)	TRD-NA128NWD
180 (8bit)	TRD-NA180NWD
256 (8bit)	TRD-NA256NWD
360 (9bit)	TRD-NA360NWD
512 (9bit)	TRD-NA512NWD
720 (10bit)	TRD-NA720NWD
1024 (10bit)	TRD-NA1024NWD

(d). Products with relay connector at cable end

Resolution	Direction	
	CW	CCW
32 (5bit)	TRD-NA32NWE	TRD-NA32RNWE
64 (6bit)	TRD-NA64NWE	TRD-NA64RNWE
128 (7bit)	TRD-NA128NWE	TRD-NA128RNWE
180 (8bit)	TRD-NA180NWE	TRD-NA180RNWE
256 (8bit)	TRD-NA256NWE	TRD-NA256RNWE
360 (9bit)	TRD-NA360NWE	TRD-NA360RNWE
512 (9bit)	TRD-NA512NWE	TRD-NA512RNWE
720 (10bit)	TRD-NA720NWE	TRD-NA720RNWE
1024 (10bit)	TRD-NA1024NWE	TRD-NA1024RNWE

Direction

Blank : Normal revolution(CW)

R : Reverse revolution(CCW)

(e). Products with FC connector at cable end

Resolution	With FC connector ※1	
	Cable length 2m	Cable length 5m
360 (9bit)	TRD-NA360NWF	TRD-NA360NWF5M
720 (10bit)	TRD-NA720NWF	TRD-NA720NWF5M

※1 "FC" denotes a FC series programmable cam switch  
(other than FC-20 and FC-21)

2). Applicability

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

a. EN61000-6-2:1999 / Electrostatic discharge EN61000-4-2

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

b. Low Voltage Directive 73/23/EEC  
EN61010-1 (1993)

Because TRD-NA encoder are designed with supply voltage under 26.4V DC, the requirement of 75V DC or more is beyond application.