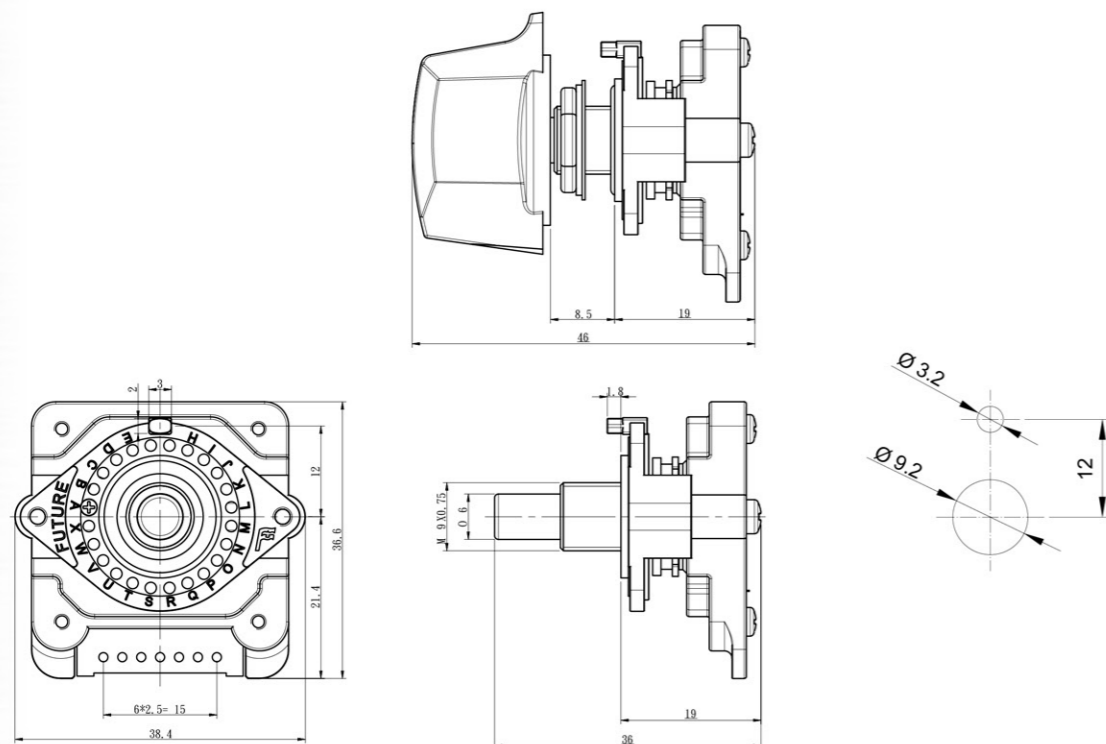


## Specification

Type	Test Condition	Specification	
Operation Temperature	No Condensation	-10°C / +50°C	
Storage Temperature	No Condensation	-20°C / +70°C	
Mechanical	Revolution Starting Torque	0.1 ~ 0.2Nm (1 ~ 2kgf·cm)	
	Shaft Load	3Nm below	
	M9 Screw Load	2Nm below	
	Nut Stopper Load	3Nm below	
Electrical	Vibration Test	10~55~10Hz/m 1.5mm X, Y, Z 3direction 2h	
	Contact Resistance	100mΩ below	
	Isolation Resistance	Contact to contact DC250V for 1 min	500MΩ above
		Contact to case DC500V for 1 min	
	Withstanding Voltage	Contact to contact AC250V for 1 min	No exception
Contact to case AC500V for 1 min			
Rate Load	AC	5V / 0.5A , 50V / 0.05A	
	DC	5V / 0.25A , 50V / 0.025A	
Life Expectancy	Unload Test 60RPM After 50,000 Rotation Test	Revolution Starting Torque	+10~-30% below
		Contact Resistance	150mΩ
		Insulation Resistance	50MΩ above
		Withstanding Voltage	No exception
Environmental	Temperatures +40°C ±5% Humidity 90% 48HR	Contact Resistance	100mΩ below
		Insulation Resistance	50MΩ above
		Withstanding Voltage	No exception
	Heat-Test +70°C ±5% 16HR	Contact Resistance	100mΩ below
		Revolution Starting Torque	0.1~0.2Nm
	Cold-Test -10°C ±5% 16HR	Contact Resistance	100mΩ below
Revolution Starting Torque		0.1~0.2Nm	

## External Dimensions & Panel Cutout (mm)



※ The specification or contents in this catalog are subject to change without notice. 2019/07

# DIGITAL CODE ROTARY SWITCH

## NDS Series

**NDS Series with multiple switching functions are applicable to the machine tool's operation panel for axis selection , feed rate and override, ...etc**



## Features

- Solid metal housing and clear graduation
- Provide 15°, 30°, 13.85° for option
- Provide various types of encoder codes for option
- With firm and skid-proof shafts
- Include inhibit and parity signal to avoid error occurrence
- Metal (Gold) coating contact points for stable and highly effective performance
- Waterproof design (IP65) and built-in o-ring
- New design for easy installation
- Save wiring operation and input signal



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## Ordering Information

NDS	01	J	CB
SERIES NAME	CODE	ANGLE	SOCKET
NDS	Output Encode	Step Angle	Socket
	01 Binary	Angle	CB 180° Socket
	02 Complement Binary	H 13.85 0-25	CS 90° Socket
	03 Gray	J 15 0-23	N None
	04 Complement Gray	N 30 0-11	
	00 PTP		
	OEM Order		

※ PTP for N Type only

### H TYPE CODE (360°/26)13.85° ENCODE

Description: INH=inhibit signal ● =ON(contact to common signal)  
P=parity signal A,B,C,D,E,F,G=terminal signal

A. Digital model NO. 01,Binary output with INH output

#### CODE NO:01H

TERMINAL	BIT No.	SET VALUE																										
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
A	1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
F	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
B	4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E	8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
C	16	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
G	INH	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
D		COM																										

B. Digital model NO. 02,Complement Binary output with INH output

#### CODE NO:02H

TERMINAL	BIT No.	SET VALUE																										
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
A	1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
F	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
B	4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E	8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
C	16	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
G	INH	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
D		COM																										

C. Digital model NO. 03,Gray output with P output

#### CODE NO:03H

TERMINAL	BIT No.	SET VALUE																										
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
A	1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
F	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
B	4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E	8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
C	16	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
G	P	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
D		COM																										

D. Digital model NO. 04,Complement Gray output with P output

#### CODE NO:04H

TERMINAL	BIT No.	SET VALUE																										
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
A	1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
F	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
B	4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E	8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
C	16	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
G	P	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
D		COM																										

## Encode

### N TYPE CODE (360° /12)30° ENCODE

Description: INH=inhibit signal ● =ON(contact to common signal)  
P=parity signal A,B,C,D,E,F,G=terminal signal

A. Digital model NO. 01,Binary output with INH output

#### CODE NO:01N

TERMINAL	BIT No.	SET VALUE											
		0	1	2	3	4	5	6	7	8	9	10	11
A	1	●	●	●	●	●	●	●	●	●	●	●	●
F	2	●	●	●	●	●	●	●	●	●	●	●	●
B	4	●	●	●	●	●	●	●	●	●	●	●	●
E	8	●	●	●	●	●	●	●	●	●	●	●	●
C	P	●	●	●	●	●	●	●	●	●	●	●	●
G	INH	●	●	●	●	●	●	●	●	●	●	●	●
D		COM											

B. Digital model NO. 02,Complement Binary output with INH output

#### CODE NO:02N

TERMINAL	BIT No.	SET VALUE											
		0	1	2	3	4	5	6	7	8	9	10	11
A	1	●	●	●	●	●	●	●	●	●	●	●	●
F	2	●	●	●	●	●	●	●	●	●	●	●	●
B	4	●	●	●	●	●	●	●	●	●	●	●	●
E	8	●	●	●	●	●	●	●	●	●	●	●	●
C	P	●	●	●	●	●	●	●	●	●	●	●	●
G	INH	●	●	●	●	●	●	●	●	●	●	●	●
D		COM											

C. Digital model NO. 03,Gray output with P output

#### CODE NO:03N

TERMINAL	BIT No.	SET VALUE											
		0	1	2	3	4	5	6	7	8	9	10	11
A	1	●	●	●	●	●	●	●	●	●	●	●	●
F	2	●	●	●	●	●	●	●	●	●	●	●	●
B	4	●	●	●	●	●	●	●	●	●	●	●	●
E	8	●	●	●	●	●	●	●	●	●	●	●	●
C	P	●	●	●	●	●	●	●	●	●	●	●	●
G		COM											

D. Digital model NO. 04,Complement Gray output with P output

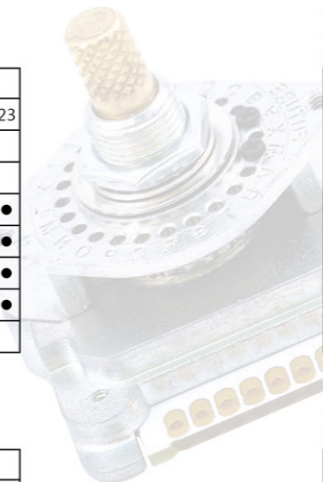
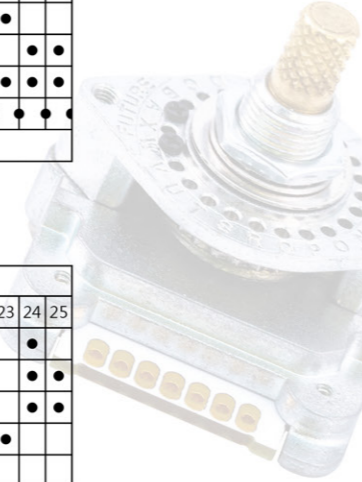
#### CODE NO:04N

TERMINAL	BIT No.	SET VALUE											
		0	1	2	3	4	5	6	7	8	9	10	11
A	1	●	●	●	●	●	●	●	●	●	●	●	●
F	2	●	●	●	●	●	●	●	●	●	●	●	●
B	4	●	●	●	●	●	●	●	●	●	●	●	●
E	8	●	●	●	●	●	●	●	●	●	●	●	●
C	P	●	●	●	●	●	●	●	●	●	●	●	●
G		COM											

E. Digital model NO. 00

#### CODE NO:00N

TERMINAL	BIT No.	SET VALUE											
		0	1	2	3	4	5	6	7	8	9	10	11
A	1	●											
B	2		●										
C	3			●									
E	4				●								
F	5					●							
G	6						●						
D		COM											



DIGITAL CODE ROTARY SWITCH