



Feature -

- encoder: 18 pulse scroller output, and one key center output
- VR: 14 position scroller output, and one key center output
- bi-color LED illuminated available

Application -

- audio / video equipments
- consumer products
- computer products
- instrumentation
- communication equipments
- home appliances

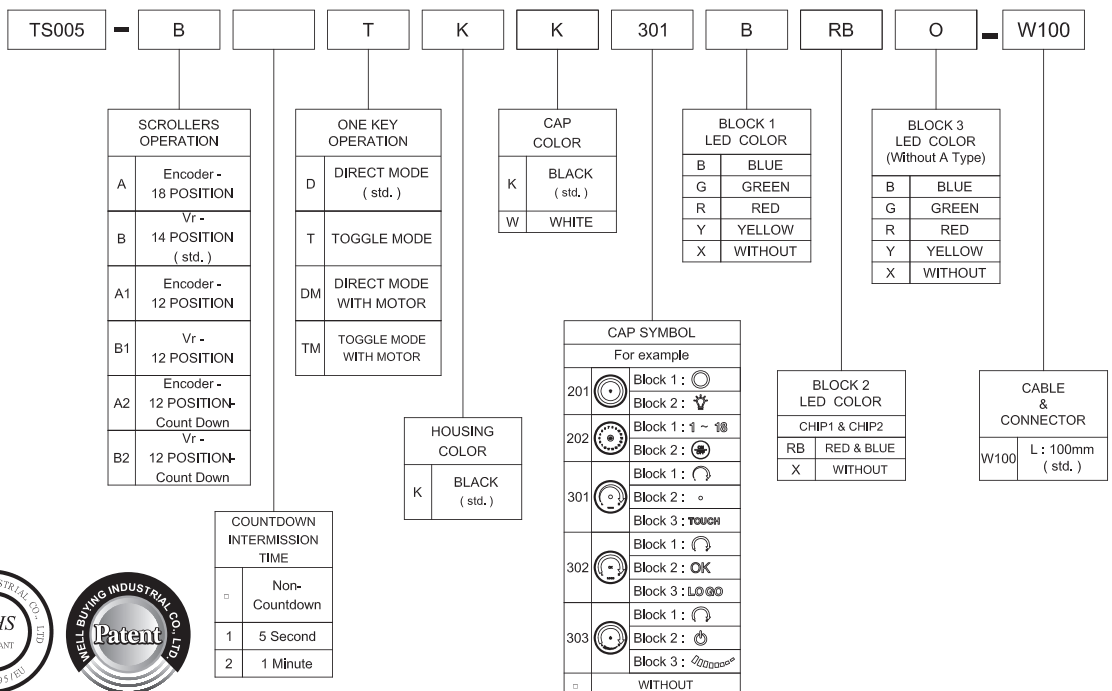
► **SPECIFICATIONS**

SWITCH SPECIFICATIONS							
POLE - POSITION		One-Channel					
CIRCUIT FEATURE		Capacitive analog signal					
OPERATING TEMPERATURE RANGE		-20°C ~ 70°C					
SEALING		PANEL SEALED TO IP67					
ELECTRICAL CHARACTERISTICS							
Symbol	Parameter	Test Conditions		MIN.	TYP.	MAX.	Units
		V _{DD}	Conditions				
V _{CC}	Input Voltage	-	-	0	-	28	V
V _{OD}	Operating Voltage	-	-	2.8	5.0	5.5	V
I _{DD}	Operating Voltage - No Load	3.3V	3.3V	-	2	3	mA
V _{OH}	Output High Voltage	3.3V	I _{OH} = - 4.0mA	2.1	-	-	V
V _{OL}	Output Low Voltage	3.3V	I _{OH} = 8.0mA	-	-	0.9	V
V _{IL}	Input ports	3.3V	-	-	200	-	Hz

LED SPECIFICATIONS							
ATTENTION (+)○ (-)○ (-) LEDs are Electrostatic Sensitive devices	Unit	Value / LED Color					
		Ultra Blue	Ultra Green	Ultra Red	Ultra Yellow		
FORWARD CURRENT	I _f	mA	20	20	20	20	
REVERSE VOLTAGE	V _r	V	5	5	5	5	
REVERSE CURRENT	I _r	μA	10	10	10	10	
FORWARD VOLTAGE@20mA	V _f	V	3.7~4.0	3.5~4.0	2.0~2.6	2.1~2.6	
LUMINOUS INTENSITY@20mA	I _v	mcd	150	1000	800	350	

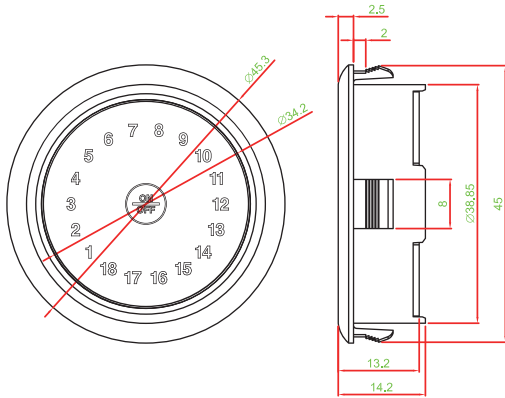
■ Physical and electrical information of LED will be provided upon customer's request on switches.

► **HOW TO ORDER**

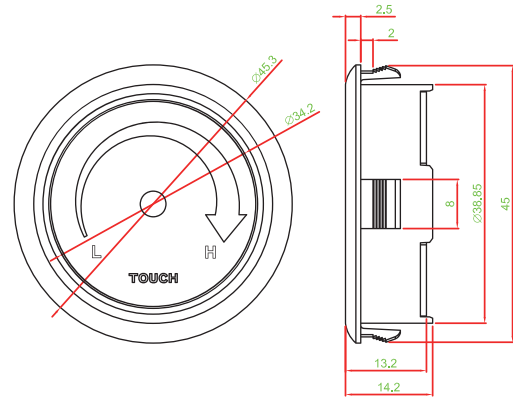


▶ DIMENSION & FRAME TYPE

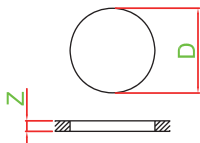
TS005-ATKK202GRB-W100



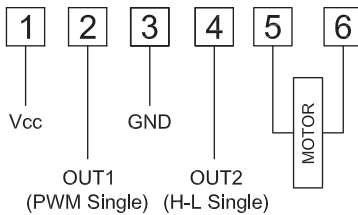
TS005-BTKK301BRBG-W100



▶ PANEL CUT OUT & CIRCUIT DIAGRAM

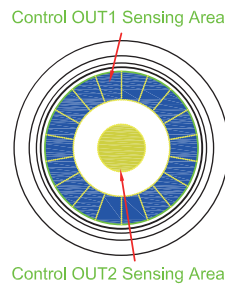


Z	D
1.0 ~ 2.0	43.5~43.7
2.0 ~ 2.5	43.7~44.1
2.5 ~ 3.0	44.1~44.4

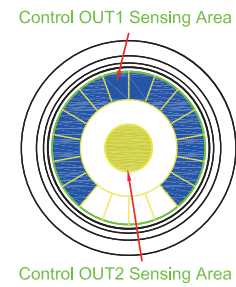


▶ CIRCUIT

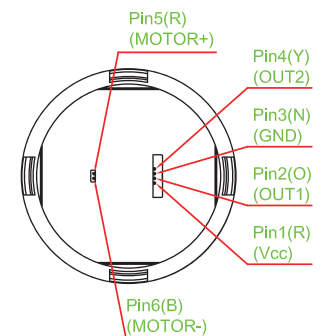
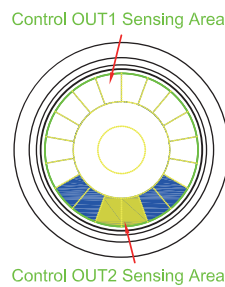
A Type



B Type



A1/B1/A2/B2 Type



▶ MATERIAL

- COVER : PC
- HOUSING : PA
- BASE FRAME : PA + GF
- P.C.B : FR4