

# Pin connections of trackballs

Ver. 1.2

All NSI trackball series GK, GS, TBM, TBL, TBS, SBS and all NSI keyboards with integrated trackball are using trackball modules which are labelled as :

**Pxx-xXxxxx** (f.i. P38-540420)

denotes ball diameter in mm  
**X** : denotes the output protocol  
 0 = Phase quadrature output  
 4 = "PS/2 only" output  
 5 = "USB only" output  
 6 = "Combo PS/2 & USB" output  
 A = "RS232 only" output

## X=0

Pin Quad	Connector 1 Quad versions
Trackball Module Partnumber	P38-x0xxxx P50-x0xxxx P75-x0xxxx
1	X1
2	X2
3	Y1
4	Y2
5	-
6	-
7	Vcc
8	-
9	-
10	GND

## X=4

Pin PS/2	Connector 1 PS/2 versions	Colour code PS/2 cable
Trackball Module Partnumber	K34-x4xxxx P38-x4xxxx	
1	(X1)	-
2	(X2)	-
3	(Y1)	-
4	(Y2)	-
5	-	-
6	-	-
7	Vcc	Orange
8	Data	Black
9	CLK	Yellow
10	GND	Red

## X=5

Pin USB	Connector 1 USB versions	Colour code USB cable
Trackball Module Partnumber	P38-x5xxxx	
1	(X1)	-
2	(X2)	-
3	(Y1)	-
4	(Y2)	-
5	-	-
6	-	-
7	Vcc	Red
8	D-	White
9	D+	Green
10	GND	Black

## X=6

Pin Combo	Connector 1 Combo versions	Colour code PS/2 cable	Colour code USB cable
Trackball Module Partnumber	P25-x6xxxx P50-x6xxxx P75-x6xxxx		
1	(X1)	-	-
2	(X2)	-	-
3	(Y1)	-	-
4	(Y2)	-	-
5	-	-	-
6	-	-	-
7	Vcc	Orange	Red
8	Data (/D-)	Black	White
9	CLK (/D+)	Yellow	Green
10	GND	Red	Black

## X=A

Pin RS232 (*)	Connector 1 RS232 versions
Trackball Module Partnumber	P38-xAxxxx P50-xAxxxx
1	TX
2	RX
3	DTR
4	RTS
5	GND
6	+5V Ext. power
7	DSR
8	-
9	-
10	Gnd Ext. Power

Note (\*)

- 1) For RS232 cables there is no standard colour code.
- 2) For some RS232 ports external power is required. (pin6 and 10)

Pin Switch	Connector 2 Switch input	Colour code switch cable
Trackball Module Partnumber	All protocol types	IC040035
1	Left Button	Red
2	Middle Button	Orange
3	Right button	White
4	GND (common)	Black

Connector 1 = 10 pin JST PH series 2,0 mm pitch  
 Connector 2 = 4 pin JST PH series 2,0 mm pitch



NSI bvba, Haakstraat 1A, B-3740 Bilzen, Belgium

Tel. : ++32 (0) 89 51 90 00

Fax : ++32 (0) 89 51 90 09

Website : [www.nsi-be.com](http://www.nsi-be.com)

E-mail : [info@nsi-be.com](mailto:info@nsi-be.com)