

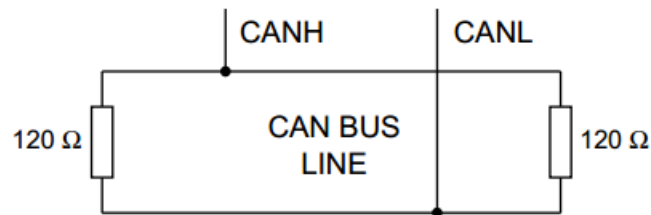
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1. How to connect Deutsch 4 pin:



PIN	COLOUR	FUNCTION
1	Blue	CAN L
2	White	CAN H
3	Black	Negative battery
4	Red	Vbatt. (12-24V)

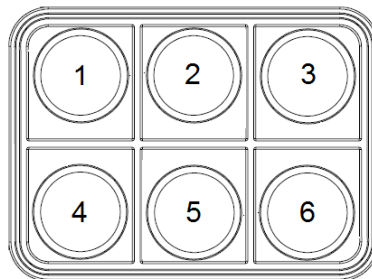


Each end of the CAN bus is terminated with 120Ω resistors in compliance with the standard to minimize signal reflections on the bus. You may need to place a 120Ω resistor between CAN-L and CAN-H.

2. Reference

Front view.

PKP2300



3. Default settings

Setting	Default state or level
Baud Rate	1 Mbit/s
CANopen Node ID	80h
CANopen Node State at start up.	Operational
LED Indicator Brightness	Maximum (3Fh)
Backlight Brightness	OFF (00h)
Periodic Message Transmission	Enable 100ms (0Ah)
Heartbeat Message	Disable
Boot-up service	Active

4. Keys state message

This message is sent by the Keypad to indicate the state of the buttons.

Byte 0 summarize the state of the keys.

The state of the buttons from 1 to 6 are transmitted in the Bytes 1-6.

The data format for each key is the following:

Bit 0: Momentary (1 when key is pressed, 0 when it is released)

Bit 1: Toggle on each key activation

Bit 2 and 3: 3 steps sequence on each key activation: 00->01->10->00

Bit 3 to 6: 4 steps sequence on each key activation: 000->001->010->100->000

Bit 7: not used

Identifier	165h (E5h + current CAN ID)	
Byte 0	Keys from #1 to #6 0 0 K6 K5 – K4 K3 K2 K1	Keys: 1=on; 0=off
Byte 1	Key 1 state 0 KKK ZZ Y X	X= momentary Y = toggle ZZ = 3 step sequence KKK = 4 step sequence 0 = not used
Byte 2	Key 2 state 0 KKK ZZ Y X	X= momentary Y = toggle ZZ = 3 step sequence KKK = 4 step sequence 0 = not used
Byte 3	Key 3 state 0 KKK ZZ Y X	X= momentary Y = toggle ZZ = 3 step sequence KKK = 4 step sequence 0 = not used
Byte 4	Key 4 state 0 KKK ZZ Y X	X= momentary Y = toggle ZZ = 3 step sequence KKK = 4 step sequence 0 = not used
Byte 5	Key 5 state 0 KKK ZZ Y X	X= momentary Y = toggle ZZ = 3 step sequence KKK = 4 step sequence 0 = not used
Byte 6	Key 6 state 0 KKK ZZ Y X	X= momentary Y = toggle ZZ = 3 step sequence KKK = 4 step sequence 0 = not used
Byte 7	00h	Not used

Example:

Direction	Identifier	Format	Message	Data
From Keypad	165	Std	10 00 00 00 00 17 00 00	Key 5 press
From Keypad	165	Std	00 00 00 00 00 16 00 00	Key 5 released
From Keypad	165	Std	10 00 00 00 00 29 00 00	Key 5 press 2nd time
From Keypad	165	Std	00 00 00 00 00 28 00 00	Key 5 released
From Keypad	165	Std	10 00 00 00 00 43 00 00	Key 5 press 3rd time
From Keypad	165	Std	00 00 00 00 00 42 00 00	Key 5 released

5. LEDs message

Identifier	180h (100h + current CAN ID)	
Byte 0	LED SW1	Key LED according to the color table
Byte 1	LED SW2	Key LED according to the color table
Byte 2	LED SW3	Key LED according to the color table
Byte 3	LED SW4	Key LED according to the color table
Byte 4	LED SW5	Key LED according to the color table
Byte 5	LED SW6	Key LED according to the color table
Byte6	Backlight intensity	0-3Fh
Byte 7	Backlight color	According to the color table

Color table:

Code	Color
00h	Off
01h	Red
02h	Green
03h	Blue
04h	Yellow
05h	Cyan
06h	Violet
07h	White/light blue
08h	Amber/orange
09h	Yellow/green

Example:

Direction	Identifier	Format	Message	Data
From Keypad	180	Std	01 02 00 04 00 00 00 08	Switch1: On Red Switch2: On Green Switch4: On Yellow Switches3, 5 and 6: Off Backlight Off; Backlight color: Amber

6. Identifier 600+CANIDh

The identifier 680h is reserved for Blink Marine configuration commands and should not be used by any CAN device connected to the CAN network where the keypad is linked.

7. Revision History

Date	Manual Revision	Comment	Related SW version
22/11/2017	1.0	First Release	