

# LINE RECEIVER

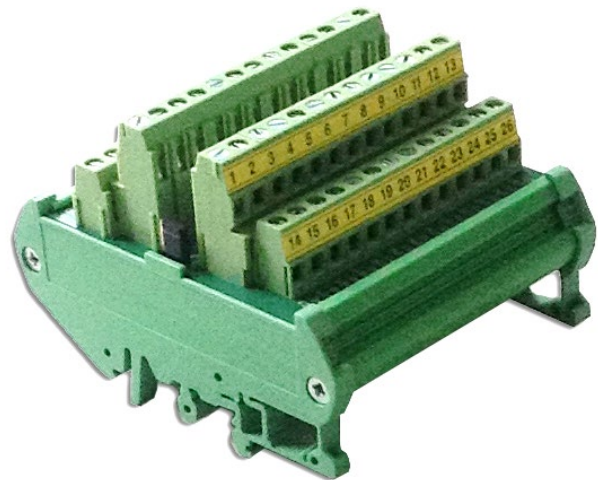
Universal converter of differential signals [TTL]  
to digital signals TTL or OC



## 1. General

The main converter purpose is to change differential signal into TTL (5V) signal or OC (open collector) signal (GND control).

Using OC signal we can also use the converter as a system for voltages matching because often we can see drives controlled by STEP/DIR signal in 24V standard.



### The use - examples:

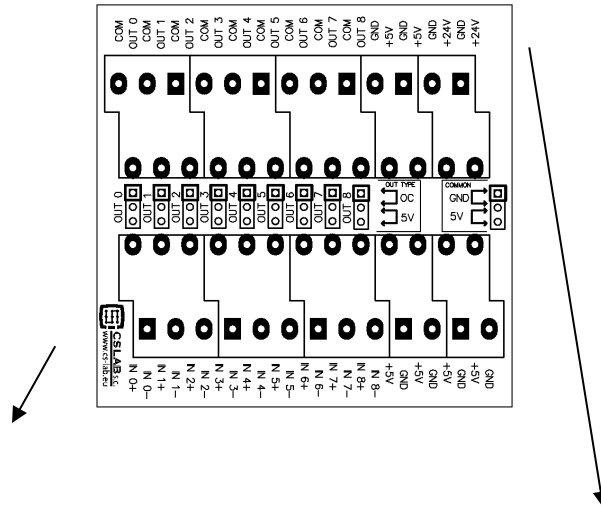
- Connection of CSMIO/IP- S or IP-M (differential signal) to a drive, which requires full TTL 5V signal and additionally all inputs are common anode/cathode type.
- Connection of CSMIO/IP- S or IP-M (differential signal) to a drive which requires 24V signal and additionally all inputs are common anode/cathode type.



In CS-Lab's offer you will also find a Line Driver - a system that has exactly opposite functions. Its main assumption is to change 5V or 24V signal into differential signal.

Matching both systems (Line Driver + Line Receiver) you can send 5V or 24V signals over long distances using differential signal which is highly resistant to interference.

## 2. PINs description



PIN no.	PIN no.
1. Differential input [nr. 0+ ]	1. Power supply +24V
2. Differential input [nr. 1+ ]	2. Power supply +24V
3. Differential input [nr. 2+ ]	3. Voltage output +5V
4. Differential input [nr. 3+ ]	4. Voltage output +5V
5. Differential input [nr. 4+ ]	5. Output [nr 8] [ 5V / OC ]
6. Differential input [nr. 5+ ]	6. Output [nr 7] [ 5V / OC ]
7. Differential input [nr. 6+ ]	7. Output [nr 6] [ 5V / OC ]
8. Differential input [nr. 7+ ]	8. Output [nr 5] [ 5V / OC ]
9. Differential input [nr. 8+ ]	9. Output [nr 4] [ 5V / OC ]
10. Voltage output +5V	10. Output [nr 3] [ 5V / OC ]
11. Voltage output +5V	11. Output [nr 2] [ 5V / OC ]
12. Voltage output +5V	12. Output [nr 1] [ 5V / OC ]
13. Voltage output +5V	13. Output [nr 0] [ 5V / OC ]
14. Differential input [nr. 0- ]	14. GND
15. Differential input [nr. 1- ]	15. GND
16. Differential input [nr. 2- ]	16. GND
17. Differential input [nr. 3- ]	17. GND
18. Differential input [nr. 4- ]	18. COM ( common GND / +5V )
19. Differential input [nr. 5- ]	19. COM (common GND / +5V )
20. Differential input [nr. 6- ]	20. COM (common GND / +5V )
21. Differential input [nr. 7- ]	21. COM (common GND / +5V )
22. Differential input [nr. 8- ]	22. COM (common GND / +5V )
23. GND	23. COM (common GND / +5V )
24. GND	24. COM (common GND / +5V )
25. GND	25. COM (common GND / +5V )
26. GND	26. COM (common GND / +5V )

### **Jumpers setting [OUT 0-0] and [COMMON]**

- Digital outputs can be individually switched by jumpers to [ TTL 5V ] or [OC open collector] type
- The COM group can be switched by jumper to +5V or GND

### **COMMENTS:**

- Max. current of all the 5V power supply outputs is 500mA
- All differential inputs are in TTL standard [ Differential Line Receivers DS26LS32 ]
- +24V power supply input on PINS [1] [2] is exactly the same terminal (so you don't have to connect both)
- On +24V power supply input you can connect voltage power source ( +12V to +26V DC)