

RS232 to SDI-12 Slave Interface

The TBS08DR RS232 to SDI-12 Converter is an interface box for connecting a data logger or RTU with SDI-12 interface to a sensor or actuator with RS232 interface. The TBS08DR connects to the RS232 interface of a sensor or actuator and behaves like a sensor within a SDI-12 network. The TBS08DR is a versatile device for everyone who needs to integrate devices with RS232 into a SDI-12 network.

The TBS08 requires the firmware to be customized to the connected RS232 device. Contact Tekbox for details.



TBS08 RS232 to SDI-12 Slave Interface

Features

- RS232 to SDI-12 Slave Interface
- Customized Firmware
- No driver required
- Baud Rate: 4800, 9600, 19200, 38400 Baud
- 7V ... 16V supply voltage
- Low power consumption
- Screw terminal blocks

- DIN-rail housing
- Operating Temperature Range:
- 40°C ... + 85°C

Target Applications

- SDI-12 Data Recording
- SDI-12 Network Installations

RS232 to SDI-12 Interface

Contents

1	INTRODUCTION	3
1.1	PRODUCT FEATURES	3
2	APPLICATION	4
3	FUNCTIONAL DESCRIPTION	4
4	HARDWARE DESCRIPTION	5
5	HISTORY	5

RS232 to SDI-12 Interface

1 Introduction

SDI-12 is a standard for interfacing data recorders with microprocessor-based sensors. SDI-12 stands for serial/digital interface at 1200 baud. It can connect multiple sensors with a single data recorder on one cable. It supports up to 60 meter cable between a sensor and a data logger.

The SDI-12 standard is prepared by

**SDI-12 Support Group
(Technical Committee)
165 East 500 South
River Heights, Utah
435-752-4200
435-752-1691 (FAX)
<http://www.sdi-12.org>**

The latest standard is version V1.3 and dates from July 18th, 2005. The standard is available on the web site of the SDI-12 Support Group.

TBS08 implements all functions for interfacing RS232 sensors or actuators to a RTU or data logger with SDI-12 interface.

1.1 Product Features

- RS232 toSDI-12 slave interface
- Customized firmware
- Baud rate: 4800 - 38400 Baud*
- 7 to 16V supply voltage
- Low power consumption
- DIN-Rail housing
- Screw terminal blocks
- Operating Temperature Range: - 40°C ... + 85°C

*) The baud rate can be jumpered to 4800, 9600,19200 or 38400 Baud and preconfigured upon customer requirement.

RS232 to SDI-12 Interface

2 Application

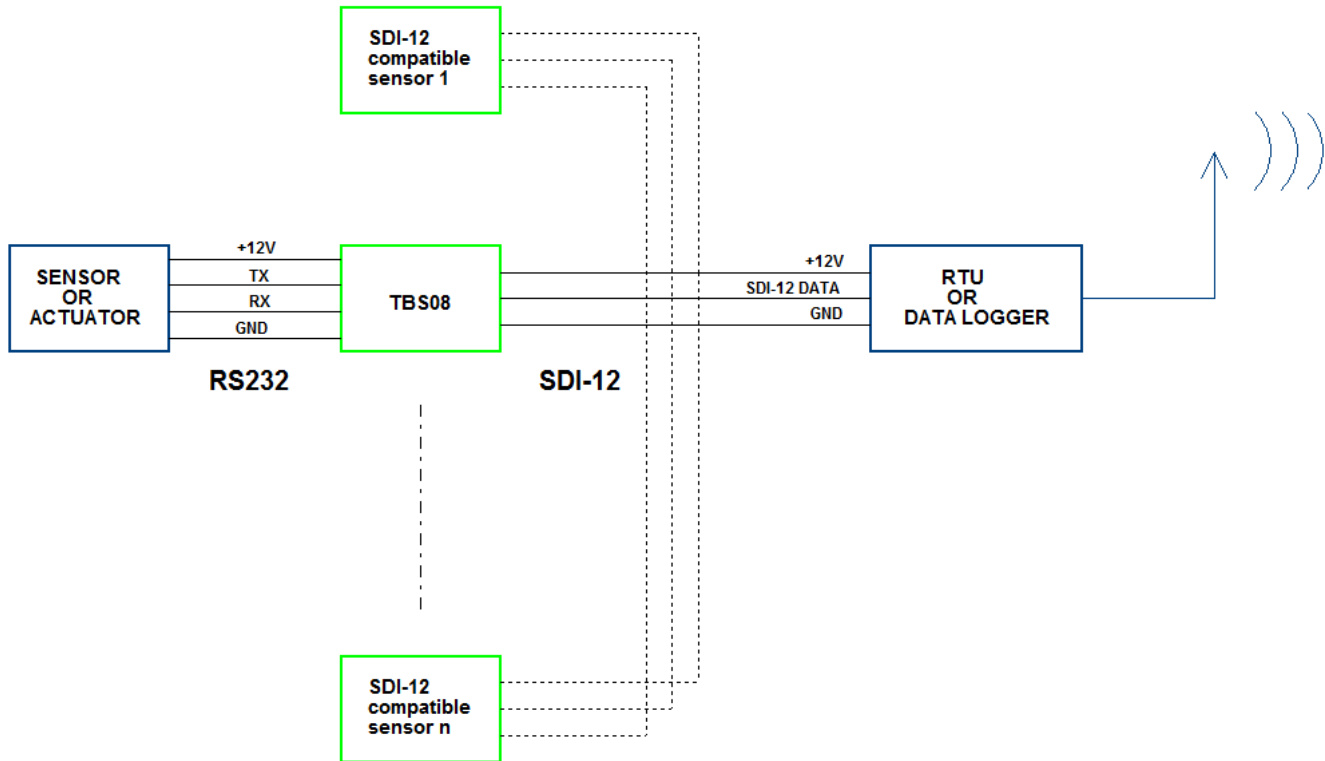


Figure 1 – TBS08DR Application

3 Functional Description

The TBS08 acts similar to a sensor with SDI-12 interface. It responds to standard SDI-12 commands such as identify, set/change address, to SDI-12 measurement commands and to extended SDI-12 commands.

Actuators are typically controlled with extended SDI-12 commands.

Tekbox will create an individual command manual for each customized product

RS232 to SDI-12 Interface

4 Hardware Description

RS232 Side, from left to right:

- Cable shield
- RS232 TX (TBS08DR output)
- RS232 RX (TBS08DR input)
- SDI-12 Sensor supply voltage
- Ground
- Ground
- 12V external supply voltage



SDI-12 Side, from left to right:

- Cable shield
- Ground
- SDI-12 Data line
- SDI-12 Supply voltage

Figure 2 – Connections

The TBS08DR supports RS232 with default setting to 19200 Baud.

Following other Baud rates can be jumpered by the user or preconfigured upon inquiry: 4800, 9600 and 32400 Baud.

Other communication settings:

- 8 Bits
- No Parity
- 1 Stop Bit
- No Handshake

5 History

Version	Date	Author	Changes
V1.0	13.05.2014	Mayerhofer	Creation of the document

Table 1 – History