

# ASi Tuner, ASi Bus Termination



## ASi Tuner:

Triplication of the ASi cable length

Strengthen of the robustness of ASi

Supervise the quality of the installation

Tool for the service



**ASi-Bus Termination**  
(Default value of the ASi Tuner)



**ASi Tuner**

## ASi Bus Termination:

Doubling of the ASi cable length  
(Default value of the ASi Tuner)



**Article no.: BWU1843: ASi Diagnostic Tuner** (with ASi Slave address)

**Article no.: BWU1648: ASi Tuner** (without ASi Slave address)

**Article no.: BWU1644: ASi Bus Termination** (Default value of the ASi Tuner)

The primary task of the ASi Tuner consists in the length adjustment in ASi circuits without repeater.

The ASi Diagnostic Tuner is suitable for the employment as diagnose unit, which announces the bus function of the control online. Unlike to the ASi Tuner the ASi Diagnostic Tuner is able to read in the traffic light announcements for each individual slave and to refer to the superordinate control system.

The result can be intergrated into an application program. It signals whether an optimization succeeded. Gradual changing of the quality of the ASi circuit can be recognized and repaired so on time.

The ASi Diagnostic Tuner can be switched off over a switch completely or set on a default value.

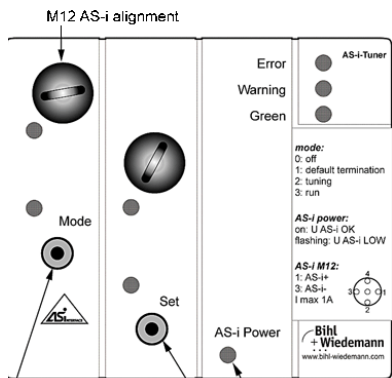
| Article No.                               | BWU1648/BWU1843   | BWU1644           |
|---|---|-------------------|
| Connection                                | ASi flat cable/ASi round cable  |                   |
| Operating voltage                         | 30 V (18 ... 31.6 V)  |                   |
| Operating current                         | 60 mA   | 10 mA             |
| LEDs                                      | 5   | 2                 |
| LED green                                 | LED (ASi Power) on:<br>U ASi > 26 V<br>LED (ASi Power) flashing:<br>18,5 V < U ASi < 26 V | U ASi > 26 V      |
| LED red                                   | Error (ASi Analyser)  | -                 |
| LED yellow                                | Warning (ASi Analyser)  | U ASi > 18,5 V    |
| LED green                                 | Communcation o.k.<br>(ASi Analyser)   | -                 |
| Ambient operating temperature             | 0 °C... +55 °C  | -30 °C ... +55 °C |
| Storage temperature                       | -30 °C... +75 °C  |                   |
| Pollution degree                          | 2   |                   |
| Protection category according to EN 60529 | IP65  |                   |
| Tolerable loading referring to humidity   | according to EN 61131-2   |                   |
| Electromagnetic sust.                     | according to slave spezifikation  |                   |
| EMC                                       | EN 61000-6-2, EN 61000-6-3  |                   |
| Dimensions (B / H / D in mm)              | 90 / 80 / 43  | 19 / 46           |

### Slave Profile (BWU1843)

I/O Code: 0x7  
ID Code: 0xA  
ID1 Code: 0x0  
ID2 Code: 0x5  
VENDOR ID: 0x0002  
PRODUCT ID: 0x0002  
AB-Slave (up to 62 Slaves)

### Bit Allocation

In 0, In 1 binary bits, freely usable  
In 2, In 3 serial communication  
Out 0, Out 1 serial communication  
Out 2 binary bits, freely usable



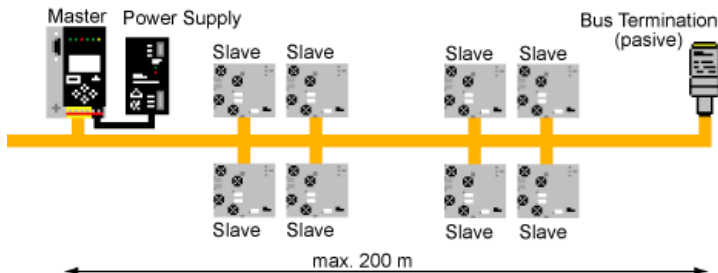
**Rotary switch:**  
BWU1843, BWU1648, BWU1715 (without slave function)  
0: off  
1: default termination  
2: tuning  
3: run  
**only BWU1843** (slave function)  
4: off  
5: default termination  
6: tuning  
7: run

**Button** LED status display:  
on: U AS-i OK  
flashing: U AS-i LOW

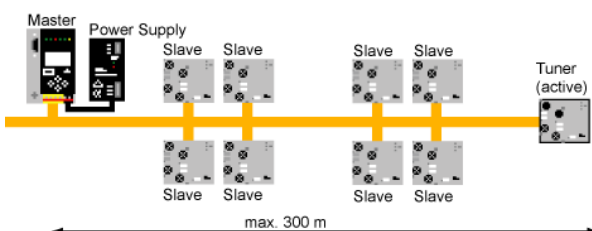
# ASi Tuner, ASi Bus Termination



The passive bus termination permits a circuit extension up to approximately 200 m



The Bihl+Wiedemann tuner permit a stable communication with net lengths to approximately 300 m *without* the employment of a Repeater and without a second power supply unit.



## Combi Slave Profile

The ASi Diagnostic Tuner operates after the new "combi slave profile" S-7.A.5, in which digital and serial data will be parallel transferred.

2I/1O data for the basic function of the tuner are transmitted thereby as usual, and are usable with each master. The serial data – here the analog values of the tension and the traffic light values of the individual slaves – are transmitted by the piece with the remaining bits, built up in the master again and sent from here than simple complete telegram to the control. The user finds the up-to-date measured ASi tension and the minimum ASi tension as 16 bit analog value in the field of the input data (similar to the analog value transmission).

So that data transmission rates of approx. 50 Baud are attainable in the ASi A/B operation. Because of the ID code "A" is the Diagnostic Tuner a slave with an extended address range and takes in the A/B operation one of 62 addresses, in the standard mode as A-slave one of 31.

## ASi 3.0 Specification

Since the Diagnostic Tuner uses the extended functions as slave, he must be used together with a master after the ASi 3.0 specification. The primary tuner functions is available however also with a ASi Master according to the specification 2.0 or 2.1.

## Description of the Bit Allocation

### In0, In1

The LEDs indicate the result of the optimization:

| Bit | LED    | Description  |
|-----|--------|--|
| 11  | red    | serious disturbances   |
| 10  | yellow | more frequent replications, which should be clarified depending upon application |
| 01  | green  | almost repetition-free communication   |
| 00  | ---    | none result available („Tuning-Phase“, or the push-button even pressed)          |

### Out2

A change of 0 to 1 has the same effect as a depressing the key. However no training procedure is released. It can be released only by means of parameters.

### Parameter

The parameter bits release (independently of the position of the rotary switch) a training procedure. Only the parameter 5, then the parameter 2 within 5 seconds causes the start of a training procedure.

### Analog Channel 0

|            |                                       |
|------------|---------------------------------------|
| Tension    | as 16 bit value of 0 ... 32 767 in mV |
| Resolution | 10 bit                                |

### Analog Channel 1

|            |                                       |
|------------|---------------------------------------|
| Tension    | as 16 bit value of 0 ... 32 767 in mV |
| Resolution | 10 bit                                |

### Vendor Specific Object 1

This object contains a pair of bits, which shows the condition of the slaves in this address for all 62 possible slaves:

| Bit | LED      |
|-----|----------|
| 11  | red      |
| 10  | yellow   |
| 01  | green    |
| 00  | no slave |

| Byte | 2 <sup>7</sup> | 2 <sup>6</sup> | 2 <sup>5</sup> | 2 <sup>4</sup> | 2 <sup>3</sup> | 2 <sup>2</sup> | 2 <sup>1</sup> | 2 <sup>0</sup> |
|------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1    | 3/3A           | 3/3A           | 2/2A           | 2/2A           | 1/1A           | 1/1A           | ---            | ---            |
| 2    | 7/7A           | 7/7A           | 6/6A           | 6/6A           | 5/5A           | 5/5A           | 4/4A           | 4/4A           |
| ...  | ...            |                |                |                |                |                |                |                |
| 16   | 31B            | 31B            | 30B            | 30B            | 29B            | 29B            | 28B            | 28B            |

## Accessories:

- ASi Analyser (art. no. BW1415)
- Passive Distributor ASi/AUX to 1 x M12 socket, 5 poles, depth 28 mm, IP67 (art. no. BW3803)



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