AS-i Tuner, AS-i Bus Termination

AS-i Tuner:
Triplication of the AS-i cable length

Strengthen of the robustness of AS-i

Supervise the quality of the installation

Tool for the service

AS-i Bus Termination:
Doubling of the AS-i cable length
(Default value of the AS-i Tuner)

AS-i-Bus Termination
(Default value of the AS-i Tuner)

AS-i Tuner

Article no.: BWU1843: AS-i Diagnostic Tuner (with AS-i Slave address)

Article no.: BWU1648: AS-i Tuner (without AS-i Slave address)

Article no.: BWU1644: AS-i Bus Termination (Default value of the AS-i Tuner)

The primary task of the AS-i Tuner consists in the length adjustment in AS-i circuits without repeater.

The AS-i Diagnostic Tuner is suitable for the employment as diagnose unit, which announces the bus function of the control online. Unlike to the AS-i Tuner the AS-i 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 AS-i circuit can be recognized and repaired so on time.

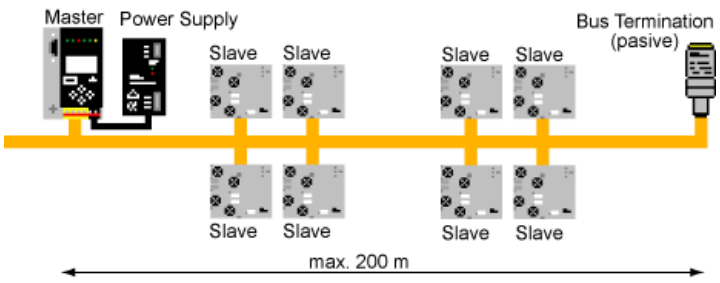
The AS-i Diagnostic Tuner can be switched off over a switch completely or set on a default value.

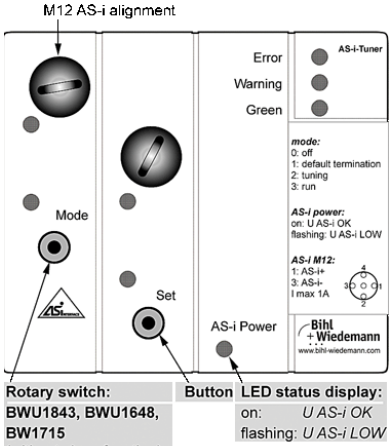
Article No.	BWU1648/BWU1843	BWU1644
Connection	AS-i flat cable/AS-i round cable	
Operating value	AS-i (30 V DC)	
Operating current	60 mA	10 mA
LEDs	5	2
LED green	LED (AS-i Power) on: U AS-i > 26 V LED (AS-i Power) flashing: 18,5 V < U AS-i < 26 V	U AS-i > 26 V
LED red	Error (AS-i Analyser)	-
LED yellow	Warning (AS-i Analyser)	U AS-i > 18,5 V
LED green	Communcation o.k. (AS-i Analyser)	-
Ambient operating temperature	0 … +55 °C	
Storage temperature	-25 … +75 °C	
Protection category according to EN 60 529	IP65	
Electromagnetic sust.	according to slave spezification	
EMC	EN 61 000-6-2, EN 61 000-6-3	
Dimensions (L / B / H in mm)	90 / 80 / 43	46 / 19

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

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

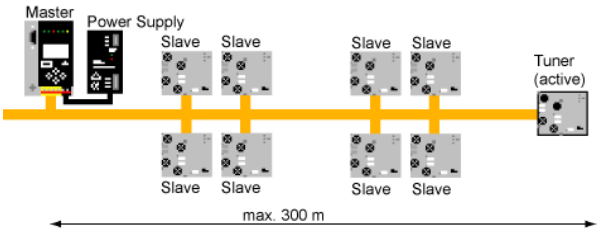




Rotary switch:	Button	LED status display:
BWU1843, BWU1648, BW1715 (without slave function) 0: *off* 1: *default termination* 2: *tuning* 3: *run*		on: *U AS-i OK* flashing: *U AS-i LOW*
only BWU1843 (slave function) 4: *off* 5: *default termination* 6: tuning 7: run		

AS-i Tuner, AS-i Bus Termination

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 AS-i 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 AS-i tension and the minimum AS-i 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 AS-i 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.

AS-i 3.0 Specification

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

Accessories:

- AS-i Analyser (art. no. BW1415)
- AS-i passive distributor H (art. no. BW1239)

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	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
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