ASi Tuner, ASi Bus Termination

Bihl+Wiedemann

ASi Tuner:

Extension of the ASi cable length up to 300 m

Strengthen of the robustness of ASi

Supervise the quality of the installation

Tool for the service

ASi Bus Termination:

Extension of the ASi cable length up to 200 m
(Default value of the ASi Tuner)

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

ASi Tuner

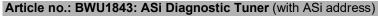**Article no.: BWU1843: ASi Diagnostic Tuner** (with ASi address)

Article no.: BWU1648: ASi Tuner (without ASi 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 participant 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.

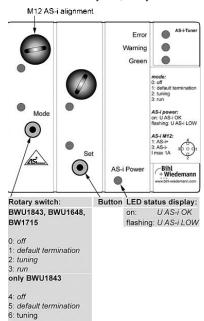| Article No.	BWU1648/BWU1843	BWU1644
Connection	ASi flat cable/ASi round cable	
Operating voltage	30 V (18 … 31.6 V)	
Operating current	60 mA	10 mA
LEDs	5	2
LED (green)	LED (ASi Power) on: U ASi > 26 V LED (ASi Power) flashing: 18,5 V < U ASi < 26 V	U ASi > 26 V
LED (red)	Error (ASi Analyser)	-
LED (yellow)	Warning (ASi Analyser)	U ASi > 18,5 V
LED (green)	Communcation o.k. (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 participant spezification	
EMC	EN 61000-6-2, EN 61000-6-3	
Dimensions (B / H / D in mm)	90 / 80 / 43	19 / 46

Participant Profile (BWU1843)

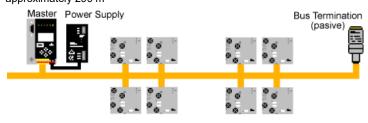|	
I/O Code:	0x7
ID Code:	0xA
ID1 Code:	0x0
ID2 Code:	0x5
VENDOR ID:	0x0002
PRODUCT ID:	0x0002
AB-address (up to 62 addresses)	

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

M12 AS-i alignment

Error
Warning
Green

mode:
0: off
1: default termination
2: tuning
3: run

AS-i power:
on: U AS-i OK
flashing: U AS-i LOW

AS-i M12:
1: AS-i+
3: AS-i-
I max 1A

Mode

Set

AS-i Power

Rotary switch:
BWU1843, BWU1648, BW1715

0: *off*
1: *default termination*
2: *tuning*
3: *run*
only BWU1843

4: *off*
5: *default termination*
6: *tuning*
7: *run*

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

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ASi Tuner, ASi Bus Termination

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

Master   Power Supply

Bus Termination (pasive)

max. 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.

Master   Power Supply

Tuner (active)

max. 300 m

Combi Participant Profile

The ASi Diagnostic Tuner operates after the new "combi participant 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 participants – 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 participant with an extended address range and takes in the A/B operation one of 62 addresses, in the standard mode as A-address one of 31.

ASi-3 Specification

Since the Diagnostic Tuner uses the extended functions as participant, he must be used together with a master after the ASi-3 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 participants in this address for all 62 possible addresses:

Bit	LED
11	red
10	yellow
01	green
00	no participant

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

Accessories:

• **ASi Analyser (art. no. BW1415)**

• **Passive Distributor ASi to 1 x M12 socket, 5 poles, depth 28 mm, IP67 (art. no. BWU4728)**

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