

Indu-Sol GmbH – Specialist in fieldbus technologies

ASi-INspektor[®] Starterkit **User Manual**



Diagnostic and service tools for AS-Interface







Content

Quickstartinstructions	1
Content	2
1 Introduction	3
1.1 Generally	3
3 Connect to the network	4
3.1 INspector [®] connect to ASi	4
3.2 Connect Switch and Webinterfacemodule.	4
4 ASi-INspector [®] evaluate	6
4.1 Acess to Webinterface	6
4.2 Error-free network map	9
4.3 Faulty network map	9
4.4 Reset the ASi-INspector [®]	10

1 Introduction

1.1 Generally

Х

The ASi-INspector $^{\mbox{\tiny \ensuremath{\mathbb{R}}}}$ is a passive data logger which continuously the traffic on the ASi-networks analyzed for disorders and events.

Based on the historical protocol analysis the ASi-INspector[®] is able to detect and store statistically

- faulty telegrams,
- telegram repetitions,
- equipment failure,
- device error (diagnoses).

Via a web interface generated by PureBox, the ASi-INspector[®] can be read without problems by the internet browser and document the errors.

3 Connect to the network

3.1 INspector[®] connect to ASi

The ASi-starter-kit will be delivered pre-wired. It consists of the ASi-INspector[®], the Webinterfacemodule (PureBox), a 3-port switch and a power supply. The ASi-INspector[®] must be connected with an ASMI (measuring point) or a terminal (is shown on the schematic drawing in 3.2) and have to supplied over extension lead onto the ASi. The brown wire is ASi⁺ and ASi⁻ the blue.

A separate 24-volt port is optional, since the power supply is taken over by the ASi-network. However the switch and the PureBox, must be powered by 24 volts.

3.2 Connect Switch and Webinterfacemodule

The 3-port switch is the connection between the user, the ASi-INspector[®] and the PureBox. The ASi-INspector[®] is connected to a standard Ethernet cable to its RJ45 plug.

On another port, the line from Webinterfacemodul on coming "Net-work" output is to connect.

The description of the LEDs and their warning signs are described at the front blade of the module.

- Green: on = ok
- Blue: data exchange
- White: updating
- Red: Error or missing link

The last free port allows users to access a computer or programmer. Either it is introduced via an Ethernet cable in a monitoring network or to connect the programmer directly to the switch for a fast readout of diagnoses.



The illustration presents a proposal for wiring.

4 ASi-INspector[®] evaluate

4.1 Acess to Webinterface

In order to tap the collected data of the INspector[®], should be ensured that the laptop is in the same IP range as INspector[®] (standardized 192.168.212.212) and PureBox (standardized 192.168.212.100).

The necessary conversions, to take on the web interface, are to made in the network settings.



With a right-mouse-button-click on the Network-icon, go to "Open Network and Sharing Center".



Click on "Change adapter settings" to open "Network Connections".

k [P2] Local A Nicht ident Intel(R) 825	Area Connection ifiziertes Netzwerk 74L Gigabit Network C X
[P2] Local Area Connect	tion Status
General	
Connection	
IPv4 Connectivity:	No Internet access
IPv6 Connectivity:	No Internet access
Media State:	Enabled
Duration:	00:08:45
Speed:	100.0 Mbps
Details	
Activity	
Se	nt — 💐 — Received
Bytes:	560 410
Properties 🔞	Diagnose
	Close

Click twice on the connected adapter to open "Local Area Connection Status".

[P2] Local Area Connection Sta	[P2] Local Area Connection Properties
General	Networking Sharing
Connection IPv4 Connectivity: IPv6 Connectivity:	Connect using:
Duration: Speed:	Configure This connection uses the following items:
Activity	
Sent	Since and reporting responder
Properties SDisable	Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
	OK Cancel

Go to "Properties" and switch to "Internet Protocol Version 4 (TCP/IPv4)".

[P2] Local Area Connection State Capacity	🏮 [P2] Loc	Internet Protocol Version 4 (TCP/IPv4) Properties
Connection IPv4 Connectivity: IPv6 Connectivity: Media State:	Networkin Connect	General You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Duration: Speed: Details	This con	Obtain an IP address automatically Use the following IP address: IP address: 10 , 1 , 2 , 104
Activity	× 4 × 4	Subnet mask: 255 , 255 , 255 , 0 Default gateway:
Sent —	 	Obtain DNS server address automatically Use the following DNS server addresses:
Properties	Descri; Trans wide a	Preferred DNS server:
	across	Validate settings upon exit
		OK Cancel

Change from "Obtain an IP address automatically " to "use the following IP address". Now enter an IP address in the area of your ASi-INspector[®] (use in default, for example 192.168.212.105).

Open Internet browser and navigate to the IP address of the web interface.

Here, the IP address of the web interface 192.168.212.100 is entered in the address column of the browser.



4.2 Error-free network map

The Web Interface pictured shows the optimal state. No error messages or slave failures.

Sol	Network	Overview									
	1	Current Date/ 6.09.2014, 10:51/	Time MM UTC+2	Current State	Last Cycle 24h	History	0 Alerts				
work Overview	Device Diagnosis			0	0	0					
t list	Lost Noder	5		0	0	0	Clear data				
Q5	Error Teler	grams Salves		0/0	0/0	0/0					
evices	Telegram ⁴	Retries per Bus Cy	rcle	0	0	0	Data Protoco				
ict	Total Teler	ram Retries		0	0	0					
information	Cycle Time min / avg /	i (ms) max		0,0/0,0/0,0	0,3 / 0,6 / 0,9	0,3 / 0,6 / 0,9	Aktualisierung ((0s)			
	Voltage [V min / avg /	max		0,0 / 0,0 / 0,0	30,0 / 29,9 / 30,0	30,0 / 29,9 / 30,0	ON				
	Start of Me	asurement		15.09.2014 16:00:25	15.09.2014 16:00:25	15.09.2014 16:00:25					
	Last SNMP	^o request			15.09.2014 21:26:00						
	Time	period	Event						Node States		
	History	✓ Ov	erview	~			Inactive	ОК	Event / Diagnosi	s Lost / Restart	Active, not proje
		0	1	2	3	4	8	6	7		
	AD						Device 5 Location 5	Device 6 Location 6	Device 7 Location 7		
							Denios 15	Omine 10	Device 17	Device 18	Device 19
	A1	Device 10 Location 10	Device 11 Location 11	Location 12		Device 14 Location 14	Location 15	Location 10	Location 17	Location 18	
	A1 A2	Device 10 Location 10 Device 20 Location 20	Device 11 Location 11 Device 21 Location 21	Device 12 Location 12 Device 22 Location 22		Device 14 Location 14 Device 24 Location 24	Location 15 Device 25 Location 25	Location 10 Device 28 Location 26	Location 17 Device 27 Location 27	Location 18 Device 28 Location 28	Location 19 Device 29 Location 29
	A1 A2 A3	Device 10 Location 10 Device 20 Location 20 Device 20 Location 30	Device 11 Location 11 Device 21 Location 21 Device 21 Location 31	Location 12 Device 22 Location 22	Device 13 Device 23 Lecation 23	Device 14 Location 14 Device 24 Location 24	Location 15 Device 25 Location 25	Location 10 Device 26 Location 28	Location 17 Device 27 Location 27	Location 18 Device 28 Location 28	Location 19 Device 29 Location 29
	A1 A2 A3	Device 10 Location 10 Device 20 Location 20 Lecation 30	Device 11 Location 11 Location 21 Location 21 Location 31	Losation 12 Device 22 Losation 22	Device 13 Device 23 Location 23	Device 14 Location 14 Device 24 Location 24	5	Location 16 Device 26 Location 26	Location 17 Device 27 Location 27	Location 18 Device 28 Location 28	Device 29 Location 29
	A1 A2 A3 B0	Device 10 Location 10 Device 20 Location 20 Device 20 Location 30 Oevice 32 Location 32	Device 11 Location 11 Device 21 Location 21 Device 21 Location 31 Support 33 Location 33	Lossion 12 Device 22 Lossion 22 Device 34 Device 34	Constant 13 Constant 13	Device 14 Device 24 Location 14 Device 24 Location 24	Bornion 15 Device 25 Location 15 Device 25 S Device 37 Location 37	Control 10 Location 10 Device 20 Location 20	Location 17 Device 27 Location 27	Bevice 28 Location 28	Device 29 Location 29 Device 41 Location 41
	A1 A2 A3 80 81	Device 10 Location 10 Device 20 Location 20 Device 20 Location 30 Device 32 Location 32 Device 32 Location 32	Device 11 Location 11 Location 11 Device 21 Location 21 Device 31 Device 31 Device 31 1 Device 33 Location 22 Device 43	Coarole 12 Location 12 Device 32 Location 52 Location 54 Location 54 Device 64	Control 15	Device 19 Loadon 14 Device 29 Lesation 24 d Device 20 Loadon 28 Device 30 Loadon 28 Device 40 Device 40	5 Device 37 Leastion 27 Leastion 27 Leastion 27 Leastion 27 Leastion 27	Device 28 Location 15 Device 28 Location 25 Device 38 Location 38 Device 48 Location 46	Location 17 Device 27 Location 27 Device 30 Location 39 Device 40	ELCOREGO 18 Device 28 Lenation 28 Device 40 Location 40 Device 60	Location 19 Device 20 Location 21 Device 41 Location 41 Device 41 Location 41
	A1 A2 A3 80 81 82	Device 10 Location 10 Device 20 Location 20 Location 20 Location 30 Device 32 Location 32 Location 32 Location 32 Device 32 Location 42 Device 52	Device 11 Loadion 11 Device 21 Loadion 21 Device 23 Loadion 21 Device 33 Loadion 23 Device 33 Loadion 23 Device 43 Loadion 43 Oevice 43 Covice 43	Losteon 12 Losteon 12 Losteon 12 Losteon 22 Losteon 24 Losteon 24 Losteon 24 Losteon 24 Derion 54 Derion 54 Derion 54	Bonde 15 Leaster 13 Orvice 23 Leaster 23 Bonde 25 Leaster 25 Leaster 25 Device 45 Leaster 45 Device 55	Device 14 Losation 14 Device 24 Losation 24 Device 35 Device 46 Losation 46 Losation 46 Losation 46 Device 66	Losation 15 Losation 15 Losation 25 S Device 37 Losation 27 Device 37 Losation 47 Device 57	Device 20 Location 25 Device 23 Location 23 Device 33 Location 25 Device 43 Location 45 Device 65	Losation 17 Device 27 Location 27 Device 10 Location 20 Device 40 Location 40 Device 50	Location 18 Device 28 Location 28 Device 40 Location 40 Device 50 Device 50 Device 50	Location 11 Device 20 Location 21 Device 41 Location 4 Device 41 Location 4 Device 61 Location 5

4.3 Faulty network map

An error event is immediately diagnosed and visualized by the network survey.

T m a u	Name o	of the Network: 1	Testwand Technik								
S o 1	Networ	k Overview									
		Current Da 16.09.2014, 11:	ite/Time 30AM UTC+2	Current State	Last Cycle 24h	History	2 Alertics				
work Overview	Device t	Diagnosis		0	7	7					
6 Bal	Lost No.	des		0	2	2	Chear data				
unceus sensings	Error To	legrams Salves		0/0	0/0	0/0					
evices	Telegran	m Retries per Bus	Cycle	0	0	0	Data Protocol				
	Total To	degram Retries		0	0	0					
information	Cycle Ta min / av	me [ms] g / max		0,0/0,0/0,0	0,5/0,5/0,9	0,6/0,5/0,9	Abhusilwarung (20x)				
	Voltage min / av	[V] g∕max		0.0/0.0/0.0	5,1/26,8/30,0	5,1/26,8/30,0	ON				
	Start of	Measurement		16.09.2014 11:21:18	16.09.2014 11:21:18	16.09.2014 11:21:18					
	Last SN	MP request									
	Time partial Exant						Node States				
	Last Cy	cle 24h	Overview	(w)			Inactive	OK	Event / Diagnosis	Lost / Resist	Active, not projec
		.0	9	1	1		1		7		
	40							Conception in the local division of the loca	Children V.	Design B	Denne #
	A1					Device 14 Constan 14	Correct of	Dennia 10 Location 10	Device 11 Listation 17	Denter 10 Location 12	Devue 10 Locator 16
	A2						Destine 25 Location 26	Operate 211	Derice 27	Annual and An	Deven 29 Locator 28
	A2	Destina 30 Cocation 30	Device 31 Location 31								
					3				,	E.	
	80			Derice 34 Longton 34	Device 25 Location 28	Device 20 Location 20		Dening 33. Lonaton 38	Device 34 Locator 36	Deuton 40 Location 40	
			Davisa 43	Obaite 94	Davise 45	Denice 40 Longiture 40	Clautina 47 Location 47	Davena #6	Device #9		
	D1										
	80			Device 54 Limetur 54	Deverse 80	Device 55 Longitory 59		Dances 50	Dataseta Ital Location Rel	Denna Mil Lineation RD	

In order to get a more detailed insight into the disturbance flow are opened by selecting the "alerts" button, the Event list.

/ n d u	Name of the Network: Testwand Technik											
S o l	Event list											
			[Overview Clear events								
Network Overview												
Event list	Date / Time 😎	Node Address	Event	Threshold								
Thresholds Settings												
Settings	16.09.2014 11:29:00	Device 6	Lost Nodes	1								
ASI-Devices	16.09.2014 11.29.00	Device 7	Lost Nodes	1								
Log												
Contact												
GPL Information												

The Event list is by the chronological arrangement an accurate statement which participant has been in disorder. In the "Event" column is the respective diagnosis of the participant to read.

4.4 Reset the ASi-INspector[®]

After correcting the error, it is recommendable to reset the INspector[®]. Resetting allows a new measurement without influences of the preceding error.

The reset is performed by selecting the button 'clear Data' and reset the alarms. Therefor the event list must be opened and it is to press the responsible button.

After the next update cycle, the diagnoses are deleted and it appears the view of the now error-free-view without system alerts and records.

Indu-Sol GmbH

Blumenstrasse 3 04626 Schmoelln

Telephone: +49 (0) 34491 5818-0 Telefax: +49 (0) 34491 5818-99

info@indu-sol.com www.indu-sol.com

We are certified according to DIN EN ISO 9001:2008