













# Dupline® Home and Building automation





Function	Controller		Bus generators	
	Home	Building	Wired	Wired
				
Dimensions (mm)	2 DIN module	2 DIN module	2 DIN module	2 DIN module
Functions	Controller with home/building automation functions and energy data logging configurable by software	BACnet controller, BTL certified, converting Dupline and Energy Meter data points to BACnet/IP objects	Smart Dupline® generator	Dupline® generator
<b>Electrical specifications</b>				
Power supply	24 VDC ± 20%	24 VDC ± 20%	24 VDC ± 20%	24 VDC ± 20%
<b>General specifications</b>				
LEDs	Green, yellow, blue, red	Green, yellow, blue, red	Green, yellow	Green, yellow
Mounting	DIN-rail (2 modules)	DIN-rail (2 modules)	DIN-rail (2 modules)	DIN-rail (2 modules)
Degree of protection	Front: IP 40 Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)		2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Storage temperature	-30°C to +70°C	-30°C to +70°C	-50°C to +85°C	-50°C to +85°C
Humidity (non condensing)	90% @ 40°C	90% @ 40°C	20 to 80 %	20 to 80 %
Main features	Home automation master unit with datalogging capability. Linux based PC with 2 USB ports, ethernet port, 2 RS485 ports, local bus	Automatically creates BACnet/ IP objects for all Dupline and energy meter data points. Ethernet port for BACnet/IP communication	Smart Dupline® bus generator. Connection of up to 250 slave modules	Dupline® bus generator
<b>References</b>				
	SH2WEB24	SB2WEB24	SH2MCG24	SH2DUG24

Dupline® Home and Building automation				
	Bus generator		Network module	Digital input module
Function	Wireless	DALI Master	Repeater	4 inputs
				
Dimensions (mm)	2 DIN module	2 DIN module	2 DIN module	2 DIN module
Functions	Wireless base unit for generating wireless network	DALI Master and DALI Power supply	Repeater and isolator	Input module, configurable as contact or pulse counter
<b>Electrical specifications</b>				
Inputs				4
Power supply	24 VDC, 115-240 VAC	230 VAC	230 VAC	24 VDC ± 20%
<b>General specifications</b>				
LEDs	Green, yellow, blue	Green, yellow, yellow	Green, yellow, yellow	Green, yellow, red
Mounting	DIN-rail (2 modules)	DIN-rail (2 modules)	DIN-rail (2 modules)	DIN-rail (2 modules)
Degree of protection	Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	-20°C to +50°C	-20°C to +50°C	0°C to +50°C	-20°C to +50°C
Storage temperature	-50°C to +85°C	-40°C to +70°C	-50°C to +85°C	-50°C to +85°C
Humidity (non condensing)	20 to 80 %	20-80 %	20-90 %	20 to 80 %
Main features	Wireless bus generator. Connection of up to 250 slave modules. Based on IEEE 802.15.4, @ 2.4 GHz Range up to 700 m	Acts as a gateway between Smart Dupline® and DALI. Enables the use of DALI lighting actuators in the system	Extends the transmission distance by regenerating the carrier signal and providing 300 mA bus output. Acts as an isolator between primary and secondary Dupline®	Voltage free, NPN, PNP, counter
<b>References</b>				
	SH2WBU230N	SB2DALI230	SB2REP230	SH2INDI424




# Dupline® Home and Building automation

	Output modules		Relay modules	
Output type	Solid state relay	SPST relay	Bistable relay	Bistable relay
				
Dimensions (mm)	2 DIN module	2 DIN module	2 DIN module	2 DIN module
Functions	Four-solid-state relay output module	Four-relay output module	Four-relay output module	Two-relay output module with energy measurement
<b>Electrical specifications</b>				
Outputs	4	4	4	2
Power supply	24 VDC ± 20%	24 VDC	Bus	230 VAC
<b>General specifications</b>				
LEDs	Green, yellow, red	Green, yellow, red	Green, yellow, red	Green, yellow, red
Mounting	DIN-rail (2 modules)	DIN-rail (2 modules)	DIN-rail (2 modules)	DIN-rail (2 modules)
Degree of protection	Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C
Humidity (non condensing)	20 to 80 %	20 to 80 %	20 to 80 %	20 to 80 %
Main features	Load: 10 W x 4 Local bus	Load: 5 A, voltage free x 4 Local bus	Load: 16 A, 230 VAC x 4 Local bus	Load: 16 A, 230 VAC x 2 Energy reading, Local bus
<b>References</b>				
	SH2SSTRI424	SH2RE1A424	SH2RE16A4	SH2RE16A2E230




# Dupline® Home and Building automation

	Relay modules		Energy meter modules	
Output type	Bistable relay	Bistable relay	Dupline® connection	Wireless
				
Dimensions (mm)	26 x 39 x 17	40 x 45 x 31	2 DIN module	40 x 45 x 31
Functions	Small sized remote relay output	Wireless relay output module with energy measurement	Energy meter with direct connection up to 16A	Energy meter with direct connection up to 16A
<b>Electrical specifications</b>				
Outputs	1	1		
Inputs			1	1
Power supply	Bus	230/110 VAC	115...240VAC	115...240VAC
<b>General specifications</b>				
LEDs		Green, blue	Green, yellow, red	Green, blue
Mounting	Decentralized		DIN-rail (2 modules)	
Degree of protection			Front: IP 40, Screw terminal: IP 20	
Pollution degree	3 (IEC 60664)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C
Humidity (non condensing)	20 to 80 %	20 to 80 %	20 to 80 %	20 to 80 %
Main features	Load: 13 A, 250 VAC	Load: 10 A, 250 VAC Energy reading, Wireless	Values readout: A, V, W, Wdmd, VA, var, PF, kWh	Values readout: A, V, W, Wdmd, VA, var, PF, kWh
<b>References</b>				
	<b>BDA-RE13A-U</b>			
115...230 VAC			<b>SH2EM16A230</b>	
230 VAC		<b>SHJWRE10AE230</b>		<b>SHJWEM16A230</b>
115 VAC		<b>SHJWRE10AE115</b>		<b>SHJWEM16A115</b>
Capacitive push buttons		<b>SHJWRE10AExLS230</b>		

# Dupline® Home and Building automation





	Roller blind modules		Transparent module
Output type	SPST relay	SPST relay	SPST relay
			
Dimensions (mm)	50 x 50 x 30	2 DIN module	2 DIN module
Functions	Decentralized module for up/down control of one rollerblind motor	Relay output module for up/down control of two AC rollerblind motors	Relay output module for up/down control of two DC rollerblind motors
<b>Electrical specifications</b>			
Outputs	1 SPST relay & 1 SPDT relay	2 SPST + 2 SPDT relay	2 SPST + 2 SPDT relay
Motor type	AC	AC	DC
Power supply	230 VAC ± 15%	24 VDC ± 20%	24 VDC ± 20%
			No power supply needed
<b>General specifications</b>			
LEDs		Green, yellow, red	Green, yellow, red
Mounting	Eurobox	DIN-rail (2 modules)	DIN-rail (2 modules)
Degree of protection		Front: IP 40, Screw terminal: IP 20	Front: IP 40, Screw terminal: IP 20
Pollution degree	3 (IEC 60664)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C
Humidity (non condensing)	20 to 80 %	20 to 80 %	20 to 80 %
Main features	Up/down control, tilting, local bus	Up/down control, tilting, local bus	Up/down control, tilting, local bus
<b>References</b>			
	<b>SHDRODC230</b>	<b>SH2ROAC224</b>	<b>SH2RODC224</b>
			<b>SH1DUPFT</b>

# Dupline® Home and Building automation




Dimmer modules			
Output type	Power mosfet	Wireless dimmer	1 to 10 V output
			
Dimensions (mm)	2 DIN module	40 x 45 x 31	2 DIN module
Functions	Power dimmer up to 500 W for R, L, C load and LED lamps	Power dimmer up to 200 W for R, L, C load and LED lamps	Analogue output dimmer for adjustable ballast with 1 to 10 V input
Electrical specifications			
Outputs	1	1	4
Power supply	230 VAC	230/110 VAC	24 VDC ± 20%
General specifications			
LEDs	Green, yellow, red	Green, blue	Green, yellow, red
Mounting	DIN-rail (2 modules)		DIN-rail (2 modules)
Degree of protection	Front: IP 40, Screw terminal: IP 20		Front: IP 40, Screw terminal: IP 20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C
Humidity (non condensing)	20 to 80 %	20 to 80 %	20 to 80 %
Main features	Local bus / Energy reading	Wireless universal dimmer with energy reading	
References			
With energy reading	SH2D500WE230		
Without energy reading	SH2D500W1230		
230 VAC	SHJWD200WE230		
115 VAC	SHJWD200WE115		
Capacitive push buttons	SHJWD200WE <sub>x</sub> LS230		
			SH2D10V424

# Dupline® Home and Building automation

## Analogue input modules





Function	Input module	Input module	Input module	Input module
				
Dimensions (mm)	50 x 30 x 18	50 x 30 x 18	50 x 30 x 18	50 x 30 x 18
Functions	Input module with 3 analogue inputs	Input module with 4 analogue inputs	Input module with 2 analogue inputs	Input module with 2 analogue inputs
<b>Electrical specifications</b>				
Inputs	3 x 0-10 VDC	2 x 0-10 VDC, 1 x thermistor 10K3 input 1 x variable resistor 1-11 KΩ	1 x thermistor 10K3 1 x variable resistor 1-11 KΩ	2* Ni1000/Pt1000 inputs
Power supply	24 VDC	24 VDC	Bus	Bus
<b>General specifications</b>				
Mounting	Inside wall box or environmental sensor housings	Inside wall box or environmental sensor housings	Inside wall box or environmental sensor housings	Inside wall box or environmental sensor housings
Degree of protection	IP 20	IP 20	IP 20	IP 20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	0°C to +50°C	0°C to +50°C	0°C to +50°C	0°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C
Humidity (non condensing)	20 to 90 %	20 to 90 %	20 to 90 %	20 to 90 %
<b>References</b>				
	<b>SHPINV324</b>	<b>SHPINV2T1P124</b>	<b>SHPINT1P1</b>	<b>SHPINNI2</b>

# Dupline® Home and Building automation

	Analogue input modules		Analogue output modules
Function	Input module	Pulse counter	0 to 10 V output
			
Dimensions (mm)	50 x 30 x 18	28 x 14 x 10	50 x 30 x 18
Functions	Input module with 2 analogue inputs	Decentral 4 input pulse counter module	Output module with 2 analogue outputs
<b>Electrical specifications</b>			
Inputs	2 x 0-20 / 4-20 mA inputs		
Outputs	2 x 0-10 VDC		
Power supply	24 VDC	Powered by bus	24 VDC
<b>General specifications</b>			
Mounting	Inside wall box or environmental sensor housings	small sized plug-in	Inside wall box or environmental sensor housings
Degree of protection	IP 20	IP 20	IP 20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)		2(IEC 60664-1, par. 4.6.2)
Operating temperature	0°C to +50°C	0°C to +50°C	0°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +70°C	-50°C to +85°C
Humidity (non condensing)	20 to 90 %	20 to 90%	20 to 90 %
<b>References</b>			
	<b>SHPINA224</b>		<b>SHPOUTV224</b>
SO inputs		<b>SHPINCTS04</b>	
Contact inputs		<b>SHPINCNT4</b>	






# Dupline® Home and Building automation

	Light Switch interfaces		Input modules	
Function	Input module	Input/output	Digital	Voltage
				
Dimensions (mm)	28 x 28 x 10	28 x 28 x 10	89 x 66 x 29	28 x 28 x 10
Functions	Input module for voltage free outputs	Input / output module for voltage free outputs and PNP transistor inputs	Input module for voltage free outputs or NPN transistor outputs.	Opto-isolated input voltage module, 90-265 VAC
<b>Electrical specifications</b>				
Inputs	4/8	4	4-contact or NPN transistor inputs	90 - 265 VAC
Outputs		4 PNP		
Power supply	Powered by bus	Powered by bus	Powered by bus	Powered by bus
<b>General specifications</b>				
LEDs			Green, yellow, red	
Mounting	In a junction box or behind a switch/pushbutton input	In a junction box or behind a switch/pushbutton input	DIN-rail mounting	
Degree of protection	IP 20	IP 20	IP 20	IP 20
Pollution degree				3 (IEC 60664)
Operating temperature	0°C to +50°C	0°C to +50°C	-20°C to +50°C	-20°C to +50°
Storage temperature	-20°C to +70°C	-20°C to +70°C	-50°C to +85°C	-50° to +70°C
Humidity (non condensing)	20 to 80%	20 to 80 %	20 to 80%	20 to 80%
<b>References</b>				
			<b>BDD-INCON4-U</b>	<b>BDA-INVOL-U</b>
4 contacts	<b>BDB-INCON4-U</b>			
8 contacts	<b>BDB-INCON8-U</b>			
Output voltage 3.3 V		<b>BDB-IOCP8-U</b>		
Output voltage 8 V		<b>BDB-IOCP8A-U</b>		

# Dupline® Home and Building automation

## Glass Switches

Function	Switch	Dimming	Temperature
			
Dimensions (mm)	120 x 80 x 27.2, 80 x 80 x 27.9	120 x 80 x 27.2, 80 x 80 x 27.9	120 x 80 x 27.2, 80 x 80 x 27.9
Functions	Programmable glass touch switch	Programmable glass touch switch for dimming control	Programmable glass touch switch for temperature control

### Electrical specifications

Number of switches	4/6	4	4
Power supply	24 VDC	24 VDC	24 VDC

### General specifications




Colour	Black/white	Black/white	Black/white
LEDs	Blue/white	Blue/white	Blue/white
Mounting	Ø60 box, 503 box	Ø60 box, 503 box	Ø60 box, 503 box
Degree of protection	IP 20	IP 20	IP 20
Pollution degree	3 (IEC 60664)	3 (IEC 60664)	3 (IEC 60664)
Operating temperature	-10°C to +50°C	-10°C to +50°C	-10°C to +50°C
Storage temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Humidity (non condensing)	20 to 80%	20 to 80%	20 to 80%
Remarks	Approved according to UL60950, integrated temperature probe	Approved according to UL60950	Approved according to UL60950, integrated temperature probe

### References

4 push buttons, Ø60 box	<b>SHG060WLS4, SHG060BLS4</b>		
6 push buttons, 503 box	<b>SHG503WLS6, SHG503BLS6</b>		
display for dimming, Ø60 box		<b>SHG060WSLD, SHG060BSLD</b>	
display for dimming, 503 box		<b>SHG503WSLD, SHG503SLD</b>	
temperature display, Ø60 box			<b>SHG060WSLT, SHG060BSLT</b>
temperature display, 503 box			<b>SHG503WSLT, SHG503BSLT</b>




# Dupline® Home and Building automation

## Light Switches

Function	4 pushbutton	4 pushbutton	4 pushbutton + PIR + Luxmeter
			
Dimensions (mm)	44 x 44 / 55 x 55	44 x 44 / 55 x 55	44 x 44 / 55 x 55
Functions	Light switch for building automation applications	Wireless light switch for building automation applications	Light switch and PIR sensor for detecting presence and/or movement in indoor installations
<b>Electrical specifications</b>			
Number of switches	4	4	4
Power supply	Powered by bus	Supplied by battery, type Lithium button 2450 3V	Powered by bus
<b>General specifications</b>			
Colour	Black/white	Black/white	Black/white
LEDs	White/blue	Red/blue	White/blue
Mounting	Wallbox Btcino, Niko, Fuga / Elko, Gira, Jung	Wallbox Btcino, Niko, Fuga / Elko, Gira, Jung	Wallbox Btcino, Niko, Fuga / Elko, Gira, Jung
Degree of protection	IP 20	IP 20	IP 20
Pollution degree	3 (IEC 60664)	3 (IEC 60664)	3 (IEC 60664)
Operating temperature	-20°C to +50°C	-20°C to +50°C	0°C to +50°C
Storage temperature	-30°C to +60°C	-30°C to +60°C	-20°C to +70°C
Humidity (non condensing)	20 to 80%	20 to 80%	20 to 80%
Other functions			Operating distance: 8 m Angle: 90°
Remarks	Approved according to UL60950	Approved according to UL60950	Approved according to UL60950
<b>References</b>			
44 x 44 Wallbox Btcino, Niko, Fuga	<b>B4X-LS4-U</b>	<b>SHA4XWLS4</b>	<b>SHA4XLS4P90L</b>
55 x 55 Wallbox Elko, Gira, Jung	<b>B5X-LS4-U</b>	<b>SHE5XWLS4</b>	<b>SHE5XPLS4P90L</b>
44 x 44 Wallbox Btcino, Niko, Fuga Temperature and humidity	<b>SHA4XLS4TH</b>		
55 x 55 Wallbox Elko, Gira, Jung Temperature and humidity	<b>SHE5XLS4TH</b>		

# Dupline® Home and Building automation

## Movement / Presence sensors

Function	Temperature display	150° PIR /Luxmeter	90° PIR/Luxmeter
			
Dimensions (mm)	44 x 44 / 55 x 55	44 x 44 / 55 x 55	44 x 44 / 55 x 55
Functions	Temperature controller with display	PIR sensor for detecting presence and/or movement in indoor installations	PIR sensor for detecting presence and/or movement in indoor installations

### Electrical specifications

Number of switches	4		
Power supply	Powered by bus	Powered by bus	Powered by bus

### General specifications





Colour	White/black	White/black	White/black
LEDs	White/blue	White/blue	White/blue
Mounting	Wallbox Btcino, Niko, Fuga / Elko, Gira, Jung	Wallbox Btcino, Niko, Fuga / Elko, Gira, Jung	Wallbox Btcino, Niko, Fuga / Elko, Gira, Jung
Degree of protection	IP 20	IP 20	IP 20
Pollution degree	3 (IEC 60664)	3 (IEC 60664)	3 (IEC 60664)
Operating temperature	-10°C to +50°C	-20°C to +50°C	0°C to +50°C
Storage temperature	-20°C to +70°C	-30°C to +70°C	-20°C to +70°C
Humidity (non condensing)	20 to 80%	20 to 80%	20 to 80%
Remarks	Approved according to UL60950	Operating distance: 8 m angle:150°	Operating distance: 8 m Angle: 90°

### References





44 x 44 Wallbox Btcino, Niko, Fuga	<b>SHA4XTEMDIS</b>	<b>SHA4XP150/SHA4XP150L</b>	<b>B4X-PIR90-U</b>
55 x 55 Wallbox Elko, Gira, Jung	<b>SHE5XTEMDIS</b>	<b>SHE5XP150/SHE5XP150L</b>	<b>B5X-PIR90-U</b>
44 x 44 Wallbox Btcino, Niko, Fuga + luxmeter			<b>SHA4XP90L</b>
55 x 55 Wallbox Elko, Gira, Jung + luxmeter			<b>SHE4XP90L</b>

# Dupline® Home and Building automation





## Movement / Presence sensors

Function	90° PIR/ Luxmeter	90° PIR/ Luxmeter	90° PIR/ Luxmeter	360° PIR/ Luxmeter
				
Dimensions (mm)	104 x 55 x 57	Ø 76 x 25	67 x 52 x 34	Ø 90 x 40
Functions	PIR sensor for detecting presence and/or movement in indoor installations	PIR sensor for detecting presence and/or movement in indoor installations	PIR sensor for detecting presence and/or movement in indoor /outdoor installations	PIR sensor for detecting presence and/or movement in indoor installations with a built-in luxmeter
<b>Electrical specifications</b>				
Power supply	Powered by bus	Powered by bus	Powered by bus	Powered by bus
<b>General specifications</b>				
Colour	White	White	White	White
LEDs	Red	Blue	Red	Blue
Mounting	Wall mounting	LK ceilingbox PL52 or PL55	Wall mounting	Ceiling mounting
Degree of protection	IP 40	IP 20	IP 64 / IP 20	IP 20
Pollution degree	3 (IEC 60664)	3 (IEC 60664)	3 (IEC 60664)	3 (IEC 60664)
Operating temperature	0°C to +50°C	0°C to +50°C	-20°C to +50°C	0°C to +50°C
Storage temperature	-20°C to +70°C	-20°C to +70°C	-30°C to +70°C	-20°C to +70°C
Humidity (non condensing)	20 to 80%	20 to 80%	20 to 80%	20 to 80%
Main features	Operating distance: 12 m Angle: 90°	Operating distance: ≤ 8 m Angle: 90°	Operating distance: 0.5 - 15 m Angle: 90°	Operating distance: ≤ 7.5 m Angle: 360° Lens: dual detecting zones
<b>References</b>				
	<b>BSD-PIR90-U</b>	<b>BSB-PIR90-U</b>		<b>SHSQP360L</b>
Luxmeter	<b>SHSDP90L</b>	<b>SHSBP90L</b>		
Outdoor			<b>BSP-PIR90-U</b>	
Indoor			<b>BSP-PIR90A-U</b>	
Outdoor + luxmeter			<b>SHSPP90L</b>	
Indoor + luxmeter			<b>SHSPP90LA</b>	





# Dupline® Home and Building automation

	Touch displays		Environmental sensors	
Function	Graphical display	Display	RGB LED	Blind
				
Dimensions (mm)	187 x 147 / 147 x 107	80 x 90 x 26	80 x 90 x 26	80 x 90 x 26
Functions	High definition 7" and 4.3" colour touchscreens, BACnet, Modbus and KNX gateway	Room sensors for CO <sub>2</sub> temperature and %RH measurement - with display	Room sensors for CO <sub>2</sub> temperature and %RH measurement - with LED indication	Room sensors for CO <sub>2</sub> temperature and %RH measurement
<b>Electrical specifications</b>				
Power supply	24 VDC ± 20%	Bus	Bus	Bus
<b>General specifications</b>				
Mounting	Wall mounting	Wall mounting	Wall mounting	Wall mounting
Indication	Display	Display	Red, green, blue	None
Degree of protection	Front: IP66 Rear: IP20	IP 20	IP 20	IP 20
Pollution degree		2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	0°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Storage temperature	-20°C to +70°C	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C
Humidity (non condensing)	5 to 85% RH	0 to 90 %	0 to 90 %	0 to 90 %
Main features	Windows CE, 7", 800 x 480 pixel / 4.3", 480 x 272 pixel, Ethernet port, BACnet, Modbus, KNX, data logging, configurable graphical display and alarms management	CO <sub>2</sub> measuring range: 0 to 2000 ppm CO <sub>2</sub> measurement: Dual source infrared NDIR technology Temperature measuring range: -20°C to +50°C (-4 to 122°F) Humidity measuring range: 0 to 100 %RH	CO <sub>2</sub> measuring range: 0 to 2000 ppm CO <sub>2</sub> measurement: Dual source infrared NDIR technology Temperature measuring range: -20°C to +50°C (-4 to 122°F) Humidity measuring range: 0 to 100 %RH	CO <sub>2</sub> measuring range: 0 to 2000 ppm CO <sub>2</sub> measurement: Dual source infrared NDIR technology Temperature measuring range: -20°C to +50°C (-4 to 122°F) Humidity measuring range: 0 to 100 %RH
<b>References</b>				
7", 800 x 480 pixel	<b>BTM-T7-24</b>			
4.3", 480 x 272 pixel	<b>BTM-T4-24</b>			
Display, CO <sub>2</sub> + temperature	<b>SHSUCOTD</b>			
Display, CO <sub>2</sub> + temperature + humidity	<b>SHSUCOTH</b>			
Display, temperature + humidity	<b>SHSUTH</b>			
Display, temperature	<b>SHSUTD</b>			
RGB Led, CO <sub>2</sub> + temperature	<b>SHSUCOTL</b>			
RGB Led, temperature + humidity	<b>SHSUCOTHL</b>			
CO <sub>2</sub> + temperature	<b>SHSUCOT</b>			
CO <sub>2</sub> + temperature + humidity	<b>SHSUCOTH</b>			
Temperature + humidity	<b>SHSUTH</b>			
Temperature	<b>SHSUT</b>			

# Dupline® Home and Building automation

	Smoke	Water	Window	Alarm
<b>Function</b>	Smoke detector	Water sensor	Wireless sensor	Keypad
				
<b>Dimensions (mm)</b>	Ø 100 x 54 mm	70 x 39 x 15.5	sensor: 60 x 30 x 15.5 magnet: 32 x 10.2 x 11.5	130 x 50 x 8
<b>Functions</b>	Smoke detector for home/ building applications	Water detection sensor for home/building applications	wireless, battery powered reed sensor with additional input	Programmable keypad for building access control and alarm control in indoor and outdoor applications
<b>Electrical specifications</b>				
<b>Inputs</b>			reed, voltage free	12 pushbuttons
<b>Power supply</b>	Powered by bus / 9 VDC battery	Powered by bus	battery	9-17 VDC
<b>General specifications</b>				
<b>Colour</b>	White	White	White	Black / white
<b>LEDs</b>	Red		Red/blue	Yellow, red, green, programmable
<b>Mounting</b>	Ceiling mounting	Wall mounting	Wall mounting, screw and double side tape	Wall box mounting
<b>Degree of protection</b>	IP 43	IP 67	IP20	IP 67
<b>Pollution degree</b>			2 (IEC 60664-1, par. 4.6.2)	
<b>Operating temperature</b>	0°C to +50°C	-20°C to +50°C	-20°C to +50°C	-15°C to +60°C
<b>Storage temperature</b>	-5°C to +85°C	-50°C to +85°C	-30°C to +85°C	-30° to 80°C
<b>Humidity (non condensing)</b>	20 to 80%	20 to 80 %	20 to 80 %	100%
<b>Main features</b>	Detection area: 60 m <sup>2</sup>	Input for Felson probe		28 user-programmable codes, Buzzer output
<b>References</b>				
		<b>BSF-WAT-U</b>		<b>BACC-KEYPAD-DC-U</b>
<b>Battery backup</b>	<b>BSG-SMOA-U</b>			
<b>No battery backup</b>	<b>BSG-SMO-U</b>			
<b>reed contact</b>			<b>SHDWWISEN</b>	
<b>reed contact + voltage free</b>			<b>SHDWWISENIN1</b>	

# Dupline® Home and Building automation

	Enviromental sensor		Light	Temperature
Function	Weather station	Anemometer	Luxmeter	Outdoor
				
Dimensions (mm)	96 × 77 × 118	183 x 137 x 145	55 x 53 x 36	67 x 35 x 15
Functions	Weather station for measurement of temperature, wind speed, brightness and precipitation	Anemometer for building automation applications	Luxmeter for indoor / outdoor installations	Temperature sensor for indoor and outdoor applications
<b>Electrical specifications</b>				
Power supply	12 to 40 VDC / 12 to 28 VAC	Powered by bus	Powered by bus	Powered by bus
<b>General specifications</b>				
Colour	White		White	Light grey
Mounting	Wall mounting	Wall mounting	Wall mounting	Direct wall mounting
Connection				Cable / plug
Degree of protection	IP 44	IP 54	IP 44	IP 67
Pollution degree		2 (IEC 60664-1, par. 4.6.2)		
Operating temperature	-30°C to +50°	-20°C to +60°C	-30°C to +60°C	-40°C to +60°C
Storage temperature	-30°C to +70°C	-20°C to +60°C		-55°C to +85°C
Humidity (non condensing)	5 to 95%	20 to 80%		20 to 80%
Main features	GPS receiver	Measuring range: 2 to 25 m/s Heating system	Measuring range: 0 to 20 kLux	
Remarks				Approved according to UL60950
<b>References</b>				
	<b>SHOWEAGPS</b>	<b>BSN-ANE-U</b>	<b>BSH-LUX-U</b>	
Cable, 2 m				<b>BSI-TEMANAB-U</b>
Plug, M12				<b>BSI-TEMANA-U</b>