

Reference List

YEAR	PROJECT	SCOPE	SPECIFICS
2001	Print house Iztok, Varna	Engineering	Bus integration of 15 close control units; Bus integration of fire alarm system; 1100 Data Points
2002	Medica Sandanski	Engineering	System qualification in compliance with GMP standards. 254 Data Points
2002	Sopharma - Ampoules facility	Engineering	System qualification in compliance with GMP standards. 550 Data Points
1999 - 2005	Business Park Sofia, Multifunctional buildings B2, B3, B4, B12, Ina Trading	Engineering	Communication system among buildings. 450 Data Points
1999 - 2005	Business Park Sofia, Multifunctional buildings B2A, B10, B11, B13 and B1	Design, delivery, installation, commissioning, software programming and start-up	Communication system among buildings. 480 Data Points
2003	Radisson SAS Grand Hotel Sofia	Re-engineering and realization of new installations	200 Data Points
2004	HIT Mladost	Engineering	253 Data Points
2004	Private house	Re-engineering	EIB home automation. HVAC automation, individual room control, lighting and shutters control
2005	Print house « Zapad », Sofia	Delivery, installation, commissioning, software programming and start-up	First WEB based BMS in Bulgaria 50 Data Points
2005	Unionbank, head office	Delivery, installation, commissioning, software programming and start-up	WEB BMS 190 Data Points
2005	Trade center « Corecom – Princess »	Delivery, installation, commissioning, software programming and start-up	350 Data Points
2005	City Center Sofia	Design, delivery, installation, commissioning, software programming and start-up	Fully automated mall, Central management of Individual Room Control for every shop. 1200 Data Points
2005	Neobalkanika	Design, delivery, installation, commissioning, software programming and start-up	System qualification in compliance with GMP standards. 250 Data Points
2005	HIT Lulin	Engineering	286 Data Points
2005	National Library « St. St. Cyril and Methodius »	Design, delivery, installation, commissioning, software programming and start-up	HVAC automation. WEB BMS 40 Data Points
2005	« Drujba » Glass manufacturing plant, Plovdiv	Design, delivery, installation, commissioning, software programming and start-up	Automation of cooling towers 40 Data Points
2005	« Helios Bay » Hotel	Design, delivery, installation, commissioning, software programming and start-up	First WEB based SOS hotel system in Bulgaria. 283 Data Points

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YEAR	PROJECT	SCOPE	SPECIFICS
2005	« Sky » Hotel	Design, delivery, installation, commissioning, software programming and start-up	WEB based SOS hotel system. 90 Data Points
2005	CISCO Bulgaria	Design, delivery, installation, commissioning, software programming and start-up	HVAC automation and individual room control. Implementation of LON WORKS network. 70 Data Points
2005	First Investment Bank	Engineering	Toshiba VRF & HVAC units electrical energy measurement and reporting.
2006	Tokuda Hospital	Design, delivery, installation, commissioning, software programming and start-up	Schrack Seconet Nurse call system. First implementation in Bulgaria. 1000 beds.
2006	Tokuda Hospital	Design, delivery, installation, commissioning, software programming and start-up. Setting and start-up of dynamic graphics on the operator station for lighting management.	KNX Lighting management system. Merging of the first and second stages of the system into one operator station.
2006	Bulgarian Telecommunication Company (BTC)	Design, delivery, installation, commissioning, software programming and start-up	Climate control and monitoring system, diesel generators, UPS, batteries, water presence, electrical consumers status, measurement of electrical power supply parameters; First implementation in Bulgaria of centralized system covering the whole territory of the country with access to every site through a WEB interface; 43 sites, 5000 Data Points
2007	Bulgarian Telecommunication Company (BTC)	Design, delivery, installation, commissioning, software programming and start-up	Climate control and monitoring system, diesel generators, UPS, STS, batteries, water and rodent presence, circuit breakers status, measurement of the electrical power supply parameters; First implementation of a real time 2n data center in Bulgaria and integration to an existing operator's level;
2007	«Lozenetz » Hospital	Design, delivery, installation, commissioning, software programming and start-up	HVAC automation;
2007	Milk processing plant, Sevlievo	Design, delivery, installation, commissioning, software programming and start-up	Carrier multi-chiller control plant; First implementation in Bulgaria;
2007	«Metropolitan » Hotel	Design, delivery, installation, commissioning, software programming and start-up	Building management system with individual room control and integration with hotel software Fidelio; First implementation in Bulgaria; 600 Data Points + 250 IRC
2007	Sopharma - Ampoules facility	Design, delivery, installation, commissioning, software programming and start-up	System qualification in compliance with GMP standards. 800 Data Points
2007	Baumax Trade Center, Plovdiv	Design, delivery, installation, commissioning, software programming and start-up	LON Integration of GEA air treatment units. 200 Data Points
2007	Billa hypermarket, Kurdjali	Delivery, installation, commissioning, software programming and start-up	Building Management System. 100 Data Points

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YEAR	PROJECT	SCOPE	SPECIFICS
2007	Hyundai office building, showroom, car service and parking	Delivery, installation, commissioning, software programming and start-up	Building Management System. 800 Data Points
2007	Schneider Electric Plant, Plovdiv	Design, delivery, installation, commissioning, software programming and start-up	Lighting automation; Integration of I/NET access control system, compressors and lifts; Monitoring of Modbus communicating electrical meters; 370 Data Points
2008	Alpha Business Center	Design, delivery, installation, commissioning, software programming and start-up	Building Management System. 800 Data Points
2008	Business Park Sofia – Building 14	Design, delivery, installation, commissioning, software programming and start-up	Integration of M-bus communicative heat-cold meters into BMS; Chillers Integration into BMS via Modbus communication; 180 Data Points
2008	Hyundai office building	Design, delivery, installation, commissioning, software programming and start-up	100 zones IRC; Integration of 130 LON communicative heat-cold meters into BMS; Integration of 40 water meters with a pulse output; The first building in Bulgaria with BREEAM certificate. 700 Data Points
2008	Mall Plovdiv	Design, delivery, installation, commissioning, software programming and start-up	3 BMS operation stations; OPC integration of fire detection system, intrusion system and power automation system; Integration of I/NET access control system; Integration of public address system, pipe heating system, drainage pumps; 4500 Data Points
2009	«Dimyat» Hotel, Varna	Design, delivery, installation, commissioning, software programming and start-up	Integration of 90 M-bus communicative heat-, cold- and water meters into BMS 530 Data Points
2009	Infinity showroom and office building	Design, delivery, installation, commissioning, software programming and start-up	Remote Management 300 Data Points
2009	Shops PLUS in Pernik, Lukovit and Silistra	Design, delivery, installation, commissioning, software programming and start-up	Building Management System
2010	Mall Galleria Stara Zagora	Design, delivery, installation, commissioning, software programming and start-up	LON integration of Roof-Top and chillers; Modbus integration of electrical meters; 1600 Data Points
2010	Mall Rousse	Design, delivery, installation, commissioning, software programming and start-up	IP communicative automation stations; LON integration of chillers; Modbus integration of electrical meters; 2170 Data Points
2010	Unipharm AD	Design, delivery, installation, commissioning, software programming and start-up	System qualification in compliance with GMP standards. 320 Data Points
2010	THE MALL – Carrefour Hypermarket	Design, delivery, installation, commissioning, software programming and start-up	Modbus integration of 4 Roof-Top Units Control of substation heating center Monitoring of smoke fans, diesel generator and chillers Modbus integration of 24 electrical meters 450 Data Points.
2011	Astral Business Center	Design, delivery, installation, commissioning, software programming and start-up	3 AHU's– central control; 42 zones/ individual room control (IRC); Integration of 62 M-bus communicative cold/heat meters; Integration

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YEAR	PROJECT	SCOPE	SPECIFICS
			of 84 electrical meters Modbus communication; 27 heat recovery units - central control; Integration of 13 other subsystems 1100 Data Points.
2011	Sports Hall Sofia – Arena Armeetz	Design, delivery, installation, commissioning, software programming and start-up	6 AHU's – serving sport hall; 1 AHU – serving training hall; Air conditioning of public area, offices, VIP zone; 5 heat pump units; Smoke ventilation of underground parking; Exhaust ventilation for hall, changing rooms, toilets, technical rooms; Control and monitoring of fire dampers, lighting, sports lighting and façade lighting; 2 operation stations DESIGO INSIGHT; Integration of 13 other subsystems 1500 Data Points.
2011	Alfa Bank – Headquarters building	Design, delivery, installation, commissioning, software programming and start-up	4 AHU'S– central control; Jbus integration of 4 chillers; ModBus integration of 6 multimeters; ModBus integration of 3 diesel generators; Integration of 12 existing sub-systems; 700 Data Points.
2011	Procredit Bank	BMS re-engineering; Design, delivery, installation, commissioning, software programming and start-up	Controllers' LON network recommissioning via LonMaker Control of AHU's, lighting, chillers Individual room control (IRC) of all rooms in the building Monitoring of electrical meter
2011	IME Plant, Botevgrad	Design, delivery, installation, commissioning, software programming and start-up	1 AHU – central control, Cooling center with 1 chiller 80 Data Points.
2012	Mall Galleria Burgas	Design, delivery, installation, commissioning, software programming and start-up	Control and monitoring of Cooling towers, circulation pumps, exhaust and smoke fans, fire and smoke dampers, lighting automation, UPS, CCTV, lifts and escalators, heating pipe system, sprinkler installation, drainage pumps, water meters, circuit breakers; LON integration of Roof-Top Units, Viessmann boilers, air curtains; M-bus integration of heat- cold meters; Modbus integration of WSHPs' of 230 shops, electrical meters, Diesel Generators, hydrophore system 2400 Data Points.
2012	Mall Galleria Burgas – Cinema City	Design, delivery, installation, commissioning, software programming and start-up	12 AHU's– central control; LON integration of 2 chillers Trane; Control of exhaust fans; Monitoring of smoke fans, fire and smoke dampers; 600 Data Points
2012	Mall Galleria Burgas – Carrefour Hypermarket	Design, delivery, installation, commissioning, software programming and start-up	2 AHU's– central control; LON integration of 2 chillers; Control of exhaust fans; Monitoring of smoke fans, fire and smoke dampers 300 Data Points
2012	Mall Bulgaria	Design, delivery, installation, commissioning, software programming and start-up	Heat-cooling center Mall; Heat-cooling center Carrefour Hypermarket LON integration of 21 Roof-Top Units, Cooling towers; 3 AHU's - central control for Carrefour hypermarket; Control and monitoring of parking ventilation, smoke evacuation fans and over-pressure fans; air curtains, water-treatment system, lighting automation, oil reservoir, pipe heating system; 170 shops WSHPs Modbus integration; Modbus integration of power meters, electrical meters, gas meters; OPC integration of access control system, fire protection system, intrusion system; Sewage pumps, sprinkler monitoring, water supply system; 4200 Data Points

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YEAR	PROJECT	SCOPE	SPECIFICS
2012	Risk Engineering – office building	BMS re-engineering;	Fire alarm system integration - 1000 Data Points Heat-cooling center, LON integration of individual room control (IRC) 9 AHU's – central control, Control and monitoring of parking ventilation and CO gas signaling system - 2 levels, lighting automation, decorative water wall, garage doors; M-bus integration of heat- cold meters; Outside blinds Modbus integration. 2200 Data Points
2012	Sofia Airport Center	Design, delivery, installation, commissioning, software programming and start-up	Heat-cooling center; central control of 12 AHU's for office areas; 3 AHU's for Greenhouse; Control and monitoring of parking ventilation and CO gas signaling system - 2 levels; lighting automation, fountains; Modbus integration of chillers, power meters, cold meters; Monitoring of irrigation system; 2200 Data Points
2012	Schneider Electric Plant, Plovdiv	Design, delivery, installation, commissioning, software programming and start-up	TAC Vista BACS station; 5 AHU's; Heat-cooling center; Monitoring lifts & electrical distribution; Lighting automation. 300 Data Points
2012	Zagorka AD, Stara Zagora	Design, delivery, installation, commissioning, software programming and start-up	Heat-cooling center; Control of air curtain – air conditioning in storage; 2 AHU's office building; LON integration of individual room control (IRC); Monitoring of smoke hatches, smoke dampers and fans; Storage door monitoring; Monitoring and control of fans, diesel generator, drainage and rainwater pumps; The building was issued BREEAM certificate. 300 Data Points
2012	City Clinic - Sofia	Design, delivery, installation, commissioning, software programming and start-up	Heat-cooling center; KNX - individual room control (IRC) 7 AHU's – central control for surgery, emergency, reanimation wards and office areas. Control and monitoring of ventilation, lighting automation, medical gas system, CCTV, access control system, fire dampers, intrusion system, power supply system; Visocall IP – IP-based Nurse Call System; 1000 Data Points
2013	Paradise Center – Cinema City	Design, delivery, installation, commissioning, software programming and start-up	16 Air Handling Units – central control; LON integration of 2 chillers Control of exhaust fans; Monitoring of smoke fans, fire and smoke dampers; First project in Bulgaria with Automation Servers, part of SmartStruxure™ Architecture range 800 Data Points
2013	Mall Bulgaria – Infinity Tower	Design, delivery, installation, commissioning, software programming and start-up	Heat-cooling center 4 AHU's – central control Control and monitoring of smoke fans, overpressure fans and dampers, lighting automation; water meters, sprinkler system, fire pumps monitoring, drinking water supply pump groups monitoring, security systems monitoring - fire alarm systems, public address system, video monitoring (CCTV), intruder alarm system; transformers monitoring; Diesel generator monitoring Modbus integration of 6 chillers, electrical meters, power meters, dry coolers integration, fan coil units - public area; Mbus integration of heat and cold meters; 1100 Data Points
2013	CENTILLION Ltd. - manufacturing and office building	Design, delivery, installation, commissioning, software programming and start-up	Heat-cooling center; LON integration of Heat pump water/air, Modbus integration of Heat pump water/water and connection to geothermal installation, Mbus integration of heat and cold meters; 8 AHU's – central control, LON integration of 140 Fan Filter Units (FFUs) for Clean rooms; Modbus integration of 3 injection pumps to geothermal heat pump installation, Modbus integration of 8 flow meters, power meters, electrical meters; Lighting automation. 2300 Data Points

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YEAR	PROJECT	SCOPE	SPECIFICS
2014	St. Petka Eye Hospital, Varna	Design, delivery, installation, commissioning, software programming and start-up	2 AHU's - operation theaters; 2 AHU's – fresh air to supply public area; Cooling and heating center with 2 chillers and 1 boiler; Control and monitoring of overpressure ventilation and smoke exhaust ventilation for garage; Control and monitoring of local extract ventilation for toilets and technical rooms; Lighting automation; Individual Room Control LON integration; ModBus integration of medical gases system; Reading of impulse water and gas meters; Monitoring of circuit breakers in low voltage panels and main distribution panels; Integration of – Fire, WSS, electrical and low voltage systems; Integration of window Tip Tronik System of Schuko Integration of Sun light protection facades of Schuko 1300 Physical Data Points 600 Integration Data Points
2014	South Ring Mall, Sofia	Design, delivery, installation, commissioning, software programming and start-up	11 AHU's – fresh air for tenants; 20 AHU's – for air conditioning of public area; Control and monitoring of cooling and heating center with 3 water to water heat pumps and 3 boilers; Control and monitoring of overpressure ventilation and smoke exhaust ventilation for public area and shops; Monitoring of gas detection system (CO) and control of smoke exhaust ventilation for garage; Control and monitoring of local extract ventilation for restaurants, toilets and technical rooms; Monitoring of gas detection system (Freon) and control of exhaust ventilation for chiller plant room; Lighting automation; ModBus integration of energy meters, multimeters and chillers; Mbus integration of heat and cold meters; Reading of impulse water and gas meters; Monitoring of circuit breakers in low voltage panels and main distribution panels; Monitoring of diesel generators, lifts and escalators; Monitoring of drain, drill, sewage, sprinkler and hydrant pump; Monitoring of waste water treatment plant 4500 Physical Data Points 2500 Integration Data Points
2015	Sports Hall, Rousse	Design, delivery, installation, commissioning, software programming and start-up	35 AHU's – public area, control of cooling center with 2 chillers, heating center, control and monitoring of overpressure ventilation, lighting automation, monitoring of circuit breaker 1300 Data Points
2015	G&E Pharmaceuticals Ltd, Botevgrad	Design, delivery, installation, commissioning, software programming and start-up	3AHU's – to supply fresh air public area, control of cooling center with 3 chillers, heating center with 2 boilers, lighting automation Qualification of BMS system according GMP requirement. 350 Physical Data Points
2015	Hypermarket Store, Burgas	Delivery, installation, commissioning, software programming and start-up	1 AHU – Sales hall, Cooling and heating center, the energy source being store's refrigeration technics; Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.; Lighting automation, incl. outside light intensity based lighting control; LON integration – Heat/cold meters; Mbus integration of electricity meters; Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc.; Local system control via Touch panel, integrated into the DDC panel; Remote two-point monitoring/control of core system parameters via LED panels; Full remote system control/monitoring via WEB server; 230 Physical Data Points 5 Integration Data Points
2015	Hypermarket Store, Asenovgrad	Delivery, installation, commissioning, software programming and start-up	1 AHU – Sales hall; Cooling and heating center, the energy source being store's refrigeration technics; Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.; Lighting automation, incl. outside light intensity based lighting control; LON integration – Heat/cold meters; Modbus integration of electricity meters; Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc. Local system control via Touch panel, integrated into the DDC panel. Remote two-point monitoring/control of core system parameters via

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YEAR	PROJECT	SCOPE	SPECIFICS
			LED panels; Full remote system control/monitoring via WEB server; 230 Physical Data Points 5 Integration Data Points
2015	City Clinic Cancer Center, Sofia	Design, delivery, installation, commissioning, software programming and start-up	11 AHU's; 3 Cooling centers: for general purposes, for technological equipment and for Robot tech. equipment; 1 Heating center; Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.; Lighting automation, incl. outside light intensity based lighting control; LON integration – Draeger medical gasses system; ModBus integration of room temperature thermostats and VRV's; Modbus integration of electrical power meters and diesel generators; Integration of – Fire, WSS, Drainage pumps, Security system, Elevators, Circuit breakers, pipe heating systems, etc.; Introduction into Bulgarian market of the Siemens most modern Building Management Software – Desigo CC. First project in Bulgaria based on this system. 1100 Physical Data Points 2300 Integration Data Points
2015	Expo 2000, Phase 3, Sofia	Delivery, installation, commissioning, software programming and start-up	2 AHU's; Cooling and Heating center; Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.; KNX integration of room thermostats, 700 data points; ModBus integration of circulation pumps and fans VSDs; Modbus integration of Heat pump and Chiller; Mbus integration of 32 Heat meters, 32 Cold meters and 32 Water meters; Lighting automation; Desigo Insight building management station 950 Physical Data Points 1150 Integration Data Points
2016	Hypermarket Store, Stara Zagora	Delivery, installation, commissioning, software programming and start-up	1 AHU – Sales hall; Cooling and heating center, the energy source being store's refrigeration technics; Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.; Lighting automation, incl. outside light intensity based lighting control; LON integration – Heat/cold meters; ModBus integration of electricity meters; Mbus integration of electricity and water meters; Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc.; Local system control via Touch panel, integrated into the DDC panel; Remote two-point monitoring/control of core system parameters via LED panels; Full remote system control/monitoring via WEB server; 230 Physical Data Points 30 Integration Data Points
2016	Tirana Business Park, Albania	Design, delivery, installation, commissioning, software programming and start-up	2 AHU's – fresh air for offices; Monitoring of cooling center with 2 chillers; Control and monitoring of load management system; Monitoring of elevators; ModBus integration of energy meters and multimeters; ModBus integration of middle voltage sepam relays; ModBus integration of temperature relays of the transformers; ModBus integration of diesel generators; Mbus integration of water and cold meters; LON integration of chillers; Monitoring of fire fighting, sewage and booster drinking pumps; Monitoring of waste water treatment plant; 50 Physical Data Points 500 Integration Data Points
2016	Unipharm, Sofia	Design, delivery, installation, commissioning, software programming and start-up	11 AHU's – for air conditioning of tablet departments and microbiology; Control and monitoring of heating center; Control and monitoring of cooling center with 2 chillers; Control and monitoring of heating center with hot steam – produce heating to machines; Control and monitoring of local extract ventilation for toilets and technical rooms; Control and monitoring of microclimate in clean rooms; Control and monitoring of pressure in clean rooms Qualification of BMS system according GMP requirement 600 Physical Data Points

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YEAR	PROJECT	SCOPE	SPECIFICS
2016	W Amsterdam hotel, Amsterdam, Netherlands	Design, delivery, installation, commissioning, software programming and start-up	<p>1 AHU – fresh air for guest room; 1 AHU – fresh air for restaurant; 1 AHU – fresh air for SPA center; 1 AHU – fresh air for butcher; 1 AHU – fresh air for swimming pool; Control and monitoring of heating center with domestic hot water; Control and monitoring of heating and cooling center with water to water geothermal heat pump; Control and monitoring of local extract ventilation for dressing room; Control and monitoring of heating curtains; Monitoring of smoke exhaust ventilation for boiler room; ModBus integration of SPA systems (fire and ice bath, swimming pool and whirlpool); ModBus integration of energy meters; Mbus integration of water and gas meters; Individual room control LON integration; Monitoring of hydrophore, water leakage sensors, pipes heating and grease traps</p> <p>500 Physical Data Points 300 Integration Data Points</p>
2017	MALL MARKOVO TEPE	Design, delivery, installation, commissioning, software programming and start-up	<p>13 AHUs – supplying fresh air in the building Control and monitoring of cooling center with 2 chillers Cooling system for the shops WHSP and cooling towers Control and monitoring of heating center with 3 boilers. Control and monitoring of overpressure ventilation and smoke exhaust ventilation for public area and shops Control and monitoring of local extract fans for shops, restaurants, toilets, technical & staff rooms, etc. Lighting control Mbus integration of heat/cold and water meters ModBus integration of electricity meters Reading of impulse gas meters Monitoring of circuit breakers in low voltage panels and main distribution panels Monitoring of existing sub systems - Plumbing, electrical and low voltage systems Generating monthly reports for consumed energy</p> <p>1500 Physical Data Points 170 Integration Data Points</p>
2017	Logistics Center, Bulgaria	Design, delivery, installation, commissioning, software programming and start-up	<p>Building Management System 7 AHUs Cooling center, the energy source being store's refrigeration technics Heating center, two gas boilers Control and monitoring of local extract fans for toilets, technical & staff rooms, etc. Lighting automation: Outside light intensity based lighting control ~1500 DALI lamps control KNX constant light intensity control KNX presence based control Water valves presence based control ModBus integration of electricity meters Mbus integration of gas and water meters Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc. Local system control via Touch panels, situated all over the store; Full remote system control/monitoring via WEB server;</p> <p>958 Physical Data Points 168 Integration Data Points</p>
2017	Electronic components plant OSRAM, Plovdiv	Design, delivery, installation, commissioning, software programming and start-up	<p>16 AHUs – supplying fresh air in the building and 17 HOVAL machines Control and monitoring of cooling center with 2 chillers and a dry cooler Control of heating center, two boilers Control and monitoring of local extract fans for restaurants, toilets, technical & staff rooms, etc Control and monitoring of DALI lighting ModBus integration of air compressors and their monitoring Reports the quantity of produced nitrogen</p>

Reference List

YEAR	PROJECT	SCOPE	SPECIFICS
			<p>Mbus integration of water meters ModBus integration of energy meters, multimeters Reading of impulse gas meters Monitoring of circuit breakers in low voltage panels and main distribution panels Monitoring of existing sub systems - Plumbing, electrical and low voltage systems Generating monthly reports for consumed energy ADP – storage, evaluation and data processing 1400 Physical Data Points 600 Integration Data Points</p>
2017	A HOUSE IN A COMPLEX	Design, delivery, installation, commissioning, software programming and start-up	<p>KNX Garage door management Control of air conditioning via convectors and radiators Curtains management TV management using an IR device Control of VELUX window and built-in blinds using meteo station display Integration and management of security system Management of DALI lightning Management of front door Heat pump control Remote access and management of different systems through SPACELYNK</p>
2017	Tokuda Hospital – Sofia	Outdoor Parking Lighting PHILIPS	Replacing of 83 outdoor parking luminaires with LED ones
2017	Reengineering Hypermarket Store, Vratza	Design, delivery, installation, commissioning, software programming and start-up	<p>1 AHU – Sales hall Cooling and heating center, the energy source being store’s refrigeration technics Control and monitoring of local extract fans for toilets, technical & staff rooms, etc. Lighting automation, incl. outside light intensity based lighting control LON integration – Heat/cold meters Mbus integration of electricity and water meters Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc. Local system control via Touch panel, integrated into the DDC panel. Remote two-point monitoring/control of core system parameters via LED panels; Full remote system control/monitoring via WEB server; 230 Physical Data Points 30 Integration Data Points</p>
2017	Reengineering Hypermarket Store, Plovdiv	Design, delivery, installation, commissioning, software programming and start-up	<p>1 AHU – Sales hall Cooling and heating center, the energy source being store’s refrigeration technics Control and monitoring of local extract fans for toilets, technical & staff rooms, etc. Lighting automation, incl. outside light intensity based lighting control LON integration – Heat/cold meters Mbus integration of electricity and water meters Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc. Local system control via Touch panel, integrated into the DDC panel. Remote two-point monitoring/control of core system parameters via LED panels; Full remote system control/monitoring via WEB server; 230 Physical Data Points 30 Integration Data Points</p>

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2017	Reengineering Hypermarket Store, Varna	Design, delivery, installation, commissioning, software programming and start-up	<p>1 AHU – Sales hall</p> <p>Cooling and heating center, the energy source being store's refrigeration technics</p> <p>Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.</p> <p>Lighting automation, incl. outside light intensity based lighting control</p> <p>LON integration – Heat/cold meters</p> <p>Mbus integration of electricity and water meters</p> <p>Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc.</p> <p>Local system control via Touch panel, integrated into the DDC panel.</p> <p>Remote two-point monitoring/control of core system parameters via LED panels;</p> <p>Full remote system control/monitoring via WEB server;</p> <p>230 Physical Data Points</p> <p>30 Integration Data Points</p>
2017	Establishment of a central operator station for a chain of Hypermarkets in Bulgaria	Establishment of a management station for monitoring and management of 53 Hypermarket stores	<p>Adding 39 controllers</p> <p>Installation of specialized software</p> <p>Making graphic pages for 53 stores</p> <p>Communication settings</p>
2017	Collider Activity Centre - Walltopia	Design, delivery, installation, commissioning, software programming and start-up	<p>10 AHUs – supplying fresh air in the building</p> <p>Control and monitoring of cooling center with 2 chillers</p> <p>Control of heating center, two boilers</p> <p>Control and monitoring of local extract fans for restaurants, toilets, garage ventilation, technical & staff rooms, etc</p> <p>Mbus integration of water meters, heat meters and cold meters</p> <p>ModBus integration of energy meters, multimeters</p> <p>Generating monthly reports for consumed energies</p> <p>180 zones control integration through KNX protocol</p> <p>1000 Physical Data Points</p> <p>1100 Integration Data Points</p>
2018	Polygrafia office center, Sofia	Design, delivery, installation, commissioning, software programming and start-up	<p>6 AHUs – supplying fresh air in the building – Modbus protocol integration.</p> <p>Control and monitoring of a heating/cooling centre with a water-air heat pump, a chiller water tank and one substation</p> <p>Control and monitoring of local extract fans</p> <p>Monitoring of split coolers</p> <p>Mbus integration of water meters, heat meters and cold meters</p> <p>Modbus integration of energy meters, multimeters</p> <p>Generating monthly reports for consumed energies</p> <p>160 zones control integration through LON protocol</p> <p>Monitoring of diesel generator and electrical installation</p> <p>5000 Integration Data Points to BMS to existing buildings</p> <p>600 Physical Data Points</p> <p>1500 Integration Data Points</p>
2018	Software level upgrading Schneider Electric plant - Ravadinovo village	BMS Software level upgrading	<p>Migration of the project to an up-to-date version of Ecostruxure Building Operation (EBO)</p> <p>Control and monitoring of a new cooling centre</p> <p>ModBus integration of VRV's</p> <p>Control of zone lightning</p> <p>Construction and visualization of zone control in the administration</p>
2018	Sopharma Ampule facilities, Area A	Design, delivery, installation, commissioning, software programming and start-up	<p>Adding 2 AHUs to the Building Management System</p> <p>GMPD documents</p> <p>120 Data Points</p>
2018	Plant for sanitary napkins and tampons Palomita, Sofia	Energy Management System PME developed by Shanderer Electric	<p>ModBus integration of energy meters</p> <p>Specialized software PME</p> <p>Communication settings</p> <p>Navigation structure</p> <p>Automatic reports</p>

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YEAR	PROJECT	SCOPE	SPECIFICS
			Trends settings in time function
2018	Acibadem City Hospital (Tokuda), Sofia	Implementation of a Building Automation System controlling and monitoring the installations as part of the modernization of the hospital	Software platform Desigo CC 4 AHUs – supplying fresh air in three areas in the building Individual zones control integration through KNX protocol Control and monitoring of cooling center with 2 chillers Lighting Automation integration of flow meters Integration of UPS and CCUs Control and monitoring of local extract fans Monitoring of fire dampers Monitoring of hydrophore system Monitoring of temperature and humidity in critical areas 470 Physical Data Points 530 Integration Data Points
2018	Acibadem City Hospital (Tokuda), Sofia	Modernization of Nurse Call System	30 beds 2 departments Transferring calls to DECT phone Server start up and commissioning
2018	Plant for electronic components LEM, Sofia	Design, delivery, installation, commissioning, software programming and start-up	3 AHUs – supplying fresh air in the building Control and monitoring of a cooling center with chillers water tank ModBus integration of air compressors and their monitoring Modbus integration of energy meters, multimeters Reading of impulse gas meters Monitoring of existing sub systems - Plumbing, electrical and low voltage systems Modbus integration of split systems 300 Physical Data Points 900 Integration Data Points
2018	Reengineering Hypermarket store, Haskovo	Design, delivery, installation, commissioning, software programming and start-up	1 AHU – Sales hall Cooling and heating center, the energy source being store's refrigeration technics Control and monitoring of local extract fans for toilets, technical & staff rooms, etc. Lighting automation, incl. outside light intensity based lighting control LON integration – Heat/cold meters Mbus integration of electricity and water meters Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc. Local system control via Touch panel, integrated into the DDC panel. Remote two-point monitoring/control of core system parameters via LED panels; Full remote system control/monitoring via WEB server; 230 Physical Data Points 30 Integration Data Points
2018	TELUS Tower office center, Sofia	Design, delivery, installation, commissioning, software programming and start-up	Integration of VRV air conditioning system, ventilation and domestic hot water Integration and monitoring of sprinkler installation, water supply system, irrigation system and recycling of waste and rainwater Control and monitoring of local extract fans for restaurants, toilets, technical rooms Control and monitoring of DALI lighting Integration of air conditioning system with DALI -microclimate management system Mbus integration of water meters Modbus integration of energy meters, multimeters Monitoring of existing sub systems - plumbing, electrical and low voltage systems Generating monthly reports for consumed energies ADP – storage, evaluation and data processing

Reference List

YEAR	PROJECT	SCOPE	SPECIFICS
			Visualization of processes on an operation station 400 Physical Data Points 4 600 Integration Data Points
2018	Software level upgrading Mall Paradise Center, Sofia	Upgrading of specialized visualization and management software from Desigo Insight 4.1 to Desigo CC	Updating the existing project. Preparation of new dynamic graphics Implementing a navigation menu
2019	Infinity Tower B – Bulgaria Mall, Sofia	Design, delivery, installation, commissioning, software programming and start-up	Heating and cooling center 2 AHU's – central control based on floor occupancy Control and monitoring of smoke fans, overpressure fans and dampers; Lighting automation in public areas; Modbus integration of 5 chillers, electrical meters, power meters; Mbus integration of heat, cold and water meters; Energy reports for electrical, water, heating and cooling consumption; Water leakage detection; Monitoring of fire alarm systems, public address system, video monitoring (CCTV) 1000 Data Points
2019	Building 15 – Business Park Sofia	Design, delivery, installation, commissioning, software programming and start-up	Heating and cooling center 4 AHU's for office space – central control based on floor occupancy 4 AHU's for restaurants and fast foods 6 AHU's Modbus integration Control and smoke extract fans in the garage Modbus integration of electrical meters Mbus integration of heat, cold and water meters Energy reports for electrical, water, heating and cooling consumption Water leakage detection Monitoring of sprinkler pumps, drainage pumps and elevators 1500 Data Points
2019	Logistic Center JYSK, Bozhurishte	Design, delivery, installation, commissioning, software programming and start-up	Integration of 5 500 lights (DALI) Integration of 200 indoor VRF units (BACNet) Integration of 170 energy meters (Modbus) Integration of 80 air heater (Modbus) 20 AHUs Modbus integration Integration of 30 air conditioning units (Modbus) Integration of 10 UPS (Modbus) Integration of 10 heat meters (M-bus) Energy management system (Siemens) Control of heating center with 5 gas boilers. Monitoring of circuit breakers and ATS Monitoring of 6 transformers 20 kV/0,4kV Monitoring of WSS, fire alarm and low voltage systems Daily and monthly energy reports for electrical, heating and gas consumption 1000 Physical Data Points 5000 Integration Data Points (BACNet, DALI, KNX, Modbus, M-Bus)
2019	Adora Business Centre 2, Sofia	Design, delivery, installation, commissioning, software programming and start-up	150 Data Points Modbus integration of electrical meters Mbus integration of heat, cold and water meters Modbus integration of Diesel generator Monitoring of sprinkler pumps, drainage pumps and elevators
2019	Biovet AD, Peshtera	Design, delivery, installation, commissioning, software programming and start-up	Control and monitoring of pressure in clean rooms with VAV dampers Chiller Modbus integration Control and monitoring of 1 AHU with DX section Control and monitoring of 5 AHU with electrical heater and cold water section Control and monitoring of microclimate in clean rooms Building a BMS system for managing all processes related to the microclimate

Reference List

YEAR	PROJECT	SCOPE	SPECIFICS
			<p>Building and adjustment of EMS system for recording and storage of microclimate parameters</p> <p>BMS and EMS system works as „Distributed Systems” in Desigo CC building automation software. This allows monitoring and control of both systems from one place</p>
2019	Hypermarket store, Veliko Tarnovo	Design, delivery, installation, commissioning, software programming and start-up	<p>230 Physical Data Points</p> <p>30 Integration Data Points</p> <p>1 AHU – Sales hall</p> <p>Cooling and heating center, the energy source being store’s refrigeration technics</p> <p>Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.</p> <p>Lighting automation, incl. outside light intensity based lighting control</p> <p>LON integration – Heat/cold meters</p> <p>ModBus integration of electricity meters</p> <p>Mbus integration of water meters</p> <p>Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc.</p> <p>Local system control via Touch panel, integrated into the DDC panel.</p> <p>Remote two-point monitoring/control of core system parameters via LED panels;</p> <p>Full remote system control/monitoring via WEB server;</p>
2020	INTERCONTINENTAL HOTEL, SOFIA	Design, delivery, installation, commissioning, software programming and start-up	<p>5 AHUs Modbus integration</p> <p>Integration of VRV air conditioning system via BacNet communication protocol</p> <p>Heat pump and chiller integration via ModBus communication protocol</p> <p>Integration of hotel software through specially developed drivers</p> <p>Control of two climate cameras by means of physical signals</p> <p>Heat centre management</p> <p>Management of the cold centre</p> <p>Implementation of zone control in hotel rooms</p> <p>Monitoring of DG and sprinkler plant</p> <p>The activities were carried out without interrupting the operation of the hotel</p>
2020	Hypermarket store, Varna	Design, delivery, installation, commissioning, software programming and start-up	<p>230 Physical Data Points</p> <p>30 Integration Data Points</p> <p>1 AHU – Sales hall</p> <p>Cooling and heating center, the energy source being store’s refrigeration technics</p> <p>Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.</p> <p>Lighting automation, incl. outside light intensity based lighting control</p> <p>LON integration – Heat/cold meters</p> <p>ModBus integration of electricity meters</p> <p>Mbus integration of water meters</p> <p>Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc.</p> <p>Local system control via Touch panel, integrated into the DDC panel.</p> <p>Remote two-point monitoring/control of core system parameters via LED panels;</p> <p>Full remote system control/monitoring via WEB server;</p>
2020	Modernization of hypermarket store, Rousse	Design, delivery, installation, commissioning, software programming and start-up	<p>230 Physical Data Points</p> <p>30 Integration Data Points</p> <p>3 AHUs, providing fresh air for the trade hall, concessionaires and fresh products.</p> <p>Cooling and heating center, the energy source being store’s refrigeration technics</p> <p>Control and monitoring of local extract fans for toilets, technical & staff rooms, etc.</p>

Reference List

YEAR	PROJECT	SCOPE	SPECIFICS
			Lighting automation, incl. outside light intensity based lighting control Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc. Local system control via Touch panel, integrated into the DDC panel. Remote two-point monitoring/control of core system parameters via LED panels; Full remote system control/monitoring via WEB server;
2020	Modernization of hypermarket store, Shumen	Design, delivery, installation, commissioning, software programming and start-up	230 Physical Data Points 30 Integration Data Points 3 AHUs, providing fresh air for the trade hall, concessionaires and fresh products. Cooling and heating center, the energy source being store's refrigeration technics Control and monitoring of local extract fans for toilets, technical & staff rooms, etc. Lighting automation, incl. outside light intensity based lighting control Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc. Local system control via Touch panel, integrated into the DDC panel. Remote two-point monitoring/control of core system parameters via LED panels; Full remote system control/monitoring via WEB server;
2020	Modernization of hypermarket store, Yambol	Design, delivery, installation, commissioning, software programming and start-up	230 Physical Data Points 30 Integration Data Points 3 AHUs, providing fresh air for the trade hall, concessionaires and fresh products. Cooling and heating center, the energy source being store's refrigeration technics Control and monitoring of local extract fans for toilets, technical & staff rooms, etc. Lighting automation, incl. outside light intensity based lighting control Integration of – Refrigeration technics, Fire, WSS, Diesel generator, Deep freezing cameras monitoring, Security system, etc. Local system control via Touch panel, integrated into the DDC panel. Remote two-point monitoring/control of core system parameters via LED panels; Full remote system control/monitoring via WEB server;
2020	Hotel Hyatt, Sofia	Design, delivery, installation, commissioning, software programming and start-up	5000 Data Points Total room automation control for guest rooms Integration of hotel property management system Individual room control for corridors, public zones and staff areas Control of heating/cooling center Modbus integration of 2 chillers Control of 32 air handling units ModBus integration of 3 air handling units ModBus integration of close control units Control of smoke exhaust and overpressure ventilation Lighting control ModBus integration and reports from energy meters and power meters ModBus integration of 2 diesel generators Mbus integration and reports from water meters Monitoring of drinking water pumps and drain/sewage pumps
2020	Congress Center Burgas	Design, delivery, installation, commissioning, software programming and start-up	700 Physical Data Points 1500 Integration Data Points (BACNet, DALI, KNX, Modbus, M-Bus). Integration of 150 indoor units VRV (Modbus) Integration of Schneider's Power Tag system for measuring power consumption (ModBus TCP / IP) Integration of KNX system for natural ventilation 5 AHUs Modbus integration – supplying fresh air in the building Integration of Siemens fire station (BACNet)

Reference List

YEAR	PROJECT	SCOPE	SPECIFICS
			<p>Integration of 45 water meters (M-Bus)</p> <p>Monitoring of existing subsystems - plumbing, fire extinguishing, electrical and low-current installations</p> <p>Generating daily and monthly reports for the consumed energies</p>
2020	Hotel Hilton, Sofia	Design, delivery, installation, commissioning, software programming and start-up	<p>800 Physical Data Points</p> <p>14 AHUs Modbus integration.</p> <p>Control of exhaust fans</p> <p>Control of heat centre with 4 diesel boilers and 2 heat pumps</p> <p>Management of heating/cooling centre</p> <p>Cold centre management with 2 chillers and 3 dry coolers</p> <p>Waste heat management of chillers for preheating of DHW water</p> <p>Monitoring of circuit breakers and ATS</p> <p>Monitoring of Refrigeration chambers</p> <p>Monitoring of existing subsystems - plumbing, fire extinguishing, electrical and low-current installations</p> <p>Lighting circuit management</p>
2020	Advance Business Center building 2, Sofia	Design, delivery, installation, commissioning, software programming and start-up	<p>1700 Physical Data Points</p> <p>5000 Integration Data Points</p> <p>Modbus Integration and management of office areas</p> <p>Control and monitoring of smoke fans, overpressure fans and dampers</p> <p>Lighting management</p> <p>Management of gas detection system (CO) and control of smoke exhaust ventilation for garage</p> <p>ModBus integration of energy meters</p> <p>Mbus integration of heat, cold meters</p> <p>Mbus integration of water meters</p>
2020	Sofia Tech Park, Sofia	Design, delivery, installation, commissioning, software programming and start-up	<p>Integration of VRV system (Modbus)</p> <p>ModBus integration of energy meters</p> <p>ModBus integration of heat, cold meters</p> <p>Mbus integration of water meters</p> <p>1 AHUs – supplying fresh air in the building</p>
2021	Petascale Computer Bulgaria, Sofia	Design, delivery, installation, commissioning, software programming and start-up	<p>Integration of chillers and dry coolers (Modbus)</p> <p>ModBus integration of energy meters</p> <p>Mbus integration of water meters</p> <p>ModBus integration of circulating pumps</p> <p>ModBus integration of precision air conditioners and split system</p> <p>ModBus integration of power management system</p> <p>ModBus integration of UPS</p> <p>400 Physical Data Points</p> <p>600 Integration Data Points</p>