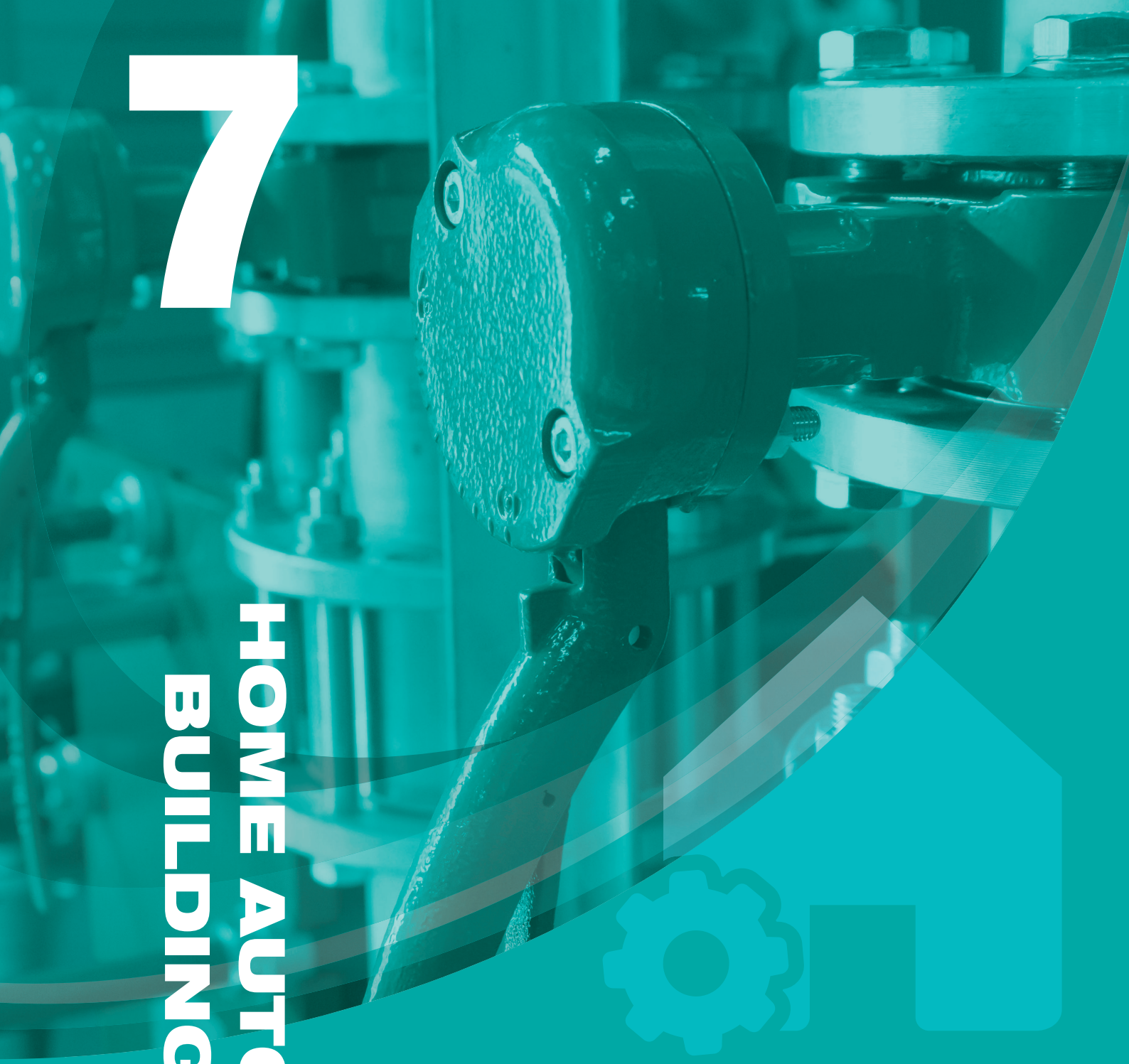


7

HOME AUTOMATION & BUILDING CONTROL

Contents

Presence/Movement Detectors

The EBDSPIR series of presence detector switches are designed to provide automatic control of lighting, heating or ventilation loads. They detect movement using a PIR sensor and turn the load on. When an area is no longer occupied the load will switch off after an adjustable time out period.
The MWS1 series of microwave presence detector switches are designed to provide automatic control of lighting, heating or ventilation loads.

CP electronics

Presence Detectors

Description	Part No.
Ceiling mounted presence detector, voltage free output contact	**EEBDSPIR-230V-VFC**
Ceiling mounted presence detector, voltage free output contact	**EBDSPIR-24V-VFC**

Microwave Presence Detectors

Wall mounted microwave presence detector	**MWS1-VFC-24V**
Wall mounted microwave presence detector with integral light sensor (c/w 300 lux light sensor)	**MWS1-VFC-24V-LUX**

Light level Transmitters

Senses light level and transmits a 0-10V DC signal linear across the selected range. Suitable for use with Building Management Systems.

ElectroControls

Specification

Field of view 120º — ELT-4W IP65
Protection ELT-4R IP30 — Supply voltage 24V AC/DC

ELT Series

Description		Part No.
Room	Surface Mounted	**ELT-4R**
Outside	Surface Mounted	**ELT-4W**

PIR Occupancy Sensors

These units are used for lighting control and designed to be installed into ceiling tiles. They can be connected to control circuits or BMS systems.
The EOCL-1 has a built-in adjustable lux sensor which will switch on the lighting only when ambient light falls below the pre-set level and movement is detected.

Specification

Field of view 60º — Protection IP40 — Supply voltage 12 to 24V AC/DC

EO-C... Series

Description		Part No.
Room	Flash mounted	**EO-C01**
Outside	Flash mounted	**EO-CL1**
Accessories		
Surface mounting back box		**EE-BP12**

Light Level Transmitter & Occupancy Sensors

TITAN Products Ltd.

TP Series

Description		Part No.
Internal light level (4-20mA loop output)	(State lux range)	**TPLLR**
Occupancy and light level flush wall mount 24V with VFC relay		**TP-WAOC/24/VF**

* Standard Lux Ranges 0-1000. 0-2500. 0-5000, 0-10,000 & 0-20,000

Contact your local sales office for additional products from this range.

Lighting Controller

The LL-C is designed to give savings over uncontrolled lighting whilst retaining an ease of installation and configuration. A passive infra-red detector monitors occupancy through moving body heat and a photo-sensitive device monitors light level. This will ensure that lighting is only switched on when the area covered is occupied and the light level is too low for normal working conditions. The LL-C-M is a mains powered unit which switches the live feed directly to the lighting.

Features
- Combined light level & occupancy detection
- Flush mounted
- 6 meter coverage
- Energy saving
- Easy adjustment of light level and delay time

Specification
Field of view 360º
Off delay timer 10 sec. to 30 min.
Protection IP30
Supply voltage 230V AC @ 50Hz

LL-C Series

Description	Part No.
240V flush ceiling mounted light level & Occ. detector	**LL-C-M**

Light Level Sensors

This range of Light Level Sensors return a linear 0-10VDC signal representing the lux level at the sensor element. This value is typically used in lighting strategies to optimise,energy efficiency through dimming and/or disabling of lights as required. The LL-E-V is an External Light Level Sensor with three different output ranges which can be selected using a link on the PCB. The enclosure is rated to IP65. The LL-C-V (ceiling mounted) and LL-W-V (wall mounted) variants have a fixed range of 0-2000 lux and are suitable for internal applications.

Features
- 0-10V DC output
- 24V AC/DC powered

Specification
Protection LL-C-V & LL-W-V IP30
LL-E-V IP65
Supply voltage 24V AC/DC

LL Series

Type	Description	Part No.
Flush mounted	Internal ceiling mounted light level sensor	**LL-C-V**
Surface mounted	External light level Sensor	**LL-E-V**
	Internal wall mounted light level sensor	**LL-W-V**

Occupancy Detectors

The OC range of Passive Infra-red Detectors is for monitoring occupation through moving body heat. The detection of occupancy causes the internal SPDT relay to activate and the volt free contacts ensure compatibility with a vast array of equipment including BMS digital inputs. The OC-W-LV can be fixed directly to a wall or mounted using the angled bracket supplied.

Specification
Field of view 90º (OC-W-V) 360º (OC-C-LV)
Off delay timer 10 sec. to 30 min.
Supply voltage 12 to 24V AC/DC

OC Series

Description		Part No.
Ceiling mounted detector (low voltage)	Flush mounted	**OC-C-LV**
Ceiling mounted detector	Surface mounted	**OC-C-M**
Wall mounted detector (low voltage)	Wall mounted	**OC-W-LV**

Contact your local sales office for additional products from this range.

Smart Building Key Components

Controllers

Power Supply	Description	Part No.
24V DC	BACnet gateway controller	**SB2WEB24**
No supply is needed	Terminal adaptor transparent module	**SH1DUPFT**
DC power supply	Smart generator module	**SH2MCG24**
DC power supply	Smart house controller	**SH2WEB24**
24V DC	USB dongle Interface module	**SH2DSP24**

DIN Rail Mount Digital Input Module

DC power supply	4 x digital input module	**SH2INDI424**

DIN Rail Mount Digital Output Modules

DC power supply	Heating only (c/w 2 set back zones)	**SH2RE1A424**
Bus supplied	Heating & cooling (c/w 2 set back zones) pump control, change	**SH2RE16A4**
DC power supply	over input, high temp / humidity input	**SH2ROAC224**

DIN Rail Mount Dimmer Modules

230V AC	DALI gateway master	**SB2DALI230**
DC power supply	4 x 1 - 10V dimmer module	**SH2D10V424**
230V supplied	500W Universal dimmer module	**SH2D500W1230**
230V supplied	500W Universal dimmer module with energy monitoring	**SH2D500WE230**

Decentralised Analogue Input Modules

Bus-powered	Analogue input 1 x 10K3 1 x Linear 10K	**SHPINT1P1**
24V DC	Analogue input 3 x 0-10V DC	**SHPINV324**
24V DC	Analogue input 1 x 10K3 1 x Linear 10K 2 x 0-10V DC	**SHPINV2T1P124**
24V DC	Analogue input 2 x 4-20mA	**SHPINA224**
Bus-powered	Analogue input 2 X PT/NI 1000	**SHPINNI2**

Decentralised Analogue Output Modules

DC power supply	Analogue output 2 x 0-10V DC	**SHPOUTV224**

Decentralised Digital Input Modules

Bus-powered	Voltage input module	**BDA-INV0L-U**
Bus-powered	Universal light switch interface 4 inputs	**BDB-INCON4-U**
Bus-powered	Alarm input module	**BDD-INCON4-U**
Supplied by Dupline®	Pulse counter module 4 inputs	**SHPINCNTS04**

Decentralised Digital Output Modules

Bus-powered	1 Way decentralised 13A relay	**BDA-RE13A-U**
230V AC	1 Way decentralised roller blind module AC	**SHDRODC230**

Decentralised Digital Input & Output Modules

230V AC	Fire & smoke damper module 4 x inputs / 2 x relay outputs	**SBB4I2O230**

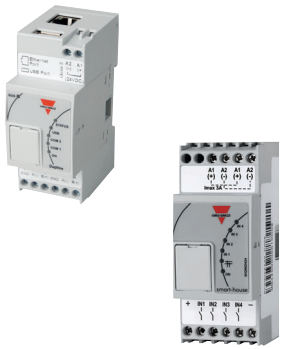
PIR Sensors

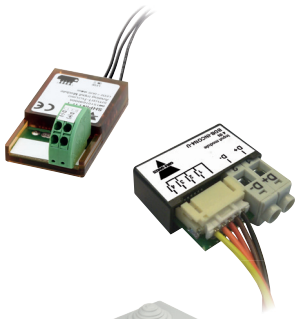
Bus-powered	ELKO PIR sensor	**BSB-PIR90-U**
Bus-powered	Indoor PIR sensor	**BSP-PIR90A-U**
Bus-powered	Outdoor PIR sensor	**BSP-PIR90-U**
Bus-powered	ELKO PIR sensor with Lux sensor	**SHSBP90L**
Bus-powered	Outdoor PIR sensor with Lux sensor	**SHSPP90L**
Bus-powered	Indoor PIR sensor with Lux sensor	**SHSPP90LA**
Bus-powered	360° Ceiling mount PIR with Lux sensor	**SHSQP360L**

Environmental Sensors

Supplied by Dupline®	Temperature sensor	**SHSUT**
Supplied by Dupline®	Temperature & humidity sensor	**SHSUTH**
Supplied by Dupline®	CO2 & Temperature sensor with traffic light	**SHSUCOT**
Supplied by Dupline®	CO2 Temperature & humidity sensor with traffic light	**SHSUCOTH**
Supplied by Dupline®	Temperature Sensor with display	**SHSUTD**
Supplied by Dupline®	Temperature & humidity sensor with display	**SHSUTHD**
Supplied by Dupline®	CO2 & Temperature sensor with display	**SHSUCOTD**
Supplied by Dupline®	CO2 Temperature & humidity sensor with display	**SHSUCOTHD**

CARLO GAVAZZI





Modbus to BACnet Gateways

The BACnet gateways are designed to expose Modbus network data as BACnet MS/TP points. This Modbus to BACnet MS/TP mapping of objects is carried out through our own specific PC software provided with the Gateway.

BACnet IO Modules

Output Type	Description	Part No.
AO, DO, DI, RI, Relay	4 x AO, 2 x DO, 7 x DI, 4 x RI, 2 x Relay BACnet I/O for network expansion	**BACnet IO Modules**
AO, DO, DI, RI, Relay	2 x AO, 4 x DO, 7 x DI, 4 x RI, 2 x Relay BACnet I/O for network expansion	**BACnet IO Modules**

Modbus to BACnet Gateway

BACnet MS/TP	Modbus RTU to BACnet MS/TP Gateway c/w PC mapping software (24V Supply)	**CCI-2X485/24**
BACnet MS/TP	Modbus RTU to BACnet MS/TP Gateway c/w PC mapping software (24V Supply)	**CCI-2X485/240**
N/A	Field Programming tool to upload mapping from PC to CCI2X485	**FPT-601**

BACnet MS/TP to IP Router

BACnet IP (RJ45)	BACnet MS/TP to IP router	**TP-NM-R/1000**

TITAN Products Ltd.

TE Controls ETS GAP Western Automation

Contact your local sales office for additional products from this range.

Smart Comms Routers & Gateways

Sontay®

smart

SC-ST — Smart Temperature Controller

The new range of Smart Temperature Controllers offer accurate control of heating, cooling and ventilation demand in modern building control systems such as hotels and office buildings.

Depending on the chosen model, operation is either as a conventional thermostat or a P+I controller (proportional integral), with relay output switching or modulating 0-10V control signals for modern EC fans and actuators. Additional inputs include enery savings, configurable for either window contact or occupancy detector, and remote temperature sensing into the built in control stratgy.

ASHRAE BACnet

The respective control parameters are available via cost efficient 2-wire RS-485 bus, using the BACnet MS/TP protocol. This allows centralised supervision of HVAC systems, with defined local access into the control strategy wich makes this range ideal for large building projects aiming for high energy effiency and smart user interaction.

FEATURES

- BACnet MS/TP over RS-485 communication
- Control signal options: SPST relays on/off or 0-10Vdc modulation
- Implemented control strategy
- Input options for PIR sensor, window contact, remote sensor and more

BENEFITS

- Centralised supervision of HVAC systems, with defined local access into the control strategy (features lockable)
- High energy effiency and smart user interface
- Sleep-mode, Countdown-timer and Auto-Fan off feature

SPECIFICATION

Heating and cooling:		
	SC-ST-B & AC	2x SPST relays, 5(1)A@24V AC, 4-pipe
	SC-ST-EC & P	2x 0-10V DC@10mA, input impedance >1k5Ω, 4-pipe
Fan speed control:		
	SC-ST-B & P	3x SPST relays, 10(4)A@24V DC
	SC-ST-AC & EC	1x 0-10V DC@10mA, input impedance >1k5Ωp
Operating Mode:		Automatic changeover between heating and cooling set by the setpoint and space temperature differential (Variants operating mode available on request.)
Additional Inputs:		· ESI VFC, configurable N/O or N/C (window contact or PIR) · External Temperature Sensor 10K3A1 (Sontay –A) · Digital input VFC, configurable NO or NC for eg. fan proving Air DP switch
BACnet communication:		BACnet Application Specific Controller (B-ASC) Supports DS-RPM-B and DS-WPM-B BIBBs RS-485, 2-wire connection BACnet MS/TP 9k6/19k2/38k4/57k6/76k8 + auto baud N81 data format (BACnet Standard)
Power supply:		
	SC-ST-B	85-260Vac, 50/60Hz
	SC-ST-P/EC/AC	24V AC/DC ±10%
Housing:	Material	ABS (flame retardant) RAL9003
	Dimensions	115 x 85 x 25mm
Protection:		IP30
Weight:		130g

Part code	*Description*
SC-ST-B	Smart Temperature Controller B
SC-ST-P	Smart Temperature Controller PLUS
SC-ST-EC	Smart Temperature Controller EC
SC-ST-AC	Smart Temperature Controller AC

SC-gateways — Gateways for Air Conditioners

The IntesisBox gateways for Air Conditioners help improve the integration time of the most popular AC brands like Daikin, Mitsubishi or Toshiba into BMS, SCADA or EMS system via Modbus or BACnet. For Modbus a common register map can be used across the range no matter which manufacturer. For BACnet the IntesisBox range offers all the necessary BACnet objects to integrate the AC units into projects. Additional ranges for Fujitsu, LG, Hitachi, Samsung, Hisense or Panasonic are available on request.

ASHRAE BACnet — Modbus

FEATURES

- Automation, building management, hotel management, HAVC and many more
- Daikin Domestic Line S21 or Skyair/VAV Line via P1P2, Toshiba or Mitsubishi
- Integration of on/off, mode, setpoint, ambient temperature, fan speed, vanes, errors
- Integration of many extra points like number of hours, window status, remote lock, outside temperature
- Available in BACnet MS/TP plus IP or Modbus

SPECIFICATION

Communication:		
	BACnet	MS/TP via RS-485 or IP via Ethernet
	Modbus	RTU via RS-485 8 data bits, no parity, 1 stop bit 2k4, 4k8, 9k6 or 19k2bpd baud rate
Environmental:		
	Operating	Temp. 0 to +40˚C RH 5 to 95%, non-condensing
	Storage	Temp -40 to +85 ˚C RH 5 to 95%
Material:		PC (UL94 V-0), light grey, RAL 7035
Dimensions:		93x53x58mm
Weight:		85g

Part code	*Description*
	BACnet server gateways for Air Conditioners
SC-DK-AC-BAC-1	AC Gateway Daikin Domestic line S21 - BACnet
SC-DK-RC-BAC-1	AC Gateway Daikin Skyair/VAV line P1P2 - BACnet
SC-TO-RC-BAC-1	AC Gateway Toshiba – BACnet
SC-ME-AC-BAC-1	AC Gateway Mitsubishi - BACnet
	Modbus slave gateways for Air Conditioners
SC-DK-AC-MBS-1	AC Gateway Daikin Domestic line S21 - Modbus
SC-DK-RC-MBS-1	AC Gateway Daikin Skyair/VAV line P1P2 - Modbus
SC-TO-RC-MBS-1	AC Gateway Toshiba – Modbus
SC-ME-AC-MBS-1	AC Gateway Mitsubishi - Modbus

Contact your local sales office for additional products from this range.

TE Controls ETS GAP Western Automation

SMART COMMUNICATION SENSORS

- Save time and cost on installation through smart connectivity.
- Our Smart Communications sensors offer total environmental sensing in one single space sensors.
- Installation of all sensors is over one twisted pair cable and configuration is simple.
- All option outputs are available via BACnet MS/TP or Modbus RTU.

SC 1000 Smart Communication Space Sensor

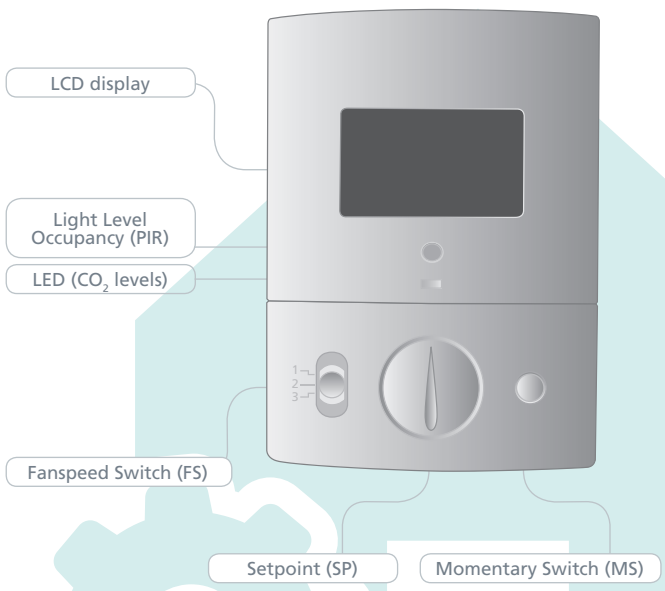
Part code								Description
SPACE SENSOR								
SC	-	1	x	x	x	x	x	**Space Temperature and RH**
								Configuration Sensing CO_2
			2					-none
			3					-CO_2
			4					-CO_2 and Traffic Light LED
								Configuration Sensing CO/IAQ (Air Quality)
				0				-none
				1				-CO
				2				-IAQ
				3				-CO and IAQ
								Configuration User Indication
					0			-none
					1			-LCD Display
					2			-Light Level Sensor
					3			-Occupancy Sensor (PIR)
					4			-Light Level and PIR Sensor
								Configuration Interface Options
						0		-none
						1		-SP
						2		-MS
						3		-FS
						4		-SP and MS
						5		-SP and FS
						6		-FS and MS
						7		-SP, MS and FS
								Configuration Analogue Input
							0	-Analogue 0-10V
							1	-Resistive for 10K3A1 Thermistor
REPLACEMENT PARTS								
SC	-	C	O					Replacement CO Sensor for SB/SM Range
		I	A	Q				Replacement IAQ (Air Quality) Sensor for SB-SM Range

NEW PARTCODE

Note: CO and IAQ elements have a 5 year life and can be replaced on site.

SPECIFICATION

BACnet MS/TP	9k6 to 78k8bps or auto baud rate detection	
Modbus RTU	9k6 to 57k6bps, selectable parity and stop bit configuration	
Supply voltage	24V AC/DC ±10%	
Output measurement ranges		
Temperature:	-10 to +110 units (°C or °F selectable). ±0.4units	
RH:	0 to 100%, ±2%	
CO_2:	0 to 2,000ppm or 0 to 5,000ppm, ±30ppm ±3%	
CO:	0 to 100ppm	
IAQ:	0 to 10 indices values	
LL:	0 to 10,000lux	
OC:	Detection, off delay 10-900 seconds user configurable	
Auxiliary Inputs		
Analogue:	1x 0-10V DC linear (default) or any Sontay 10K3A1 thermistor.	
Digital:	1x Volt Free Contact	
User Interfaces		
Setpoint wheel SP:	User configurable: Min. max. °C or °F selectable	
Override button MS:	User configurable	
Fan speed switch FS:	Configurable 3, 4 or 5 stages (Off, Auto, 1, 2, 3)	
LCD Display:	Indication of measured values. fan speed status, configurable (e.g. occupancy status)	
Traffic light LED:	Green, amber, red LED indication for CO2 level	
Housing:		
	Material	ABS (flame retardant)
	Protection	IP30
	Colour	Polished white finish
	Dimensions	115 x 85 x 28m
	Weight	up to 145g
Ambient		
	Temperature	0 to +50°C
	RH	0 to 95% non-condensing



Contact your local sales office for additional products from this range.

Smart Comms Routers & Gateways

Sontay®

smart

SC 600 Smart Communication Plant Sensor

SPECIFICATION

BACnet MS/TP	9k6 to 78k8bps or auto baud rate detection	
ModBus RTU	9k6 to 57k6bps, selectable parity and stop bit configuration	
Supply voltage	24V AC/DC ±10%	
Output measurement ranges		
Temperature:	-10 to +110 units (°C or °F selectable). ±0.4units	
RH:	0 to 100%, ±2%	
CO_2:	0 to 2,000ppm or 0 to 5,000ppm, ±30ppm ±3%	
CO:	0 to 100ppm	
IAQ:	0 to 10 indices values	
LL:	0 to 10,000lux	
OC:	Detection, off delay 10-900 seconds user configurable	
Auxiliary Inputs		
Analogue:	1x 0-10V DC linear (default) or any Sontay 10K3A1 thermistor.	
Digital:	1x Volt Free Contact	
User Interfaces		
LCD Display:	Indication of measured values. fan speed status, configurable (e.g. occupancy status)	
Traffic light LED:	Green, amber, red LED indication for CO2 level	
Housing:		
	Material	ABS (flame retardant)
	Protection	IP65 (when screws applied) IP54 (Plant Gas Sensors)
	Dimensions	116 x 106 x 52mm
	Weight	up to 265g
Ambient		
	Temperature	0 to +50°C
	RH	0 to 95% non-condensing

NEW PARTCODE								Part code / Description
IMMERSION SENSOR								
	SC	-	2	0	0	x	0	x	**Immersion Temperature**
									Configuration User indication
						0			- none
						1			- LCD Display
						2			- Light Level Sensor
						3			- PIR Sensor
						4			- Light Level and PIR sensor
									Configuration Analogue Input
							0		-Analogue 0-10V
							1		-Resistive for 10K3A1 Thermistor
DUCT SENSOR								
	SC	-	3	x	x	x	0	x	**Duct Temperature and RH**
				2					-none
				3					-CO2
				4					-CO2 and Traffic Light LED
									Configuration Sensing CO/IAQ (Air Quality)
					0				-none
					1				-CO
					2				-IAQ
					3				-CO and IAQ
									Configuration User Indication
						0			-none
						1			-LCD Display
						2			-Light Level Sensor
						3			-PIR Sensor
						4			-Light Level and PIR Sensor
									Configuration Analogue Input
							0		-Analogue 0-10V
							1		-Resistive for 10K3A1 Thermistor
PLANT SENSOR								
	SC	-	4	x	0	x	0	x	**Plant Temperature**
									Configuration Sensing RH
				0					- none
				2					- RH
									Configuration User Indication
						0			-none
						1			-LCD Display
						2			-Light Level Sensor
						3			-PIR Sensor
						4			-Light Level and PIR Sensor
									Configuration Analogue Input
							0		-Analogue 0-10V
							1		-Resistive for 10K3A1 Thermistor
REPLACEMENT PARTS								
	SC	-	C	O					Replacement CO Sensor for SB/SM Range
			I	A	Q				Replacement IAQ (Air Quality) Sensor for SB-SM Range

NEW PARTCODE								Part code / Description
OUTSIDE WALL SENSOR (RAD SHIELD)								
	SC	-	5	x	0	x	0	x	**Outside Temperature (Rad Shield)**
									Configuration Sensing RH
				0					-none
				2					-RH
									Configuration User Indication
						0			-none
						1			-LCD Display
						2			-Light Level Sensor
						3			-PIR Sensor
						4			-Light Level and PIR Sensor
									Configuration Analogue Input
							0		-Analogue 0-10V
							1		-Resistive for 10K3A1 Thermistor
PLANT HOUSING GAS SENSING								
	SC	-	6	x	x	x	0	x	**Plant Housing Gas Sensing IP54**
									Configuration Sensing CO_2
				0					- none
				3					-CO2
									Configuration Sensing CO/IAQ (Air Quality)
					0				- none
					1				-CO
					2				-IAQ
					3				-CO and IAQ
									Configuration User Indication:
						0			- none
						1			-LCD Display
									Configuration Analogue Input:
							0		- Analogue 0-10V
							1		- Resistive for 10K3A1 thermistor

Note: CO and IAQ elements have a 5 year life and can be replaced on site.

Contact your local sales office for additional products from this range.

TE Controls ETS GAP Western Automation

SC-FS-ROUTER-BAC — Fieldserver BACnet Router

- Routing between BACnet MS/TP (RS-485) and BACnet IP (Ethernet)
- Available in single port (32 devices) or dual port (64 devices) without the use of additional line drivers.
- Easy installation with DeviceFind™, one page configuration via web browser and device discovery button
- SMC Cloud connects your device to the cloud, allowing remote access for diagnostics, monitoring, alarming & configuration

SPECIFICATION

Power	9-30Vdc or 12-24V AC, 240mA at 12V	
Ambient	Temperature	-40 - 75°C
	Relative Humidity	5 - 90% non condensing
Communication	Serial RS-485, galvanic isolation	
	Baud rate 4k8, 9k6, 19k2, 38k4, 57k6, 115k2	
	Ethernet: 10/100BaseT, MDIX, DHCP	
	Ethernet: 10/100 BaseT MDIX	
Installation	Table, wall or DIN rail mount	
Dimension	115 x 74 x D1mm	
Weight	200g	

Part code	*Description*
SC-FS-ROUTER-BAC	FieldServer BACnet Router (Dual Port)
SC-FS-ROUTER-BAC1	FieldServer BACnet Router (Single Port)
SC-FS-8915-35-QS	Din Rail Mounting Assembly

SC-FS-EZ-x — Fieldserver EZ Gateways into BACnet/Modbus

The EZ Gateway is an easy to use, high-performance building and industrial automation protocol gateway for integrators to interface M-Bus, Modbus or KNX products in commercial buildings, campuses and industrial facilities over Modbus RTU, Modbus TCP/IP, BACnet MS/TP or BACnet IP protocols. With the EZ Gateway range, the integrator does not need to be a protocol expert and can minimise configuration and commissioning time.

- **M-Bus:** M-Bus Explorer and Device Profiles App allow each M-Bus device to be auto-discovered, templatised and presented to quickly configure new M-Bus devices. This makes each corresponding M-Bus device into a virtual BACnet device within the EZ Gateway, thereby providing granular visibility and control over each device via BACnet.
- **Modbus:** Supports virtual nodes allowing each Modbus device connected to a single EZ Gateway to be seen as a separate device on the BACnet network. The web interface is used to configure the local network settings and create profiles for Modbus devices.
- **KNX:** The EZ Gateways KNX interface is compatible with all KNX certified products. Easy data mapping via built in KNX data map graphical user interface and import of XML and ESF files.
- SMC Cloud connects your device to the cloud, allowing

SPECIFICATION

Power	9-30Vdc or 12-24V AC.	
Ambient	Temperature	-40 - 75°C
	Relative Humidity	5 - 90% non condensing
Communication	Baud rate 4k8, 9k6, 19k2, 38k4, 57k6, 115k2	
Installation	Table, wall or DIN rail mount	
Dimension	115 x 74 x 41mm	
Weight	200g	

Part code	*Description*
SC-FS-EZ1-MBUS-MOD-BAC	EZ Gateway, M-Bus to Modbus/BACnet - 16 devices, 500 points
SC-FS-EZ2-MBUS-MOD-BAC	EZ Gateway, M-Bus to Modbus/BACnet - 32 devices, 1000 points
SC-FS-EZ3-MBUS-MOD-BAC	EZ Gateway, M-Bus to Modbus/BACnet - 64 devices, 5000 points
SC-FS-EZ1-MOD-BAC	EZ Gateway, Modbus to BACnet - 500 points
SC-FS-EZ2-MOD-BAC	EZ Gateway, Modbus to BACnet - 1000 points
SC-FS-EZ1-KNX-BAC	EZ Gateway, KNX to BACnet - 500 points
SC-FS-EZ2-KNX-BAC	EZ Gateway, KNX to BACnet - 1000 points

SC-FS-BENG-x — FieldServer BACnet Internet of Things Gateway

The new BACnet Internet of Things Gateway offers all you would expect from a high – end Explorer product and more. It not only automatically discovers BACnet IP and BACnet MS/TP networks, but with new Monitor View and Historian features, device data points can be precisely tracked and logged for analysis. Additionally it also acts as a Wifi Access Point for remote access from any mobile device without user restrictions. Cellular data (SIM card required) is an option.

- Discover BACnet network simultaneously and read/write objects and properties
- Configure easily on the web using smartphone or other smart devices without additional software installations.
- Monitor View and Historian for data analysis
- SMC Cloud connects the device to the cloud, allowing remote access for diagnostics, monitoring, alarming & configuration
- Secure data interface through REST API

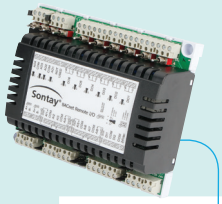
SPECIFICATION

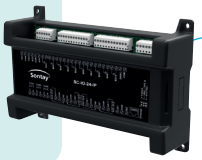
Power	9-30Vdc or 12-24V AC.	
Ambient	Temperature	-40 - 75°C
	Relative Humidity	5 - 90% non condensing
Communication	Baud rate 4k8, 9k6, 19k2, 38k4, 57k6, 115k2	
Installation	Table, wall or DIN rail mount	
Dimension	115 x 74 x 41mm	
Weight	200g	

Part code	*Description*
SC-FS-BENG-W	BACnet Internet of Things Gateway (WiFi Only)
SC-FS-BENG-C	BACnet Internet of Things Gateway (WiFi and cellular)

Smart Comms Routers & Gateways

SC-IO — Smart I/O Modules





The Sontay Smart Communication IO-Modules extend your system when your application requires additional inputs and outputs on a physical controller. Integrating the 20 IO points with your BMS provides a simple and cost effective expansion of a new or existing controller. SC-IO-24 for RS-485 and brand new in 2018 the SC-IO-24-IP for Ethernet, both capable to transmit data via the BACnet or Modbus protocol.

BACnet

Modbus

Communication:

- Selectable communication protocol (BACnet or Modbus) via DIP switch.
- The SC-IO-24 supports BACnet MS/TP or Modbus RTU over RS-485.
- The SC-IO-24-IP in addition supports BACnet IP and Modbus TCP/IP over Ethernet.
- Automatic device instance configuration and baud rate detection (BACnet MS/TP).
- Connects to any Modbus master or Modbus TCP/IP master controller.
- Copy & broadcast configuration to other Sontay SC-IO products via BACnet.

Inputs and Outputs:

- Inputs: Configurable universal analogue and digital inputs. The SC-IO-24-IP also support pulse counting with counter reset object for the digital inputs and PWM to analogue object converters.
- Outputs: Configurable analogue and digital outputs. The SC-IO-24 comes with 10 override switches to manually control each output (auto, forced on or forced off).

Installation:

- 10 override switches to manually control each output (auto, forced on or off)
- LED status indication of each input and output
- DIN rail mounting
- 24V AC/DC powered
- Removable two part terminal blocks

SPECIFICATION

Supply voltage:		24V AC/DC ±10%	
Supply current:		8VA (331mA @ 24V AC)	
Inputs:	SC-IO-24	8 x Universal configurable for 0-10V DC,	
		thermistor type B (10K4A1), On/off (VFC) or 4-20mA	
		2 x Digital normally open/closed or direct/reverse	
	SC-IO-24-IP	8 x Universal, configurable for 0-10V DC,	
		thermistor, on/off or 4-20mA	
		2 x Digital, normally open/closed or direct/reverse	
		Supports on-board PWM to analogue object converters	
		and pulse counters with counter reset object	
		2x RS-485 communication ports	
Outputs:	SC-IO-24	2 x Universal, 0-10V DC, Pulsed signal (20mA drive),	
		on/off or 4-20mA	
		2 x Analogue 10V DC	
		6 x Digital Relay, normally open/closed,	
		independent common per relay, 5A resistive	
	SC-IO-24-IP	6x Digital outputs	
		4x Analogue outputs	
Protocols:	SC-IO-24	BACnet MS/TP: 9k6, 19k2, 38k4 or 76k8 bps (BAS-C).	
			or auto baud rate detection
		Modbus RTU	Slave @ 9k6, 19k2, 38k4 or 57k6
			No parity, 2 stop bit
			Even parity, 1 stop bit
			Odd parity, 1 stop bit
	SC-IO-24-IP	Additional to the above:	
		BACnet IP Supports DHCP or fixed/static addressing	
		Connects to any Modbus TCP/IP master controller	
Ambient:		Temperature	0 to 50°C
		RH	5 to 95% RH. non-condensing
Housing:		Material	ABS
		Dimensions	160 x 126 x 57mm (SC-IO-24)
Protection:		IP30	
Weight:		400g	

Part code	*Description*
SC-IO-24	Smart Communication IO Module BACnet / ModBus
SC-IO-24-IP	Smart Communication IO Module BACnet IP/Modbus TCP/IP

ST-TOUCH — Touchscreen Thermostat

The ST-TOUCH range of touchscreen thermostats, offers intuitive ambient temperature control with a modern design to maximize energy efficiency. Whether flush or surface mounted its slim cell-phone like design and full touchscreen operation definitely has its finger on the pulse.

Modbus

FEATURES

- Auto fan speed with auto-off function (-HC only)
- Calendar/time programmable (-P only)
- Sleeping mode (-HC only)
- Adjustable Switching Differential (deadband. -P only)
- On/off memory function
- Anti-frost protection mode
- Lock-function
- Modbus RS-485 communication as standard

SPECIFICATION

Operation:	-HC	Heating/cooling/fan	
	-P	Heating programmable	
Set point range:	-HC	10-30°C / 1°C per step	
	-P	5-35°C / 0.5°C per step	
Accuracy	±1°C		
Output contacts:	-HC	Heating/cooling:	3A resistive
		Fan speed:	5A resistive
	-P	Heating:	20A resistive
Supply:	-HC	220V AC ±10% 50/60Hz	
	-P	85 to 240V AC 50/60Hz <2W	
Wiring:	-HC	≤ 1.5mm2	
	-P	≤ 2.5mm2	
Dimensions	110 x 86 x 13mm (when flush mounted)		
Ambient:	Temperature	0 to 50°C	
	RH	<90% non-condensing	
Protection	IP30		
Communication:	ModBus via RS-485		
Weight:	180g		

MODELS

-HC	*-P*
Hotels & Offices	Smart Homes
Heating & Cooling	Programmable
3-Speed Fan Control	Boilers/Underfloor
White Touch Screen	External Sensor Option
	Blue Touch Screen

Part code	*Description*
ST-TOUCH-HC	Heating/cooling Touch Screen Thermostat
ST-TOUCH-P	Programmable Touch Screen Thermostat
	Accessories
ST-TOUCH-555	External temperature sensor, for –P version only
ST-TOUCH-BOX	Optional back box

Contact your local sales office for additional products from this range.

SC-PM-E23C5 — Smart Power and Energy Meter

Designed with the user in mind, the SC-PM-E23C5 offers maximum application flexibility for retrofit as well as low-energy buildings. Its universal inputs allow utilisation of existing Sontay Current Transformers (PM-CT range) as well as the new low profile Rogowski Rope Transducer PM-CTR-UO18 up to 5000A.

The energy data gets transmitted either via the Modbus RTU or BACnet MS/TP protocol. Auto-detection of the baud rate, parity and protocol type eases up the commissioning of the energy monitoring system in building projects. The meter's small form factor enables installation in existing panels with limited space, and does not require external mounting or the expense of extra enclosures or conduit runs.

FEATURES

- Simplest possible installation, commissioning and operation
- Compatible with CTs (see page 35) from 5-5000A (requires 5A secondary from the CT)
- Native ModBus or BACnet communication for seamless into BMS
- Unidirectional or bidirectional
- Flexible CT configurations (1, 2 or 3- phase)

APPLICATIONS:

- Energy monitoring and commercial sub metering
- Renewable energy
- Energy management
- Cost allocation in building

Part code	*Description*
SC-PM-E23C5	Smart Power and Energy Meter
PM-CTR-UO18	Rogowski Current Transformer
PM-CT-x	All Current Transformers on page 35

CHARACTERISTICS:

Measurements:

- Bi-directional kW, kVAR, kVA, PF, Real kW, reactive kVAR and apparent kVA
- Import and export Totals of Present Power Demand
- Peak Power Demand
- Current, voltage, frequency
- Accumulated Net Energy and Real Energy by Phase (kWh)
- Import and Export Accumulators of Real and Apparent Energy
- Reactive Energy Accumulators by Quadrant (3-phase Total and Per Phase)
- Demand Interval Configuration

Measurement Accuracy:

- Real Power & Energy, 1/3 Volt Current Input Mode
- IEC 62053-22 Class 0.2S, ANSI C12.20 0.2%
- Real Power & Energy, Rogowski Current Input Mode
- IEC 62053-22 Class 0.5S, ANSI C12.20 0.5%

SPECIFICATION

Frequency Range	45 to 65Hz	
Outputs	RS-485 Serial (Modbus RTU Protocol)	
	RS-485 Serial (BACnet MS/TP Protocol)	
Reactive Power & Energy	IEC 62053-23 Class 2, 2%	
Measured AC Voltage	Min. 90V L-N (156V L-L) for stated accuracy;	
	UL max.: 480V L-L (277V L-N); CE max.: 300V L-N	
Impedance	2.5MΩ L-N / 5MΩ L-L	
Input Current Characteristics		
Measurement Input Range	0 to 0.333V AC (+20% over-range)	
Impedance	33kΩ	
Ambient		
Temperature	Operating	-30°C to 70°C (-22° to 158°F)
	Storage	-40°C to 85°C (-40° to 185°F)
Humidity	<95% RH (non-condensing)	
Protection	IP20	
Dimensions	152 x 47 x 36mm (6.68 x 1.84 x 1.41")	
Weight	300g	

PA-60-x — Multi-Configurable Air DP Sensor

The PA-60-2-COM differential pressure transmitter is ideal for measuring filter conditions, as well as many other applications in ventilation/air conditioning systems in buildings, laboratory's and clean rooms (air and non-corrosive gases). Four field-selectable pressure ranges and selectable Modbus/ BACnet outputs, which are easily defined by user selection switches. An optional LCD displays is Modbus/BACnet outputs.

FEATURES

- User selectable measurement range and output type
- Duct fixing kit included
- Snap-fit cover

Part code	*Description*
PA-60-2-COM	0 to 50, 100, 300 & 500Pa Multi Range Selectable 0-10Vdc or 4-20mA Selectable Output ModBus/BACnet
	Suffix (add to above part code)
-LCD	Integral LCD Display

SPECIFICATION

Power Supply:	24V AC/DC ±10%	
Measurement ranges:	Selectable	
Overall accuracy:	PA-60-2	±2.00% fs
Over Pressure:	0.1bar	
Pressure Connections:	Push fit for 6mm (0.24')ID tubing	
Housing:	Material	ABS (Flame retardant VO)
	Dimensions	116 x 106 x 52mm
Protection:	IP65	
Ambient range:	Temperature	0 to 40°C
	RH	0 to 85% RH. non-condensing
Weight:	240g	

Part code	*Description*
	Accessories
DFK	Duct fixing kit
TEE	Tee piece air pressure (pack of 10)
PA-TUBE-8MM	PVC tube 8mm o/d x 1.5mm wall, 30m reel
Note: A duct fixing kit (DFK) is supplied with the sensor, consisting of 2m and 5mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.	

CP electronics

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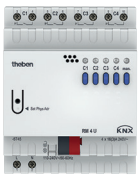
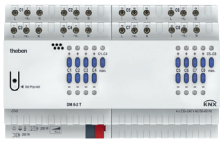
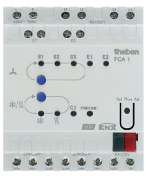






Presence/Movement Detectors

Microwave Presence Detectors

Description	Part No.
Compact ceiling PIR presence/absence detector	**EBDSPIR-KNX**
High sensitivity PIR presence/absence detector	**EBDHS-KNX**
Adjustable ceiling mount microwave presence/absence detector	**MWS3A-KNX**
Low profile ceiling microwave presence/absence detector	**MWS6-KNX**

Accessories

Compact, programming/commissioning handset	**UHS5**
Compact, user handset	**UHS7**
Surface mounting back box for detectors	**DBB**
Surface mounting back box for MWS3 series	**MWS3A-DBB**
Wall mounting bracket for MWS3A series	**MWS3A-DBB-WBRKT**
Clear vandal proof polycarbonate cover	**MWS3A-VPPC**
Surface mount back box extender	**MWS3A-DBB-EXT**

Passive Infrared Presence Detectors

Module No	Description	Part No.
PresenceLight 360B-KNX WH	Ceiling mounted presence light 360	**2009000**
PresenceLight 180B-KNX WH	Wall mounted presence light 180	**2009050**
thePrema P360 KNX UP WH	8 x 8m detection area	**2079000**
theRonda S360 KNX Flat DE WH	Slim flush fit PIR with 9m circular detection	**2089560**
thePassa P360 KNX UP WH	Corridor sensor with 2 x 15m x 5m detection	**2019300**
theRonda P360-110 DALI UP WH	DALI single light channel broadcast PIR	**2080040**
theRonda P360-330 DALI UP WH	DALI 3 light channel addressable PIR	**2080045**

Actuators

Switching Actuators

Module No	Description	Part No.
RMG 4 I KNX	4 way switch actuator base module	**4930210**
RME 4 I KNX	4 way extension module	**4930215**
RMG 8 S KNX	8 way switch actuator - base module	**4930220**
RMG 4 U KNX	8 way extension module	**4930223**

Universal Dimmer Actuators

DMG 2 T KNX	2 channel dimmer base module	**4930270**
DME 2 T KNX	2 channel extension module	**4930275**
DM 2 T KNX	2 way universal dimmer	**4940270**
DM 4 T KNX	4 way universal dimmer	**4940275**
DM 4-2 T KNX	4 way universal dimmer	**4940280**
DM 8-2 T KNX	8 way universal dimmer	**4940285**

Heating Actuators

Module No	Description	Part No.
HMG 6 T KNX	6 way heating actuator - base module	**4930240**
HME 6 T KNX	6 way extension module	**4930245**
HM 6 T KNX	6 way heating actuator c/w outputs	**4940240**
HM 12 T KNX	12 way heating actuator c/w outputs	**4940245**
CHEOPS drive KNX	Thermal actuator no sensor	**7319200**
CHEOPS control KNX	Thermal actuator with integral temp sensor	**7329201**
FCA 1 KNX	Fan coil controller	**4920200**
FCA 2 KNX	Fan coil controller with 0-10	**4920210**
HMT 6 S KNX	Wall mount 6 zone UFH controller 24v/0-10	**4900373**
HMT 12 S KNX	Wall mount 12 zone UFH controller 24v/0-10	**4900374**

Contact your local sales office for additional products from this range.

TE Controls ETS GAP Western Automation

HVAC Controllers

Individual Room Thermostats

Module No	Description	Part No.
RAMSES 713 FC KNX	Temp controller for fan coils	**7139202**

Multi-functional Display with Room Thermostat

VARIA 826 S WH KNX	White glass multi function screen	**8269210**
VARIA 826 S BK KNX	Black glass multi function screen	**8269211**

Sensor Technology

Brightness & Temperature Sensors

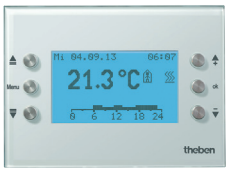
Module No	Description	Part No.
LUNA 131 S KNX	Light & temp sensor	**1319201**
LUNA 133 KNX	Light sensor	**1339200**
LUNA 134 KNX	Light sensor 10 channels	**1349200**

CO2 Air Quality Sensor

Module No	Description	Part No.
AMUN 716 S KNX	Multi function room sensor, CO2, temp, humidity, pressue	**7199230**

Self Contained Outdoor Weather Station

Module No	Description	Part No.
Meteodata 140 S 24V KNX	24V Weather station	**1409201**
Meteodata 140 S 24V GPS KNX	24V Weather station with GPS receiver	**1409204**
Meteodata 140 S KNX	100-230V Weather station	**1409207**
Meteodata 140 S GPS KNX	100-230V Weather station with GPS receiver	**1409208**



System Devices

Binary Input/Binary Output Sensor Interfaces

Module No	Description	Part No.
TA 2 S KNX	2 Inputs binary interface	**4969222**
TA 4 S KNX	4 Inputs binary interface with temp inputs C3/C4	**4969224**
TA 6 S KNX	6 Inputs binary interface with temp inputs C3/C4	**4969226**
TA 8 S KNX	8 Inputs binary interface with temp inputs C3/C4	**4969228**
BM 6 T KNX	Din rail mount 6 channel input 10 - 240AC/DC	**4940230**

DALI Gateway

DALI Gateway KNX PLUS	Dali gateway module - KNX	**9070929**

Interface

KNX USB Interface		**9070397**

Clocks

Digital Time Switch

Module No	Description	Part No.
TR 648 top2 RC-DCF KNX	8 Channel time clock with GPS	**6489210**
TR 648 top2 RC KNX	8 Channel time clock	**6489212**

Time Transmitter

ZS 600 DCF KNX	Signal emitter	**6009200**