

INTEGRATED BUILDING MANAGEMENT SOLUTION CATALOGUE

 **Fidelix**
www.fidelixme.com

AUTOMATION SYSTEMS

- Building Management (BMS) ▾
- Lighting Control ▾
- Metering & Energy Management ▾
- Home Automation ▾
- Guest Room Management (GRMS) ▾

SECURITY MANAGEMENT SYSTEM

- Access Control & Intruder Detection ▾
- Video Surveillance ▾

Who We Are ▲

We were founded on 2nd January 2008 in Dubai Airport Free Zone as COBA Middle East FZCO to represent high tech companies from Finland. Since inception we have provided forefront IBMS solutions for Intelligent Green Buildings in the Middle East and Africa. We are a diversified team of true professionals working in deep co-operation with our stake holders. Our team has extensive experience in design, implementation and commissioning of automation and security systems. We have implemented comprehensive references throughout the region across all verticals. Nordic's fastest growing IBMS Company – Fidelix Ltd – has joined hands exclusively with us to represent them in this region. We partner with our system integrator partners & provide professional support services with competitive pricing.

Our Vision & Mission ▲

Our Vision is to become the leading provider of IBMS solutions in the Middle East and Africa. We shall create a new benchmark for Indoor Air Quality and Energy Management to help the regions fulfill the reduction targets of greenhouse gas emissions.

Our Mission is to provide the most advanced and user friendly IBMS Solution. We enable implementation of cost efficient Intelligent Green Buildings and Cities by providing open forefront solution and professional support services to our System Integrator partners with very competitive pricing.

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About Fidelix Ltd. ▲

Fidelix Ltd, a Finnish company founded in 2002, focuses on development and manufacturing of building management and security systems. Fidelix Ltd is the Nordic's fastest growing IBMS solution provider. Revenue and profitability has been growing annually, revenue being 20 M€ last year. Year-on-year growth has been around 20% during the last few years.

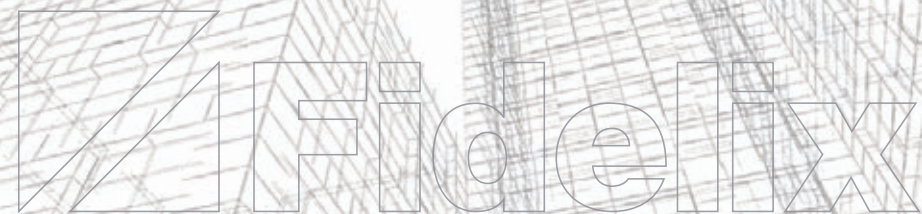
Fidelix provides truly open web based platform for implementing Green Buildings and Cities. Finland has long history of energy saving and indoor air quality (IAQ) management since 1970's. We have successfully combined this knowledge into our system. Our user interfaces are intuitive, fast and complete - Scandinavian style.

Since establishment in 2002, we have delivered products to more than 10,000 international projects, where Fidelix web-based IBMS administers indoor air quality and saves millions of dollars by smart energy management.

We use latest web technologies (HTML5) and open IEC 61131-3 standard for PLC programming. Controllers fulfil BACnet B-BC profile. I/O-points are linked via BACnet, Modbus, M-Bus, SNMP, OPC

Our Middle East team has extensive knowledge of this market with immaculate track record. Team has implemented comprehensive references throughout the region across all verticals – Hotels, Malls, Hospitals, Universities, Schools, Banks, Palaces, Commercial & Residential buildings and Villas.

We are a dedicated team of over 150 automation and security professionals providing Fidelix IBMS solution for Intelligent Green Buildings. We provide modular cost effective solutions and professional support services to our system integrator partners in the Middle East and Africa.



Our Values ▲

Company values are Integrity, Professionalism, Partnership and Agility. We have been working in Middle East and Africa since 2008 according to these values. We have built strong business network which is built on Trust.

Integrity – The origin of our company is Finland – a country famous not only for advanced technologies, but also for the honesty of the people. Integrity means to us honesty and responsibility to our customers and suppliers.

Professionalism - We are a team of true professionals. We expect professionalism from each other, our system integrator partners and suppliers. We work continuously to develop the skills of our partners and our team.

Partnership – We work in deep co-operation with our system integrator partners and suppliers. System Integrators help us to capture the latest market requirements and trends and we co-operate with our suppliers to provide forefront solutions to the system integrators and end users.

Agility – We continuously develop our solution in co-operation with our partners according to their requirements and offerings. Solution structure is layered and fully open, which enables rapid development of our total solution as required.

Building Management System

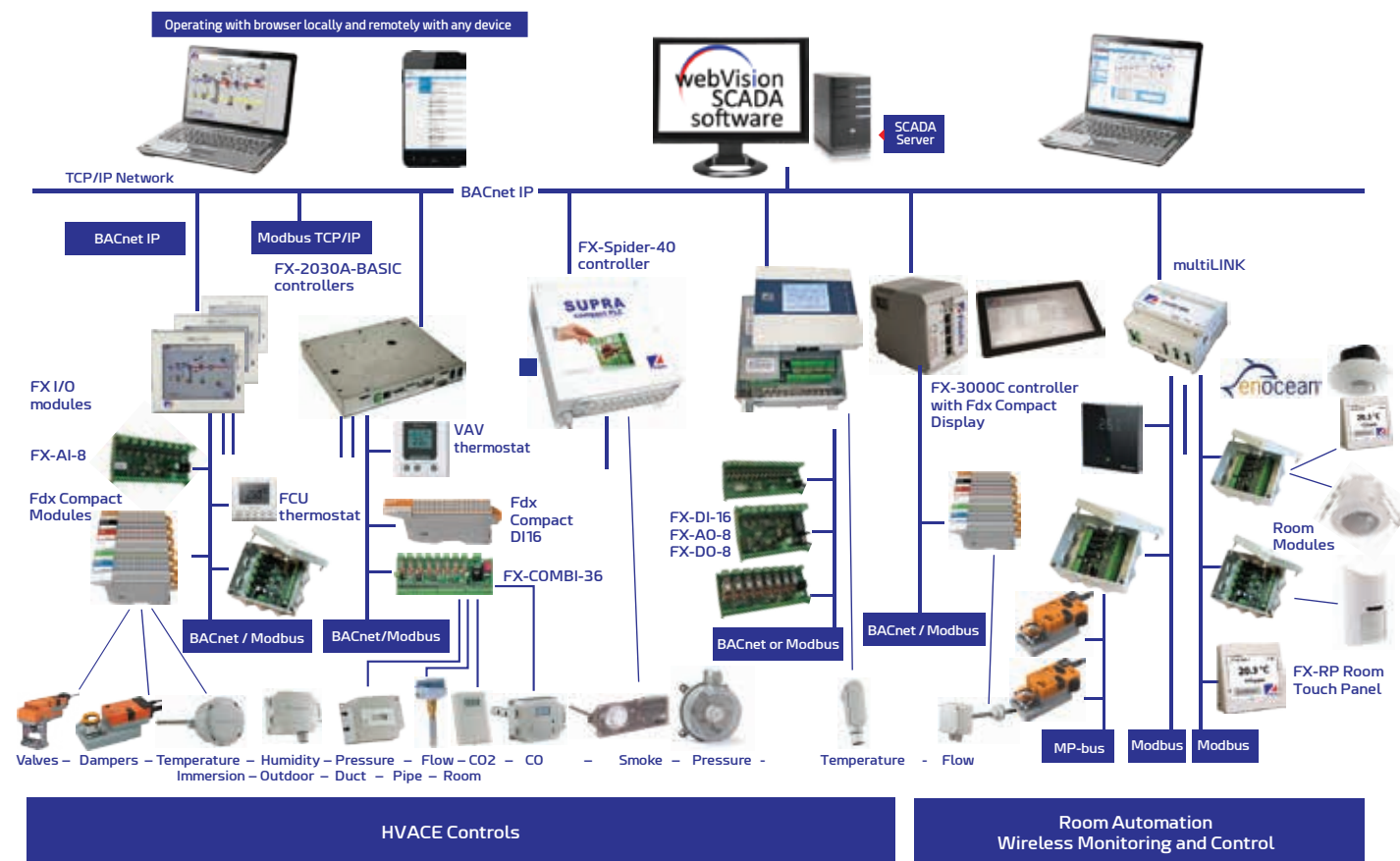
Fidelix is a truly open IBMS platform. Our system is clearly layered with fully open interfaces between the layers:

- ▲ SCADA software
- ▲ Central Control Units
- ▲ IO Modules and Room/Unitary Controllers
- ▲ Industry standard field equipment

SCADA Software

Our monitoring and controlling software – webVision – is a fully featured Supervisory Control and Data Acquisition (SCADA) package with SQL database engine. It gathers information effortlessly from multiple Central Control Units in different locations enabling easy implementation of integrated smart buildings and cities. Software integrates all data into one web browser operated user interface that allows full control of all aspects of larger systems.

BMS SYSTEM ARCHITECTURE



It provides comprehensive alarm management, viewing of dynamic information and history trends, event logs and versatile energy reports. OPC, ODBC, XML, Access and web service interoperability enables easy integration with 3rd party systems. Support for unlimited simultaneous users makes it a truly Open SCADA platform.

Central Control Units

Fidelix Central Control Units (CCU) – FX-2030A and FX-Spider – are state of the art BACnet controllers with integrated web server and a maximum I/O capacity of 2000 (physical & virtual) points per controller. Controllers fulfil BACnet B-BC profile and they are freely programmable using IEC 61131-3 industry standard PLC programming language.

CCUs have on-board Ethernet, serial port for connecting modem and Micro SD card for scheduled or manual back-ups for easy system restoring. FX-Spider controller has 40 built-in I/O-points. I/O-modules, Room/Unitary controllers, thermostats and 3rd party equipment & systems can be connected to CCUs via any open standard protocol – BACnet, Modbus, M-bus being the most commonly used. FX-2030A controllers have three and FX-Spider two configurable fieldbus connections. To add additional fieldbus connections to system multiLINK multipurpose communication modules are used. It is a versatile communication module with integrated web- and FTP-server, interconnecting Ethernet, M-Bus, Modbus and RS-232 interfaces, seamlessly. It can be used to convert fieldbus over UDP or TCP to RS485 or RS232, as a serial repeater, or as a serial master.

IO Modules

We have a comprehensive range of robust IO modules FX-DI-16, FX-DO-8, FX-AI-8, FX-AO-8, FX-COMBI-36 and the new compact series Fdx Compact DI16, DO8, DO16, AI8, AO8 and TRIAC8 modules. DI-points are used to read indications, alarms and impulses for consumption metering purposes. Each DI-point has bi-colored LED (red/green) to show the status. AI-points can read resistive sensors from 800-100000 ohm, current loops or voltage signals and digital indications. DO-points have changeover relays that can drive 6 Amp 230 VAC loads. DO-points have indication LEDs and manual override switches. AO-points have customizable minimum and maximum voltage outputs. DO- and AO-points have configurable default values to preserve point's current state or change to a pre-programmed value during interruption in the communication.

Room/Unitary controllers

Room/Unitary controllers are versatile controllers that can be used for numerous applications, such as hotel rooms, district cooling, small ventilation systems, or as room controllers in offices or homes. Controller's CPU runs its code independently, enabling swift and accurate reactions to changing indications and measurements. Internal Flash memory makes sure all data is saved even during power or communication interruptions. Controllers can be connected via fieldbus to Central Control Units to receive settings and commands, or send out alarms or other data.

FX-Multi-16 is a preprogrammed unitary controller with 6 universal inputs, 2 analogue inputs, 4 digital outputs and 4 analogue or TRIAC outputs. Extensive library of programs exist and additional dedicated programs can be made fast.

FX-Multi-24 is a freely programmable unitary controller with 12 universal inputs, 4 digital outputs, 4 TRIAC outputs and 4 analogue outputs. International PLC programming standard IEC 61131-3 is used to program any application. Extensive application library exists and it is easy to modify existing applications. The controller can simultaneously act as Modbus slave and master. Intelligent local sensors, FX-RP touch screen room panels, and IO modules can be connected as slaves to FX-Multi-24 controllers. Additionally, the FX-Multi-24 can be equipped with an enocean transceiver to connect wireless sensors and actuators and with MP-bus transceiver to communicate with Belimo actuators.

Range of communicating and stand-alone **Thermostats** are provided for Fan Coil Units (FCU) and Variable Air Volume (VAV) damper controls.

Industry standard field equipment

We provide full range of industry standard field equipment. Our sensor selection includes Temperature, Humidity, Pressure, Pressure Difference, Flow, Carbon-dioxide, Carbon-monoxide, Lux level, Smoke, Tank level and Occupancy sensors for Outdoors, Rooms, Ducts and Pipes.

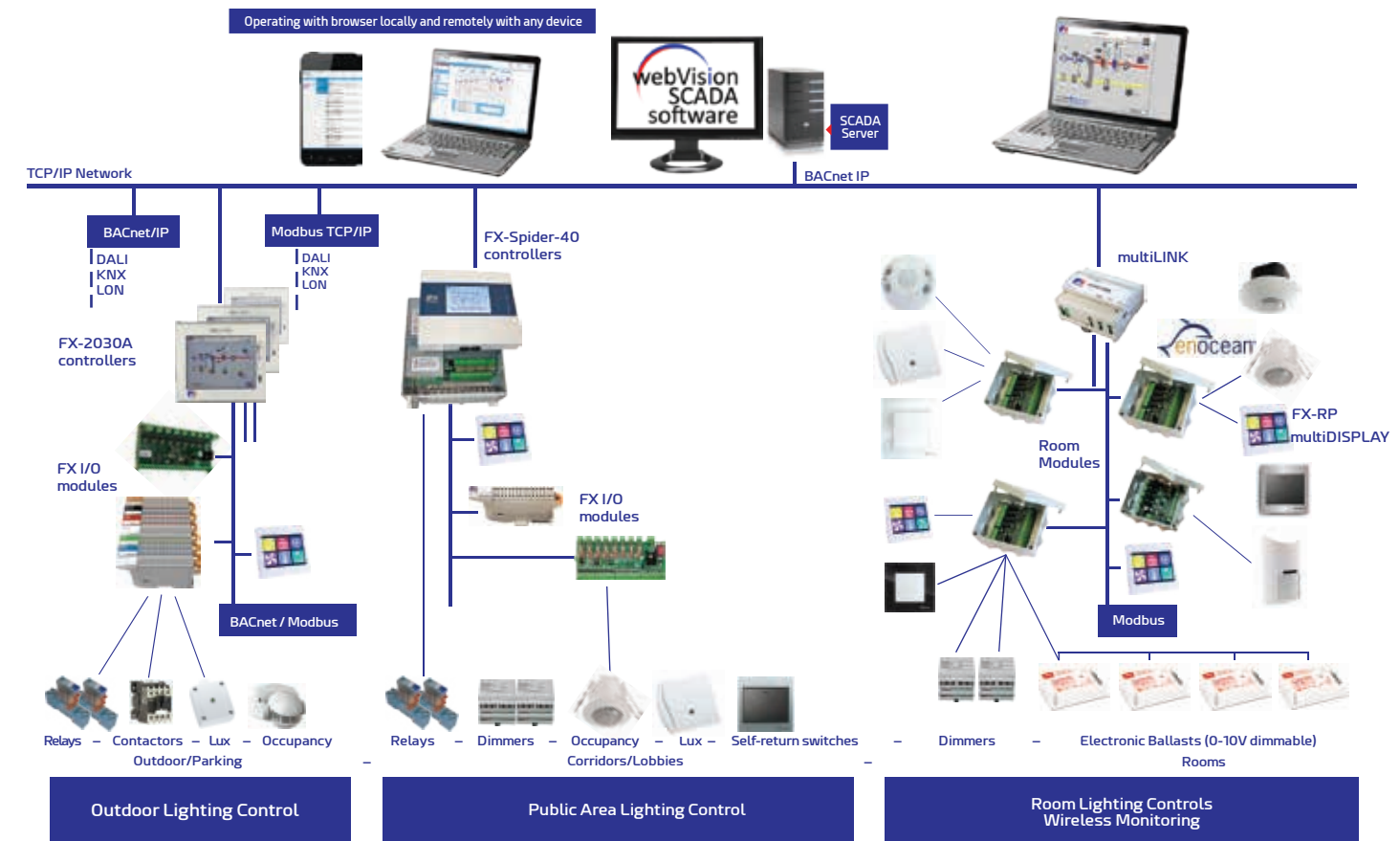
Lighting Control System

Fidelix Lighting Control System fulfils all kinds of lighting control requirements for Outdoor, Facade Lighting, Indoor Public Areas and Individual Occupant Spaces.

Lighting Controls are used in all type of facilities – Hotels, Malls, Commercial Spaces, Offices, Schools, Residential Buildings and Private Homes.

Lighting groups can be either On/Off type or dimmable. Public Area lighting is typically controlled by time schedules and movement/occupancy detectors. Outdoor lighting is typically controlled by lux level measurement and is limited with time schedules to achieve energy savings. In parking areas combination of time schedule and movement detectors is typically applied. Individual Occupant Spaces are controlled with occupancy detectors, commands from self-return switches connected to digital input (DI) points of Room Controllers or IO modules and commands from 3.5" Touch Screen Room Panels (FX-RP). Commands can be On/Off or Up/Down Level commands to individual lighting groups or situations for multiple groups.

LIGHTING CONTROL SYSTEM ARCHITECTURE



Lighting Control System architecture follows Fidelix IBMS architecture. WebVision software is used to manage lighting controls in large buildings and building complexes. Room Panels (FX-RP) are used to create tailored Graphical User Interfaces for all kinds of lighting scenes and controls. Room panels are typically connected as slaves to the freely programmable FX-Multi-24 controllers. On/Off lighting groups up to 6 Amp can be directly controlled by switchover relays of Digital Output (DO) points. Dimmable Lighting Groups with electronic ballasts (fluorescent, LED lights) can be controlled directly with Analogue Output (AO) point 0-10 Volt signal. Maximum current from AO point is 20 mA. Other lighting groups like halogens and 230VAC LED lights that are suitable for dimming are controlled with separate 0-10 Volt controlled dimmers modules. Dimmer modules are available for 600W, 1000W and 1500W loads. DALI and KNX devices are integrated to Fidelix via DALI/BACnet, KNX/BACnet gateways.

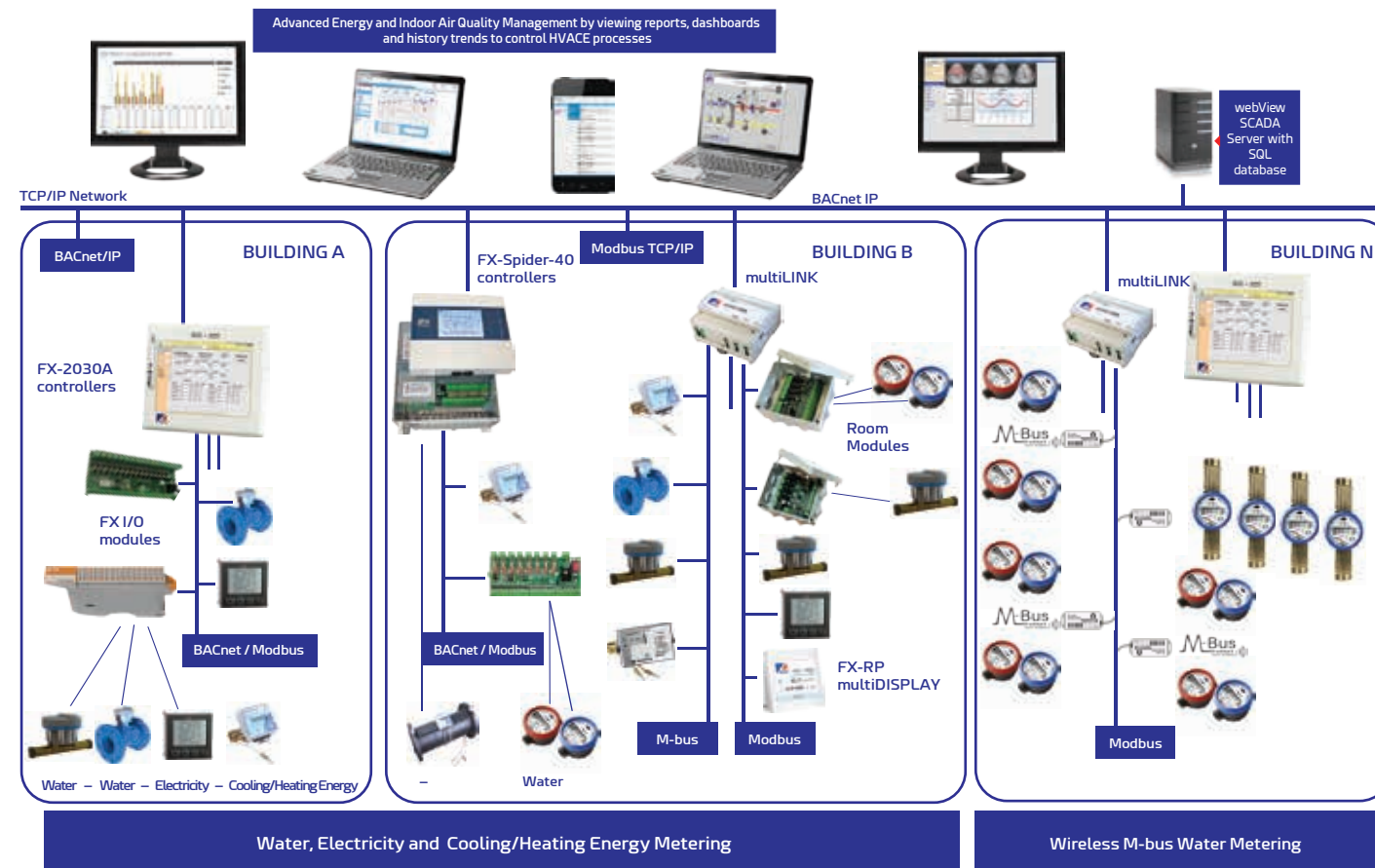
Metering & Energy Management

Metering system can be used to record hourly, daily, weekly, monthly and yearly consumptions of:

- Water
- Electricity
- Cooling & Heating Energy
- Gas

Versatile reporting and dashboards combined with freely programmable Building Management System enables very efficient Energy Management services for all type of facilities.

METERING SYSTEM ARCHITECTURE



Fidelix Metering & Energy Management Systems fully complies with the Green Building requirements, as enforced for example by Estidama in the Emirate of Abu Dhabi.

Metering & Energy Management System architecture is in line with the Fidelix IBMS architecture. Web-Vision SCADA Software is used to record consumption data into SQL database and generate reports as per client's requirements. Energy Reporting Web Dashboards can be easily generated from this software.

M-Bus Meters are connected to the multiLINK multipurpose communication module which can relay data to the Central Control Units (CCUs) and from CCUs to webVision software. Modbus meters can be connected either through the multiLINK or directly to CCUs. BACnet meters can be connected directly to CCUs. Pulse Meters are connected to the Digital Inputs (DI) of IO modules.

We provide complete range of Water, Electricity and Energy Meters. Water and Energy meters are ultrasonic type. All meters are available with M-Bus, Modbus and Pulse (S0) outputs to cater to the customer's requirements. Third party meters with different protocol like wireless M-bus can be integrated to our system.

Combining metering and reporting system to BMS enables providing Advanced Energy and Indoor Air Quality (IAQ) Management services. Operators can wisely manage HVAC processes by viewing reports, dashboards and history trends to minimize consumption and to optimize IAQ.

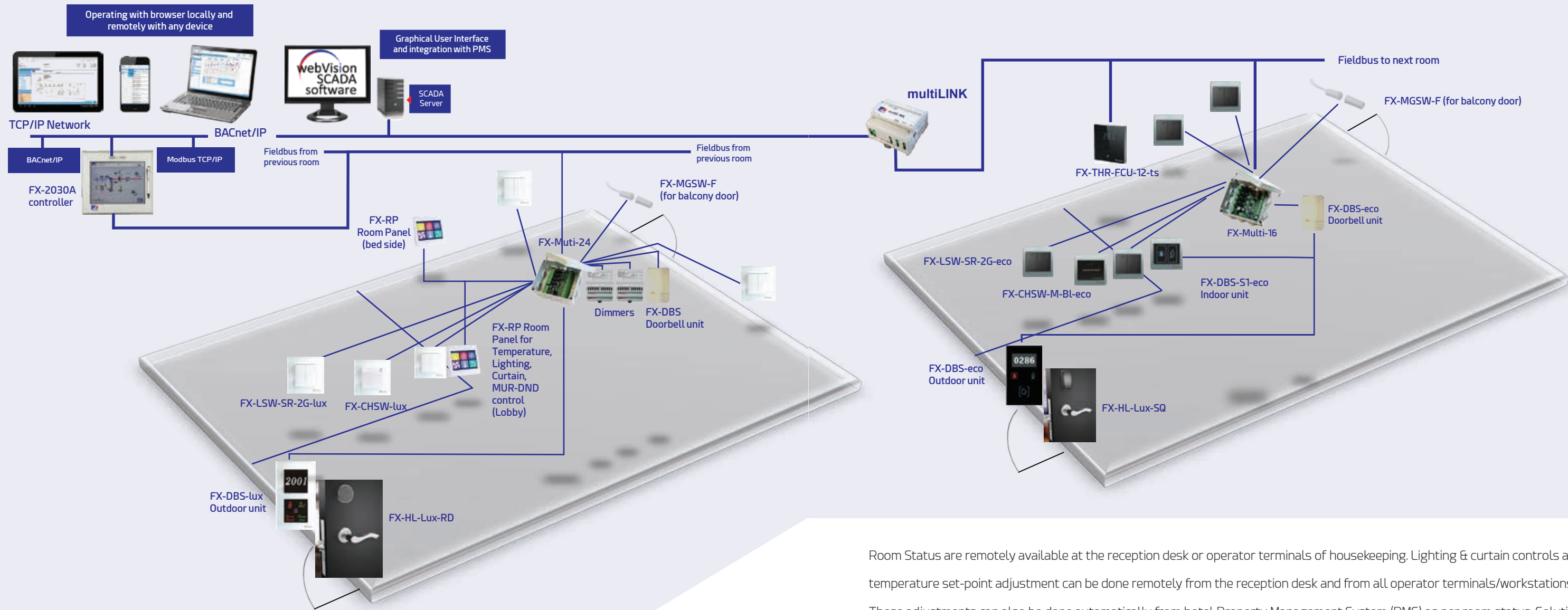
Guest Room Management System

Fidelix Guest Room Management System (GRMS) is a freely-programmable solution which can be tailored to meet the requirements of hotels from basic to the most luxurious ones.

GRMS architecture follows Fidelix IBMS architecture and can be an integral part of a comprehensive IBMS Solution. GRMS can be seamlessly integrated to Building Management System via Fidelix Central Control Units (CCUs).

Basic Solution typically includes Hotel Locks, compatible Energy-Saving Card Holders and thermostats with Energy-Saving features. Energy-Saving Card Holders give permission for the room lighting and thermostat.

To add more features to this basic version, Smart Door Bell System with Do-Not-Disturb & Make-Up-Room (DND&MUR) indoor and outdoor units can be added. Card Holders can also be replaced by occupancy sensors. Balcony door or window contacts can be added to limit/cut off the cooling when doors/windows are left open. Depending on client's requirement, either stand-alone or communicating features can be implemented. Hotel locks have optional Near Field Communication (NFC) feature. This enables guests to use their iOS and Android to devices access their the rooms without keycards.



Room Status are remotely available at the reception desk or operator terminals of housekeeping. Lighting & curtain controls and temperature set-point adjustment can be done remotely from the reception desk and from all operator terminals/workstations. These adjustments can also be done automatically from hotel Property Management System (PMS) as per room status. Solution has standard open interfaces which enable easy integration with any PMS.

More luxurious hotels have lighting control system where individual groups are either on/off controlled or dimmable. Guests can operate lights and curtains by self-return lighting switches and FX-RP room panels. Temperature sensor embedded in the FX-RP room panel can be used for temperature control. Fan Coil Unit (FCU) or Variable Air Volume (VAV) damper can be controlled with FX-Multi room controllers. This removes the need for a separate thermostat. FX-RP room panels can be used also to replace separate DND&MUR panels.

Different color and frame options are available to match interior designs. Eco-series has five acrylic frame options – Light Silver, Golden Yellow, Rose Gold, White and Black – and three metal frame options – Satin Silver, Satin Gold and Satin Rose Gold. Lux-series has two glass frame color options – Black and White – and four metal frame options – Satin Silver and Gold, Glazed Silver and Gold and two wooden, stone and leather frame options.

LUX-SERIES PRODUCT SAMPLES



ECO-SERIES PRODUCT SAMPLES



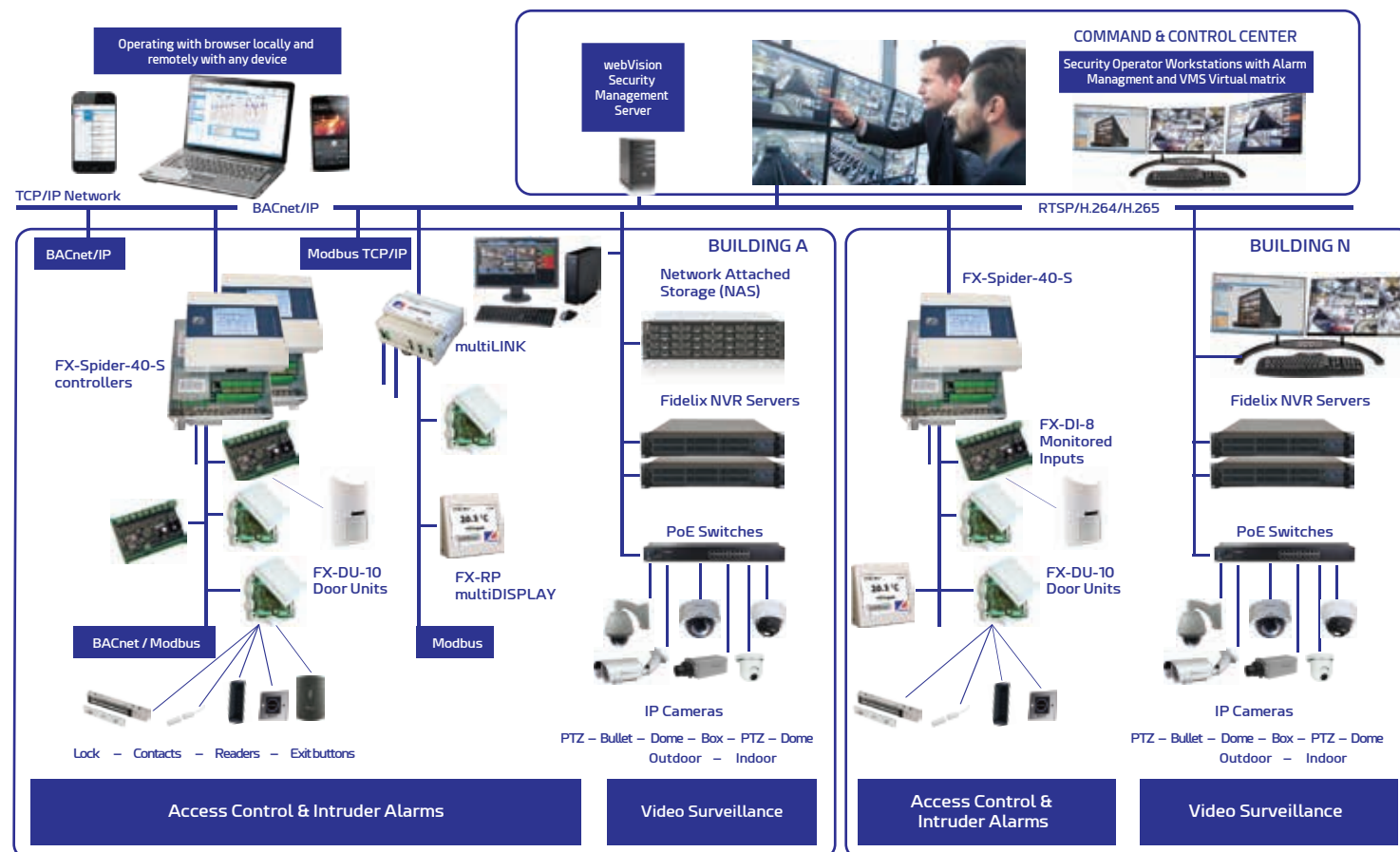
Total Security Management System

Fidelix Total Security Management System (TSMS) seamlessly integrates Access Control & Intrusion Detection System (AC&IDS) and Video Management System (VMS). All types of facilities – Banks, Hotels, Malls, Hospitals, Commercial & Residential Buildings and Private Homes can be totally secured with Fidelix TSMS. System can be easily scaled up from individual buildings to large building complexes and full cities.

Security events are generated from ACS – Unauthorized Attempt to Enter, Forced Entry, Door Open Too Long, from IDS – Inputs from Movement/Occupancy Detectors, Vibration Sensors, Magnetic Contacts of Doors and Windows, Panic Buttons – and from VMS – Motion Detection from cameras and other video analytics. These events can be seamlessly shared between AC&IDS, VMS and automation systems. Events can be used to activate sirens and flash strobes, lock or open doors/gates, turn on lights and to start recording on VMS, send e-mail notifications and pop-up camera views on operator workstations. Fire alarms and critical MEP alarms can be linked to system to reduce response times and thus minimize damages. For example in case of verified water leakage operator can shut the specific valves and pumps.

Security operator workstations are license-free. They are implemented with standard PC and display hardware, web based Alarm Management & Graphical User Interface (webView) and fully featured virtual matrix of VMS. It's easy and cost efficient to implement individual security workstations and large Command and Control Centers (CCC). We provide unified solution to cater to customers' present and future total security requirements.

SECURITY MANAGEMENT SYSTEM ARCHITECTURE



Access Control & Intruder Detection System

Access Control & Intruder Detection System (AC&IDS) Architecture follows the generic Fidelix IBMS architecture. FX-SPIDER-40-S is security controller for AC&ID systems. It can handle 2000 points (physical & virtual) and it has integrated tamper switch, back-up battery and two RS-485 lines to connect FX-DU-10 and FX-SI-8 Security Modules. Up to 63 modules can be connected to each line.

Door Unit (FX-DU-10) has interfaces for two access readers, two Digital Outputs (DO) to operate locks or activate local alarm devices and eight sabotage monitored security inputs to get door/lock status, Request-to-Exit and different types of alarm indications. Security module FX-SI-8 has eight sabotage monitored inputs. It is used to connect alarm Inputs from movement/occupancy detectors, door/window magnetic contacts, panic buttons, glass break and vibration sensors. Security zones can be armed and disarmed as per client requirements – automatically according to time schedules and manually from web user interfaces, FX-RP Room Panels, access readers and sabotage monitored inputs.

We provide full range of access readers, locks and other door accessories and full range of security sensor to implement high end security systems.

Video Surveillance System

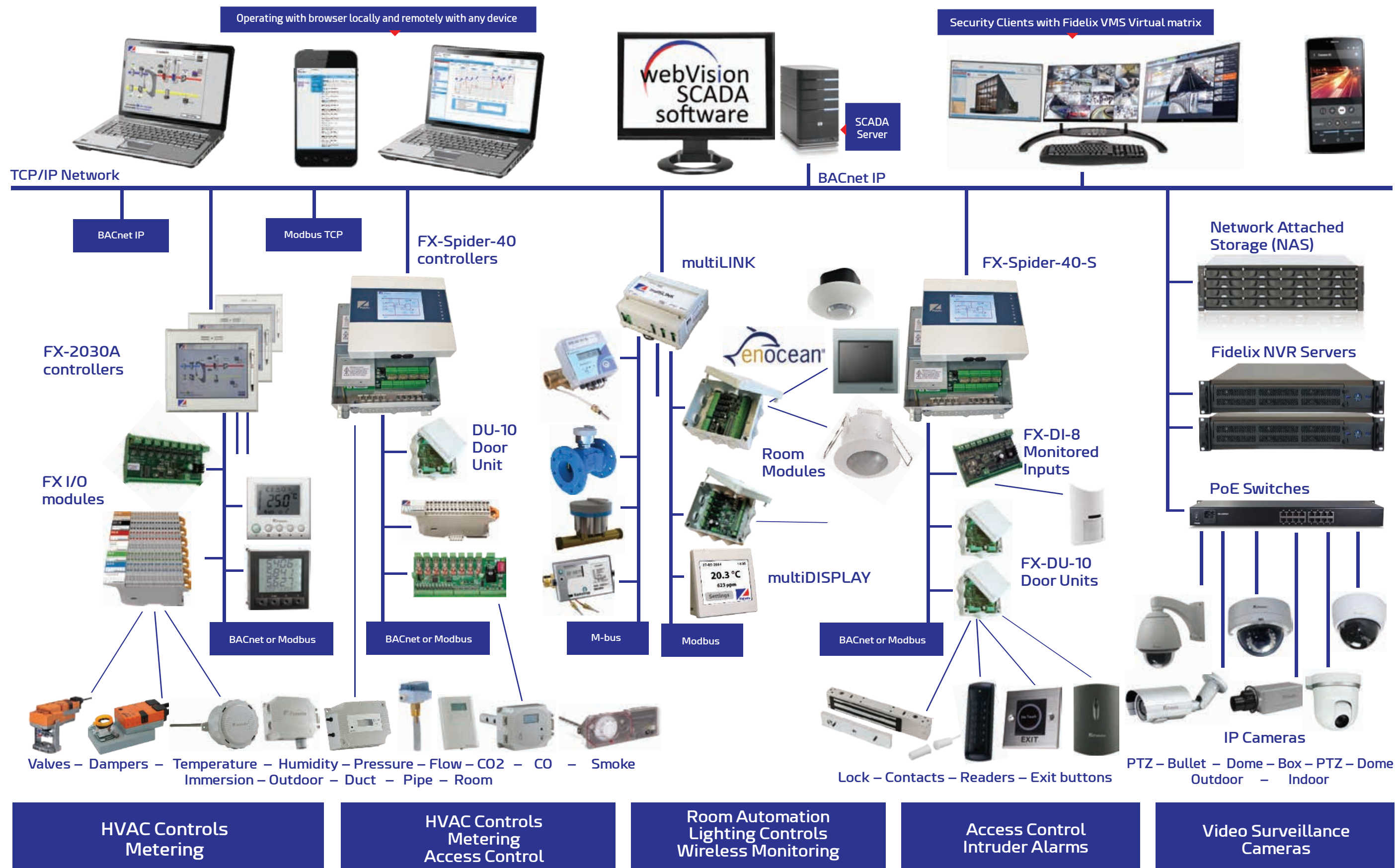
Fidelix Video Surveillance System consists of Video Management System (VMS) and full range of IP Cameras.

Fidelix VMS is a flexible, scalable, user-friendly and cost-efficient solution to secure all types and sizes of facilities. Core of the VMS is Fidelix Networked Video Recorder (FX-VMS-NVR), which operate on standard PC hardware. Depending on frame-rate & resolution of video streams and the selected NVR hardware, one FX-VMS-NVR can process typically streams from 30 to 100 cameras. Unlimited amount of NVRs and VMS Clients can be added to the system without compromising on the system performance. Operators can view cameras from multiple NVRs with VMS Clients. Live views and recordings can be simultaneously viewed by unlimited number of concurrent clients. Back-up NVRs can be added to the system for redundancy purpose.

FX-VMS-NVR has highly accurate and reliable Motion Detection feature. Motion Detection is typically used to start/stop recording, which typically saves about 70% of the required storage space compared to continuous recording. Area of detected motion is also recorded to enable easy & fast area-search. VMS has in addition following features: informative and easy-to-operate timeline, flexible camera windows with full features, versatile automatic rules, audio recording, map view, de-wrapping fish eye 360° streams and virtual PTZ function, user management, diagnostics with alarm and error log, mobile apps, web interface, Point of Sale (POS) integration and ANPR.


We provide full range of Dome, Box, Bullet and PTZ Dome Cameras for indoor and outdoor usage. Cameras are available in different resolutions - 1, 2, 4, 5 and 8 Megapixels. All Cameras comply with ONVIF-S Profile, provide triple streaming and have PoE support available.

FIDELIX IBMS SYSTEM ARCHITECTURE














	TYPE	DESCRIPTION	PART NUMBER
	SCADA SOFTWARE	<ul style="list-style-type: none">Supervisory Control And Data Acquisition SoftwareDynamic And Configurable User Interface (HTML5)Standard SQL DatabaseCollecting And Viewing Alarms, Indications, Measurements, Controls And Consumptions From Multiple SourcesAlarm ManagementHistorical TrendingEvent LoggingVersitile Reporting- Hourly, Daily, Weekly, Monthly, Yearly With ComparisonsSupports Integration To Various 3rd Party Systems (Opc, Sql , Xml, Web Service)Browser BasedUnlimited Amount Of Concurrent Users	WEBVISION
CENTRAL CONTROL UNITS			
	FREELY PROGRAMMABLE BACnet/IP CONTROLLER WITH WEB & FTP SERVER	<ul style="list-style-type: none">BACnet B-BC controllerCompact sizeFreely programmable webserver/PLC with open IEC 61131-3 standardWired/Wireless (WiFi) TCP/IP communicationModbus RTU to the I/O's via base of the controllerEasy Add-on extension (Modbus/BACnet) port2 USB, 4 Ethernet RJ45DIN-rail mounted	FX-3000C <small>NEW</small> Shipping 2017Q1
	WIRELESS 15,6" TOUCH SCREEN DISPLAY FOR FX-3000C CONTROLLER	<ul style="list-style-type: none">Modern 15,6" Display/Web browser for FX applicationsCapacitive multi touch screen with zoom in/out functionWired/Wireless (WiFi) TCP/IP communicationTFT Brilliant screen, 16/9 aspect ratio, 1366x768 resolutionAndroid 4.0, A10 1.2 GHz dual-core CPU	FDX COMPACT DISPLAY <small>NEW</small> Shipping 2016Q4
	FREELY PROGRAMMABLE BACnet/IP CONTROLLER WITH INTEGRATED TOUCH SCREEN AND WEB & FTP SERVER	<ul style="list-style-type: none">BACnet B-BC controller2000 I/O-points (physical and virtual)10,4" touch screenWindows CEFreely programmable webserver/PLC with open IEC 61131-3 standardEthernet RJ45, DVI, serial and USB-connector3 pcs of BACnet MS-TP or Modbus RTU ports (RS-485)Micro SD card reader for automatic back-up function12 to 24VDC operating voltage	FX-2030A-10
	FREELY PROGRAMMABLE BACnet/IP CONTROLLER WITH INTEGRATED WEB & FTP SERVER	<ul style="list-style-type: none">BACnet B-BC controller2000 I/O-points (physical and virtual)Windows CEFreely programmable webserver/PLC with open IEC 61131-3 standardEthernet RJ45, DVI, serial and USB-connector3 pcs of BACnet MS-TP or Modbus RTU ports (RS-485)Micro SD card reader for automatic back-up function12 to 24VDC operating voltage	FX-2030-BASIC
	FREELY PROGRAMMABLE BACnet/IP CONTROLLER WITH 40 BUILT-IN IO-POINTS AND INTEGRATED WEB & FTP SERVER.	<ul style="list-style-type: none">BACnet B-BC controller2000 I/O-points (physical and virtual)5,7" touch screenWindows CEFreely programmable webserver/PLC with open IEC 61131-3 standardEthernet RJ45, DVI, serial and USB-connector1 pcs of BACnet MS-TP or Modbus RTU port (RS-485)1 pcs of Modbus RTU port (RS-485)Micro SD card reader for automatic back-up function16 universal inputs (digital or analogue selectable)8 digital inputs (with terminal resistor)8 relay outputs (230VAC/6A)8 analogue outputs (0-10V)230VAC power supply	FX-SPIDER-40
	FREELY PROGRAMMABLE BACnet/IP CONTROLLER WITH 40 BUILT-IN IO-POINTS AND INTEGRATED WEB & FTP SERVER BUT WITHOUT TOUCH SCREEN	<ul style="list-style-type: none">BACnet B-BC controller2000 I/O-points (physical and virtual)Windows CEFreely programmable webserver/PLC with open IEC 61131-3 standardEthernet RJ45, DVI, serial and USB-connector1 pcs of BACnet MS-TP or Modbus RTU port (RS-485)1 pcs of Modbus RTU port (RS-485)Micro SD card reader for automatic back-up function16 universal inputs (digital or analogue selectable)8 digital inputs (with terminal resistor)8 relay outputs (230VAC/6A)8 analogue outputs (0-10V)230VAC power supply	FX-SPIDER-40-BASIC

COMMUNICATION INTERFACE

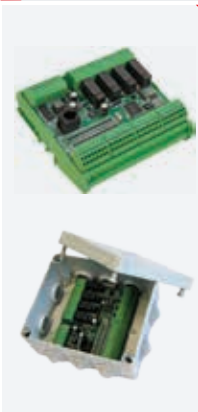



	TYPE	DESCRIPTION	PART NUMBER
	MULTI-PURPOSE COMMUNICATION MODULE	<ul style="list-style-type: none">RS-485 modbus portTwo additional serial ports for M-bus or Modbus4MB internal Flash memoryTCP/IP ethernet port with optional PoEmini-USB portIntegrated web- and FTP-serverMicro SD card reader	MULTILINK

IO MODULES FOR CCUS

	TYPE	DI	DO	AI	AO	DESCRIPTION	PART NUMBER
	COMPACT DIGITAL INPUT MODULE	16				16 digital inputs (indication, alarm or pulse) DIN-rail mounted with power and communication LED indicators Individually detachable connectors	Fdx Compact DI16 <small>NEW</small> Shipping 2016q4
	COMPACT DIGITAL OUTPUT MODULE		8			8 digital outputs, 24V/1A changeover relays DIN-rail mounted with power and communication LED indicators Individually detachable connectors	Fdx Compact DO8 Shipping 2016Q4
	COMPACT DIGITAL OUTPUT MODULE		16			16 digital outputs, open collector sink output to control relays or LEDs DIN-rail mounted with power and communication LED indicators Individually detachable connectors	Fdx Compact DO16 Shipping 2016Q4
	COMPACT ANALOGUE INPUT MODULE			8		8 analogue inputs (resistive, 0-10V, 4-20mA) DIN-rail mounted with power and communication LED indicators Individually detachable connectors	Fdx Compact AI8 Shipping 2016Q4
	COMPACT ANALOGUE OUTPUT MODULE				8	8 analogue outputs (0-10V) DIN-rail mounted with power and communication LED indicators Individually detachable connectors	Fdx Compact AO8 Shipping 2016Q4
	COMPACT TRIAC OUTPUT MODULE		8			8 triac outputs with 24VAC impulse control DIN-rail mounted with power and communication LED indicators Individually detachable connectors	Fdx Compact TRIAC8 Shipping 2016Q4
	DIGITAL INPUT MODULE	16				16 digital inputs (indication, alarm or pulse) Bi-colored LED indicators (red/green) Individually detachable connectors Operating voltage 24 VDC (20-26VDC) DIN-rail mounted Size (LxWxH): 205mm x 90mm x 65mm	FX-DI-16
	DIGITAL OUTPUT MODULE		8			8 relay outputs (max. 250VAC/6A) Manual override switches Indication LEDs to indicate when relay is on Individually detachable connectors Operating voltage 24 VDC (20-26VDC) DIN-rail mounted Size (LxWxH): 205mm x 90mm x 65mm	FX-DO-8
	ANALOGUE INPUT MODULE			8		8 analogue inputs (resistive, 0-10V, 0/4-20mA) Jumper selectable sensor types Individually detachable connectors Operating voltage 24 VDC (20-26VDC) DIN-rail mounted Size (LxWxH): 158mm x 90mm x 65mm	FX-AI-8
	ANALOGUE OUTPUT MODULE				8	8 analogue outputs (0-10V) Programmable default output values Individually detachable connectors Operating voltage 24 VDC (20-26VDC) DIN-rail mounted Size (LxWxH): 123mm x 90mm x 65mm	FX-AO-8
	DIGITAL AND ANALOGUE INPUT AND OUTPUT COMBINATION MODULE	12	8	8	8	12 digital inputs 8 analogue inputs 8 analogue outputs 8 relay outputs (max. 250VAC/6A) Individually detachable connectors Operating voltage 24 VDC (20-26VDC) DIN-rail mounted Size (LxWxH): 231mm x 126mm x 65mm	FX-COMBI-36

ROOM/UNITARY CONTROLLERS AND TOUCH PANELS



TYPE	DESCRIPTION	PART NUMBER
	<ul style="list-style-type: none">• 12 universal inputs (digital or analogue selectable)• 4 analogue outputs (0-10V)• 4 digital outputs (max. 230VAC/6A)• 4 triac outputs (PWM, max. 1A)• Detachable connectors• RJ25 port for multiDISPLAY hand panel• Slave to CCU, Master to multiDISPLAY or other devices• Freely programmable with PLC logic according to IEC 61131-3 standard• Optional EnOcean transceiver to connect wireless devices• Optional MP-bus to communicate with Belimo actuators (max. 8)• Operating voltage 24 VAC/DC (16-26VAC)• DIN-rail mounted• Size (LxWxH): 122mm x 108mm x 65mm• Optional IP55 non-flammable polystyrene enclosure• Size with enclosure (LxWxH): 170mm x 145mm x 85mm	FX-MULTI-24 FX-MULTI-24-C
	<ul style="list-style-type: none">• 6 digital or resistive inputs• 2 analogue inputs, 0(2)-10V• 4 analogue or TRIAC outputs (jumper selectable)• 4 relay outputs (max. 230VAC/6A) (optional)• Detachable connectors• Slave to CCU• Comes with ready made firmware as per requirement• Operating voltage 24 VAC/DC (16-26VAC)• DIN-rail mounted• Size (LxWxH): 117mm x 125mm x 65mm• Optional IP55 non-flammable polystyrene enclosure• Size with enclosure (LxWxH): 170mm x 145mm x 85mm	FX-MULTI-16 FX-MULTI-16-C
	<ul style="list-style-type: none">• 3.5" Touch Screen• Integrated temperature sensor (NTC 10)• Freely programmable graphics and functionality• 5 built-in time schedules• Maximum 250 I/O points• Modbus RTU interface• Selectable master or slave mode• Typically slave to a multi-24 as a room control panel• Micro SD card for complex graphics• Three options available: Straight, Tilted and Embedded• Screen resolution 320 x 240 px• Operating voltage 12-26VDC or 16-26VAC• Size Straight (LxWxH): 85mm x 85mm x 19mm• Size Tilted (LxWxH): 85mm x 85mm x 35mm• Installation on standard 3" x 3" mounting box	FX-PR-Straight FX-PR-Tilted
	<ul style="list-style-type: none">• 3.5" Touch Screen• Integrated temperature sensor (NTC 10)• Freely programmable graphics and functionality• 5 built-in time schedules• Maximum 250 I/O points• Modbus RTU interface• Selectable master or slave mode• Typically slave to a multi-24 as a room control panel• RJ25 for power from and communication with FX-MULTI-24• Micro SD card for complex graphics• Screen resolution 320 x 240 px• Operating voltage 12-26VDC or 16-26VAC• Protection class: IP51• Size (LxWxH): 146.5mm x 89mm x 25mm	FX-HP




THERMOSTATS



COMMUNICATING THERMOSTATS							
COMMON FEATURES	Modbus RTU communication interface, Installation on standard 3" x 3" mounting box, Easy to operate, easy to integrate with Fidelix Central Control Units (CCUs), IP30 protection class						
	TYPE	OUTPUT SIGNAL FOR HEATING/COOLING	FAN CONTROL	OPERATING CONDITIONS	POWER SUPPLY	DESCRIPTION	PART NUMBER
	FCU THERMOSTAT WITH ON/OFF VALVE	On/Off heating/cooling with automatic changeover, 2-pipe	3-speed fan	0°- 50°C 5-90% RH	85 - 260VAC	Classical looks with large LCD Optional IR remote control Blue backlight Size (LxWxH): 100 x 86 x 15.3mm	FX-THR-FCU-230-2P-cla
	FCU THERMOSTAT WITH ON/OFF VALVE	On/Off heating and cooling with automatic changeover, 4-pipe					FX-THR-FCU-230-4P-cla
	TOUCH SCREEN FCU THERMOSTAT WITH ON/OFF VALVE	On/Off heating/cooling with automatic changeover, 2-pipe	3-speed fan	0°- 45°C 5-95% RH	12 VDC	Luxurious looks Large Touch Screen Infrared approaching sensor Energy saving mode Size (LxWxH): 86 x 86 x 13mm	FX-THR-FCU-12-2P-MD-ts
	TOUCH SCREEN FCU THERMOSTAT WITH ON/OFF VALVES	On/Off heating and cooling with automatic changeover, 4-pipe					FX-THR-FCU-12-4P-MD-ts
	VAV THERMOSTAT, MODULATING HEATING/COOLING	Modulating (0-10V) control signal for VAV damper	No	10°- 45°C 5-90% RH	24VAC ±10%	Stylish looking with mirror Energy saving input Remote sensor, NTC 3K Size (LxWxH): 86 x 86 x 23mm	FX-THR-VAV-24-CHM-MD-mir
	FCU THERMOSTAT WITH MODULATING VALVE	Modulating (0-10V) control signal for cooling/heating valve, 2-pipe	3-speed fan	0°- 50°C 5-95% RH	24VAC ±10%	Modern and attractive looks Energy saving input (ESI) Remote sensor, NTC 3K Size (LxWxH): 86 x 86 x 17.6mm	FX-THR-FCU-24-2PM-MD-mdr
	FCU THERMOSTAT WITH MODULATING VALVES	Modulating (0-10V) control signals for cooling and heating valves, 4-pipe					FX-THR-FCU-24-4PM-MD-mdr
STANDALONE THERMOSTATS							
COMMON FEATURES	Installation on standard 3" x 3" mounting box, Easy to operate, IP30 protection class						
	MECHANICAL FCU THERMOSTAT WITH ON/OFF VALVE CONTROL	On/Off heating/cooling with manual changeover, 2-pipe	3-speed fan	0°- 50°C 5-90% RH	230VAC	Traditional mechanical thermostat with large dial for setpoint (10-30°C) and sliding selectors for cool/off/heat and fan speed, no display Size (LxWxH): 86 x 86 x 24mm	FX-THR-FCU-230-2P-mec
	MECHANICAL FCU THERMOSTAT WITH ON/OFF VALVES	On/Off heating and cooling with manual changeover, 4-pipe					FX-THR-FCU-230-4P-mec
	FCU THERMOSTAT WITH ON/OFF VALVE	On/Off heating/cooling with automatic changeover, 2-pipe	3-speed fan	0°- 50°C 5-90% RH	85 - 260VAC	Elegant looks with large LCD Blue backlight Size (LxWxH): 86 x 86 x 15.3mm	FX-THR-FCU-230-2P-ele
	FCU THERMOSTAT WITH ON/OFF VALVES	On/Off heating and cooling with automatic changeover, 4-pipe					FX-THR-FCU-230-4P-ele
	FCU THERMOSTAT WITH ON/OFF VALVE	On/Off heating/cooling with automatic changeover, 2-pipe	3-speed fan	0°- 50°C 5-90% RH	85 - 260VAC	Classical looks with large LCD Optional IR remote control Blue backlight Size (LxWxH): 100 x 86 x 15.3mm	FX-THR-FCU-24-230-2P-cla
	FCU THERMOSTAT WITH ON/OFF VALVES	On/Off heating and cooling with automatic changeover, 4-pipe					FX-THR-FCU-24-230-4P-cla
	TOUCH SCREEN FCU THERMOSTAT WITH ON/OFF VALVE	On/Off heating/cooling with automatic changeover, 2-pipe	3-speed fan	0°- 50°C 5-90% RH	85 - 260VAC	Luxurious looks Large Touch Screen Infrared approaching sensor Energy saving mode Size (LxWxH): 86 x 86 x 13mm	FX-THR-FCU-230-2P-ts
	TOUCH SCREEN FCU THERMOSTAT WITH ON/OFF VALVES	On/Off heating and cooling with automatic changeover, 4-pipe					FX-THR-FCU-230-4P-ts
	FCU THERMOSTAT WITH MODULATING VALVE	Modulating (0-10V) control signal for cooling/heating valve, 2-pipe	3-speed fan	0°- 50°C 5-90% RH	24VAC ±10%	Modern and attractive looks Energy saving input (ESI) Remote sensor, NTC 3K Size (LxWxH): 86 x 86 x 17.6mm	FX-THR-FCU-24-2PM-mdr
	FCU THERMOSTAT WITH MODULATING VALVES	Modulating (0-10V) control signals for cooling and heating valves, 4-pipe					FX-THR-FCU-24-4PM-mdr

TEMPERATURE

	TYPE	OUTPUT SIGNAL	RANGE	PROTECTION CLASS	OPERATING CONDITIONS	DESCRIPTION	PART NUMBER
	OUTDOOR TEMPERATURE SENSOR	NTC 10K	-50 TO 100 °C	IP65 (NEMA 4X)	-50 - 100 °C	Integrated Wind And Sun Shield Accuracy: ±0.2°C	FX-TES-O
	ROOM TEMPERATURE SENSOR, SLIM	NTC 10K	0 - 50°C	IP30 (NEMA 1)	0° - 50°C 0 - 95%RH	Set Point Adjustment (Optional) range: 0K to 10K Display (Optional) Size: 38.1mm x 16.5mm Display Range: 0 – 35°C / 32 – 95°F Accuracy: ±0.2°C	FX-TES-R FX-TES-R-P FX-TES-R-LCD
	ROOM TEMPERATURE SENSOR, SQUARE	NTC 10K	0 - 50°C	IP30 (NEMA 1)	0° - 50°C 0 - 95%RH	Set Point Adjustment (Optional) range: 0K to 10K Fan Speed Selection (Optional): Auto-Off-Low-Med-High Accuracy: ±0.2°C	FX-TER-NTC10 FX-TER-NTC10P FX-TER-NTC10PS
	IMMERSION TEMPERATURE SENSOR	NTC 10K	-20 TO 105 °C	IP65 (NEMA 4X)	-20 - 105 °C	Probe Lengths: 100mm (default), 50mm, 150mm, 200mm, 300mm and 450mm Accuracy: ±0.2°C	FX-TES-Wxxx FX-TWxxx
	DUCT TEMPERATURE SENSOR	NTC 10K	-20 TO 105 °C	IP65 (NEMA 4X)	-20 - 105 °C	Probe Lengths: 200mm (default), 100mm, 300mm and 450mm Accuracy: ±0.2°C	FX-TES-Dxxx
HUMIDITY & TEMPERATURE							
	OUTDOOR HUMIDITY & TEMPERATURE SENSOR	RH: 4-20mA, 0-5/10VDC TEMPERATURE: NTC 10K	0-100% RH TE: -40 TO 85°C	IP65 (NEMA 4X)	-40° - 85°C	LCD Display Available Field Selectable outputs AC/DC Operation Accuracy: ±2% RH (5-95% RH)	FX-RHTES-O
	ROOM HUMIDITY & TEMPERATURE SENSOR	RH: 4-20mA, 0-5/10VDC TEMPERATURE: NTC 10K	0-100% RH TE: 0° TO 50°C	IP61 (NEMA 2)	0° - 50°C 0-95% RH	LCD Display Available Field Selectable outputs AC/DC Operation Accuracy: ±3% RH (5-95% RH)	FX-RHTES-R FX-RHTES-R-LCD
	DUCT HUMIDITY & TEMPERATURE SENSOR	RH: 4-20mA, 0-5/10VDC TEMPERATURE: NTC 10K	0-100% RH TE: -40 TO 85°C	IP61 (NEMA 2)	-40° - 85°C	LCD Display Available Field Selectable outputs AC/DC Operation Accuracy: ±3% RH (5-95% RH)	FX-RHTES-D FX-RHTES-D-LCD
PRESSURE AND AIR FLOW							
	AIR PRESSURE DIFFERENCE SENSOR	4-20 mA, 0-5/10 VDC, SWITCH SELECTABLE	POSITIVE,NEGATIVE OR DIFFERENTIAL PRESSURE - 250 TO 1000 Pa.	IP61 (NEMA 2)	0° - 70°C 10-90% RH	Suitable for measuring filter/fan differential pressure Measurement of Differential (two ports), Static, Velocity or Total Pressure. Four variable jumper selectable pressure ranges LCD display and integrated static probe available Accuracy: ±1% Full Scale of range	FX-PDS-A FX-PDS-A-LCD
	ROOM PRESURE DIFFERENCE SENSOR	4-20 mA, 0-5/10 VDC, SWITCH SELECTABLE	± 60, ± 30 Pa. OR ± 250, ± 125	IP30 (NEMA 1)	0° - 60°C 10 - 90% RH	Offers several bi-directional pressure ranges and field-selectable output signal types On-board auto-zero function, an alarm output with a variable trip point, a remote buzzer output with silence switch and a flashing alarm LED LCD display Accuracy: ± 1% F.S.O. (±2% F.S.O. for 30 Pa ranges)	FX-PDS-R-LCD-60 FX-PDS-R-LCD-250
	WATER GAUGE PRESSURE SENSOR	3-WIRE TRANSMITTER, SELECTABLE 4-20mA ACTIVE, 0-5/10VDC	0 - 0.5/1/2.5/5 BAR 0 - 1/2/5/10 BAR 0 - 3/6/15/30 BAR	IP65 (NEMA 4X)	0° - 50°C 10-90% RH	Backlit LCD for display Four switch selectable pressure ranges Uni-directional or bi-directional pressure range selection Accuracy: ±1% Full Scale of range	FX-PGS-W-5 FX-PGS-W-10 FX-PGS-W-30
	WATER DIFFERENTIAL PRESSURE SENSOR	3-WIRE TRANSMITTER, SELECTABLE 4-20mA ACTIVE, 0-5/10VDC	0 - 0.35/0.7/1.7 /3.45 BAR 0 - 0.5/1/2.5/5 BAR 0 - 1/2/5/10 BAR 0 - 3/6/15/30 BAR	IP65 (NEMA 4X)	0° - 50°C 10-90% RH	Backlit LCD for display Four switch selectable pressure ranges Uni-directional or bi-directional pressure range selection Accuracy: ±1% Full Scale of range	FX-PDS-W-3 FX-PDS-W-5 FX-PDS-W-10 FX-PDS-W-30
	AIR PRESSURE DIFFERENCE SWITCH	Volt-free contact. max. 1.0 A (0.4 A) / 250VAC	50 - 500 Pa	IP 54	-20°C - +85°C	Suitable for monitoring filters and fan status Duct fixing kit is included Upper and lower switching pressure tolerance +/-15% Max. operating pressure 50 mbar	FX-PDSW-A
	WATER PRESSURE DIFFERENCE SWITCH	Volt-free contact. 3 Amp @ 230VAC Inductive 0.1 Amp @ 230VDC	0.2 to 4.5 bar	IP30 (NEMA 1)	-20° - 70°C	Adjustable setpoint Adjustable differential Direct switching of 240 VAC loads for flow proving & flow failure detection	FX-PDSW-W
	AIR FLOW SENSOR	4 – 20mA or 0 – 10 VDC signal	0 - 16 m/s	IP54	-20°C - 50°C	Linear output signal Compensates for changes of air temperature Corrosion resistant material Fully electronic registration of airflow speed AC or DC voltage supply Telescopic sensor facilitates installation Fuse protected. Accuracy: ±5 %	FX-AFS
CARBON-DIOXIDE, CO2							
	ROOM CARBON-DIOXIDE & TEMPERATURE SENSOR	4-20 mA, 0-5/10 VDC NTC 10K	0-2000 PPM CO2 RANGE 100 M³ (1000 FT³) TYPICAL	IP30 (NEMA 1)	0° - 50°C 0-95% RH	Patented self-calibration algorithm Guaranteed 5 year calibration interval Easily field calibrated Accuracy: ±30 ppm + 3% of reading with Auto Calibration on LCD Display available	FX-CDTES-R FX-CDTES-R-LCD

	TYPE	OUTPUT SIGNAL	RANGE	PROTECTION CLASS	OPERATING CONDITIONS	DESCRIPTION	PART NUMBER
	DUCT CARBON-DIOXIDE & TEMPERATURE SENSOR	4-20 mA, 0-5/10 VDC NTC 10k	0-2000 ppm CO2 range 100 m³ (1000 ft³) typical	IP65 (NEMA 4X)	0°- 50°C 0-95% RH	Patented self-calibration algorithm Guaranteed 5 year calibration interval Easily field calibrated Accuracy: ±30 ppm + 3% of reading with Auto Calibration on LCD Display available	FX-CDTES-D FX-CDTES-D-LCD
CARBON-MONOXIDE,CO							
	CARBON-MONOXIDE SENSOR	4-20 mA (loop-powered with 24 VDC)	Analog: 0-300 ppm Modbus: 0-500 ppm 700 m³ (7500 ft³) or 15 m radius of area to be covered	IP65 (NEMA 4X)	-20° - 50°C 15-95% RH	Electrochemical sensing element Powered by either AC or DC source Easy to calibrate in the field Accuracy: ± 5 ppm or ± 5% of reading @ 0-50°C, 15-95% RH	FX-CMS-R
	DUCT CARBON-MONOXIDE SENSOR	4-20 mA (Active), 0-5/10 VDC (Selectable)	0-100, 150, 300, 400 or 500 ppm	IP65 (NEMA 4X)	-20° - 50°C 15-95% RH 0.9 - 1.1 ATM	Setup/calibration fully menu driven Easy to calibrate in the field Replaceable Electrochemical sensing element Powered by either an AC or DC source Accuracy: ±5 ppm or 5% of reading whichever is greater	FX-CMS-D
SMOKE							
	DUCT SMOKE DETECTOR	Two (2) sets of 10A form "C" alarm contacts One (1) set of 10A form "C" trouble contacts	0.50 - 20 m/s	IP61 (NEMA 2)	PHOTO: 0°-60°C ION: 0°-70°C	Detection of smoke and products of combustion in air moving through HVAC ducts Easy and quick mounting to round or rectangular ducts from 1" – 12" wide Simple change-out of photo or ion detector heads Clear cover for convenient visual inspection Built-in reset switch that is also an alarm test switch	FX-SMD-D-P FX-SMD-D-I
WATER LEVEL / FLOW / LEAKAGE							
	WATER LEVEL SWITCH	Volt free contact 250V, 10A	0-5m (cable length)	IP68	0°-60°C	Compatible for clean waters, sumps and general applications Accurate and repeatable switching Adjustable Max and Min switching levels with the counter-weight	FX-LVSW-5
	ULTRASONIC LEVEL SENSOR	0-5/10VDC 4-20mA (750ohm resistance)	0.2 - 5m	METER: IP65 SENSOR: IP68	METER: -20°- 60°C SENSOR: -20°- 80°C	Accurate tank level meter up to 5 meter High precision Segregated meter and sensor units Accuracy: 0.25% - 0.5% of Full Scale	FX-USLS-5
	LIQUID FLOW SWITCH	Dust-tight microswitch with switching contacts (NC/NO)	0.6-240 m³/h for pipe sizes DN25-200	IP65, CLASS I	-40° - +85 °C 10...90% RH	Well-suited in pipes of general industrial plants, heating and air conditioning systems, refrigeration systems, sprinkler or anti-fire systems, heat pumps, devices for oil monitoring, lubrication circuits Adjustable flow rate setting Suitable for pipes with diameter 1-8"	FX-FLSW-W
OCCUPANCY							
	WALL MOUNTED OCCUPANCY DETECTOR	24VDC or 230VAC control signal	12 meter range (180°)	IP44	-20° - +55 °C 10...90% RH	Wall mounted Passive Infrared occupancy detector 180° horizontal detection angle	FX-PIR-W180 FX-PIR-W180-230V
	FLUSH MOUNTED OCCUPANCY DETECTOR	24VDC or 230VAC control signal	7 m at 2.5 m height 8.4 m at 3.0 m height	IP20	0° - +55 °C 10...90% RH	Flush mounted occupancy detector gives out either 24VDC or 230VAC control signal	FX-PIR-C360F FX-PIR-C360F-230V
	HIGH DEFINITION OCCUPANCY DETECTOR	Volt free contact	8 m at 2.4 m height	IP30 (NEMA 1)	-40° - +55 °C 10...90% RH	High definition occupancy detector, 8-element pyros Recommended installation heigh 2.3 - 4.0 meters	FX-PIR-HD-C360
	DUAL TECHNOLOGY OCCUPANCY DETECTOR	Volt free contact	8 m at 2.4 m height	IP30 (NEMA 1)	-40° - +55 °C 10...90% RH	Dual technology occupancy detector with Passive Infrared and Ultrasonic sensors	FX-PIR-US-C360
	DUAL TECHNOLOGY OCCUPANCY DETECTOR	Volt free contact	8 m at 2.4 m height	IP30 (NEMA 1)	-40° - +55 °C 10...90% RH	Dual technology occupancy detector with High Definition Passive Infrared and Ultrasonic sensors	FX-PIR-HD-US-C360
LIGHT LEVEL							
	ILLUMINATION TRANSMITTER, OUTDOOR	0-10VDC	Selectable: 0-500 Lux 0-1000 Lux 0-20000 Lux 0-60000 Lux	IP65 (NEMA 4X)	-20 TO +60°C	Outdoor lux level sensor with four selectable ranges Suitable for controlling outdoor and facade lights via BMS Sensitivity adapted to human eye's range 350-820nm Dimensions: 64 x 72 x 40 mm	FX-LXS-O
	ILLUMINATION TRANSMITTER, INDOOR	0-10VDC	Selectable: 0-500 Lux 0-1000 Lux 0-5000 Lux 0-20000 Lux	IP30 (NEMA 1)	0 TO +50°C	Indoor lux level sensor with four selectable ranges Suitable for controlling indoor lighting via BMS Sensitivity adapted to human eye's range (350-820nm) Dimensions: 85 x 91 x 27 mm	FX-LXS-IN

SELF-RETURN LIGHTING CONTROL SWITCHES







	TYPE	OUTPUT SIGNAL	RANGE	PROTECTION CLASS	OPERATING CONDITIONS	DESCRIPTION	PART NUMBERS
	1-GANG SELF-RETURN SWITCH	Volt free contact	Max. Current 10A Max. Voltage 250VAC	N/A	-20 TO +60°C	Five acrylic color options: 1. Light Silver 2. Golden Yellow 3. Rose Gold 4. White 5. Black	FX-LSW-SR-1G-eco
	2-GANG SELF-RETURN SWITCH	2 volt free contacts	Max. Current 10A Max. Voltage 250VAC	N/A	-20 TO +60°C		FX-LSW-SR-2G-eco
	3-GANG SELF-RETURN SWITCH	3 volt free contacts	Max. Current 10A Max. Voltage 250VAC	N/A	-20 TO +60°C	Three metal options: 1. Satin Silver 2. Satin Gold 3. Satin Rose Gold	FX-LSW-SR-3G-eco
	4-GANG SELF-RETURN SWITCH	4 volt free contacts	Max. Current 10A Max. Voltage 250VAC	N/A	-20 TO +60°C	Horizontal dual, triple and quad frames available	FX-LSW-SR-4G-eco
	1-GANG SELF-RETURN SWITCH	Volt free contact	Max. Current 10A Max. Voltage 250VAC	N/A	-20 TO +60°C	Optional controlled LEDs (24VDC) available for 1-gang and 2-gang models	FX-LSW-SR-1G-lux
	2-GANG SELF-RETURN SWITCH	2 volt free contacts	Max. Current 10A Max. Voltage 250VAC	N/A	-20 TO +60°C	Optional engravings on buttons available	FX-LSW-SR-2G-lux
HOTEL GUEST ROOM SPECIFIC EQUIPMENT							
	BASIC CARD HOLDER SWITCH, ANY CARD	230VAC	Max. Current 30A Max. Voltage 250VAC	N/A	0° - +60 °C 15...85% RH	Basic energy saving card holder Works with any card	FX-CHSW-P
	BASIC CARD HOLDER SWITCH, MIFARE CARD	230VAC	Max. Current 30A Max. Voltage 250VAC	N/A	0° - +60 °C 15...85% RH	Basic energy saving card holder Works with MIFARE RFID cards (13,56 MHz)	FX-CHSW-M
	ECO SERIES CARD HOLDER SWITCH, MIFARE CARD	230 VAC	Max. Current 16A Max. Voltage 250VAC	N/A	0° - +60 °C 15...85% RH	White/Black, with 5 frame options, Light Silver/Black/ White/Golden Yellow/Rose Gold Works with MIFARE RFID cards (13,56 MHz)	FX-CHSW-M-Wh-eco FX-CHSW-M-Bl-eco
	LUX SERIES CARD HOLDER SWITCH, MIFARE CARD	230 VAC	Max. Current 16A Max. Voltage 250VAC	N/A	0° - +60 °C 15...85% RH	Glass, metal, wood, stone and leather frame options Works with MIFARE RFID cards (13,56 MHz)	FX-CHSW-M-A-Wh-lux
	ECO SERIES DOORBELL DND-MUR DISPLAY SYSTEM	Low current signal	Up to 100m	N/A	0° - +60 °C 15...85% RH	Doorbell unit 230VAC powered Indoor and outdoor units powered by Doorbell unit Cat 5/6 cabling to indoor and outdoor units Optional Please Wait function Optional laundry/newspaper request	FX-DBS-S1-eco
	ECO SERIES DOORBELL DND-MUR DISPLAY SYSTEM WITH LARGE OUTDOOR PANEL	230 VAC	Not limited	N/A	0° - +60 °C 15...85% RH	All units 230VAC powered Normal electrical power cabling Optional Please Wait function Optional laundry/newspaper request	FX-DBS-L1-eco
	LUX SERIES DOORBELL DND-MUR DISPLAY SYSTEM	230 VAC	Not limited	N/A	0° - +60 °C 15...85% RH	All units 230VAC powered Normal electrical power cabling Optional Please Wait function Optional laundry/newspaper request	FX-DBS-lux
	HOTEL LOCK WITH INTEGRATED SQUARE MIFARE READER	Optional Near Field Communication (NFC) and Zigbee networked	Card 4.5cm Bluetooth 6 meters Zigbee 10 meters	N/A	0° - +60 °C 15...85% RH	Stylish high quality hotel lock with MIFARE reader Secure 5 latch mortise Two Stainless Steel (SUS304) handle options Low power consumption and easy battery change 20,000 openings with new batteries Audit trail for 800 events Optional NFC Mobile key for iPhones & Android Optional Zigbee to Ethernet communication	FX-HL-Lux-SQ FX-HL-Lux-SQ-NFC FX-HL-Lux-SQ-ZB
	HOTEL LOCK WITH INTEGRATED ROUND MIFARE READER	Optional Near Field Communication (NFC) and Zigbee networked	Card 4.5cm Bluetooth 6 meters Zigbee 10 meters	N/A	0° - +60 °C 15...85% RH		FX-HL-Lux-RD FX-HL-Lux-RD-NFC FX-HL-Lux-RD-ZB
	BLUETOOTH TO WIFI CONVERTER	Bluetooth to Locks WIFI to hotel WLAN	6 meters	N/A	0° - +60 °C 15...85% RH	Bluetooth to WIFI gateway for Mobile Key function Can link 4-6 locks to hotel WIFI	FX-HL-BTtoWIFI
	ZIGBEE TO LAN CONVERTER	Zigbee to Locks Ethernet (10/100 BaseT) to LAN	10 meters	N/A	0° - +60 °C 15...85% RH	Bluetooth to WIFI gateway can link up to 10 locks to hotel LAN	FX-HL-ZBtoLAN

	TYPE	OUTPUT SIGNAL	RANGE	PROTECTION CLASS	OPERATING CONDITIONS	DESCRIPTION	PART NUMBERS
	HOTEL CARD ISSUING SOFTWARE AND USB CARD READER/WRIER	Mifare Read And Write	MAX. 4.5 CM	N/A	0° - +60 °C 15...85% RH	Hotel Card Issuing tool and USB MIFARE card reader/writer	FX-HL-USB-CRW
ULTRASONIC COOLING AND HEATING & WATER							
	ULTRASONIC COOLING & HEATING METER (DN20-40)	M-bus Software Point Optional Modbus or 50 pulse	Pipe Size: DN20 -DN40 Nominal Flow: 1.5 - 10m3/h	IP65 (NEMA 4X)	5° - 55 °C	External threaded screw to connect to pipelines Two optional models: Standalone with pulse outputs Networked with Modbus communication Maximum admissible working pressure: 1.6MPa (16 bar) Automatic diagnostic function Accuracy Flow Meter: ±(2+0.02 Qp / Q)% Accuracy Temperature: ±(0.3 + 0.05 * T)K; ΔT = T ± 0.1K	FX-BTU-DNxx-M FX-BTU-DNxx FX-BTU-DNxx-MD (xx=DN size)
	ULTRASONIC COOLING & HEATING METER (DN50-200)	M-bus Software Point Optional Modbus or 50 pulse	Pipe Size: DN50-DN200 Nominal Flow: 15 - 250 m3/h	IP65 (NEMA 4X)	5° - 55 °C	Flanges to connect to pipelines Two Optional models: Standalone with pulse outputs Networked with Modbus communication Maximum admissible working pressure: 1.6MPa (16 bar) Automatic diagnostic function Accuracy Flow Meter: ±(2+0.02 Qp / Q)% Accuracy Temperature: ±(0.3 + 0.05 * T)K; ΔT = T ± 0.1K	FX-BTU-DNxx-M FX-BTU-DNxx FX-BTU-DNxx-MD (xx=DN size)
	ULTRASONIC WATER METER (DN15-DN40)	M-bus Software Point Optional Modbus or 50 pulse	Pipe Size: DN15 to DN40. Nominal flow: 2.5 m3/h to 16 m3/h.	IP65 (NEMA 4X)	5° - 55 °C	External threaded screw connection to pipelines. Not influenced by medium impurities, chemicals or magnetic interference. Cold water model: 0.1 - 50°C Hot water model (H): 0.1 - 90°C Battery life is more than 8 years Accuracy: Class 2 Two Options: Standalone with pulse outputs Networked with Modbus communication Maximum admissible working pressure: 1.6MPa (16 bar)	FX-USWM-DNxx-M FX-USWM-DNxx-M-H FX-USWM-DNxx FX-USWM-DNxx-H FX-USWM-DNxx-MD FX-USWM-DNxx-MD-H (xx=DN size 15-40)
	ULTRASONIC WATER METER (DN50-DN300)	M-bus Software Point Optional Modbus or 50 pulse	Pipe Size: DN50-DN300 Nominal flow: 25m3/h - 1000m3/h	IP65 (NEMA 4X)	5° - 55 °C	Flanged connection to pipelines. Not influenced by medium impurities, chemicals or magnetic interference. Cold water model: 0.1 - 50°C Hot water model (H): 0.1 - 90°C Battery life is more than 8 years Accuracy: Class 2 Two Options: Standalone with pulse outputs Networked with Modbus communication Maximum admissible working pressure: 1.6MPa (16 bar)	FX-USWM-DNxx-M FX-USWM-DNxx-M-H FX-USWM-DNxx FX-USWM-DNxx-H FX-USWM-DNxx-MD FX-USWM-DNxx-MD-H (xx=DN size 50-300)






ACCESS CONTROL CCU, DOOR UNIT AND SECURITY INPUT MODULE



	TYPE	DESCRIPTION	PART NUMBERS
	FREELY PROGRAMMABLE BACnet/IP SECURITY CONTROLLER WITH 40 BUILT-IN IO-POINTS AND INTEGRATED WEB & FTP SERVER	<ul style="list-style-type: none"> • Integrated back-up battery and tamper switch • BACnet B-BC controller • 2000 I/O-points (physical and virtual) • 5,7" touch screen • Windows CE • Freely programmable webserver/PLC with open IEC 61131-3 standard • Ethernet RJ45, DVI, serial and USB-connector • 2 pcs of BACnet MS-TP or Modbus RTU ports (RS-485) • Micro SD card reader for automatic back-up function • 16 universal inputs (digital or analogue selectable) • 8 digital inputs (with terminal resistor) • 8 relay outputs (230VAC/6A) • 8 analogue outputs (0-10V) • 230VAC power supply 	FX-40-SPIDER-S
	DOOR UNIT	<ul style="list-style-type: none"> • 2 card reader interfaces • 2 digital outputs for locks and local alarm (max load 1A / 30VDC) • 8 monitored digital inputs for door status, request to exit and alarms • Integrated tamper switch • Detachable connectors • Operating voltage 24 VDC (16-26VDC) • IP55 non-flammable polystyrene enclosure • Size (LxWxH): 110mm x 110mm x 65mm 	FX-DU-10
	SECURITY INPUT MODULE	<ul style="list-style-type: none"> • 8 security loops with sabotage detection • Individually detachable connectors • Operating voltage 12 or 24 VDC (10-26VDC) • DIN-rail mounted • Size (LxWxH): 123mm x 90mm x 65mm • Optional IP55 non-flammable polystyrene enclosure • Size with enclosure (LxWxH): 170mm x 145mm x 85mm 	FX-SI-8

CARD READERS




	TYPE	OUTPUT SIGNAL	PROTECTION CLASS	OPERATING CONDITIONS	DESCRIPTION	PART NUMBER
	PROXIMITY CARD READER (125 KHz), 10CM	Wiegand, RS232	IP66	-35 - 75 °C 0 - 90%RH	Reading distance up to 10 cm Built-in two colour LED Built-in buzzer Operating voltage: 9-16 VDC Power consumption: 70mA @ 12VDC, Max. 180mA Size (WxHxD): 76 x 124 x 23 mm	FX-CR-STND-PX
	SMART CARD READER (13.56 MHz), 8.9CM	Wiegand, RS232	IP66	-35 - 75 °C 0 - 90%RH	Reading distance up to 8 cm Built-in two colour LED Built-in buzzer Operating voltage: 9-16 VDC Power consumption: 70mA @ 12VDC, Max. 180mA Size (WxHxD): 76 x 124 x 23 mm"	FX-CR-STND-SR
	PROXIMITY CARD READER (125 KHz), 7CM	Wiegand, RS232	IP67	-40 - 60°C 0 - 90%RH	Reading distance up to 7 cm Built-in three colour LED Built-in buzzer Operating Voltage: 10 - 30VDC Power consumption: 40mA @ 24VDC, max 65mA Size (WxHxD): 43 x 110 x 24 mm	FX-CR-SLIM-PX
	SMART CARD READER (13.56 MHz), 8.9CM	Wiegand, RS232	IP67	-40 - 60°C 0 - 90%RH	Reading distance up to 7 cm Built-in three colour LED Built-in buzzer Operating Voltage: 10 - 30VDC Power consumption: 20mA @ 24VDC, max 60mA Size (WxHxD): 43 x 110 x 24 mm	FX-CR-SLIM-SR
	PROXIMITY CARD READER WITH KEYPAD (125 KHz), 7CM	Wiegand, RS232	IP67	-40 - 60°C 0 - 90%RH	Reading distance up to 7 cm Built-in three colour LED Built-in buzzer Operating Voltage: 10 - 30VDC Power consumption: 15mA @ 24VDC, max 40mA Size (WxHxD): 43 x 110 x 24 mm	FX-CRK-SLIM-PX
	SMART CARD READER (13.56 MHz), 8.9CM, WITH KEYPAD	Wiegand, RS232	IP67	-40 - 60°C 0 - 90%RH	Reading distance up to 7 cm Built-in three colour LED Built-in buzzer Operating Voltage: 10 - 30VDC Power consumption: 20mA @ 24VDC, max 60mA Size (WxHxD): 43 x 110 x 24 mm	FX-CRK-SLIM-SR

LOCKS





	MAGNETIC LOCK FOR SLIDING DOOR, 600 LBS	600 LBS 280 kg	IP44	-10 - 60°C 0 - 90%RH	Operating Voltage: 12VDC Power consumption: 450mA @ 12VDC Optional built-in status indication (NO/NC/COM) Built-in status LED Lock size (WxHxD): 250 x 48 x 27 mm Armature plate size (WxHxD): 180 x 38 x 11 mm	FX-EML-600S
	MAGNETIC LOCK, 600 LBS	600 LBS 280 kg	IP44	-10 - 60°C 0 - 90%RH	Operating Voltage: 12VDC Power consumption: 450mA @ 12VDC Optional built-in status indication (NO/NC/COM) Built-in status LED Lock size (WxHxD): 250 x 48 x 27 mm Armature plate size (WxHxD): 180 x 38 x 11 mm	FX-EML-600 FX-EML-600-M
	DOUBLE MAGNETIC LOCK, 2 x 600 LBS	2 x 600 LBS 2 x 280 kg	IP44	-10 - 60°C 0 - 90%RH	Optional built-in status indication (NO/NC/COM) Built-in status LED Operating Voltage: 12VDC Power consumption: 2 x 450mA @ 12VDC Lock size (WxHxD): 500 x 48 x 27 mm Armature plate size (WxHxD): 180 x 38 x 11 mm (2 pcs)	FX-EML-2x600 FX-EML-2x600-M
	DROPBOLT LOCK FLUSH MOUNTED, FAIL SAFE	Volt free contact	IP44	-10 - 60°C 0 - 90%RH	Built-in status indication (NO/NC/COM) and status LED Operating Voltage: 12VDC Power consumption: 250mA @ 12VDC, Start-up 1200mA Lock size (WxHxD): 200 x 34 x 42 mm	FX-DBL-F
	DROPBOLT LOCK SURFACE MOUNTED, FAIL SAFE	Volt free contact	IP30	-10 - 60°C 0 - 90%RH	Built-in status indication (NO/NC/COM) and status LED Operating Voltage: 12VDC Power consumption: 250mA @ 12VDC, Start-up 1200mA Lock size (WxHxD): 147 x 24 x 38 mm	FX-DBL-S

	TYPE	OUTPUT SIGNAL	PROTECTION CLASS	OPERATING CONDITIONS	DESCRIPTION	PART NUMBER
	DROPBOLT LOCK FOR GLASS DOOR, FAIL SAFE	Volt free contact	IP44	-10 - 60°C 0 - 90%RH	Built-in status indication (NO/NC/COM) and status LED Operating Voltage: 12VDC Power consumption: 250mA @ 12VDC, Start-up 1200mA Lock size (WxHxD): 147 x 43 x 38mm & 147 x 43 x 24mm	FX-DBL-SGL
	ELECTRIC STRIKE LOCK	N/A	IP44	-10 - 60°C 0 - 90%RH	Operating Voltage: 12VDC Power consumption: 200mA @ 12VDC Lock size (WxHxD): 160 x 25 x 31 mm	FX-ESL

REQUEST FOR EXIT BUTTONS










	REQUEST TO EXIT BUTTON, PLASTIC	Potential free contact	N/A	0 - 55°C 0 - 95%RH	Electrical rating: 3A, 36VDC Mechanical life mote than 1,000,000 contacts Size (WxHxD): 86 x 86 x 20 mm	FX-REX-basic
	REQUEST TO EXIT BUTTON, METAL	Potential free contact	N/A	-10 - 55°C 0 - 95%RH	Stainless steel panel Electrical rating: 3A, 36VDC Mechanical life mote than 1,000,000 contacts Size (WxHxD): 86 x 86 x 20 mm	FX-REX-standard
	REQUEST TO EXIT BUTTON WITH PROXIMITY SENSOR	Potential free contact	IP55	-20 - 55°C 0 - 95%RH	Sensing distance: 0.1 - 10cm Operating Voltage: 12VDC Electrical rating: 3A, 36VDC Mechanical life mote than 1,000,000 contacts Size (WxHxD): 86 x 86 x 20 mm	FX-REX-IR





MAGNETIC CONTACTS AND DETECTORS

	MAGNETIC CONTACT RECESSED	Potential free contact	IP30	-10 - 55°C 0 - 95%RH	Operating distance: 15-25mm Reated current: 500mA Rated voltage: Max. 100VDC Rated power: 10W Size (Reed switch): 65 x 19 x 12mm Size (Magnet): 65 x 12 x 12mm	FX-MGSW-F
	MAGNETIC CONTACT SURFACE MOUNTED	Potential free contact	IP66	-40 - 65°C 0 - 95%RH	Operating distance: 15-25mm Reated current: 100mA Rated voltage: Max. 200VDC Rated power: 2W Size (Reed switch): 18.5 x 10-12mm Size (Magnet): 15 x 10-12mm	FX-MGSW-S
	CEILING MOUNTED PASSIVE INFRARED DETECTOR	Potential free contact	IP30	-20 - 60°C 0 - 95%RH	NC alarm contact Tamper switch Input voltage: 9 - 16VDC, 9mA Size (DxH): 85 x 25mm	FX-PIR-S-C360
	WALL MOUNTED PASSIVE INFRARED DETECTOR	Potential free contact	IP30	-20 - 60°C 0 - 95%RH	NC alarm contact Tamper switch Input voltage: 9 - 16VDC, 8mA Size (WxHxD): 60 x 100 x 42mm	FX-PIR-S-W90



VIDEO SURVEILLANCE

		Max resolution and frame rate at max resolution	Image Sensor	Lens	Sensitivity		Horizontal View Angle	Compression Format			IR distance	IRC filter	IP66 (Weatherproof)	IK10 (Vandalproof)	WLAN Option	2-way audio	BNC Output	I/O	Wide Dynamic Range	SD Card	Max. Power Consumption		Dimensions, mm	Operating Temperature	Part Number
				Color (lux)	B/W (lux)	H.264		M-JPEG	H.265	12VDC, IR On											Power over Ethernet (PoE), IR On				
Box Cameras																									
	Full HD	2 Mpix@30fps	1/2.7" CMOS	CS mount	0.05	0.01	N/A	✓	✓		N/A	✓			✓	✓	✓	1DI,1DO	D-WDR	✓	2.88W	3.84W	W65 x H58 x L132	0°C - 50°C	FX-CFB-2M4
	High Frame Rate Full HD	2 Mpix@60fps	1/2.8" Sony Exmor CMOS	CS mount	0.01	0.005	N/A	✓	✓		N/A	✓				✓	✓	1DI,1DO	WDR	✓	3.96W	4.75W	W65 x H58 x L132	-20°C - 55°C	FX-CFB-2M4-60FPS
	4 Megapixel	4 Mpix@30fps	1/3" CMOS	CS mount	0.08	0.03	N/A	✓	✓		N/A	✓			✓	✓		1DI,1DO	D-WDR	✓	3.96W	5.28W	W65 x H58 x L132	-20°C - 55°C	FX-CFB-4M4
	5 Megapixel	5 Mpix@30fps	1/3.2" CMOS	CS mount	0.05	0.01	N/A	✓	✓	✓	N/A	✓			✓	✓	✓	1DI,1DO	D-WDR	✓	2.76W	3.99W	W65 x H58 x L132	-20°C - 55°C	FX-CFB-5M5
Bullet cameras Cameras																									
	High Definition (HD)	1 Mpix@30fps	1/4" CMOS	3-10.5mm	0.1	0.05	21.71° - 69.02°	✓	✓		25m	✓	✓		✓				D-WDR	Micro	4.32W	5.28W	Φ83 x L117	-10°C - +55°C	FX-CFBU-1M4-O-IR25
	Full HD with 25 meter IR	2 Mpix@30fps	1/2.7" CMOS	3-10.5mm	0.05	0.01	34.89° - 96.49°	✓	✓		25m	✓	✓		✓	✓	✓	1DI, 1DO	D-WDR	Micro	4.8W	6.72W	Φ83 x L117	-10°C - +55°C	FX-CFBU-2M4-O-IR25
	High Frame Rate Full HD	2 Mpix@60fps	1/2.8" Sony Exmor CMOS	3-10.5mm	0.01	0.005	31.9° - 104.9°	✓	✓		35m	✓	✓			✓	✓	1DI,1DO	WDR	Micro	6.00W	7.2W	Φ83 x L180	-20°C - +60°C	FX-CFBU-2M4-O-IR30-60FPS
	Full HD with 50 meter IR	2 Mpix@30fps	1/2.7" CMOS	7-22mm	0.05	0.01	17.2° - 46.7°	✓	✓		50m	✓	✓		✓	✓	✓	1DI,1DO	D-WDR	Micro	5.4W	7.5W	Φ114 x L260	-10°C - +55°C	FX-CFBU-2M4-O-IR50
	4 Megapixel with 30m IR	4 Mpix@30fps	1/3" CMOS	2.8-12mm	0.08	0.03	34.47° - 92.42°	✓	✓		30m	✓	✓		✓	✓		1DI,1DO	D-WDR	Micro	6.36W	8.16W	Φ77 x L125	-20°C - +60°C	FX-CFBU-4M4-O-IR30
	4 Mpix with zoom lens, 30m IR	4 Mpix@30fps	1/3" CMOS	2.8-12mm 4.2x	0.08	0.03	35.68° - 102.56°	✓	✓		30m	✓	✓		✓	✓		1DI,1DO	D-WDR	Micro	6.6W	8.64W	Φ77 x L125	-20°C - +60°C	FX-CZBU-4M4-O-IR30
	4 Mpix with zoom lens, 70m IR	4 Mpix@25fps	1/3" CMOS	5.1-51mm 10x	0.08	0.03	6.99° - 51.04°	✓	✓	✓	70m	✓	✓		✓	✓	✓	1DI,1DO	D-WDR	Micro	7.92W	9.60W	Φ77 x L172	-20°C - +60°C	FX-CZBU-4M5-10Z-O-IR70
	5 Megapixel with 30m IR	5 Mpix@30fps	1/3.2" CMOS	3-10.5mm	0.5	0.1	26.94° - 70.25°	✓	✓	✓	30m	✓	✓		✓	✓	✓	1DI,1DO	D-WDR	Micro	5.88W	7.41W	Φ77 x L125	-20°C - +60°C	FX-CFBU-5M5-O-IR25
	8 Megapixel with 25m IR	8 Mpix@15fps	1/2.6" CMOS sensor	3-10.5mm	1	0.5	31.83° - 87.72°	✓	✓		25m	✓	✓		✓	✓		1DI,1DO	D-WDR	Micro	7.08W	8.64W	Φ77 x L125	-20°C - +60°C	FX-CFBU-8M4-O-IR25
Dome Cameras																									
	High Definition (HD) Mini Dome	1 Mpix@30fps	1/4" CMOS	2.8mm	0.2	0.1	77.79°	✓	✓		5m	✓			✓	✓		1DI,1DO	D-WDR	Micro	2.52 W	3.36W	Φ100 x H49	0°C - 45°C	FX-CFMD-1M4-F
	High Definition fixed lens	1 Mpix@30fps	1/4" CMOS	2.8mm	0.2	0.1	77.79°	✓	✓		20m	✓				✓		1DI,1DO	D-WDR	Micro	3.72W	4.8W	Φ131 x H94	0°C - 45°C	FX-CFD-1M4-IR-F
	High Definition vari-focal	1 Mpix@30fps	1/4" CMOS	2.8-12mm	0.1	0.05	24.86° - 70.88°	✓	✓		15m	✓				✓		1DI,1DO	D-WDR	Micro	3.72W	5.28W	Φ131 x H94	0°C - 45°C	FX-CFD-1M4-IR
	High Definition flush mounted	1 Mpix@30fps	1/4" CMOS	2.8-12mm	0.1	0.05	24.86° - 70.88°	✓	✓		15m	✓				✓		1DI,1DO	D-WDR	Micro	3.72W	5.28W	Φ165 x H70	0°C - 45°C	FX-CFDF-1M4-IR
	Full HD with 15 meter IR	2 Mpix@30fps	1/2.7" CMOS	3-9mm	0.05	0.01	33.04° - 91.44°	✓	✓		15m	✓				✓	✓	1DI,1DO	D-WDR	✓	3.96W	5.28W	Φ132 x H108	0°C - 45°C	FX-CFD-2M4-IR
	High Frame Rate Full HD	2 Mpix@60fps	1/2.8" Sony Exmor CMOS	3-9mm	0.01	0.005	28° - 103°	✓	✓		20m	✓				✓	✓	1DI,1DO	WDR	✓	5.16W	6.72W	Φ132 x H108	-10°C - +55°C	FX-CFD-2M4-IR-60FPS
	4 Megapixel with 20m IR	4 Mpix@30fps	1/3" CMOS	2.8-12mm	0.08	0.03	34.47° - 92.42°	✓	✓		20m	✓				✓		1DI,1DO	D-WDR	✓	5.88W	7.68W	Φ132 x H108	-20°C - +55°C	FX-CFD-4M4-IR
	5 Megapixel with 20m IR	5 Mpix@30fps	1/3.2" CMOS	3-10.5mm	0.5	0.1	26.94° - 70.25°	✓	✓	✓	20m	✓				✓	✓	1DI,1DO	D-WDR	✓	6W	6.9W	Φ132 x H108	-20°C - +55°C	FX-CFD-5M5-IR
	8 Megapixel with 20m IR	8 Mpix@15fps	1/2.6" CMOS	3-10.5mm	1	0.5	31.83° - 87.72°	✓	✓		20m	✓				✓		1DI,1DO	D-WDR	✓	6.48W	7.98W	Φ132 x H108	-20°C - +55°C	FX-CFD-8M4-IR

		Max resolution and frame rate at max resolution	Image Sensor	Lens	Sensitivity		Horizontal View Angle	Compression Format			IR distance	IRC filter	IP66 (Weatherproof)	IK10 (Vandalproof)	WLAN Option	2-way audio	BNC Output	I/O	Wide Dynamic Range	SD Card	Max. Power Consumption		Dimensions, mm	Operating Temperature	Part Number
					Color (lux)	B/W (lux)		H.264	M-JPEG	H.265											12VDC, IR On	Power over Ethernet (PoE), IR On			
Fish Eye PTZ Cameras																									
	Indoor, 5 Megapixel	5 Mpix@15fps	1/3.2" CMOS	1.19 mm	1		185°	✓	✓						✓	✓	1DI,1DO	D-WDR	✓	4W	4.8W	Φ132 x H108	0°C - 45°C	FX-CFD-5M4-FE360	
	Outdoor/Vandal, 5 Megapix	5 Mpix@15fps	1/3.2" CMOS	1.19 mm	1		185°	✓	✓			✓	✓		✓	✓	1DI,1DO	D-WDR	Micro	4.8W	5.8W	Φ137 x H102	-10°C - +55°C	FX-CFDV-5M4-FE360-O	
Outdoor/Vandal Dome Cameras																									
	HD Mini Vandal Dome	1 Mpix@30fps	1/4" CMOS	2.8mm	0.2	0.1	77.79°	✓	✓		5m	✓		✓	✓	✓			D-WDR	Micro	1.8W	2.4W	Φ80 x H67	-10°C - +55°C	FX-CFMDV-1M4-O
	Full HD with 15 meter IR	2 Mpix@30fps	1/2.7" CMOS	3-9mm	0.05	0.01	33.04° - 91.44°	✓	✓		15m	✓		✓		✓	✓	1DI,1DO	D-WDR	Micro	3.84W	4.8W	Φ137 x H102	-10°C - +55°C	FX-CFDV-2M4-O-IR
	High Frame Rate Full HD	2 Mpix@60fps	1/2.8" Sony Exmor CMOS	3-9mm	0.01	0.005	28° - 103°	✓	✓		20m	✓	✓	✓		✓	✓	1DI,1DO	WDR	Micro	5.28W	6.72W	Φ137 x H102	-20°C - +60°C	FX-CFDV-2M-O-IR-60FPS
	4 Megapixel with 20m IR	4 Mpix@30fps	1/3" CMOS	2.8-12mm	0.08	0.03	34.47° - 92.42°	✓	✓		20m	✓	✓	✓		✓		1DI,1DO	D-WDR	Micro	6W	8.64W	Φ137 x H102	-20°C - +60°C	FX-CFDV-4M4-O-IR
	4 Mpix with zoom lens, 20m IR	4 Mpix@30fps	1/3" CMOS	2.8-12mm 4.2x	0.08	0.03	35.76° - 90.47°	✓	✓		20m	✓	✓	✓		✓		1DI,1DO	D-WDR	Micro	6W	8.64W	Φ137 x H102	-20°C - +60°C	FX-CZDV-4M4-O-IR
	5 Megapixel with 20m IR	5 Mpix@30fps	1/3.2" CMOS	3-10.5mm	0.5	0.1	26.94° - 70.25°	✓	✓	✓	20m	✓	✓	✓		✓	✓	1DI,1DO	D-WDR	Micro	5.52W	7.20W	Φ137 x H102	-20°C - +60°C	FX-CFDV-5M5-O-IR
	8 Megapixel with 20m IR	8 Mpix@15fps	1/2.6" CMOS	3-10.5mm	1	0.5	31.83° - 87.72°	✓	✓		20m	✓	✓	✓		✓		1DI,1DO	D-WDR	Micro	6.00W	7.2W	Φ137 x H102	-20°C - +60°C	FX-CFDV-8M4-O-IR
Pan Tilt Zoom Cameras																									
	Indoor, 1.3 Mpix, 22 x zoom	1.3 Mpix@30fps	1/3" CMOS	22x zoom	0.1	0.05	2.7° - 59.4°	✓	✓		N/A	✓			✓	✓		2DI, 1DO	D-WDR	Micro	9.6W	11.52W	Φ150 x H161	-10°C - +55°C	FX-CPTZD-1.3M4-22Z
	Indoor, Full HD, 18 x zoom	2 Mpix@30fps	1/2.8" CMOS	18x zoom	0.05	0.005	3.5° - 62.6°	✓	✓		N/A	✓			✓	✓		2DI, 1DO	D-WDR	Micro	9.96W	15.74W	Φ150 x H161	-10°C - +55°C	FX-CPTZD-2M4-18Z
	Outdoor, 1.3 Mpix, 22 x zoom	1.3 Mpix@30fps	1/3" CMOS	22x zoom	0.1	0.05	2.7° - 59.4°	✓	✓		N/A	✓	✓			✓		2DI, 1DO	D-WDR	Micro	AC24V 11.52W	12W	Φ219 x H312	-20°C - +60°C	FX-CPTZD-1.3M4-22Z-O
	Outdoor, Full HD, 18 x zoom	2 Mpix@30fps	1/2.8" CMOS	18x zoom	0.05	0.005	3.5° - 62.6°	✓	✓		N/A	✓	✓			✓		4DI, 1DO	D-WDR	Micro	AC24V 15.8W	16.09W	Φ219 x H312	-20°C - +60°C	FX-CPTZD-2M4-18Z-O
	Outdoor, Full HD, 20 x zoom	2 Mpix@30fps	1/2.8" CMOS	20x zoom	0.02	0.001	2.7° - 54.6°	✓	✓		N/A	✓	✓			✓		4DI, 1DO	D-WDR	Micro	AC24V 15.8W	16.09W	Φ219 x H312	-20°C - +60°C	FX-CPTZD-2M4-20Z-O
	Outdoor, Full HD, 30 x zoom	2 Mpix@30fps	1/2.8" Exmor CMOS	30x zoom	0.05	0.002	2.3° - 63.7°	✓	✓		N/A	✓	✓			✓		4DI, 1DO	D-WDR	Micro	AC24V 15.64W	15.84W	Φ219 x H312	-20°C - +60°C	FX-CPTZD-2M4-30Z-O
	Outdoor, Full HD, 20 x zoom with 150 m IR	2 Mpix@30fps	1/2.9" Exmor CMOS	20x zoom	0.05	0.005	3.4° - 62.6°	✓	✓	✓	150m	✓	✓			✓		4DI, 1DO	D-WDR	Micro	DC36V 49.13W	50.66W	Φ227 x H462	-20°C - +60°C	FX-CPTZD-2M5-20Z-O-IR
Common features for all camera models		ONVIF compliance : Profile S compliant Network : 10/100 Base-T Ethernet with Power over Ethernet (no PoE in WLAN models) Compression formats : H.264, M-JPEG Video Analytics : Motion Detection and Tampering Detection Triggered Actions : Mail, FTP, Save to SD card, DO, SAMBA Audio compression : G.711 (64k) / G.762 (32k, 24k) Triple streaming – 3 different video streams with different settings (compression, resolution, frame and bit rate, etc.) Video Bit Rate Adjustment : Variable Bit Rate or Constant Bit Rates Network Protocols : IPv6, IPv4, HTTP, HTTPS, SNMP, QoS/DSCP, Access list, IEEE 802.1X, RTSP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, SAMBA, Bonjour Security : Password protection, IP address filtering, HTTPS encrypted data transmission, 802.1X port-based authentication for network protection Other Features : Image Snapshot, Full Screen Monitoring, Privacy Mask, Up to 10 Simultaneous Connections, Firmware remotely upgradable																							



MIDDLE EAST & AFRICA OFFICE ▲

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