

BMSline programmable and addressable chain actuators

New generation of compact actuators with integrated programmable circuit board, providing two-way communication with computer system. All actuator functions are totally programmable and the actuators provide 100% real-time feedback on their status. Integrating window automation with the BMS Building Management System will enable interaction with other systems in building (HVAC, lighting...) granting considerable energy saving, improving comfort and wellbeing, becoming health and productivity. At the same time the building's safety is assured by smoke ventilation in emergencies.

The windows can be organized into groups thanks to addressable actuators. Different scenarios can be selected for each single group for total automation or local and/or remote control. Input and outputs from and to other systems can be managed for a complete integration in the building.



Remote control

For groups of windows in rooms, zones, etc.



Daily comfort ventilation

With continued monitored indoor and outdoor temperature and CO2 concentration, windows can be controlled to provide first class living comfort and to save energy.



Local control

The BMSline actuator can be manually operated by the local push button. Continual real-time feedback to BMS system.



Night cooling

To avoid or cut down on air conditioning during the day. With continually monitored indoor and outdoor temperatures, windows can be partly opened at night to exploit the cool air from outside, reduce indoor temperature and limit the use of air conditioning.



Micro ventilation

To recycle air and regulate humidity. For a healthy environment, windows can be opened a little for air to circulate and to regulate humidity indoors.



Sun blade actuator control

To reduce sun radiation and subsequently regulate light.



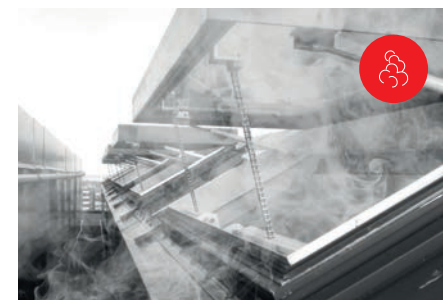
All scenarios can be set on a time and daily basis, but the system can always be used for any temporary need.



Windows will be closed in bad weather conditions, ignoring all other commands (apart smoke ventilation).



Safety always ensured



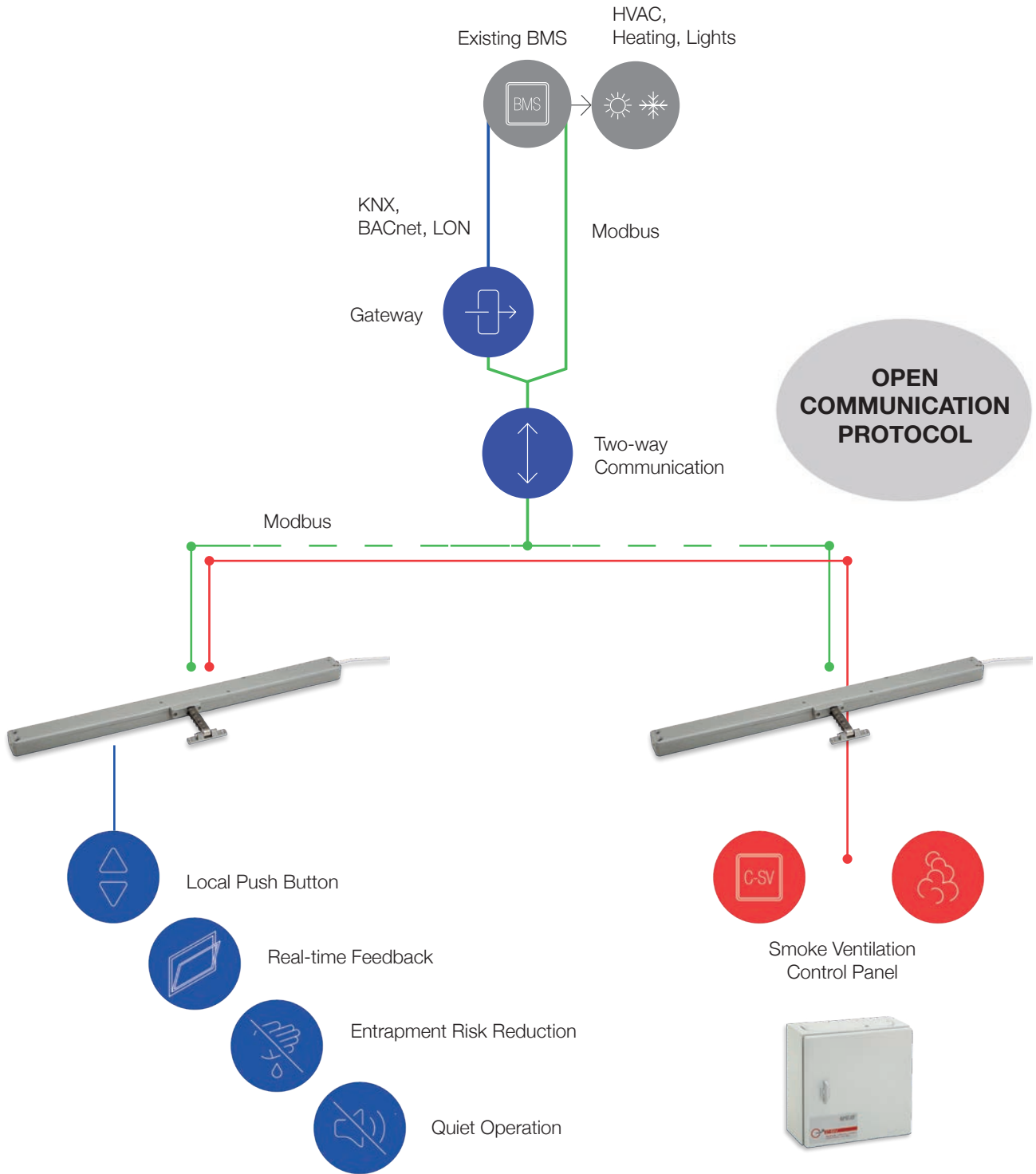
Smoke & heat extraction

Dedicated Control Panels and actuators, tested in fire conditions, operate windows, skylights and louvres to extract smoke.

BMSline

Integrating window automation into Building Management Systems

- **Compatible** with all existing Building Management Systems
- Continual, totally controlled window with **real-time feedback**.
Not just an ON/OFF operation (open/close)
- **Addressable actuators**
in order to control the environment of each room in a building
- **No need for external modules/control panels:**
the actuator has built-in intelligence
- Window **controlled locally** by a standard wall switch, even with a centralized Building Management System
- **Smoke Ventilation** Control Panels with back-up batteries can be directly and safely connected.




Energy Saving & Wellbeing



Reduced installation & setup cost



Integration in existing BMS



100% safety condition



BMSline

Programmable and adressable chain actuators

The BMSline smart features are available for NANO, QUASAR, TWIN QUASAR and VEGA actuator series with 24Vdc voltage supply

<p>Programmable parameters</p> <ul style="list-style-type: none"> • Stroke • Percentage of opening and closing action • Speed, in opening and closing action • Force, in opening and closing action • Real close position of the window • Closing position tolerance • Soft stop length and speed 	<p>Feedback</p> <ul style="list-style-type: none"> • Full opening or closing • Percentage of opening and position of the chain • Current setting of parameters and scenarios • Location in the building and address in the network • Statistics • Command state • Eventual Failures 	<p>Scenarios</p> <ul style="list-style-type: none"> • Reduction of entrapment risk • Local control of the window even with centralized management • Speed synchronization for multiple actuators on the same window • “Soft” closing of the window • Quiet operation for Natural Ventilation and full speed and force for Smoke Ventilation
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	NANO BMSline	QUASAR BMSline	VEGA BMSline
VOLTAGE SUPPLY	24 Vdc ± 10%	24 Vdc ± 10%	24 Vdc ± 10%
ELECTRICAL CONNECTION & BUS COMMUNICATION LINE	<p>Electrical Connector with cable Different configurations</p> <p>Interconnection cable with 2 Connectors (1,0 m) 48013N (White) – 48014O (Black) 2 wires voltage supply 2 wires Synchro/E-Lock</p>	<p>Supplied with 2x3 m cable: 2 wires voltage supply 2 wires Synchro/E-Lock 3 wires local switch 3 wires Modbus RTU 2 wires smoke ventilation</p>	<p>Supplied with 2x3 m cable: 2 wires voltage supply 2 wires Synchro/E-Lock 3 wires local switch 3 wires Modbus RTU 2 wires smoke ventilation</p>
OPERATION	programmable	programmable	programmable
STROKE	programmable	programmable up to 500 mm	programmable up to 300 mm
FORCE (push or pull action)	programmable up to 400 N	programmable up to 300 N	programmable up to 300 N
SPEED (opening or closing action)	programmable up to 14 mm/s	programmable up to 15 mm/s	programmable up to 9 mm/s
CURRENT ABSORPTION (max load)	1,2 A	0,9 A	0,7 A
PARALLEL CONNECTION	YES	YES	YES
LIMIT STOP	Electronic	Electronic	Electronic
SAFETY STOP	Electronic	Electronic	Electronic
FEEDBACK SIGNAL	All features via BUS line	All features via BUS line	All features via BUS line
PROTECTION CLASS	IP40	IP 30	IP30

PART No.	NANO BMSline					
STROKE	200 mm	300 mm	400 mm	500 mm	600 mm	800 mm
GREY RAL 9006	41998B	42001E	42004H	42007K	42010N	42013Q
BLACK RAL 9005	41999C	42002F	42005I	42008L	42011O	42014R
WHITE RAL 9010	42000D	42003G	42006J	42009M	42012P	42015S

PART No.	QUASAR BMSline	VEGA BMSline
GREY RAL 9006	48035J	41579Z
BLACK RAL 9005	48036K	41580A
WHITE RAL 9010	48037L	41581B

Suitable for combined installation with the additional locking device E-LOCK BMSline:

PART No.	E-LOCK BMSline
BRACKET INCLUDED	41589J
BRACKET NOT INCLUDED	48021V

BMSline programmable versions are available on request: TWIN QUASAR - QUASAR L 24 Vdc (600 - 750 - 1000 mm)

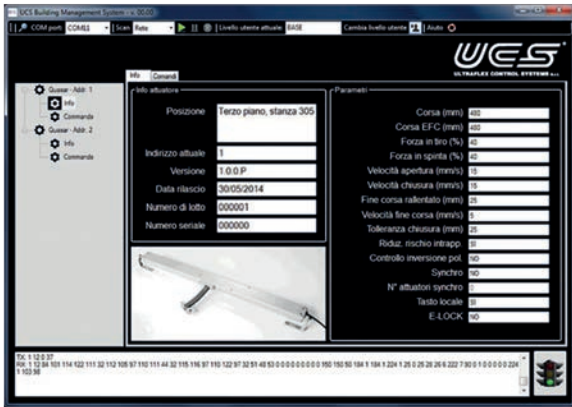
BMSline

Programmable and addressable chain actuators - Accessories

BMSline Setup Kit Part No. 41587H

User friendly Configuration Software including cable for fast connection between PC (USB connector) and actuators

- Parameters, Scenarios, Setup, Network Address Assignment
- Actuator Control and Closing Position Adjustment
- Information feedback and diagnostic
- Statistic
- Setup data recording



The UCS BMSline Configuration Software works on any computer with Windows XP and following versions

On request, actuators can be configured in the factory and the Network Address can be assigned according to the customer requirements

BMSline Gateway

The BMSline Gateway allows the translation of BMSline communication BUS protocol (Modbus RTU) to other standard BUS languages (BACnet, KNX, Lonworks ...).

The gateway behaves like a Modbus master towards the actuators, cyclically polling them and making the information accessible to the target technology (other protocols). The process also works in the reverse direction: when the data points of the target technology are changed, the gateway will automatically update the corresponding Modbus registers of the actuators.

The gateway provides a web-type interface that allow to perform configuration and diagnostic operations from any machine provided with network interface and a web browser.

- The standards currently supported are:
- BACnet MS/TP - BACnet on RS-485 serial line
 - BACnet/IP - BACnet on Ethernet/IP
 - KNX TP1 - Konnex protocol on proprietary serial line
 - KNXnet/IP - Konnex protocol on Ethernet/IP
 - LON TP/FT-10 - CEA-709 standard protocol on TP/FT-10 type interface
 - LON/IP - CEA-852 standard protocol on Ethernet/IP

UCS supplies the gateway already equipped with four possible configurations corresponding to 4 different product codes:



- GATEWAY MODBUS RTU - LON (both LON TP/FT-10 and LON/IP) – Part No. 41648Q
- GATEWAY MODBUS RTU - BACnet (both BACnet MS/TP and BACnet/IP) – Part No. 41649R
- GATEWAY MODBUS RTU - KNXnet/IP – Part No. 41650S
- GATEWAY MODBUS RTU - KNX TP1 – Part No. 41651T
(To be used with Interface module KNX TP1 - Part No. 41652U)

These devices allow interfacing up to 30 BMSline actuators with Building Management Systems based on protocols other than Modbus RTU



- GATEWAY MODBUS RTU – BACnet/IP – Part No. 41888V

This device allows interfacing up to 20 BMSline actuators with Building Management systems based on BACnet/IP



K107A Modbus repeater for RS-485 transmission – Part No. 41624S

The K107A Modbus repeater for RS-485 transmission allows to:

- Extend the network maximum length
- Increase the actuator number on the same line (install one repeater for every group of 30 actuators)
- Create network branches

Moreover:

- The LED lights on the repeater supply a first diagnostic test regarding the network communication state.
- The repeater divides the network in two sections, protecting from communication disturbance, or voltage dispersion that may damage the network.

NOTE: it is always advisable to use a repeater between the master (PC, Server, Gateway etc.) and the remaining part of the network.