HDL social media and more...

We, the team at HDL, are pleased to invite you to join us in the social media community. As an HDL customer, you are very important to us, and we look forward to assisting you however and whenever we can. We invite you to explore our solutions, learn more about us online, and connect with others who can inspire and help you. Follow us on Facebook, Twitter, YouTube and Google+!

Follow us on Facebook, Twitter, Youtube and Google+!
Company Profile

HDL is an international company which has prided itself on providing the highest possible level of professional service since 1995.

With its headquarters based in Guangzhou for manufacturing, distribution and integration solutions, HDL has become one of the main participants on the international scene of home and building automation and stage lighting.

Due to the reliability of the HDL Buspro, we have developed several different kinds of projects, ranging from a smart house in Norway, through a luxury hotel in Dubai and a lighting control system in the famous Sydney Opera House, to the biggest international events, such as the Shanghai Expo 2010.

The HDL brand has been widely distributed around the world, and is available in more than eighty countries, through various dealers, integrators and distributors.

We are proud to state the reason why we have become a top company in the sector. Caring about our customers is our priority, and we are always searching for the next innovative step to provide our customers with a customised solution for their homes, and the most productive and energy-efficient solutions for their businesses.

A powerful R&D Department

The aim of HDL is to accelerate the worldwide transition to the full automation of homes and buildings, with a full and diverse range of increasingly affordable HDL Buspro Pro products. To this end, our engineers constantly work on the cutting edge of innovation, looking for the next challenge to create products with new functionalities, more customisable for our customers, and widely compatible with the different technologies available in the market.

Excellent Technical Support

The best way to recognise good service is, of course, to have experienced bad service in the past, and then to experience good service to compare it against. We are confident that you will only ever experience the highest level of service with HDL. If any of your products do give you any problems, you should be able to find the solution as quickly as possible. Your time is valuable to you and us, and it should not be wasted.

Our team was designed and constructed to work closely with our R&D department. We are able to provide a fast and very direct technical support service which will help you with your installation, configuration, and all types of issues that may present themselves.

Advantages of HDL

VALUE

- Best Price-Quality/Functionality Ratio.
- Highest cost-performance in the market.

SERVICE

- Fast and decisive Technical Support service.
- Customization of our products, materials or design on customers request.
- Possibility to provide OEM solutions.

DELIVERY

- Quickest delivery in the market. Ready to delivery to whichever part of the world.
- Availability of shipping by plane and ship.
- Free shipping only in case of manufacturing defect.
Would you like to become an HDL Member?

- Distributor
- Integrator
- Dealer
- Installer

An interesting and promising business opportunity is waiting for you.

Contact us: sales@hdlatomation.com

HDL has an EXCELLENT WORLDWIDE POSITION

- HDL is an International company with a presence in more than eighty different countries all around the world.
- Its headquarters are situated in Guangzhou, with offices in Oslo, Dubai, Munich and London.
- HDL's distribution network covers the whole world, with more than 200 dealers and distributors, and over 1,000 installation designers and electrical installers.
From 1995 to the present

The largest and most outstanding stage lighting control system in China was built by HDL.

HDL provided 95% of the stage lighting solution for this iconic building, which is used for legislative and ceremonial activities of the Communist Party.

From 1995 until the present, HDL has been the company in charge of maintaining, checking over and upgrading the intelligent control system, which has more than 6,000 different lighting channels, and stage lighting with more than 20,000 lamps.

The whole of the intelligent control system is managed through Ethernet, and from the control center we can monitor the state of each single device and lamp.

HDL was not only focused on the improvement of the stage lighting control system, but also enhanced and optimized the energy-saving aspect of the project.

2006

The BMW Museum Center is the symbol of Munich. The modern museum is located at the Olympic Park, and is a reference model for multi-functionality in building, as well as a great example of an energy-saving system.

Event AG, as the construction contractor, selected HDL to provide the DMX Lighting Control solution for the spectacular glass showroom.

In this case the customer asked us to keep the balance between outdoor and indoor lighting through a huge sensors system connected by HDL Buspro.
2010

In 2010, Guangzhou celebrated the 16th edition of the Asian Games (ASiad), the best Asian Games so far. This was a massive event unprecedented in both size and scale. HDL contributed to this success by implementing their solutions for the Asian Games Village.

HDL provided the home automation for all the apartments in the Asian Games Villas. The solution chosen by the organization was an integration of lighting, curtains, AC, background music, video, security, monitoring systems, intercom, and door access, with everything controlled by HDL’s App available for tablets and smart phones.

2010

Shanghai became the capital of the world during the world Expo in 2010. The theme of the exposition was “Better Life-Better City” and it had the largest number of countries participating, and was the most expensive Expo, in the history of the world, with more than 73 million participants.

HDL was the company selected to integrate the solution for the most important building in the nationalities area, the China Pavilion, and also the China Aerospace Pavilion in the cooperates area.

HDL implemented and displayed an outstanding outdoor lighting effects, controlled by a combination of lighting network systems which covers the whole area of the World Expo Park.

The company achieved the target of making unique buildings which captured the attention and imagination of all the visitors, and HDL became established as an expert and reliable company for urban outdoor lighting landscapes, and stages for massive events.
2013

HDL’s Hotel Guestroom System was implemented in all of the 541 guest rooms in the hotel, the biggest resort in Vietnam. This included: integrating lights control and AC control; clean room notification; provision of room status to reception (mostly used to prepare services in advance); motion sensors; dry contact modules for integration with doors’ magnetic sensors; and door bells with DNO service (Do not Disturb showed at the door’s bell display).

The big challenge for HDL was to satisfy the requirement from the customer to make HDL’s Hotel System compatible with the software used for the general management of the hotel, a hospitality ERP from the USA. Our engineers started to work right away, and HDL achieved the target with a high score. The customization for the client was highly successful, and ready on time.

Furthermore, when the guest is checking in or out, the reception staff can remotely control all the room’s functionalities from reception in order to prepare the room for a warm welcome to the customer in the case of check-in, or to save energy by switching off all the lights in the room after the customer has checked out.

2013

All 171 rooms and 30 suites of the SOFITEI Casablanca had lighting, AC, and curtains fully automated, with control enabled via a customized DLP panel. To enable the energy consumption and guestroom amenities to be controlled and monitored, the hotel was equipped with HDL guestroom management software.

The solutions that you can find in the rooms are a control panel inside the room from which the customer can display the room status on an external doorbell display, and lighting and curtain functions that can be controlled from within the room from the room controller designed by HDL.

The system brought a minimalist and elegant but homely style to both customers and hotel workers. Different scene modes such as Read Mode and Night Mode make the otherwise complicated on/off easier and more attractive for the guests.
WELCOME TO HDL's SHOWROOM

In HDL we think the best way to showcase our products is to allow you to experience them as if they were in your own home. We do this in our comfortable showroom which is situated in Guangzhou, China.

All our guests will feel and test the HDL Buspro technology in all the corners of this smart house, which you are cordially invited to visit, to experience the exciting home automation in its pure state.

“Designed to stimulate your ideas and be a source of inspiration.”

“Feeling how different scenes can create different environments and moods in your home.”

“We are eagerly looking forward to your visit. We would love to have you as our special guest.”

“Take a closer look to see how home automation equals comfort and luxury.”

“The HDL Buspro training sessions and celebrations take place in the multi-functional auditorium room.”

“We display useful innovative features, helping you to identify a design with functional benefits to suit your own needs.”
INTERNATIONAL TRAINING FOR HDL Buspro

Join the International HDL Buspro training and get the official HDL high-skilled user certification.

Also visit our factory and learn how the products are created, and how quality control is performed; because the best way to know how HDL Buspro works is to learn it from the engineers who have created it.

Characteristics of the HDL Buspro training

■ Every year we arrange three or four international training sessions.
■ The training sessions are delivered through fluent English.
■ Different levels: basic course and advanced course.
■ HDL provides special training for repair parts.
■ HDL helps you to arrange all that you need for your trip.
■ HDL also provides training in other countries: ask your distributor for details.

INTERNATIONAL EXHIBITIONS

HDL attends different theme exhibitions and fairs. HDL’s attractive booth displays different solutions tailored to show the most relevant aspects of HDL Buspro to suit the topic of the specific event, to catch the attention of the new customers who still don’t know about HDL Buspro.

HDL is always present at the most important events and exhibitions

International exhibitions in which HDL has been presented

Frankfurt Light Building Expo
March 2014 in Frankfurt, Germany
Lighting and Building

Intersec 2015
January 2015 in Dubai, UAE
The Region’s Annual Safety, Security & Fire Protection

ISE 2015
February 2015 in Amsterdam, Netherlands
Integrated Systems Europe

YAPI-TURKEYBUILD Istanbul
April 2015 in Istanbul, Turkey
Building, Construction Materials and Technologies

Grand Designs Live 2015
May 2015 in London, UK
Consumers Electronics and Home Automation
Control everything from everywhere
CONTROL ALL THE FUNCTIONS OF HDL Buspro FROM YOUR SMARTPHONE AND TABLET

Universal Visualization & Control Software
CONTROL SOFTWARE FOR HDL Buspro

"Control your entire home automation system and audio/video equipment from a user-friendly interface"

Description
Nowadays, consumers look for comfort and simplicity. This concept, extended into the home and building automation field, means the ability to have full control of HDL Buspro functions from the everyday devices that everybody has always on hand, like the smartphone or tablet.

- Lighting
- DVD
- Curtain

- Lighting
- Blind
- Climate
- Floor Heating
- Background Music
- Security
- Multi Media
- Ventilation
- Irrigation
- And More...

- Micro interface
- Neon interface
- V2.1
- Black interface

- HDL Buspro
- KNX
- Crestron
- AMX
- Modbus
- Teco
- INELS
- Helvar
- Domintelli
- Lutron
- Any Audio/Video equipment and Media Server
Wireless Intelligent Switch EU
MPL8-RF.18

Parameters
- Power supply: DC12V (from wireless power interface)
- Power consumption: 56mA@DC12V
- Wireless transmit power: 0mW
- Wireless receive sensitivity: -90dBm
- Installation: Wall mounting
- Dimensions: 86x48x10.5(mm)

Functions
- Built-in temperature sensor
- Specified pages for AC, floor heating, music, etc.
- Multi-key mode: Single on-off, Single on, Single off, Combination on-off, Combination on, Combination off, Double click/single switch, Double click/combination switch, Momentary, Clock, Short, Long press, Short
- Press/Long press
- Multi-key control mode: Scenes, Sequence, Timer switch, Universal switch, Single channel lighting control, Broadcast scene, Broadcast channel, Curtain switch, GPRS control, Panel control, Security module, Z audio control
- Support online upgrading

The HDI-MPL8-RF is a wireless panel which is able to work in conjunction with the wireless power interface. Featuring an improved and customizable LCD display, the HDI-MPL8-RF enables users to find information effortlessly.

Electronic icons

The new HDI-MPL8-RF has an improved LCD screen that is capable of displaying multiple icons, which can then be customized via an extensive updatable library. Messages, digital data, and page management information can all be displayed, enabling a user to find information effortlessly.

All in one

In a single HDI-MPL8-RF panel there are seven different pages dedicated to the control of various automation systems. The following systems are included, four pages dedicated to lighting, a page dedicated to HVAC, one page for floor heating, and one page for background music. Each page can hold multiple icons enabling the user to take complete control over all aspects of their automation solutions, without a unifying HDI-MPL8-RF panel.

Customizable

The HDI-MPL8-RF panel is completely customizable, and has an extensive range of fascia colours, and modules available. This unit even extends to the LED bottom status indicators which have adjustable light intensity levels. The module can also be incorporated into a double panel installation, or be flush mounted. These customization options allow a user to have their exact requirements not only met, but exceeded.

Utilizing a wireless mesh IEEE 802.15.4 communication network, the HDI wireless panel range can be installed anywhere in a building without needing a physical connection to the Buupro mainframe. Using frequencies of 768, 868, and 900 MHz, the connection can fulfill the long-distance communication frequency standard applying in different countries; which ensures efficient and precise data transmission.
**Wireless Touch Button Switch EU**

**MPT4-RF.18**

### Parameters

- Power supply: DC 12V (from wireless power interface)
- Power consumption: 40mA (DC 12V)
- Wireless transmit power: -15dBm
- Wireless receive sensitivity: -90dBm
- Installation: Wall mounting
- Dimensions: 86*86*15.5mm

### Functions

- Multi Key Mode: Single on, Single off, Single on/off, Combination on/off
- Combination switch, Momentary, Short (long press), Short (long press), Long (long press)
- Multi Key control: Time, Sequence, Timer switch, Universal switch
- Single channel lighting control, Curtain switch, OPPS control, Panel control
- Broadcast control, Broadcast channel, Security module, 2-audio control
- Adjustable backlight color and intensity
- Supports online upgrading

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**RGB LED backlight**

Each button is illuminated by an RGB LED back light which can change color or intensity when used for different applications, based on the preference of the user. This customizable button back light ensures that the unit can blend into any situation or environment.

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**The color, icons and pattern of the plate can be customised**

Based on your personal favorites or your requirements:

- White Glass
- Black Glass
- Pink Glass
- Orange Glass

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**The HGL-MP04R-RF wireless panel has a seamless glass finish, and a backing plate specifically designed based on European standard. The module can control multiple targets via its distinguishable buttons, which have a customizable RGB LED back light.**

### Parameters

- Power supply: DC 12V (from wireless power interface)
- Power consumption: 45mA (DC 12V)
- Wireless transmit power: -15dBm
- Wireless receive sensitivity: -90dBm
- Installation: Wall mounting
- Dimensions: 86*86*15.5mm

### Functions

- Multi Key Mode: Single on, Single off, Single on/off, Combination on/off
- Combination switch, Momentary, Short (long press), Short (long press), Long (long press)
- Multi Key control: Time, Sequence, Timer switch, Universal switch
- Single channel lighting control, Curtain switch, OPPS control, Panel control
- Broadcast control, Broadcast channel, Security module, 2-audio control
- Adjustable backlight color and intensity

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**Two custom color status per button**

Each button is illuminated by a RGB LED back light which can change colour or intensity when used for different applications, based on the preference of the user.

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**Background**

Switchers are elements very important when you design a new space. That’s why we want to give the possibility to customize the plate and frame to find the style which suits you best.

Customize different plate and frame color:

- Pink Glass
- Blue Glass
- White Glass
- Garden Glass

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**Buttons**

Small details are important because they give a distinguished touch of luxury and fashion to your home or business. To feel identified with these values, you can change the button’s ring colors to adjust it with your house style or your color business.

Choose the style of the buttons:

- Bronze
- Aluminium
- Aluminium Bronze
The HDL MP(468)-RF wireless panel has large dual control buttons, which can be customized by the end user. There are 4-8 button combinations available, with each button having LED status indicators that can show which function is currently being used.

**DIY customization**

The HDL MP(468)-RF series offers users the ability to replace the button names or icons, by simply removing the plastic cover and deleting one of their own designs color by color. This enables rapid changes without the need for compromising engineering drawings. As long as a user has access to a piece of paper and a pen or pencil, the customization can be accomplished. Coupled with this, a range of faces are available, making the unit suitable for any environment or situation.

**Wireless communication**

The unit supports wireless communication to control multiple targets. The wireless power interface can be controlled by single HDL MP(468)-RF module.

**Customizable**

The HDL MP(4/6)B-18 has a completely customizable face. A user is able to specify both the face color and the number of it to be made out of. This leveling modules the module to fit seamlessly into any room.

**Parameters**

- Power supply: DC5V (from wireless power interface)
- Power consumption: 67mA/DC5V
- Wireless transmit power: 150mW
- Wireless receive sensitivity: 90dBm
- Installation: Wall mounting
- Dimensions: 68x88x10.5mm

**Functions**

- Key Mode: Single on/off, Single on, Single off, Combination on, Combination off, Combination on/off, Double-click single on/off, Double-click combination on/off, Inching, Short/long press, Short press/long inching.
- Key Control Type: Strobe, Sequence, Timer switch, Universal switch, Single channel lighting control, Broadcast scene, Broadcast channel, Curtain control, DCRIS Control, Panel Control, Security Module, Z-audio Control
- Built-in temperature sensor
- It has a key lock, mutually exclusive and key linkage.
- Customize button labels and plate can be replaced.
- Indicator intensity is adjustable.
- Supports online upgrading.
The wireless power interface supplies wireless panels with 0V/0V. Dimming is possible through 2 TRIAC dimming channels, and 1 MOSFET trailing edge dimming channel. The module also has short circuit protection, and over-heating protection.

**Parameters**
- Working power: AC220V
- Frequency: 50/60Hz
- Wireless transmission power: ≤10dbm
- Wireless receive sensitivity: ≤90dbm
- Output: 3 channels
- Output current: 1A/CH, total current should not exceed 2A
- Fuse: 4A/1Ø type
- Terminal: Wago 236
- Dimension: 84/64/38(mm)

**Functions**
- Supplies DC12V power for wireless panels
- 1CH MOSFET Dimmer/Dimming/Switch
- 2CH TRIAC Dimming/Switch
- Short circuit protection
- Over heating protection

**Without neutral line**

The HCL-MPW010.18 is specifically designed to supply power to wireless panels without neutral line. This is an optimized supply that is best suited to the panels, it enhances device stability, and mobiles peak panel performance.

**Protected**

Safeguards are integral to any HCL device, and the HCL-MPW010.18 is no different. Dual system guards are given through short circuit protection and over-heating protection. The DC power is boosted with AC power to ensure the user operation security. These preventive measures stop potentially dangerous situations occurring, and enhance user peace of mind.

**Triple channels**

With 3 MOSFET dimming channel, and 2 TRIAC dimming channels, users are able to tailor the system to their exact specifications. All of the three channels can trigger dimming, and switching, raising them sustain for a wider range of applications.

**Parameters**
- Working power: AC220V
- Detection range: 6m (installation height: 3m)
- Communication: Wireless
- Installation: Ceiling mount
- Dimension: Ø90*117(mm)

**Functions**
- Built-in Temperature sensor, PIR sensor, LUX sensor, Ultrasonic sensor, as well as Universal switch. Dry contact and logic control
  - totally 8 logic conditions
  - With 24 logic blocks, each logic block have 8 input and 25 output commands. Each logic block has two universal switch inputs, can
  - totally set 48 universal switches
  - Variety Control Includes scene switch, sequence switch, universal
  - switch, signal channel adjust, audio - curtain, GPRS panel control,
  - background music control, etc
  - Two logic relationships: OR, AND
  - Adjustable infrared sensitivity, sensitivity range: 1-100
  - Adjustable ultrasonic sensitivity, sensitivity range: 1-100
  - Security function, to be used with the security module.
  - Supports wireless online upgrading.

This module is both a PIR and ultrasonic sensor utilizing wireless communication protocols. Several logic inputs can be used to control multiple targets, and the module can be connected to other security modules.
Wireless Gateway Module
MCIP-RF02.10

Parameters

- Working power: 12~30VDC
- Communication: RJ45, HDL, Buspro, Wireless
- Wireless transmit power: ±15dBm
- Wireless receive sensitivity: -80dBm
- Communication distance indoor: 50m (barrier-free)
- Work mode: Mesh mode, bridge mode
- Bus Terminal: 0.16-0.85mm Diameter Single Core
- Additional function: RF433MHz receiving

Wireless Central Frequency

- [China] WiMAX: 780MHz-800MHz
- [Europe] 864MHz-870MHz
- [North America] ISM: 904MHz-928MHz

Triple communication interfaces

The wireless MCIP-RF02.10 gateway supports three essential communication types, RJ45, HDL-Buspro, and RF. These communication methods allow a user to control the wireless system via a pad or smart phone, while maintaining conventional wired system functionality.

Dual Working Modes

With two working modes the gateway is suitable for any automation solution. The first mode is the mesh network mode; this mode enables all the wireless devices active on the network to connect to each other. The mesh also supports wired system integration through the RJ45 and HDL-Buspro ports.

The second mode is bridge mode, the function of this mode is to act as a transmission bridge. This enables multiple gateways and their associated wired devices to communicate with each other wirelessly. The scope of the system can then be further extended via RF.

Mesh network working mode

Bridge working mode
Wireless 1 Channel Motorized Curtain
MWM70-RF.12

Common Parameters
- Voltage range: AC220V(20% 50Hz)
- Slave interface: 6P network interface
- Rated power: 70W
- Rated torque: 1.0Nm
- Rated speed: 12r/min
- Line speed: 16m/min
- Communication: wireless
- Insulation class: E
- IP class: IP44

Special parameters for MASTER
- Power supply: AC220V
- Communication: Wireless
- Master Interface: RJ11(RPS23) network port

Special parameters for SLAVE
- Bus working voltage: DC12V
- BUS Power Consumption: 33mA/DC12V
- Power supply: Provided from master
- Slave interface: RJ11(RPS23) network port

The module is a wireless motorized curtain controller, which supports both master and slave modules. The unit utilizes standard IEEE 802.15.4 wireless communication protocols, with frequencies of 768, 868, and 900 MHz. The new generation clutch and planetary reducer gears, enable the controller to operate at a barely audible 40dB.

Functions
- Over LOAD protection. The curtain will stop in case of external disturbance
- Supports the following control commands: Open, Close, Stop and Percentage
- Included additional modes to adjust the curtain to the supports
- Easy programming for control panels and switches
- Supports manual mode when the power off
- Motor running mode: forward or reverse
- Pulse coding for position control
- Open/Close protection. In case of high temperature, the motor will switch off temporarily
- The position of the curtain can be measured and displayed in user interface
- Optional function of automatic calibration when power on
- Trigger manually the Open and Close of the curtain
- Solid and robust structure with modern style
- Supported Master and Slave mode
- Extremely silent working mode

Technical Specifications
- Direct-powered by 220V AC, Maximum pulling force 8Kg (one motor), maximum curtain weight 50Kg (one motor), 80Kg (2 motors)
- Built-in new generation clutch, precise planetary reducer, noise level 40dB.
- Percentage control enabled
- Drag and run enabled, can be disabled
- Integrated with multiple user interfaces, HDL panel, Life on iPad, Touchlife on Android pad, Touchlife on 7-inch touch screen
- Suitable for all small to medium-scale curtain applications, linear and arched, one- and two-side opening.
- Recommended maximum track length 12m; refer to load curves below

Load curves (one-motor type)

- Fabric Weight
- Track Length

Load curves (two-motor type)

- Fabric Weight
- Track Length
### 1/2CH Relay

**Parameters**
- Input voltage: AC85-265V
- Output current: 16A (C05D=0.4)
- Power consumption: 0.41W
- Wireless transmit power: ≤150mW
- Wireless receiving sensitivity: ≥90dBm
- Communication distance indoor: ≤30m (barrier free)
- Installation: Wall box
- Dimensions: 44x36x17(mm)

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### 1CH Trailing Dimmer/4 CH Dry Contact Input

**Parameters**
- Input voltage: AC85-265V
- Output current: 1.5A
- Power consumption Max: 0.44W
- Wireless transmit power: ≤150mW
- Wireless receiving sensitivity: ≥90dBm
- Communication distance indoor: ≤30m (barrier free)
- Installation: Wall box
- Dimensions: 44x36x20.3(mm)
Buspro is a distributed communication bus protocol based on the RS-485 standard, which enables control of all building appliances, and integration with third party software and hardware. It allows technologies to merge and can be expanded in a simplistic manner.

```
<table>
<thead>
<tr>
<th>Common Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Power Supply: DC16~36V</td>
</tr>
<tr>
<td>- Rated voltage: AC220V±20% 50Hz</td>
</tr>
<tr>
<td>- Static direct-current power: 0.7W</td>
</tr>
<tr>
<td>- Dynamic direct-current power: 1.2W</td>
</tr>
<tr>
<td>- Working voltage range: AC180~234V</td>
</tr>
<tr>
<td>- Working current: 0.6A</td>
</tr>
<tr>
<td>- Rated power: 140W</td>
</tr>
<tr>
<td>- Rated torque: 10N.m</td>
</tr>
<tr>
<td>- Rated speed: 17/min</td>
</tr>
<tr>
<td>- Terminal: HDL Buspro</td>
</tr>
<tr>
<td>- IP: -4268</td>
</tr>
<tr>
<td>- Insulation class: E</td>
</tr>
<tr>
<td>- IP class: IP41</td>
</tr>
</tbody>
</table>
```

**1 Channel Tubular Blind Controller**

**MVSM45B.12**

The MVSM45B.12 is a tubular blind controller, which has been designed to automate all common roller blinds. The unit can output 10Nm of torque giving an effortlessly smooth action, and operates at a barely audible 42dB.

**Functions**

<table>
<thead>
<tr>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Cast control to open, close, stop and percentage control</td>
</tr>
<tr>
<td>- Communication: HDL Buspro</td>
</tr>
<tr>
<td>- AC Motor: A power source, provide enough power, it can move the torque of tubular motor big enough</td>
</tr>
<tr>
<td>- Overheat protection</td>
</tr>
<tr>
<td>- Supports online upgrading</td>
</tr>
<tr>
<td>- Supports easy programming</td>
</tr>
</tbody>
</table>

**High torque**

Using a single phase AC motor the unit can effortlessly control blinds via its 10Nm of torque. To provide a user with the ultimate in blind control, the unit has percentage control, stop, up and down control.

**Reliable**

To increase reliability and service life, the MVSM45B.12 utilizes overheat protection. This safeguards not only the unit itself but the system it is integrated into.
**Technical Specifications**

- Direct-powered by 220V AC. Maximum pulling force 8Kg (one motor), maximum curtain weight 60Kg (one motor), 80Kg (2 Motors).
- Suitable for all small to medium-scale curtain applications, linear and arched, one-and two-side opening.
- Recommended maximum track length 12m, refer to load curves below.

**Common Parameters**

- Voltage range: AC220V±20%, 50Hz
- Rated power: 70W
- Rated torque: 1.9Nm
- Rated speed: 112rpm
- Line speed: 16cm/s
- Insulation class: E
- IP class: IP41

**Functions**

- Built-in new-generation clutch, precise planetary reducer, noise level ≤45dB.
- Suitable for all small to medium-scale curtain applications, linear and arched, one-and two-side opening.
- The motor has three modes: they are forward, reverse, and stop.
- The interval between activating and deactivating the curtain is less than 100ms.

**Special parameters for MASTER**

- Bus working voltage: DC15-24V
- Bus power consumption: 40mA/DC 24V
- Communication interface: HDL-Buspro
- Master interface: RJ11/8P2C/network port

**Special parameters for SLAVE**

- Bus working voltage: DC12V
- BUS Power Consumption: 33mA/DC 12V
- Power supply: Provided from Master
- Slave interface: RJ11/8P2C/network port

**Load curves (one-motor type)**

![Load curves (one-motor type)](image)

**Load curves (two-motor type)**

![Load curves (two-motor type)](image)
HDL music play box is an elegant device to manage your music and playlists from many different sources. The client can create a personalized environment in which to enjoy their favorite music.

HDL Audio Amplifier provides an excellent solution for you in those places where you need to use more power to supply your music equipment.

### Parameters
- Power Supply: DC24-48V
- Static Power: 1.6W
- Audio Input Voltage: 0.777VPP
- Input Resistance: 10KΩ
- Output Resistance: 32Ω
- Output Power: 20W x 2
- Harmonic distortion < 0.005%
- SNR: 97dB
- Frequency Range: 20Hz ~ 20kHz
- File name length: <255 bytes
- Music Format: MP3
- SD Card Capacity: <32G
- Dimensions: 180mm x 180mm x 37mm
- Communication: FTP, UDP

### Functions
- **External Input**: Availability to connect any external input through:
  - Mini Jack Port: Audio Input/Audio OUT port
  - Internal SD Card: Up to 32GB
  - FTP Server: Availability to use FTP/CSCP remote server through:
- **Ethernet**
  - FM Radio: Possibility to use external FM antenna in order to improve the signal
- **Bluetooth**: Supports Bluetooth 2.0
- **SMPH Optical Fiber Input**: Supports SPDIF, Optical Fiber input
- **Capacitive touch button**: Easy to control music play box locally
- **Dry contact to control audio amplifiers**
- **Availability to use IR emitter to control devices such as DVD, LCD, or audio amplifier**
- **The Touch Panel technology adjusts automatically to the changing environmental conditions such as humidity and temperatures**
- **Supports online upgrading**

### Parameters
- Power Supply: DC24-48V
- Audio Input Voltage: 0.777VPP
- Audio Output Resistance: 4Ω
- Output Power: 50W x 2
- Harmonic distortion < 0.005%
- SNR > 96dB
- 4 class Gain control: 25.6dB, 31.5dB, 35.6dB, 37.6dB
10" Color Home Control Touch Screen

MTS10A.2WB

Parameters

- Power supply: 12~30VDC PCE, IEEE 802.3af
- Power: Max. 15W
- CPU: Samsung Exynos 4412 1.8GHz / ARM Cortex-A9 quad-core
- DDR: 2GB DDR3
- Flash: 8GB (Flash)
- Communication protocol: Buapio
- Touch screen: Capacitive screen
- Screen resolution: 10.1 inch
- Screen resolution: 1280x800
- Screen ratio: 16:9
- Operation system: Android 4.2.2
- Ethernet port: Rj45 10/100 M
- SD card: Max. 32GB
- Camera: 5.0 megapixels, 2592x1944
- Dimensions: 260x220x29(mm)
- Installation: Wall box

- Main interface
- Air Control
- TV Control

- TV
- Lighting
- Air Conditioning
- Scene
- DVD
- Curtain
- Background Music
- Media
- PA
- Monitoring
- Security
- Blu-ray
- Projector
- Netflix
- Geothermal System
- Smart Meter
- Voice Control
- Home Theater
- Power Setting
Touch DLP Panel

Parameters

- Working power 12-24V DC
- DC Current 4mA@12VDC
- Bus Terminal: 0.75EA 8mm Diameter Single Core
- Housing Material: Glass, ABS, PC
- Installation: G1 Wall Box
- Dimensions: 66x16.5x10.5 [mm]

7 Different Pages

With 7 separate and easy to navigate pages, a user can take complete control over their lighting, air conditioning, back ground music, fire heating, and security. Each of the pages has 8 buttons providing a button lockout control, and 2 dedicated wording buttons. In addition to this located on the bottom of the panel are four customizable shortcut keys, giving you fast and intuitive system navigation.

Customizable

Every aspect of the DLP can be customized, from the on screen icons to the lavel color, allowing the touch panel to be tailored to any environment or situation. A personalized logo or anything can even be added to the screen to give you a truly unique solution.

Flush Mount

When the DLP touch panel is coupled with the flush mount system, the panel projects a mere 3mm from the wall. This seamless integration between panel and building has been designed to ensure that the panel is an organic element of the building, and does not intrude upon the aesthetics of a room.

Multi-Functional

The DLP touch panel is able to do more than control every system and device in a building. With its built-in temperature sensor, data can be sent to the thermostat allowing each room to be monitored independently. This ensures that your heating and cooling solutions are optimized, and work as efficiently as possible.

Customize different plate and frame color

Vacation Away Curtain 30% Disarm Night

What's your favorite color?

Your Company’s Logo In The Switches

Give an excellent impression for your company using customized front plates with the logo of your company or the corporate colors.

Choose The Color That Defines Your Home’s Personality

We provide the possibility to print out layout colors, picture or image texture on the front plate that suit your lifestyle or with your interior designer's project colors.
Parameters

- Working voltage: DC12~30V (From HDL-MPP3.46)
- Power consumption: 35mA/DC24V
- Terminal: 0.75-0.85mm Diameter Single Core
- Housing Material: Glass, PC, ABS
- Installation: GI Wall Box
- Dimensions: 88*116.5*10.5 (mm) (Normal) 98*126.5*10.5 (mm) (XL)

ENERGY MANAGEMENT

The crowning feature of the Enviro panel is its ability to monitor in real-time the electrical and water resources being consumed. This is particularly useful if a user is trying to cut down on their energy usage, or if they simply wish to be notified of excessive energy use.

12 LISTING PAGES

With a massive 12 listing pages users can control hundreds of targets in their building. These listing pages use large easy to read fonts, are capable of displaying 147 languages, and use universally acknowledged icons.

4.3” CAPACITIVE LCD

Sporting a 4.3-inch capacitive touch LCD screen, the Enviro Panel allows a user to know at a glance exactly what systems are active. The screen also boasts a cool blue backlit display that is capable of being constantly active, allowing fast location detection in dim or unfamiliar conditions.

MULTIPLE TARGETS

Users can take complete control over every feature of their building, with a single Enviro Panel. From lighting, curtains, music, scenes, sensors, timers, AC, door heating, and even security solutions. This effortless control enables a user to know exactly what feature or appliance is being used and where.
Touch Buttons Switch EU
MPT4.48

![Touch Buttons Switch EU](image)

**The back-light button lights up when it is touched**

Each touch button has two-colour custom status which can be infinitely adjusted via the RGB value. The Touch Panel technology adjusts automatically to the changing environmental conditions such as humidity and temperature. Also other parameters such as the back-light’s brightness and saturation are adjustable.

**The color, icons and pattern of the plate can be customised**

Based on your personal favorites or your requirements

- Orange Glass
- Blue Glass
- Light Green Glass
- Glasser Glass

![Status without backlight color](image)

<table>
<thead>
<tr>
<th>Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply: DC12-30V</td>
</tr>
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<td>BUS power consumption: 10mA (DC24V)</td>
</tr>
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<td>Installation: Wall mounting</td>
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<tr>
<td>Dimensions: 88x88x10.5 (mm)</td>
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<table>
<thead>
<tr>
<th>Functions</th>
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</thead>
<tbody>
<tr>
<td>Working with MPP/All panel power interface</td>
</tr>
<tr>
<td>1/2/3/4 touch control buttons</td>
</tr>
<tr>
<td>Multi-mode button: Single on/off, single-off, combination on/off, combination off/off, double click/combination on/off, momentary, short press/long press, short press/long momentary etc.</td>
</tr>
<tr>
<td>Multi-control types for buttons: Scenes, sequence, timer, universal switch, single channel control, curtain, DIPSW, panel, broadcast scene, broadcast channel, security module, music</td>
</tr>
<tr>
<td>Adjustable RGB backlight</td>
</tr>
<tr>
<td>Combination function for single on/off, combination on/off</td>
</tr>
<tr>
<td>Support easy programming</td>
</tr>
<tr>
<td>Support HDL, Bupro online-upgrading</td>
</tr>
</tbody>
</table>

IR Remote Control

Built-in IR receiver (You need to replace a plate with an IR receiving hole to enable the IR remote control function)
New generation DLP

New design features such as metal buttons with four left/right keys (in total eight individual buttons) which you can arrange together and separate to fit any desired style. There are also many other options available with different materials and colours to fit in with your lifestyle.

With just one DLP you can control your whole house. Up to 32 buttons distributed through four pages, you can control up to 96 targets with each button, and in total more than 3000 targets like lighting, curtain, blinds, HVAC, heating system, background music, etc.

The new firmware supports 147 different languages, has a user-friendly interface, and provides easy programming function as well. The DLP panel allows connections with dimmers, relays, curtains, etc. directly without software. All the buttons have the ability to record the state of the rest of buttons and create with them new scenes in the DLP panel. This special function makes creating and changing scenes easy for the end user.

DLP Switch EU
MPL8.48

Control more than 3000 targets
147 Languages
Link to different pages
Easy Programming

Customise your DLP
Based on your personal favourites or your individual requirements
- Selectable Plate
- Selectable Frame

Parameters
- Power supply: DC12-30V
- BUS power consumption: 3mA/0.24W
- Installation: Wall mounting
- Dimensions: 88×48×10.5(mm)

Functions
- Working with MPL8.48 panel power interface
- 8 control buttons, 2 page buttons, button combine function
- Multi Modes for button: Single on/off, single on, single off, combination on, combination off, combination on/off, double click/combination on/off, momentary, click timer, short press/long press, short press/long momentary, "hyperlink" etc.
- Multi control types for button: Scenes, sequence, timer, universal switch, single channel control, curtain, GP455, panel, broadcast scene, broadcast channel, security, music
- IR remote control, adjustable LCD back light
- Floor heating, air conditioning and music control
- Support HQL button online upgrading

IR Remote Control
Built-in IR receiver (You need to replace a plate with an IR receiving hole to enable the IR remote control function)
Intelligent Switch EU
MP01R,48 / MP02R,48 / MP03R,48 / MP04R,48

Parameters
- Power supply: DC12-36V
- BUS power consumption: 20mA/DC24V
- Installation: Wall mounting
- Dimensions: 80x80x18.5mm

Functions
- Working with MPP 48 panel power interface
- 1/2/3/4 control buttons
- Multi modes for button: Single on/off, single on, single off, combination on, combination on/off, double click/ single on/ off, double click/combination on/off, momentary, short press/long press, short press/long momentary etc.
- Multi control types for button: Scene, sequence, timer, universal switch, single channel control, curtain, GPRS, panel, broadcast scene, broadcast channel, security module, music
- Adjustable RGB backlight
- Combination function for: Single on/off, combination on/off
- Support easy programming
- Support HDL Ba Gespr online upgrading

Background
Switchers are elements very important when you design a new space. That’s why we want to give the possibility to customize the plate and frame to find the style which suits you best.

Customize different plate and frame color
- Pink Glass
- Blue Glass
- White Glass
- golden Glass

Buttons
Small details are important because they give a distinguished touch of luxury and fashion to your home and business. To feel identified with these values, you can change the button’s ring colors to adjust it with your house style or your color business.

Choose the style of the buttons
- Bronze
- Aluminum
- Aluminum-Bronze

Selectable Plate Materials
The feeling of touch of Bronze and Glass are unique. If you are trying to avoid common materials, you can use the materials for your switchers which it matches better with your style.

Two custom color status per button
The back-light button lights up when it is pressed. Each button has two custom color status which can be infinitely adjustable via the RGB value by software.
8 Buttons Switch EU
MP8B.48

DIY Concept
Selectable plate and frame this is ideal in situations where you may need to regularly change or adjust the functionalities of different buttons.

The text on the buttons is easily adjustable, removable, and replaceable to suit your individual and changing needs. You simply print what you want, fix it to the button and cover it with the plastic sleeve.

This also makes it a very economical option as opposed to committing yourself to ones with design at the outset.

2/4/6 Buttons Switch EU
MP2B.48 / MP4B.48 / MP6B.48

Parameters
- Power supply: DC12-24V
- BUS power consumption: 15mA/40DC24V
- Installation: Wall mounting
- Dimensions: 86*48*10.5mm

Functions
- Working with MPFL.48 panel power interface
- 4/6/8 control buttons
- Multi mode four button: single on/off, single on, single off, combination on, combination off, combination on/off, double click single on/off, double click combination on/off, momentary, short press/long press, short press/long momentary etc.
- Multi control types four button: Scene, sequence, timer, universal
- switch, single channel control, curtain, GPRS, panel, broadcast
- scene, broadcast channel, security, music
- Customize button labels
- Key lock function
- Key led status can be adjustable
- Support easy programming
- Support HDL, Bussra online upgrading

IR Remote
Built-in IR receiver (You need to replace a plate with an IR receiving hole to enable the IR remote control function)

Customize different plate and frame color
White glass 8 button switch
White glass 6 button switch
White glass 4 button switch
White glass 2 button switch
4/6/8 Buttons Switch EU
MP4B.48 / MP6B.48 / MP8B.48

Parameters
- Power supply: DC12-36V
- BUS power consumption: 15mA/DC24V
- Installation: Wall mounting
- Dimensions: 86×48×10.5 (mm)

Functions
- Working with MP84.48 panel power interface
- 4/6/8 control buttons
- Multi-mode function: single on/off, single on, single off, combination on, combination off, double click/single on/off, double click/combination on/off, momentary, short press/long press, short press/long momentary, etc.
- Multi-control types for buttons: scene, sequence, timer, universal switch, single channel control, curtain, GPRS, panel, broadcast
- Customized button labels
- Key lock function
- Key led status can be adjustable
- Support easy programming
- Support HDL Buspro online upgrading

Color of plate and frame is selectable and customizable
- White glass: 2 button switch, 4 button switch, 6 button switch

4/8 buttons Panel EU
MP4A.48 / MP8A.48

Parameters
- Power supply: DC12-36V
- BUS power consumption: 15mA/DC24V
- Installation: Wall mounting
- Dimensions: 86×116.5×10.5 (mm)

Functions
- Working with MP84.48 panel power interface
- 2/4/8 big button total 8/4/8 control button
- Multi-mode function: single on/off, single on, single off, combination on, combination off, combination on/off, double click/single on/off, double click/combination on/off, momentary, short press/long press, short press/long momentary, etc.
- Multi-control types for buttons: scene, sequence, timer, universal switch, single channel control, curtain, GPRS, panel, broadcast
- Customized button labels
- Key lock function
- Key led status can be adjustable
- Support easy programming
- Support HDL Buspro online upgrading

Color of plate and frame is selectable and customizable
- White glass: button switch

Note: Built in IR receiver, need to replace a plate with IR receiving hole to achieve IR remote control function.
Double Panels
COMBINE TWO USER INTERFACE IN ONE PLACE

Double up the functionalities in an elegant way
You can avoid a scattered, untidy look by having two panels next to each other, and at the same time bring all of your required functionalities into the one place.

Easy and economic solution to extend your BUS
This is also a very cheap solution, as you only need to extend the bus cable by a few centimeters to reach the adjacent panel. It gives you the advantage of less construction work and ugly drilling and chiseling for separately placed panels.

Create a double panel combining two user interfaces
We can have the individual plates finished to whatever color or template you require. The two panels can be color-coordinated to your individual requirements and aligned neatly for optimum esthetic appearance.

Intelligent Switch EU
MP6CN.48 / MP13CN.48

Parameters
- Power supply: DC12-30V
- BUS power consumption: 15mA/DC24V
- Installation: Wall-mounting
- Dimensions: 89×89×9(mm)

Functions
- Working with MPP1.48 panel power interface
- 7×14 control button
- Multi mode for button: Single on/off, single on, single off, combination on, combination off, combination on/off, double click/single on/off, double click/comination on/off, momentary, short/long press, short/long press, momentary etc.
- Multi control types for button: Scene, sequence, timer, universal
- Scene, single channel control, scene, GPRS, panel, broadcast
- Scene, broadcast channel, security, music
- Customize button labels
- Key lock function
- Key led status can be adjustable
- Support HDA, Buspro online upgrading

Customize different plate and frame color
Modern Series Intelligent Switch EU

**Parameters**
- Power supply: DC12-30V
- BUS power consumption: 15mA/DC24V
- Installation: Wall mounting
- Dimensions: 86x86x33(mm)

**Functions**
- Multi mode for button: Single on/off, single on, single off, combination on, combination off, combination on/off, Momentary, double click, single click, etc.
- Multi control types for button: Scene, sequence, timer, universal switch, single channel control, curtain, GPRS, panel, broadcast scene, broadcast channel, security module, Music, etc.

Intelligent Switch EU

**Parameters**
- Power supply: DC12-30V
- BUS power consumption: 20mA/DC24V
- Installation: Wall mounting
- Dimensions: 86x86x33(mm)

**Functions**
- Working with MFP4.48 panel power interface
- 1/2/3 control button
- Multi modes for button: Single on/off, single on, single off, combination on, combination off, combination on/off, double click, single on/off, double click/combination on/off, momentary, short press/long press, short press/long momentary, etc.
- Multi control types for button: Scene, sequence, timer, universal switch, single channel control, curtain, GPRS, panel, broadcast scene, broadcast channel, security module
- Customize button labels
- Key lock function
- Key lock status can be adjustable
- Support easy programming
- Support HOLO Bypass online upgrading

MPH101.48

MPH102.48

MPH104.48

MPH108.48

MPH01.48

MPH02SA.48

MPH03A.48
**Touch Button Switch US**

**MPT2.46 / MPT4.46 / MPT6.46**

### Parameters
- Power supply: DC12-35V
- BUS power consumption: 20mA/DC24V
- Installation: Wall mounting
- Dimensions: 86×116×10.5[mm]

### Functions
- Working with MPTI.46 panel power interface
- 2/4/8 control button
- Multi modes for button: Single on/off, single on, single off, combination on, combination off, combination on/off, momentary, double click
- Single on/off, double click/combo, on/off, etc.
- Multi control types for button: Scene, sequence, timer, universal, switch, etc.
- Single on, single off, combination on, combination off, combination on/off, momentary, double click, single on/off, double click/combo, on/off, etc.
- Backlight value adjustable
- Color of backlight (RGB) can be set
- Support easy programming
- Support HOI Buspro online upgrading

### Color of back board support RGB/Selectable face plate and frame

- White glass/silver touch switch
- White glass/abs touch switch
- White glass/silver touch switch

**Note:** Built-in IR receiver, need to replace a plate with IR receiving hole to achieve IR remote control function.

---

**Aluminum Style Switch US**

**MP2K.48 / MP4K.48 / MP6K.48 / MP8K.48**

### Parameters
- Power supply: DC12-35V
- BUS power consumption: 15mA/DC24V
- Installation: Wall mounting
- Dimensions: 73×122×9[mm]

### Functions
- Working with MPPI.K48 panel power interface
- 2/4/8 control buttons
- Multi modes for button: Single on/off, single on, single off, combination on, combination off, combination on/off, momentary, double click
- Single on/off, double click/combo, on/off, etc.
- Multi control types for button: Scene, sequence, timer, universal, switch, etc.
- Single on, single off, combination on, combination off, combination on/off, momentary, double click, single on/off, double click/combo, on/off, etc.
- Support easy programming
- Support HOI Buspro online upgrading

### Selectable QTY Button

- [Image of selectable QTY buttons]
DLP Switch US  
MPL8.46

Parameters
- Power supply: DC12-30V
- BUS power consumption: 30mA/3CC4V
- Installation: Wall-mounting
- Dimensions: 86×116.5×10.5(mm)

Functions
- Working with MPF6.46 panel power interface
- 8 control buttons, 7 page buttons, button combine function
- Multi-blades for button: Single-on-off, single-on, single-off, combination
- on, combination off, combination on/off, double side single on/off,
  double click/combination on/off, momentary, close timer, short
  pressure and press, short press long momentary, “preset button” etc.
- Multi control types for button: Scene, sequence, timer, universal
  switch, single channel control, curtain, GPRS, panel, broadcast
  scene, broadcast channel, security, music
- IR remote control, delineate LCD back light
- Floor heating, air conditioning and music control
- Support easy programming
- Support HOI Busprom online upgrading

Multiple Control Pages
- Lighting
- Background Music
- Floor Heating

Metal Buttons  
Electronic Labels  
Selectable Plate  
Selectable Frame

4/6/8 Buttons Switch US  
MP4B.46 / MP6B.46 / MP8B.46

Parameters
- Power supply: DC12-30V
- BUS power consumption: 15mA/CC4V
- Installation: Wall-mounting
- Dimensions: 86×116.5×10.5(mm)

Functions
- Working with MPF6.46 panel power interface, 4/6/8 Buttons
- Multi-blades for button: Single-on-off, single-on, single-off, combination
- on, combination off, combination on/off, double click/single-off, double
  click/combination on/off, momentary, short press long press, short press
  long momentary etc.
- Multi control types for Button: Scene, sequence, timer, universal switch,
  single channel control, curtain, GPRS, panel, broadcast scene, broadcast
  channel, security module, music
- Customize button labels
- Key lock function
- Key led status can be adjustable
- Support easy programming
- Support HOI Busprom online upgrading

Customize different plate and frame color

Built-in IR receiver, need to replace a plate with IR receiving hole to realize
IR remote control function

White glass 2 button switch  
White glass 4 button switch  
White glass 8 button switch  
White glass 16 button switch

Built-in IR receiver, need to replace a plate with IR receiving hole to realize
IR remote control function
4/6/8 Buttons Switch US
MP4B.46 / MP6B.46 / MP8B.46

Parameters
- Power supply: DC12-30V
- BUS power consumption: 15mA/DC24V
- Installation: Wall mounting
- Dimensions: 86x116x5+10.5(mm)

Functions
- Working with MPPI.46 panel power interface
- 4/6/8 control buttons
- Multi modes for button: Single on/ off, single on, single off, combination on, combination off, combination on/off, double click/single on/off.
- Double click/combinati on/off, momentary, short press/long press, short press/long momentary etc.
- Multi control types for button: Scene, sequence, timer, universal switch, single channel control, curtain, GPRS, panel, broadcast scene, broadcast channel, security, music.
- Customize button labels
- Key lock function
- Key led status can be adjustable
- Support easy programming
- Support HOS. Sussex online upgrading

Customize different plate and frame color
- White glass 2 button switch
- White glass 4 button switch
- White glass 6 button switch
- White glass 8 button switch

Selectable face plate and frame
- MP4A.46
- MP8A.46

Note: Built-in IR receiver, need to replace a plate with IR receiving hole to achieve IR remote control function

4 / 8 buttons Switch US
MP4A.46 / MP8A.46 / MP4A.46 / MP8A.46

Parameters
- Power supply: DC12-30V
- BUS power consumption: 15mA/DC24V
- Installation: Wall mounting
- Dimensions: 86x116.5+10.5(mm)

Functions
- Working with MPPI.46 panel power interface
- 4/8 big button, total 8/4 control button
- Multi modes for button: Single on/ off, single on, single off, combination on, combination off, combination on/off, momentary, double click/single on/off, double click/combinati on/off, momentary, short press/long press, short press/long momentary etc.
- Multi control types for button: Scene, sequence, timer, universal switch, single channel control, curtain, GPRS, panel, broadcast scene, broadcast channel, security module, Music
- Key lock function
- Key led status can be adjustable
- Support easy programming
- Support HOS. Sussex online upgrading

Installation diagram
Panel Power Interface
MPPI.46 / MPPI(k).48 / MPPI.48

Parameters
- Power supply: DC12-30V
- Installation: Wall mounting
- Dimensions: H183.5mm x W106.5mm x D26.5mm (MPPI.46)
  H73mm x W106mm x D26.5mm (MPPI(k).48)

Installation diagram
Panel plate + Panel power interface + Back box

Panel Power Interface
MPPI.48

Parameters
- Power supply: DC12-30V
- Installation: Wall mounting
- Dimensions: H83.5 x W83.5 x D 26.5 (mm)

Installation diagram
Panel plate + Panel power interface + Back box

High Performance Dimmer
SB-WL-D0610 / SB-WL-D0620 / SB-WL-D1210

Parameters
- Power supply: 3 phases (L1, L2, L3, N, PE)
- Power input: AC220V±15%
- Protection: Overload protection
- Installation: Wall mounting

SB-WL-D0610
- Output channel: 6 channel dimming
- Dimensions: 478x580x162 (mm)
- Current in each channel: each channel 1.5A, total less than 9A
- Maximum 6 separate areas
- Can provide 250VA current to BUS

SB-WL-D0620
- Output channel: 6 channel dimming
- Dimensions: 478x580x162 (mm)
- Current in each channel: each channel 2.5A, total less than 15A
- Maximum 6 separate areas
- Can provide 250VA current to BUS

SB-WL-D1210
- Output channel: 12 channel dimming
- Dimensions: 478x580x162 (mm)
- Current in each channel: each channel 1.5A, total less than 12A
- Maximum 12 separate areas
- Can provide 250VA current to BUS

Functions
- 10-bit dimming Accurate
- Hardware bypass function
- Up to 5/12 separate scenes
- Up to 60 scenes in each area, maximum runtime of scene is 60 minutes
- Up to 30 scenes, 10 steps in each sequence, each sequence lasts 60 minutes as internal time, there are four types of sequences:
  Forward/Backward/Toggle/Random
- Low/high maximum threshold are available to suit the different needs in each channel
- Emergency bypass in each channel
- Remark information provided in each scene, scene, channel and sequence
- With 3 fire emergency switch
- Can go back to previous scene or designated scene once the system restart.
Leading / Trailing Edge MOSFET Dimmer

**Parameters**

- Power supply: AC110/240V
- BUS Working voltage: DC12-35V
- BUS power consumption: 25mA/42DC24V
- Dimming curves: linear, x, x^2, x^3
- Dimensions: 216×190×48(mm)

**Functions**

- Maximum 2x separate areas, each area has 12 zones
- Each output channel has LED indicator for status and manual switch
- Maximum 6 sequences, and 12 steps for each sequence
- Low Threshold, High Threshold, Maximum Threshold are all available for each channel
- Each channel can choose leading edge or trailing edge
- Can select specified scene or scene before power off when the device restarts
- Short circuit and over heat protection
- 4 dimming curves
- Supports online upgrading

**Parameters**

- Power supply: AC110/240V
- BUS Working voltage: DC12-35V
- BUS power consumption: 25mA/42DC24V
- Dimming curves: linear, x, x^2, x^3
- Dimensions: 216×90×48(mm)

**Functions**

- Maximum 2x separate areas, each area has 12 zones
- Each output channel has LED indicator for status and manual switch
- Maximum 6 sequences, and 12 steps for each sequence
- Low Threshold, High Threshold, Maximum Threshold are all available for each channel
- Each channel can choose leading edge or trailing edge
- Can select specified scene or scene before power off when the device restarts
- Short circuit and over heat protection
- 4 dimming curves
- Supports online upgrading

**Diagram of constant current**

- 1 load channel: 15mA constant current
- Working with TRIAC dimmer
- Connected in parallel when working with this lamp

Note: Above picture is set HDL TRIAC dimmer as an example. The module can supply maximum 16mA current for TRIAC, this module can solve the flicker problem when dimming the lamps such as LEDs and low voltage Halogen.
### Leading Edge TRIAC Dimmer

**MD0206.432 / MD0403.432 / MD0602.432**

#### Parameters
- Power supply: 110/240V±10%
- BUS Working voltage: DC12-30V
- BUS power consumption: 28mA/DC 24V
- Dimming curves: Linear, η, η², η³
- Dimensions: 144X88X65 (mm)

#### Functions
- Output channel: 2ch/8A
- Fuse 10A type
- TRIAC: 250mA unidirectional TRIAC, minimum load 40W
- Maximum 8 separate areas, each area has 12 scenes

---

### Leading Edge TRIAC Power Amplifier

**SB–WL–B0120 / SB–WL–B0210**

#### Parameters
- Power supply: AC 220V±10%
- Protection: Need exterior protection switch
- Output channel: 1 channel dimming output
- Output current: 20A
- Installation: Wall hanging
- Dimensions: 288x200x100 (mm)

#### Functions
- Dimmable power amplifier
- AC0-240V power input
- DC 0-12V control signal input

---

#### Parameters
- Power supply: AC 240V±10%
- Protection: Need exterior protection switch
- Output channel: 2 channel dimming output
- Output current: 10A
- Installation: Wall hanging
- Dimensions: 288x200x100 (mm)

#### Functions
- Dimmable power amplifier
- AC0-240V power input
- DC 0-12V Control signal input
### 10A Relay Module

#### MR0410.431 / MR0810.432 / MR1210.433 / MR1610.433

- Output channel: 4 channel Relay
- Dimensions: 216x90x46(mm)
- 4 channel relay output
- Maximum 4 separate areas
- Each area has 8 scenes, maximum runtime of scene: 60 minutes

### Parameters

- Power supply: DC15-30V
- Static BUS power consumption: 15mA/DC24V
- Dynamic BUS power consumption: 40mA/DC24V
- Current in each channel: 150mA
- Life time for relay unit: More than 60,000 times
- Overload : Need MCB for each channel
- Installation: Standard 35mm Din Rail
- Capacity load of Relay: < 150W

### Functions

- 4/8/12/16 channel relay output
- 4/8/12/16 separate areas
- Each area has 6/16/24/32 scenes, maximum runtime of scene: 60 minutes
- Each area has 2 sequences, each sequence has 12 steps
- Each channel has lights protection delay: 0-60 minutes
- Each channel has switch on delay time: 0-50 seconds
- Manual buttons ON and OFF for each channel
- Remote program and management are available
- Can go back to previous scene or designated scene once the system restart
- LED lights are available for indication of each channel
- Staircase lamp function and Mutual exclusion function
- Support easy programming
- Support HDL Buspro online upgrading

### 16A Relay Module

#### MR0416.431 / MR0816.432 / MR1216.433 / MR1616.434

- Output channel: 8 channel Relay
- Dimensions: 216x90x46(mm)
- 8 channel relay output
- Maximum 8 separate areas
- Each area has 16 scenes, maximum runtime of scene: 60 minutes

### Parameters

- Power supply: DC15-30V
- Power consumption: Static power consumption: 16mA/DC24V
- Dynamic power consumption: 35mA/DC24V
- Current in each channel: 160mA
- Life time for relay unit: More than 60,000 times
- Protection: Need exterior protection switch
- Installation: Standard 35mm Din Rail
- Capacity load of Relay: < 300W

### Functions

- 4/8/12/16 channel relay output
- 4/8/12/16 separate areas
- Each area has 8/16/24/32 scenes, maximum runtime of scene: 60 minutes
- Each area has 2 sequences, each sequence has 8 steps
- Each channel has lights protection delay: 0-60 minutes
- Manual buttons ON and OFF for each channel
- Remote program and management are available
- Can go back to previous scene or designated scene once the system restart
- Each channel has switch on delay time: 0-35 seconds
- Each area has 2 sequences, the maximum step of each sequence is scene as channel units
- Staircase lamp function and Mutual exclusion function
- Support easy programming
- Support HDL Buspro online upgrading
**LED Driver/ LED Dimmer**

**SB–WM–LED0304 / SB–LED650mA / MDLED0605.432**

- **Power supply:** AC 240V±10%
- **Output channel:** 3 channel (DC24V 4A)
- **Dimensions:** 310×220×67(MM)

**SB–LED650mA**

- **Power input:** DC10-30V
- **Output:** 650mA
- **Dimensions:** 34×38×22.5(MM)
- **3 output channel for LED strip**
- **PWM constant voltage output for LED strip**

**Parameters**

- **Power supply:** DC15-30V
- **Static BUS power consumption:** 20mA/DC24V
- **Dynamic BUS power consumption:** 40mA/DC24V
- **Output:** 6Ch/6A
- **LED power input:** 12-30VDC
- **Dimensions:** 144×90×58(MM)

**Functions**

- Maximum 6 separate areas, each area has 12 scenes
- Maximum 6 sequences, each sequence has 12 steps, each step has 60 minutes as interval time, there are 4 types of sequence: Forward/Backward/Random/Forward&Backward
- Low, high or max threshold are available in each channel to suit different loads
- Can go back to previous scene or designated scene once the system restart
- Manual buttons ON and OFF for each channel
- Short circuit protection, overload protection
- SA output current in each channel
- PWM constant voltage output for LED Lamp and LED strip
- Support easy programming
- Support HDL Buspro online upgrading

---

**Ballast Dimmer, 0-10V Output**

**MRDA0610.432**

**Parameters**

- **Power supply:** DC 15-30V
- **Power consumption:** 30mA/DC24V
- **Installation:** Standard 35mm Din Rail
- **Dimensions:** 144×90×58(MM)

**Functions**

- 6 channel relay output
- Manual buttons ON and OFF for each channel
- LED lights available for indicators of each channel
- Maximum 6 separate areas, each area has 12 scenes
- Maximum 6 sequences, each sequence has 12 steps, each step has 60 minutes as interval time, there are four types of sequence: Forward/Backward/Random/Forward & Backward
- Low, high or max threshold are available in each channel to suit different loads
- Can go back to previous scene or designated scene once the system restart
- Support easy programming
- Support HDL Buspro online upgrading

---

**DMBUS Gateway**

**MBUS–DMX 232**

**Parameters**

- **AC input:** 230VAC±10%
- **BUS power consumption:** 200mA/DC24V
- **Interface:** 128×64 dot matrix graphic LCD 6 manual buttons
- **Installation:** Standard 35mm Din Rail
- **Dimensions:** 144×90×58(MM)
- **Built-in Ethernet port**

**Functions**

- Gateway: DMX512/1990 or ArtNet to HLD Buspro (one way)
- DMX decode: ArtNet to DMX512/1990
- MAX reserveable DMX channel: 48
- Each DMX channel support 16 targets

---

**NEW PRODUCT**

Introducing DMX Gateway, a gateway unit which integrates DMX-Buspro system with DMX Lighting Control system, enabling control of range of fixtures/features in dimmers, relays, etc, from professional lighting desks...
**How to combine HDL Buspro + DMX Technology + LED Driver**

**EXAMPLE OF USE**

**DMX Scene Recorder**

**SB–DN–Recorde**

**Parameters**
- Power supply: DC12-30V
- BUS power consumption: 40mA@12V
- Interface: 128x64 dot matrix graphic LCD
- 8 manual buttons
- Installation: Standard 55mm Din Rail
- Dimension: 144x90x66(mm)
- Built in Ethernet port

**Functions**
- Total capacity: 255Styles
- PC remote operation, download programs, play programs, delete programs
- Signal Interface: HDL Buspro, RJ45
- Support: NetDMX
- Has two play modes single or loop playback
- Wall panel playback
- Up to 4 hours records for programs

**48 Channel DMX Controller / 512 channel DMX Show Controller**

**SB–DN–48DMX**

**Parameters**
- Power supply: DC12-30V
- BUS power consumption: 200mA@12V
- Interface: 128x64 dot matrix graphic LCD
- 6 manual buttons
- Installation: Standard 55mm Din Rail
- Dimension: 144x90x66(mm)
- Built in Ethernet port

**Functions**
- Can be pre-set up to 500 scenes, scene running time from 0.1 second to 60 minutes
- HDL-NET DMX signal output
- Each channel has gradual and abrupt change properties
- HDL Buspro and Ethernet double way data communication
- Up to 99 scenes, each sequence has 255 steps, step running time from 0.1 second to 60 minutes, 4 modes for the sequences “Forward”, “Backward”, and “Back and forth’, ‘Random’.
- Soft reset with power on
- DMX512 signal output (1990 version)
### 2 Channel Curtain Module / HVAC Module

**SB–DN–2Motor / MAC01.331**

#### Parameters
- Power supply: DC15–30V
- BUS power consumption: 5mA/DC24V
- Controllable curtain: 2 curtains
- Motor type: Capacitive single phase
- Channel max output current: 5A
- Lifetime for relay unit: 50,000 times
- Installation: Standard 35mm Din Rail
- Dimension: 72x90x44(mm)

#### Functions
- 2 channel curtain control
- Hardware and software interlock for forward or backward
- Forward and backward delay
- Fan speed: High, medium or low
- Control mode: cooling, heating, dehumidification, invalid
- Temperature control by connecting with up to 4 pieces of DSE1820
- One master module supports up to 8 slave modules
- DC24V fan speed control method
- Support HDL Buspro online upgrading

### Floor Heating Controller / Logic Controller

**MFH06.432 / SB–DN–Logic960**

#### Parameters
- Power supply: DC12–30V
- BUS power consumption: 15mA/DC24V
- Static power consumption: 30mA/DC24V
- Output channel: 6
- Maximum channel current: 10mA/DC24V (0–10V output)
  - 1A/220VAC (Relay output)
- Lifetime for relay unit: 5,000,000 times
- Protection: External breaker
- Dimension: 72x90x46(mm)

#### Functions
- 6 channels floor heating or cooling control
- 2 output ways in each channel: relay output and 0–10V output
- Temperature control: 5°C–40°C (±0.5°C accuracy)
- Timing or manually floor heating system flush function
- Auto protection from over temperature collection
- Support HDL Buspro online upgrading

---

### Notes
- Maximum 12 logic blocks, each block has 20 logic tables.
- Variables can be connected with each other.
- Maximum 4 input conditions and 20 output targets in each logic table.
- Logic table input conditions: Time, status of channel, external inputs, universal switch etc.
- Logic relations: and, or, and, nor, or Support HDL Buspro online upgrading.
### 64 Channel DALI / GPRS SMS Controller
**MC64–DALI.431 / HDL–MGSM.431**

#### Parameters
- **Power supply:** DC12–30V
- **BUS power consumption:** 15mA/DC24V
- **DALI independent power supply:** AC110/220V
- **Interface:** HDL Buspro And DALI
- **Installation:** Standard 35mm Din Rail
- **Dimension:** 72x92x65(mm)

#### Functions
- **Transform HDL signal into DALI signal**
- **Up to 64 DALI channels**
- **Scene controller**
- **Support maximum 16 independent areas**
- **Available function for each channel:** Low and high threshold, system failure, DALI component early warning
- **First emergency function**
- **After device reset, there is no option to return to the designated scene or return back to the last 20 seconds scene before power off**
- **Support HDL Bupsro online upgrading**

### 1 & 3 Phase Digital Power Meter / HDL HUB 6 Lines
**SB–DN–PM3P01 / SB–DN–PM1P03 / MBC06.431**

#### Parameters
- **Power supply:** DC12–30V
- **Measuring voltage:** 0–250VAC
- **Maximum access to current (each channel): Three-phase 10A / 16A single phase**
- **BUS power consumption:** 65mA/DC24V
- **Built-in relay:** 2A/250VAC (single phase)
- **Installation:** Standard 35mm Din Rail
- **Dimension:** 72x92x65(mm)

#### Functions
- **You can view real-time phase voltage, current, power, active power, reactive power, apparent power, power factor, active power, reactive power, and other values**
- **Logical function:** phase voltage, phase current, line, electrical values of each phase at a certain time, universal switching, all can be logical trigger conditions
- **Logical relational process, AND, OR, and trigger delay time can be set**
- **Data records can be retained for one year**

### HDL

#### HDL–MGSM.431

#### SB–DN–PM3P01

#### SB–DN–PM1P03

#### MBC06.431
DC24V Power Supply
SB–DN–PS750 / SB–DN–PS2.4A

**Parameters**
- Power supply: AC240V±10%
- Frequency: 50-60Hz
- Output current: 750mA
- Output voltage: DC24V
- Installation: Standard 35mm Din Rail
- Dimension: 72 x 90 x 46 (mm)

**Functions**
- Power supply: AC110/220V±10%
- Frequency: 50-60Hz
- Output current: 2.4A
- Output voltage: DC24V
- Installation: Standard 35mm Din Rail
- Dimension: 144 x 90 x 56 (mm)

Security Module/Ceiling Speaker Manual
SB–DN–SEC250K

**Parameters**
- Working Voltage: DC15-30V
- Power Consumption: 15mA@DC24V
- Dimensions: 72mm x 90mm x 66mm
- Installation: Standard 35mm Din Rail
- Interface: HDSL Buspro

**Functions**
- 8 Separate zones for different security purposes
- Multiple security modes: Away, Holiday, Daytime, Nighttime, etc.
- Multiple alarm modes: Invasion, Gas, Fire, Temperature, etc.
- Multi-layered security protection
- Can set up security protection for 8 zones simultaneously
- Availability to check the alarm log
- Send commands to the GPRS SMS Controller or Dial-Out to send SMS messages or call for help to the emergency contact directly
- For emergencies, the system will automatically notify the emergency contacts
- Online upgrading is available
Ultrasonic & PIR Sensor
MSPU05.48

Parameters
- Power supply: DC12-30V
- BUS power consumption: 45mA/DC24V
- Ultrasonic sensing range: 6m (diameter)
- Static and dynamic sensing range: 6m (diameter)
- Dimensions: 85x85x35 (mm)

Functions
- Working with MFP-J panel
- Built-in temperature sensor, PIR sensor, LUX sensor, dry contact, ultrasonic sensor, universal switch, logic, delay, logical conditions
- With 24 logic blocks function, can set 20 inputs
- With 2 optional logical relations: OR, AND
- PIR sensitivity can be adjusted, the sensitivity range is 1:100
- Ultrasonic sensor sensitivity can be adjusted, the sensitivity range is 1:100
- UV switch no.: Logical condition is assigned to 201-248, each logical has 2 UV switch no.
- Each logical has time delay 1-3600s
- Support HQL Buspro online upgrading

Outdoor sensor
HDL-MSOUT.4W

Parameters
- Working voltage: DC12-30V
- Power consumption: 31mA/DC24V
- Temperature detection range: -40°C to 60°C
- Illumination detection range: 0 to 15000 LUX
- Humidity detection range: 20% to 95% RH
- Microwave detection range: H: 7m D: 10m L: 6m
- Housing material: ABS, stainless steel
- Installation: Screw fixation
- Dimensions: 125x75x42 (mm)

Functions
- Built-in LUX sensor, microwave sensor, humidity sensor, temperature sensor, dry contact, universal switch
- Two logical relations: OR, AND
- It has 24 logic blocks. Both true logical and false logical can trigger the targets respectively. Each logic can set 20 targets
- Adjustable microwave sensitivity: range is 1:100
- Each logic supports trigger delay time from 0 to 300s
- The range of universal switch number in logic is 201-248, each logic has 2 universal switch numbers, universal switch can close automatically, the time range is 1-3600s
- Temperature function:
  - Supports security function
  - Sensor has heating function. It can make sure that the circuit can work normally while the temperature is below 5°C
  - Supports online upgrading
## Temperature, Humidity / Wide Field PIR Sensor
### S8–CMS–THL / S8–WMS–PIR

**Parameters**
- Power supply: DC12–30V
- Bus power consumption: 25mA/DC24V
- Temperature detection range: -20–38°C
- Illumination detection range: 0–500Lux
- Humidity detection range: 20–95%
- Installation: Ceiling mount
- Dimension: 80(diameter)x32(mm)

**Functions**
- Equipped with brightness sensor, temperature sensor, humidity sensor.
- Two dry contact inputs, two universal switches.
- Logic status which can be used as input conditions.
- Two logic relations: OR, AND.
- With up to 24 logic block functions, max eight logic input conditions, up to 20 target outputs for logic conditions.
- Security warning function, need to be used with the security module.

## 12 in 1 Multi-Function / Air Quality Sensor
### S8–CMS–12in1 / S8–CMS–LA

**Parameters**
- Power supply: DC12–30V
- Bus power consumption: 45mA/DC24V
- Static power consumption: 90mA/DC24V (Relay on)
- Dynamic power consumption: 2mA/DC24V (Relay off)
- Signal output: 1 Diode, Bupro signal
- Temperature detection range: 0°C–45°C
- Illumination detection range: 0–300 Lux
- Installation: Ceiling mount
- Dimension: 80(diameter)x32(mm)

**Functions**
- Equipped with a temperature sensor, brightness sensor, infrared motion sensor, ultrasonic sensor, two dry contact inputs, two external input conditions.
- With infrared receiver function, can receive eight infrared remote control codes.
- With infrared transmitter function, capable of sending 99 infrared remote control codes.
- With four logic relations: OR, AND, NON, NAND.
- With up to 32 logic block functions, can be set nine input conditions, each logic block can be set 10 output targets.
- 2 relay outputs.
- Security function, to be used with the security module.
- Support HDI Bupro online upgrading.
**Ceiling Mount Ultrasonic / Ceiling Mount PIR Sensor**

** MSPU03.4C / MSP02.4C **

### Parameters
- **Power supply:** DC18-30V
- **Bus power consumption:** 30mA/DC24V
- **Detection range in diameter:** 8m (installation height: 3m)
- **Temperature detection range:** 0°C to 45°C
- **Illumination detection range:** 0-500Lux
- **Dimension:** 63x63x38mm
- **Cutting Size:** 45mm (Diameter)

### Functions
- Equipped with temperature sensor, brightness sensor, ultrasonic sensor and universal switch which can be used as logic conditions.
- 24 logic blocks, 20 output targets can be set in each logic block.
- Two logic relations: OR, AND
- Sensitivity adjustable, range from 1-10
- Universal switch numbers were assigned to 201-248 in the logic conditions, 2 switch numbers for each logic, universal switch has auto-off function from 1 to 3600 seconds.
- Logic can trigger the control target no matter it’s valid or not
- Security function, to be used with the security module
- Support HDL Buspro online upgrading

---

**HDL 7 IN 1 Sensor / HDL 8 IN 1 Sensor**

** MSP07M.4C / MSP08M.4C **

### Parameters
- **Power supply:** DC18-30V
- **Bus power consumption:** 25mA/DC24V
- **Detection range in diameter:** 8m (installation height: 3m)
- **Temperature detection range:** -20°C to 60°C
- **Illumination detection range:** 0-500Lux
- **Dimension:** 84mm (diameter) x 37.5mm

### Functions
- Built-in infrared motion sensor, LUX sensor, dry contact, temperature sensor and universal switch control.
- Seven logic functions: brightness sensor, temperature sensor, PIR sensor, two dry contact inputs and logical condition.
- Two logic relations: OR, AND.
- Adjustable infrared motion sensitivity, range from 1-10.
- It has 24 logic blocks. The range of universal switch number in logic function is 201-248, each logic has 2 universal switch number. The universal switch has Auto-Off function, delay time is 1-3600s.
- Logic can trigger the control target no matter it’s valid or not.
- Up to 10 logic block functions to trigger the control target.
- Supports upgrade from HDL Buspro.
- Constant illuminance function.
- Supports IR sending control target, the universal switch number is 1-240. It can upload multiple IR code.
- Constant illuminance function.
**RF Receiver / IR/RF Remote Controller**
MRF16.4C / MTIRW / MP2N-RF.18

**Parameters**
- Power supply: DC12-30V
- Frequency of carrier wave: 433.1568MHz/433.92MHz
- Bus Power Consumption: 5mA/10mA
- Receiving distance: 50M
- Dimension: 83 x 83 x 32(mm)
- Installation: Ceiling Mount

**Functions**
- Wireless function: Connect to at most 4 wireless controllers with different addresses, and need the current remote address
- Key code: single-on, single-off, single-on, single-off, combined on, combined off
- Maximum 99 objects for each key: 24 control keys for each controller (except combine function)
- Control objects: Scene, scenes, timer, general switch, single channel adjust
- Can set up to 8 different buttons programs
- Support HID,Buspro online upgradling

**MP2N-RF.18**
- Frequency of carrier wave: 433.92MHz
- Dimension: 83 x 83 x 15.4(mm)

---

**IR Learner / IR Emitter With Current Detector**
SB–IR–Learn.01 / SB–IR–EM

**Parameters**
- Frequency of IR: 38KHz ± 20%
- Installation: USB 2.0 Interface
- Dimension: 38 x 70 x 38(mm)
- USB Interface, no driver for use
- Indicator LED flashing when learning code

**Functions**
- USB Interface, no driver and easy to use
- Infrared Code learning
- Infrared Code sending test
- Indicator w/flash when the device is learning the IR Code
- Current detecting function for identify device On/Off status
- Maximum 200 IR Codes can be stored
- To send the IR codes by using a H.L.E.D
- Supports upgrade from HLD Buspro

---

**MRF16.4C**

**Parameters**
- Battery: Lithium (3.7V, 100mA)
- Working current: 45mA
- Standby current: 1mA
- Frequency of IR: 38KHz
- Frequency of RF: 433.1568MHz/433.92MHz
- IR Sending Distance: 5m
- RF Sending Distance: 50m
- Dimension: 155 x 60 x 24.2(mm)
- USB Interface: Software Upgrade, Charging

---

**MTIRW**

**Parameters**
- Power supply: DC12-30V
- BUS power consumption: 15mA/DC24V
- Remote controller code storage: Maximum 200 IR codes
- IR Transmitter carrier frequency: 38KHz
- Dimension: 45 x 45 x 15(mm)
- IR remote control signal transmitter
- Detecting state of controlled equipment

---

**SB–IR–Learn.01**

**Parameters**
- Power supply: DC12-30V
- BUS power consumption: 10mA/DC24V
- Remote controller code storage: Maximum 200 IR codes
- IR Transmitter carrier frequency: 38KHz
- Dimension: 45 x 45 x 15(mm)
- IR remote control signal transmitter
- Detecting state of controlled equipment

---

**SB–IR–EM**

**Parameters**
- Power supply: DC12-30V
- BUS power consumption: 15mA/DC24V
- Remote controller code storage: Maximum 200 IR codes
- IR Transmitter carrier frequency: 38KHz
- Dimension: 45 x 45 x 15(mm)
- IR remote control signal transmitter
- Detecting state of controlled equipment
1 Port IP Interface / HDL-BUS EIB Gateway
HDL-MBUS01IP.431 / SB-DN-EIB

Parameters
- Power supply: DC15-30V
- BUS power consumption: 40mA/DC24V
- HDL Busspro subnet numbers: 1 HDL Buspro subnet
- Signal interface: HDL Busspro, RJ45
- Installation: Standard 35mm Din Rail
- Dimension: 72x90x66(mm)

Functions
- HDL Busspro and Ethernet double way data communication
- Support internet remote access connection
- Intelligent data exchange, reducing data traffic

HDL-BUS / RS232 Converter
SB-DN-RS232N

Parameters
- Power supply: DC15-30V
- BUS power consumption: 15mA/DC24V
- Installation: Standard 35mm Din Rail
- Signal Interface: RS232/HDL Busspro
- Dimension: 72x90x66(mm)
- Support HDL Busspro online upgrading

Functions
- HDL Busspro and KNX two ways data converting
- Supports multiple types of data points
- Can be set up to 254 goals in two-way conversion control

Professional Rs232 module
SB-DN-232IP–Pro

Parameters
- KNX Power supply: DC15-30V
- KNX power consumption: 5mA/DC24V
- Interface: HDL Busspro
- PCB size: 72x90x66(mm)
- Programming software: HDL Busspro setup tool
- Installation: Standard 35mm Din Rail

Functions
- Power supply: DC15-30V
- BUS power consumption: 5mA/DC24V
- Installation: Standard 35mm Din Rail
- Signal interface: RS232/HDL Busspro
- Dimension: 72x90x66(mm)
- Gateway between HDL Busspro and Ethernet
4 / 8 Channel Dry Contact Sensor
MSD04.40 / MSD08.40

Parameters
- Power supply: DC12-35V
- BUS power consumption: 10mA/DC24V
- Installation: Screw fix installation
- Dimension: 45x45x16(mm)

Functions
- 4 channels dry contact input
- 4 channels state indicator output
- Dimming function
- Tamper alarm
- Security function, to be used with the security module
- Switch type: Mechanical switch, Single-On, Single-Off,
  Single-On/Off, Combination-On, Combination-Off,
  Combinations, Multi-functional, Parallel switch
- Control target type: Sources, sequences, universal switches,
  single channel adjustment, broadcast scene, broadcast channel,
  curtain control, panel control, GPRS function, fire alarm control
  and music play functions
- Support HDL Buspro online upgrading

4 Channel Temperature Sensor
SB–MTS04.20

Parameters
- Power supply: DC12-35V
- BUS power consumption: 5mA/DC24V
- Thermometer operating temperature range: -30 °C ~ 100 °C
- Installation: Standard 85x85(mm) installation
- Dimension: 45x45x16(mm)

Functions
- 4 channels temperature detection
- Each thermometer channel has 3 setting modes (by default, predetermined resistance, custom indexing table)

HDL Music Player
MZDN.432A

Parameters
- Power supply: DC124V
- Static power consumption: 1.6W
- Communication protocol: HDL Buspro, FTP, UDP
- Signal interface: RS485, SDcard, HDL Buspro, FM/MAudio,
  Audio input
- Audio input voltage: 0.7Vpp
- Input Impedance: 5KΩ
- Output Impedance: RL = 8 Ω, RR = 8 Ω
- Output power: 2x50W
- Total Harmonic distortion: <0.05%
- Signal to Noise Ratio: 97dB
- Frequency response: 22Hz ~ 20kHz
- Length of file name: <25 byte
- Music file format: Mp3
- Volume of SD Card: < 32 G
- Dimension: 180x160x58(mm)

Functions
- HDL-MZDN.432 is a digital background music player, it has FM Radio, External input, FTP Audio stream, SD card, User can listen to the music from DLN panel and iPad, iPhone. This audio system supports songs from SD card, so it can be used for alarm system and voice service for home automation.
- External input
- Internal SD card
- FM radio
- FTP Server
- Voice prompt
6 Ports Switch
HDL-MBR06.431

Parameters
- Working voltage: DC 12-36V
- Power consumption: 10mA/24VDC
- Ports: 6
- Devices for each port: 0-63
- Communication: HDL, Bupro
- Housing material: Nylon, PC
- Installation: DIN rail installation
- Dimensions: 72x90x68(mm)

Functions
- Filter data
- Check the data
- Supports 6 bus cables, each bus cable can connect up to 63 devices
- Communication: HDL, Bupro
- Supports online upgrading

Hotel Doorbell
MPB03.48

Parameters
- Power supply: DC12-36V
- BUS power consumption: 25mA/DC24V
- Installation: Wall mounting
- Dimensions: 84x84x22.2(mm)

Functions
- Various function, time set up
- Backlight brightness adjustable
- Door open detect
- Support HDL, Bupro upgrading
- Please clean

Keep improving
- Laser engraving
- Highlight the metal chrome material
- Working state display

Images of Hotel Doorbell and 6 Ports Switch are shown.
### Hotel Door Bell / Air Condition Switch
#### MPB01.48 / MPAC01.48

<table>
<thead>
<tr>
<th>Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Power supply : DC12-30V</td>
</tr>
<tr>
<td>- BUS power consumption : 24mA/DC24V</td>
</tr>
<tr>
<td>- Installation : Wall mounting</td>
</tr>
<tr>
<td>- Dimensions : 86×86×22 (mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- PRIVACY status display;</td>
</tr>
<tr>
<td>- Visiting function;</td>
</tr>
<tr>
<td>- Support HDL Buspro online upgrading</td>
</tr>
</tbody>
</table>

### Hotel Master Card Switch
#### MPC01.48 / MHIC.48

<table>
<thead>
<tr>
<th>Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Power supply : DC12-30V</td>
</tr>
<tr>
<td>- BUS power consumption : 24mA/DC24V</td>
</tr>
<tr>
<td>- Card type : MIFARE ONE S50 13.56MHZ</td>
</tr>
<tr>
<td>- Installation : Wall mounting</td>
</tr>
<tr>
<td>- Dimensions : 86×86×32 (mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Insert key for power;</td>
</tr>
<tr>
<td>- Identification, insert a different card, run the corresponding scene</td>
</tr>
<tr>
<td>- Card types: guest card, service card, dancer card, maintenance card, administrator card etc.</td>
</tr>
<tr>
<td>- Can be set mechanical switch when plug the card, the switch can be set 1 to 49 targets.</td>
</tr>
<tr>
<td>- Other key mode can be set 1 to 99 targets</td>
</tr>
<tr>
<td>- Support HDL Buspro online upgrading</td>
</tr>
</tbody>
</table>

### MPB01.48

<table>
<thead>
<tr>
<th>Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Power supply : DC12-30V</td>
</tr>
<tr>
<td>- BUS power consumption : 26mA/DC24V</td>
</tr>
<tr>
<td>- Installation : Standard GI box</td>
</tr>
<tr>
<td>- Dimensions : 86×86×22 (mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Control temperature, speed, mode, on/off</td>
</tr>
<tr>
<td>- Air conditioning mode: cooling, heating</td>
</tr>
<tr>
<td>- Speed: high, low, medium</td>
</tr>
<tr>
<td>- Display indoor temperature and air condition status etc</td>
</tr>
<tr>
<td>- Support HDL Buspro online upgrading</td>
</tr>
</tbody>
</table>

### MPAC01.48

<table>
<thead>
<tr>
<th>Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Power supply : DC12-30V</td>
</tr>
<tr>
<td>- BUS power consumption : 26mA/DC24V</td>
</tr>
<tr>
<td>- Installation : Standard GI box</td>
</tr>
<tr>
<td>- Dimensions : 86×86×22 (mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Working with MPS-68 panel power interface</td>
</tr>
<tr>
<td>- Insert key for power</td>
</tr>
<tr>
<td>- Identification, insert a different card, run the corresponding scene</td>
</tr>
<tr>
<td>- Card types: guest card, service card, dancer card, maintainer card, administrator card etc.</td>
</tr>
<tr>
<td>- Can be set mechanical switch when plug the card, the switch can be set 1 to 49 targets; other key mode can be set 1 to 99 targets</td>
</tr>
<tr>
<td>- Support HDL Buspro online upgrading</td>
</tr>
</tbody>
</table>
### Hotel Door Bell
**SB–3S–Bell–XS / SB–3S–Bell**

#### Parameters
- Power supply: DC15-36V
- Bus Power consumption: 45mA/DC24V
- Dimension: 105 x 170 x 45mm
- Installation: Back Box for HDL

#### Functions
- Show current number of room, DND, clean room, and laundry
- Door bell: Open the door if a card & keycard is inserted
- Support HDL Buspro online upgrading

<table>
<thead>
<tr>
<th>SB–3S–Bell–XS</th>
<th>MPHAC01.48</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
</tr>
</tbody>
</table>

#### Hotel Room Switch / Hotel Room Multimedia Panel
**Classic Switch / Multi Media Connector**

#### SB–MS–Black
- Power Socket / Telephone Outlet / Data Outlet / VIDE0 / AUDIO / VGA / USB / HDMI

#### SB–MS–White
- Power Socket / Telephone Outlet / Data Outlet / VIDE0 / AUDIO / VGA / USB / HDMI

#### SB–MS–Black–S
- Power Socket / Telephone Outlet / Data Outlet / VIDE0 / AUDIO / VGA / USB / HDMI

#### SB–MS–White–S
- Power Socket / Telephone Outlet / Data Outlet / VIDE0 / AUDIO / VGA / USB / HDMI
Hotel IO Module / RCU Hotel Guest Room Control Unit
MHIOU.432 / MHRCU.433

Parameters
- Power supply: DC15-30V
- BUS power consumption: 40mA/DC24V
- Dynamic power consumption: 60mA/DC24V
- Communication: HDL Buspro
- Buspro terminal: 0.75-0.85mm single-core cable
- Dimension: 144x90x58.5 (mm)

Functions

OUTPUTS:
- Channel 1 and 3 are dimming outputs, total current is no more than 2A
- Channel 5 to 10 are switch outputs, each channel 5A
- Channel 11 and 12 are curtain switch control

INPUTS:
- 14-channel dry contact input
- 3-channel indoor doorbell control and 3-channel status indicator output
- 1-channel outdoor doorbell control and 3-channel status indicator output
- 1-channel door bell switch control

Hotel Room Control Host
SB–DN–48HNET

Parameters
- Power supply: DC12–30V
- Static power consumption: 60mA/DC24V
- Dynamic power consumption: 300mA/DC24V
- Signal interface: HDBuspro, RJ45 (inner) Buspro, RJ45
- Interface: RJ45 / IP network interface
- STRIVAC: 16A TRIVAC, minimum load is 30w
- Buspro terminal: 0.75-0.85mm single-core cable
- Dimension: 216x92x56 (mm)

Functions
- 48 Channel control
- Total 64 scenes, each scene’s running time is (0-3500 seconds)
- Can run the scene according to the status of card master
- Hotel host have RJ45 port for connect with another room and reception or manager center, with hotel manage software and module can integrate with third-party property manager software
- Mix control function:
  - Channel NO.1-13 are relay output, each channel 5A
  - Channel NO.14-17 are relay output, each channel 15A
  - NO.18-21 channels for switching, each channel 1A
- Doorbell function:
  - 24 channels dry contact input
- 8 channels state indicator output
- LED output function
- 12 channels normal switch state indicator output

Coming Soon

Indoor Interphone
MT510L.2WI

Parameters
- Power supply: DC12–30V
- Bus Power Consumption: 40mA/DC24V
- Installation: Standard 35mm Din Rail
- Dimension: 72 x 95 x 66mm

Outdoor Interphone
MTOIL.2WI

Parameters
- 48 Channel control
- Total 64 scenes, each scene’s running time is (0-3500 seconds)
- Switch function: HDBuspro and Ethernet exchange
- Receive the diversed for touch control signal, control the doorbell status display
- Can identify insert card module status and scene and target
- Control the various status of AC and upload the status to the monitor software.
- Control the various status of curtain and upload the status to the monitor software
- Receive various of panel’s control signal, deal with channel and module’s control
- High Scalability, add corresponding control component on the master control module when need expand new functions.
- And the system can work perfect with any valid systems. Such as BACnet system, the central control system and security system.

Card Holder With Three Service Buttons
MPTC03.46

4 Channels 3A LED Driver
MDLED0403.40
### 24CH Hotel Room Relay Module / 24 Zone Dry Contact Input Module

**Model:** MHR2402.232 / SB–DN–DRY–24Z

**Features:**
- Power supply: DC24V
- BUS power consumption: 12mA/DC24V
- Dimension: 144 x 90 x 66mm
- Installation: Standard 35 mm Din Rail
- Current in each channel: 2A
- Dimensions: 144 x 90 x 66mm
- Installation: Standard 35 mm Din Rail

### Hotel Guest Room MIX Controller

**Model:** SB–DN–HMIX12 / HDL–MH02R18U.232

**Features:**
- Power supply: DC24V
- BUS power consumption: 200mA/DC24V
- Installation: Standard 35mm Din Rail
- Dimensions: 144 x 90 x 66mm
- Installation: Standard 35 mm Din Rail

### Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Power supply: DC24V</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS current: Dynamic current</td>
<td>450mA</td>
</tr>
<tr>
<td>Static current</td>
<td>30mA</td>
</tr>
<tr>
<td>Current in each channel</td>
<td>2A</td>
</tr>
<tr>
<td>Dimension</td>
<td>144 x 90 x 66mm</td>
</tr>
<tr>
<td>Installation</td>
<td>Standard 35 mm Din Rail</td>
</tr>
</tbody>
</table>

### Functions

<table>
<thead>
<tr>
<th>Functions</th>
<th>24 channels relay output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch/preset: Mechanical switch, Scene-on, Single-Off, Single-On/Off Combination, Combination off, Combination On/Off, Invalid switch. (Both mechanical switches and combination switches can set 49 control latches)</td>
<td></td>
</tr>
<tr>
<td>Control target: Scene, Sequence, Universal, Switch, Scene, Channels, Broadcast scene, Broadcast channel, curtain control, panel control, GPRS and so on.</td>
<td></td>
</tr>
<tr>
<td>Security and fire feature need to be used together with Security Command Module</td>
<td></td>
</tr>
</tbody>
</table>

### Channels

<table>
<thead>
<tr>
<th>Channel No.</th>
<th>10 and 11 are dimming outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max 12 areas, each area has 48 scenes</td>
<td></td>
</tr>
<tr>
<td>Channel No.</td>
<td>1 to 8 are switch outputs, each channel 5A</td>
</tr>
<tr>
<td>Channel No.</td>
<td>12 is DC5-12V control signal output for 0-10V fluorescent and LED light control</td>
</tr>
<tr>
<td>Channel No.</td>
<td>9 is curtain switch control</td>
</tr>
<tr>
<td>Support HGI, Bi-Polar online upgrading</td>
<td></td>
</tr>
</tbody>
</table>

### Functions

<table>
<thead>
<tr>
<th>Functions</th>
<th>1-3 channel, it control the low, medium and high levels for air conditioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-channel, it control the heating, refrigeration solenoid valve for air conditioning</td>
<td></td>
</tr>
<tr>
<td>6-13 channel, it control the lamps (Current less than 1A)</td>
<td></td>
</tr>
<tr>
<td>14-15 channel, it control the lamps (Current less than 5A)</td>
<td></td>
</tr>
<tr>
<td>16-18 channel control the lamps for silicon control (Current less than 2A)</td>
<td></td>
</tr>
<tr>
<td>19-20 channel control the lamps for controllable silicon dimming (Current less than 2A)</td>
<td></td>
</tr>
<tr>
<td>Relay lifetime : Up to 600000</td>
<td></td>
</tr>
</tbody>
</table>

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Images of the modules are also included in the document.
**HDL Buspro System Program Software**

**S8-PW-Back**

**Description**
- HDL Buspro Software is a flexible and powerful design tool, this is used for parameters setting for all HDL Buspro products.

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**HDL Buspro Graphic Monitor Software**

**GMS**

**Description**
- HDL Buspro System Graphic Supervisory Control Software is the powerful and convenient graphical software. It graphically monitors and controls the lighting circuit, shares fan statistics with data, status for alarms, timer control, scene control, dimming control, and hyperlink.
- Optional types: M5CS.100, M5CS.200, M5CS.500, M5CS.1000, M5CS.10IL.
- Number of monitored objects: 100 controlled point, 200 controlled point, 500 controlled point, 1500 controlled point, and infinite controlled point.

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**HDL Buspro Easy Setup Tool**

**MSSHOW.V1.0**

**Description**
- HDL Buspro Easy Setup tool is an easy functional design tool, which can program for all of HDL Buspro online or offline devices and meet all requirements of the systems engineering design. Meanwhile, it also supports the import and export of project data, enabling flexible data sharing.

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**Intelligent Hotel Room Management Software**

**IHMS.V1**

**Description**
- HDL Buspro Hotel Room Intelligent System Management Software can be monitored to locate room status and information, the database management, will safety and reliability. To manage and control the hotel room environment control system, central air conditioning system, the intelligent light system, and the service system, room data will various innovative ways of interacting dynamically to displayed, real-time to reflect room use, guest needs, services and equipment, assist in hotel room equipment, internal resource for real-time control of the integrated management and control system. The system uses modular design, has energy saving, efficiency, and offers personalized service to customer, raising the level of hotel management and the hotel image.