

# **General characteristics**

A modular range of devices for domestic and similar use which can be installed in surface- or flush-mounting boxes and in ordinary and watertight boxes.

The System range for domestic use has a modular structure on flush-mounting frames up to 12 modules. Surface-mounting and free-standing boxes and plates are included, along with watertight plates (IP55) and outdoor containers (IP40 and IP55).

The range includes controls, socket-outlets, protections, indicators, connectors and special components with high quality characteristics.

|                                   |                           | TECHNICAL                            | DATA AND REI                     | ERENCE STANDAR                             | DS  |                                      |                        |  |
|-----------------------------------|---------------------------|--------------------------------------|----------------------------------|--|---|--------------------------------------|------------------------|--|
|                                   |                           | Essential electrical data*           |                                  |  |   | Resistance to abnormal heat and fire |                        |  |
| Component                         | Reference standards       | Resistance<br>at test voltage<br>(V) | Insulation<br>resistance<br>(ΜΩ) | Breaking capacity or<br>category of<br>use | Prolonged<br>operation<br>(no. position<br>changes) | Thermo-pressure<br>with ball<br>(°C) | Glow Wire Test<br>(°C) |  |
| Commands                          | EN 60669-1                |                                      |                                  | 1.25 In<br>(200 position changes)          | 40,000<br>at In 250V AC cos φ = 0.6                 |                                      |                        |  |
| Socket-outlets                    | IEC 60884-1               |                                      | >5                               | 1.25 In<br>(100 position changes)          | 50,000 125  |                                      | 850                    |  |
| Latching relays                   | EN 60669-1 / EN 60669-2-2 | 2000<br>at 50 Hz                     |                                  |  |   | 125                                  |                        |  |
| Momentary relays                  | EN 60669-1 / EN 60669-2-2 | for 1 minute                         |                                  | 1.25 In<br>(200 position changes)          | at In 250V AC cos φ = 0.6                           |                                      |                        |  |
| Miniature circuit<br>breakers     | EN 60898-1                |                                      | 2** ÷ 5                          | ЗКА  | 8,000   |                                      |                        |  |
| Residual current circuit breakers | EN 61009-1 / EN 61008-1   |                                      | 2 ÷ 5                            | ЗКА  | 4,000   |                                      |                        |  |
| Supports and plates               | EN 60669-1                | -                                    | -                                | -  | -   | 70                                   | 650                    |  |

\* For rated voltages and currents, see the specifications in the single codes. \*\* The value of 2 MΩ refers to a special condition established by the standards given alongside.

|                   | BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS |                       |                       |                       |                       |           |                       |                  |                  |                  |                       |           |
|-------------------|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------|-----------------------|------------------|------------------|------------------|-----------------------|-----------|
| Agent             | Water solution                                 | Saline                | Aci                   | ds                    | Bas                   | ies       |                       | Solv             | ents             |                  | Mineral               | UV        |
| Component         |  | Concentrated          | Diluted               | Concentrated          | Diluted               | Hexane    | Benzol                | Acetone          | Ethyl alcohol    | oil              | rays                  |           |
| Plates            | Resistant                                      | Resistant             | Limited<br>resistance | Resistant             | Resistant             | Resistant | Limited<br>resistance | Not<br>resistant | Not<br>resistant | Not<br>resistant | Limited<br>resistance | Resistant |
| SYSTEM<br>devices | Resistant                                      | Limited<br>resistance | Not<br>resistant      | Limited<br>resistance | Limited<br>resistance | Resistant | Resistant             | Resistant        | Resistant        | Resistant        | Resistant             | Resistant |

\* The resistance values given are valid for an ambient temperature no higher than 40°C.

Terminal resistance to cable traction: > 50N Device hold on support: > 0.6J

| TERMINAL TIGHTENING CAPACITY |                      |                    |                        |  |  |  |  |
|------------------------------|----------------------|--------------------|------------------------|--|--|--|--|
| Strande                      | d wires              | Solid wires        |                        |  |  |  |  |
| Minimum                      | Maximum              | Minimum            | Maximum                |  |  |  |  |
| 0.75mm <sup>2</sup>          | 2 x 4mm <sup>2</sup> | 0.5mm <sup>2</sup> | 2 x 2.5mm <sup>2</sup> |  |  |  |  |

### **Common construction features**



Quick installation: fixing the devices on the supports from both front or rear.

Simplicity of connections: double terminals, cable clamp with unlosable screws and protection collars.





# Degree of protection of the set of SYSTEM domestic range assembly installed

| COMPONENT   | INSTALLATION  | REFERENCE STANDARD | IP RATING   |
|---|---|--------------------|---|
| Devices with closed front (commands, bells, indicators, etc.) installed in flush-mounting boxes, surface-mounting boxes, free-standing panels (completed with support and plate) and in self-supporting boxes | Flush-mounting for domestic or similar<br>finish, in vertical position, installed to a<br>high standard   |                    | 41  |
| Devices with open front (socket-outlets, etc.) installed<br>in flush-mounting boxes, surface-mounting boxes,<br>free-standing panels (completed with support and plate) and<br>in self-supporting boxes       | Flush-mounting for domestic or similar<br>finish, in vertical position, installed to a<br>high standard. Suitable for use for zone 3<br>of rooms containing baths or showers. | EN60529            | <b>X1</b><br>(it is 21 in case of socket-outlets) |
| Devices with open front (socket-outlets, etc.) installed<br>in flush-mounting boxes, surface-mounting boxes,<br>free-standing panels (completed with support and plate) and<br>in self-supporting boxes       | Flush-mounting for domestic or similar<br>finish, in vertical position, installed to a<br>high standard <b>with plug inserted</b>   | -                  | 4χ  |

### ACCESSORIES

### Spare parts and accessories

### Lamps for System articles

| CONTROL DEVICES   |                        | i GEWISS     | М                        | NIATURE LAMP UN | ITS             | Luminous / colour<br>RESULT | OBTAINABLE<br>COLOURS   |                              |
|-------------------|------------------------|--------------|--------------------------|-----------------|-----------------|-----------------------------|---|------------------------------|
| Functional        | Functional             | Iconographic | Туре                     | Code            | Voltage         | Colour                      |   |                              |
|                   | localisation           | signalling   |                          | GW 10 893       | 12-24V AC/DC    | White                       |   | White                        |
| 0                 |                        |              | LED                      | GW 30 947       | 230/110V AC     | VVIIILE                     | The signalling colour corresponds   | VVIIILE                      |
| and the second    | 1000                   | 10 M         |                          | GW 30 946       | 230/110V AC     | Light blue                  | to the colour of  | Light blue                   |
| • •               |                        | <b>e</b>     | Fluorescent              | GW 30 943       | 230V AC         | Red                         | the chosen miniature lamp   | Red                          |
|                   | -                      |              |                          | GW 30 944       | 230V AC         | Green                       |   | Green                        |
| PUSH-E            | BUTTON WITH NAMI       | E PLATE      |                          |                 | CARTRIDGE LAMPS |                             | Luminous / colour<br>RESULT   | OBTAINABLE<br>COLOURS        |
|                   |                        |              | Туре                     | Code            | Voltage         | Colour                      |   |                              |
|                   | 0                      |              | Incandescent             |                 | 12V AC/DC       | White                       | White backlighting  | White                        |
|                   |                        |              | S6 x 36                  | GW 20 903       | 24V AC/DC       | vviiite                     | White Dacklighting  | vviiite                      |
| SIN               | SINGLE INDICATOR LAMPS |              |                          |                 | CARTRIDGE LAMPS |                             | Luminous / colour<br>RESULT   | OBTAINABLE<br>COLOURS        |
|                   |                        |              | Туре                     | Code            | Voltage Colour  |                             |   |                              |
|                   |                        |              | Incandescent<br>S6 x 31  | GW 20 904       | 12V AC/DC       | White                       | The signalling colour corresponds to the colour of the chosen indicator   | Red - Green<br>Amber - White |
|                   |                        |              | 56751                    | GW 20 905       | 24V AC/DC       |                             | lamp diffuser   | Light blue                   |
|                   |                        |              |                          | GW 20 906       |                 | Red                         | With red diffuser:  | Red                          |
|                   |                        |              | Fluorescent<br>S6.3 x 28 | 011 20 500      | 230V AC         | Reu                         | With amber diffuser:  | Amber                        |
|                   |                        |              | 5015 X 20                | GW 20 908       |                 | Green                       | With green diffuser:  | Green                        |
| STAIR RISER LAMPS |                        |              |                          | CARTRIDGE LAMPS |                 | Luminous / colour<br>RESULT | OBTAINABLE<br>COLOURS   |                              |
|                   |                        |              | Туре                     | Code            | Voltage         | Colour                      |   |                              |
|                   |                        |              | Incandescent             | GW 20 902       | 12V AC/DC       | White                       | The signalling colour corresponds to the colour of the chosen stair riser | Red - Green<br>Amber - White |
|                   |                        |              | S6 x 36                  | GW 20 903       | 24V AC/DC       | vvilice                     | lamp diffuser   | Light blue                   |

### Examples of functional and localisation lighting To indicate the operating status of services not visible from the command position To locate the command button key in the dark The two indicator lamps and the service are placed in parallel, therefore they switch on and off The indicator lamp is The indicator lamp is The two indicator lamps come on The indicator lamp is located parallel to the service, and is switched on when the one-way switch is ON. The indicator lamp follows the ON/OFF status of the service. witched on when the one-way switch is OFF. With the one-way switch in the ON position, the service is powered and the indicator lamp is switched off. when the service is not powered and go off when it is ON. f‡ $\otimes$ $\bigotimes$ $\diamond$ $\bigotimes$ together with the service Ш NOTE: layouts not suitable for commanding compact energy saving lamps, LED lamps and/or relays



## COMMAND

### Infrared movement detector

The passive infrared movement detector senses temperature variations within its range of action and, depending on the environmental light, closes a relay contact. When movement stops, the contact automatically opens again after an adjustable set time. The device incorporates a light-sensitive sensor with an adjustable tripping threshold to avoid controlling the service (e.g. lighting equipment) when not necessary.



### **Connection diagram**



| DATI TECNICI                      |                                       |  |  |  |  |
|-----------------------------------|---------------------------------------|--|--|--|--|
| Power supply voltage              | 230V - 50/60Hz                        |  |  |  |  |
| Light-sensitive threshold setting | 10 lux - max. inhibited               |  |  |  |  |
| Activation duration setting       | 15 sec / 10 min                       |  |  |  |  |
| Output contact                    | 1 NA 3A (AC1) 250V ac, potential-free |  |  |  |  |
| Type of load:                     |                                       |  |  |  |  |
| Resistive loads                   | 700W                                  |  |  |  |  |
| Incandescent lamps                | 450W                                  |  |  |  |  |
| Low voltage halogen lamps (12V)   | 450W                                  |  |  |  |  |
| Uncompensated fluorescent lamps   | 2x58W                                 |  |  |  |  |
| Motor and motor reduction units   | 400VA                                 |  |  |  |  |
| Operating temperature             | -5 / + 40 °C                          |  |  |  |  |
| Relative humidity                 | max. 93% non condensative             |  |  |  |  |

Not suitable for compensated fluorescent lamps, for discharge lamps and for those loads not indicated; please use an auxiliary relay to control such lamps.

### Applications



### Relay

### Latching relay

buttons with NO contact.

### Momentary relay

Latching-type relay for controlling lamps from several points using push- For executing automatic mechanisms or separations between the control circuit and the power circuit. Can be used as an auxiliary element for controlling particular loads.

|  | LATCHIN  | G RELAY             |  |                             | MOMENTARY REL  | AY                       |  |
|--|--|---------------------|--|-----------------------------|--|--------------------------|--|
| Reference standards:<br>EN 60669-1; EN 60669-2-2 | System: GW 20 071<br>GW 21 071<br>GW 20 072<br>GW 21 072<br>Playbus: GW 30 111 |                     | Reference standards:<br>EN 60669-1; EN 60669-2-2 | ¢                           | System: GW 20 074<br>GW 21 074<br>Playbus: GW 30 116 |                          |  |
|  |  |                     | TECHN  | ICAL DATA                   |  |                          |  |
| Power supply voltage (coil)                      |  | 230V - 50/          | 60Hz   | Power supply voltage (coil) | 230V -   | 230V - 50/60Hz           |  |
| Dutput contact GW 20 07                          |  | GW 20 071           | / 21 071 / 30 111 1NO;                           | Output contact              | 1 chang  | geover contact NO/NC;    |  |
| GW   |  | GW 20 072           | /21 072 / 2NO                                    |                             | 10A (AC  | 1) / 4A (AC15) - 250V AC |  |
| 10A (AC1) /                                      |  | 7A (AC15) - 250V AC |  |                             |  |                          |  |





# **Call relay**

### "Bathroom Alarm" call system

For the locations where it is compulsory (bathrooms), space must be allowed for the manoeuvring of a wheel chair, and an emergency bell must be fitted near the toilet and bathtub.

### **Connection diagram**



### **Multiple call system**

For small concerns (school classrooms, clinics, nursing homes, etc.) where the call must be localised from the control station.



Call display board located in the control station.









### SIGNAL

### **TV-SAT socket-outlets**

The development of television transmission systems and of services intended for the user has raised the performance and quality level required for signal distribution systems.

The EN 60728 standards (systems for distribution of television and sound signals via cable) define the present and future European Standard and establish the requisites that the various parts of the system (including the terminal socket-outlets) must meet.

Thanks to their high performance level, these new socket-outlets provide optimal distribution of the signals (both digital and analogue), as required by the various providers for accessing current and future services.

|       | CHARACTERISTICS  | ADVANTAGES   |
|-------|--|--|
|       | • Shielding efficiency (in compliance with standard EN 60728-4.  | • The socket-outlets are in a metal shell and are unaffected by the electromagnetic emissions (EMC) present in the environment.  |
|       | <ul> <li>Impedance adaptation.</li> <li>An innovative system for the quick, safe connection of the coaxial cable.</li> </ul>                       | <ul> <li>Undesired signal reflections are avoided.</li> <li>Maintains the co-axiality of the cable in the connection point.</li> </ul>   |
| R CAR | • A range featuring two types:user ports with F connector (type EN 60169-24) and with male IEC connector Ø 9.5mm (in compliance with HD 134.2 S2). | <ul> <li>Maximum application flexibility with single or centralised systems (new / restored / pre-arrangements for future extensions).</li> <li>In satellite reception, due to the frequency range, it is very important to maintain the co-axiality of the connection, which is a requirement fully met by the innovative connection and the use of the F connector.</li> </ul> |

|  |   | ти   | SAT                                 |   | TV-SAT  |   |
|--|---|--|-------------------------------------|---|---|---|
| APPLICATIONS   | Centralised system with star distribution | Centralised system with cascade distribution | SAT system<br>for single<br>service | Combined TV-SAT<br>system for single<br>service | Combined TV-SAT<br>centralised system with<br>star distribution | Combined TV-SAT<br>centralised system<br>with feedthrough<br>socket-outlets |
| System:         Playbus:           GW 20 391         GW 21 391           GW 20 392         GW 21 391           GW 20 393         GW 21 392           GW 20 393         GW 21 393   |   |  | V<br>United socket-outlets          |   | -zzazzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz                          |   |
| System:         System:         Playbus:           GW 20 381         GW 21 381         GW 20 381           GW 20 385         GW 21 381         GW 30 301           GW 20 382         GW 21 382         GW 30 305           GW 20 383         GW 21 383         GW 30 302 |   |  |                                     | TV SAT  | Direct socket<br>outlet<br>socket-outlet<br>SAT                 | Freethingh  |

Reference standards: EN 50083-1; EN 50083-2; EN 50083-4 **TECHNICAL DATA** Frequency field From 5 to 2400 MHz Diameter of the coaxial cable From Ø 5 to Ø 7mm **Return channel** From 5 to 40 MHz Resistance of terminal closure: 75 ohm Shielding Class A Chrominance/luminance < 1 ns. for all models delay difference TV port male IEC coaxial connector Ø 9.5mm GW 20 277 SAT port F (female) coaxial connector



# **TV-SAT socket-outlets attenuation values**

|   | Nominal     | Attenuation / Loss of pa<br>Nominal (flattening of respon |                      |                        |                        | Branching attenuation / Loss of base<br>(flattening of response) |                        |                        |                        | Directivity       |                   | Return<br>loss (dB) |                             |
|---|-------------|---|----------------------|------------------------|------------------------|--|------------------------|------------------------|------------------------|-------------------|-------------------|---------------------|-----------------------------|
| Gewiss code   | attenuation | Return<br>channel   | тν                   | S                      | AT                     | Return<br>channel  | τν                     | S                      | AT                     | Return<br>channel | TV-SAT            | Return<br>channel   | TV-SAT                      |
|   | (dB)        | 5-40<br>MHz   | 47-862<br>MHz        | 950-2150<br>MHz        | 2150-2400<br>MHz       | 5-40<br>MHz  | 47-862<br>MHz          | 950-2150<br>MHz        | 2150-2400<br>MHz       | 5-40<br>MHz       | 47-2400<br>MHz    | 5-40<br>MHz         | 47-2400<br>MHz              |
| GW 20 391 - GW 20 381<br>GW 21 391 - GW 21 381<br>GW 30 311 - GW 30 301 | 0           | -   | -                    | -                      | -                      | ≤ 0.5 dB<br>(≤ 0.2 dB)   | ≤ 0.5 dB<br>(≤ 0.5 dB) | ≤ 0.8 dB<br>(≤ 0.5 dB) | ≤ 0.8 dB<br>(≤ 0.5 dB) | -                 | -                 | ≥ 10 dB             |                             |
| GW 20 392 - GW 20 382<br>GW 21 392 - GW 21 382<br>GW 30 312 - GW 30 302 | 10          | ≤ 2.5 dB<br>(≤ 1 dB)                                      | ≤ 2 dB<br>(≤ 1 dB)   | ≤ 3 dB<br>(≤ 1.5 dB)   | ≤ 3.2 dB<br>(≤ 1.5 dB) | 10.5 dB<br>(± 1.5 dB)  | 10dB<br>(± 1.5 dB)     | 10.5 dB<br>(± 1.5 dB)  | 11dB<br>(± 2.5 dB)     | ≥ 15 dB           | complying<br>with | ≥ 10 dB             | complying<br>with<br>CEI-EN |
| GW 20 393 - GW 20 383<br>GW 21 393 - GW 21 383<br>GW 30 313 - GW 30 303 | 14          | ≤ 1.5 dB<br>(≤ 1 dB)                                      | ≤ 1.2 dB<br>(≤ 1 dB) | ≤ 2.2 dB<br>(≤ 1.5 dB) | ≤ 2.5 dB<br>(≤ 1.5 dB) | 15 dB<br>(± 1.5 dB)  | 14.5 dB<br>(± 1.5 dB)  | 14.5 dB<br>(± 1.5 dB)  | 15 dB<br>(± 2.5 dB)    | ≥ 15 dB           | CEI-EN<br>50083-4 | ≥ 10 dB             | 50083-4                     |
| Insulation / separation<br>between ports                                |             |   |                      |                        |                        |  |                        |                        |                        |                   |                   |                     |                             |
| GW 20 396 - GW 20 386<br>GW 21 396 - GW 21 386<br>GW 30 316 - GW 30 306 | 5           | ≤ 5 dB<br>(≤ 1.5 dB)                                      | ≤ 5 dB<br>(≤ 1.5 dB) | ≤ 6 dB<br>(≤ 1.5 dB)   | ≤ 6.5 dB<br>(≤ 1.5 dB) | ≤ 5 dB<br>(≤ 1.5 dB)   | ≤ 5 dB<br>(≤ 1.5 dB)   | ≤ 6 dB<br>(≤ 1.5 dB)   | ≤ 6.5 dB<br>(≤ 1.5 dB) | >12 dB            | >10 dB            | ≥ 10 dB             | EN<br>50083-4<br>Degree 3   |

### **Telephone connectors**

4-contact RJ11 telephone connectors, suitable for connecting the telephone, telefax, and modem.

RJ11

System: GW 20 251 GW 21 251 Playbus: GW 30 261

| TECHNICAL DATA     | GW 20 251 - GW 21 251<br>GW 30 261 |
|--------------------|------------------------------------|
| Connector type     | RJ11                               |
| No. of contacts    | 4                                  |
| Connection         | Terminal blocks with screws        |
| Category           | 3                                  |
| Transmission speed | up to 16 Mb/s                      |

### Diagrams

Reference standards:

ISO 11801



### Series connection



Clamps 3 and 4 are connected by means of the contact inside the telephone, which is closed when the telephone receiver is put down. When the telephone receiver is picked up, the line breaks downstream (L1 pole), ensuring that the conversation is not overheard.

Parallel connection



Note: when one of the plugs is extracted, the socket-outlets downstream are disconnected. To prevent this problem, insert a plug

with a jumper between terminals 3-4, in the socket-outlet from which

Telephone pair L1 L2 ContactPin ContactPin 1 2 3 4 ContactPin 1 2 3 4

> Each socket-outlet takes the signal from the line. There is no conversation secrecy.

For technical information contact the Technical Assistance Service or visit gewiss.com

Technical Information

the telephone appliance was unplugged.



# **Connectors for structured wiring**

RJ45 connectors in categories 5e and 6, shielded and unshielded for data transmission. They allow network connection of information technology devices (computers, printers, modem, etc.) and the connection of multimedia devices (e.g. those used for video conferences). They can also be used for traditional, centralised telephone systems.



# Adapters for structured wiring

A data transmission system with structured wiring offers flexibility of use, installation of the final and universal network, commissioning independent of the location and use of the terminal outputs. In complex and extensive systems (e.g. tenders) the client requires a certificate of conformity for the entire system. Leading companies in the field of structured wiring, installed directly or by qualified operators, are able to provide this service. GEWISS, offering a shell which is compatible with IBM, Systimax/Commscope and AMP/Keystone Jack makes it possible to integrate the PLAYBUS / SYSTEM ranges with data transmission components belonging to a structured system.



# **USB and HDMI couplers**

Female-female couplers with Keystone Jack coupling, for A-type USB and HDMI cables. To complete with GW2x270 adapters.

HDMI coupler

USB coupler



GW 38 056

GW 38 057

### **USB** charger

2.1A double USB charger, suitable for powering mobile phones, smartphones and mobile electronic devices.

### Double USB charger

| GW 20 361 |  |
|-----------|--|

| TECHNICAL DATA   |  |  |
|--|--|--|
| Power supply         100-240V ac - 50/60Hz - 300mA max |  |  |
| Output   | 5V dc - 2.1A   |  |
| USB connector  | 2.0 A-type   |  |
| Power supply connector                                 | Screw terminals, maximum cable section 1.5 mm <sup>2</sup> |  |
| Degree of protection                                   | IP20   |  |
| Operating temperature                                  | 0 ÷ +40°C  |  |

Suitable to recharge a single 2.1A electronic device or a couple of simultaneous devices. The total current provided (max. 2.1A) is split in the two USB outputs, depending on the state of charge of the connected devices.



### PROTECTION

## **Protection devices**

### **Overvoltage limiter**

The overvoltage limiter is a varistor-type discharger suitable for protecting a terminal circuit against mains overvoltages caused by manoeuvres or atmospheric discharges.

| • | TECHNICA                  | L DATA         |
|---|---------------------------|----------------|
| Π | Rated voltage             | 250V AC        |
| 3 | Maximum discharge current | 8 kA (8/20 µs) |
|   | Maximum discharge power   | 75 J           |



The overvoltage peak is absorbed by the varistor which, for voltage values higher than the arcing value, behaves like a resistor with a very low value. The overvoltage peak will not reach the service or will at least be greatly attenuated. If the varistor breaks, a fuse prevents short-circuiting and the fault is indicated by the LED going out.

### Automatic circuit breakers

System: GW 20 431

GW 20 432

Automatic miniature circuit breakers for protection against overcurrent and earthing currents of terminal circuits.

### **Miniature circuit breakers**

| Í  | 1 |  |
|----|---|--|
| Γ  |   |  |
| Ŀ  | - |  |
| C6 | 0 |  |

GW 30 375 GW 30 376 GW 21 431

GW 21 432



GW 21 437

GW 21 438

GW 21 439

GW 21 448

GW 21 449

GW 21 450



1P+N

Input either from above or below.

Miniature circuit breaker connection diagram.

1P

Û

IN OUT

Reference standards: EN 60898 - EN 61009-1 - EN 61543

|   | TECHNICAL DATA |                   |                             |                           |                            |                  |                        |                    |                                   |
|---|----------------|-------------------|-----------------------------|---------------------------|----------------------------|------------------|------------------------|--------------------|-----------------------------------|
|   | Rated          | Rated             | Rated                       | Short-circuiting Range of |                            | Chart sizeviting | Tr                     | ipping characteris | tic                               |
| Type of<br>circuit breakers   | voltage<br>(V) | frequency<br>(Hz) | residual<br>current<br>(mA) | capacity<br>(A)           | nominal<br>currents<br>(A) | No. of poles     | Overcurrent protection | Limiting<br>class  | Residual<br>current<br>protection |
| Miniature circuit<br>breakers                                       | 230            | 50 - 60           | -                           | 3000                      | 6 - 10 - 16                | 1P<br>1P+N       | Туре С                 | 3                  | -                                 |
| Residual current<br>circuit breakers with<br>overcurrent protection | 230            | 50 - 60           | 10 - 30                     | 3000                      | 6 - 10 - 16                | 1P+N             | Туре С                 | 3                  | Class A                           |



### DIMMER

### Rotating electronic regulators, for resistive/inductive loads

Dimmer with conventional potentiometer adjustment and static switching off by turning the knob on position zero.

Reference standards: EN 60669-1; EN 60669-2-1



Domestic sector for light source adjustment.

▲ Items designed solely to export to a limited number of countries outside the European Union or proposed as candidate and to the European Free Trade Association.



The conformity to EMC Directive is guaranteed only connecting the GW 2x 803 or GW 30 403 regulators to a LC filter as showed in the following wiring diagram.



WARNINGS

- The connection should be made together with a fuse carrier (eg. GW 2x 401) with a quick-acting fuse with high breaking capacity type F2.5AH 250Vac (for GW 2x 802 and GW 30 402) or type F5AH 250Vac (for GW 2x 803 and GW 30 403) as shown in the diagrams.
- The regulator does not have a mechanical circuit breaker in the main circuit and so is not galvanically separated. The circuit load should be considered always under voltage.
- The conductors should be pushed down to the bottom of the box. Do not let the conductors in the box contact the walls of the regulator.
- Do not install the regulator near thermostats or chronothermostats.
- Max n.1 regulator in the same round/square box. Max n.2 regulators in the same rectangular box; for installations with 2 regulators in the same box, the maximum loads controllable by each regulator should be reduced by 50%. The side-by-side installation of several products in a single box is not permitted: insert a blanking module between two electronic devices.
- It should be used in dry, dust-free places at a temperature between 0°C and +35°C.



## Rotating electronic regulators with two-way switch, for resistive/inductive loads

Dimmer with incorporated two-way switch that makes it possible to command the switching on and off of a second point (using the two-way switch), or a number of points (using intermediate switches). Switched on and off by pressing the knob; adjustment by turning it.





WARNINGS

- The connection should be made together with a fuse carrier (eg. GW 2x 401) with a quick-acting fuse with high breaking capacity type F2.5AH 250Vac as shown in the diagrams.
- The conductors should be pushed down to the bottom of the box. Do not let the conductors in the box contact the walls of the regulator.
- Do not install the regulator near thermostats or chronothermostats.
- Max n.1 regulator in the same round/square box. Max n.2 regulators in the same rectangular box; for installations with 2 regulators in the same box, the maximum loads controllable by each regulator should be reduced by 50%. The side-by-side installation of several products in a single box is not permitted: insert a blanking module between two electronic devices.
- It should be used in dry, dust-free places at a temperature between 0°C and +35°C.

### Push-button electronic regulators, for air agitators

Push-button type dimmer with pre-set intensity levels (0-25-50-100%). By briefly pressing the push-button, the minimum intensity level will be obtained. With any further touch, the speed will change from the minimum to the medium, then the maximum. A subsequent touch will turn the dimmer off.

Reference standards: EN 60669-1; EN 60669-2-1



Command and adjustment from several points with NO push-buttons

Technical data

Power supply voltage: 230V-50 Hz Power: 55-80 VA **Typical use:** 

- Suitable for adjusting air agitators, fans and extractors with induction engines.
- It can be controlled by external NO push-button.

WARNINGS

- Article only suitable for adjusting air stirrers, fans and aspirators with induction motors with auxiliary
  phase. Not suitable for adjusting fan-coil motors or light sources.
- The connection should be made together with a fuse carrier (eg. GW 2x 401) with a quick-acting fuse with high breaking capacity type F0.8AH 250Vac as shown in the diagrams.
- The regulator does not have a mechanical circuit breaker in the main circuit and so is not galvanically separated. The circuit load should be considered always under voltage.
- Do not install the regulator near thermostats or chronothermostats.
- It should be used in dry, dust-free places at a temperature between 0°C and +35°C.



# Push-button electronic regulators, for resistive/inductive loads

Push-button type dimmer, with possibility of control and adjustment from any number of points using single-pole NO push-buttons; gradual switching on and off by briefly touching at the pre-set adjustment level (intensity memory); adjustment with prolonged pressure on the same button. The push-button regulators are available both in traditional and in IGBT technology that allows the regulation of electronic transformers and ensure a quiet and gradual operation.

| Reference standards: EN 60669-   | 1;EN 60669-2-1                   |  | GW 20 829 - GW 21 829 | GW 20 828 - GW 21 828 |
|--|----------------------------------|--|-----------------------|-----------------------|
| Control push-button:   | TECHNICAL DATA                   | GW 30 407  | GW 30 401             |                       |
| • ON/OFF with touch;<br>• adjustment by prolonged                            |                                  | Technology   | with IGBT transistor  | with TRIAC            |
| Light signalling of<br>adjustment level and<br>protection tripping           | Power supply voltage             | 230V - 50Hz  | 230V - 50Hz           |                       |
|  | Adjustable power                 | 25 ÷ 300W (GW 30 406)<br>40 ÷ 300 (GW 20 829)<br>25 ÷ 180W (GW 30 407) | 60 ÷ 500W             |                       |
|  | Adjustable load                  |  |                       |                       |
|  | - Incandescent and halogen lamps | •  | •                     |                       |
| System: GW 20 828 - GW 21 828<br>GW 20 829 - GW 21 829<br>Playbus: GW 30 407 |                                  | - Toroidal transformers  | •                     | •                     |
|  |                                  | - Lamellar transformers  |                       | •                     |
|  |                                  | - Electronic transformers  | •                     |                       |

| SPECIFIC FUNCTIONAL CHARACTERISTICS OF THE DIMMER GW 20 829 - GW 21 829 - GW 30 407 WITH IGBT TECHNOLOGY |  |  |  |
|--|--|--|--|
| CHARACTERISTICS  | ADVANTAGES   |  |  |
| Possibility of commanding electronic power supplies and reduced loads.                                   | Versatile use.   |  |  |
| Memorisation of the adjustment level.  | Easy positioning to a standard adjustment.   |  |  |
| Indicator lamp for level of adjustment and protection tripping.  | The indicator lamp allows the device to be identified in the dark; it flashes to show the                    |  |  |
| Automatic search for the maximum level of adjustment.  | electronic protection has tripped. <ul> <li>Maximum comfort in selecting the level of adjustment.</li> </ul> |  |  |
| Electronic self-protection against overloading and short-circuiting, resettable.                         | Protection of the regulator in the event of overload connections or a fault with the service device.         |  |  |
| Adjustment with IGBT transistor.   | Total absence of buzzing during operation.   |  |  |

### Typical use:

- Domestic sector, for adjusting light sources
- Commercial sector, hotel rooms, places for communities, conference halls, for adjusting light sources
- In existing systems, the push-button dimmers can be installed in place of two-way switches, without modifying the circuit.







Control from two points (2 two-way switches)

Control and adjustment from two points (1 dimmer + 1 NO push-button)

### WARNINGS

- The connection should be made together with a fuse carrier (eg. GW 2x 401) with a quick-acting fuse with high breaking capacity type F2.5AH 250Vac (for GW 2x 828) or type F1.6AH 250Vac (for GW 2x 829) as shown in the diagrams.
- The conductors should be pushed down to the bottom of the box. Do not let the conductors in the box contact the walls of the regulator.
- · Do not install the regulator near thermostats or chronothermostats.
- Max n.1 regulator in the same round/square box. Max n.2 regulators in the same rectangular box; for installations with 2 regulators in the same box, the maximum loads controllable by each regulator should be reduced by 50%. The side-by-side installation of several products in a single box is not permitted: insert a blanking module between two electronic devices.
- It should be used in dry, dust-free places at a temperature between 0°C and +35°C.



# ENERGY AND COMFORT MANAGEMENT

### 1-channel daily and weekly electronic timer

- Electronic device for the timed command of a load
- Positive LCD display with white backlight
- Permanent indication of: time, day of the week, load lighting status, functioning/working mode status,
- 144 daily cycles that can be set (transitions every 5 minutes)
- Manual activation/deactivation of the load (MAN mode)
- Programmed activation/deactivation of the load (AUTO mode), with daily/weekly cycles
- Permanent deactivation of the load (OFF mode)
- Immediate visualisation of the daily planning, via permanently visualised histogram
- Rechargeable buffer battery

Reference standards: EN 60730-1; EN 60730-2-7



GW 20 825 - GW 21 825

Command push-buttons:

- Selection of functional mode
- Selection of operational mode
- Modify (increase) - Modify (decrease)

| TECHNICAL DATA                |                                   |  |
|-------------------------------|-----------------------------------|--|
| Power supply voltage          | 230V AC 50/60Hz                   |  |
| Output contacts               | 1NO/NC 8A(AC1) / 4A(AC15) 250V AC |  |
| Reserve charge                | 48 hours                          |  |
| Dimensions                    | 2 modules                         |  |
| No. activations/deactivations | 144                               |  |



## Wiring terminals Power supply:

Output relay:

L - Phase N - Neutral

- it iteation
- 1 NO contact 2 - NC contact

3 - Common

Serial line: 4

- 4 TX (output data) 5 - GND (common)
- 6 RX (input data)

# Timed electronic push-button

Timer with multiple functions, equipped with push-button for local control allowing the automatic delayed switch-off of lamps, fans, extractors, etc.





# CLIMATE CONTROL

### Timed thermostat - daily/weekly programming

The timed thermostat allows you to automatically control the weekly temperature and timing within the place of installation, together with the heating and air-conditioning systems.

- Powered by mains voltage
- Relay output contact for commanding the boiler, air-conditioner, zone solenoid valve, etc.
- LCD display with white backlight (the backlighting is activated every time one of the button-keys is pressed, and switches off 5 seconds after the last touch)
- Programming on a weekly basis (a programme for 7 days with hourly profiles independently configurable for each day)
- Setting of hourly profile on 24-hour basis, with 3 different temperature levels (T1, T2, T3) and profile display
- Programming of times with a resolution of 15 minutes without a limit in the number of daily changes
- Residual current circuit breaker for adjustment can be set and differentiated for HEATING and AIR-CONDITIONING
- PARTY and HOLIDAY functions for programming special functioning speeds of different duration periods
- Functioning modes that can be set: AUTOMATIC / MANUAL / OFF
- Possibility to select the system thermal gradient self-learning function. This function optimises the heating anticipation (up to 2 hours) in order to guarantee the set temperature right from program start;
- Rechargeable buffer battery.

Reference standards: EN 60730-1; EN 60730-2-7, EN 60730-2-9



System: GW 20 827 - GW 21 827 Playbus: GW 30 706

| TECHNICAL DATA                     |                                    |  |
|------------------------------------|------------------------------------|--|
| Power supply voltage               | 230V AC 50/60Hz                    |  |
| Dimensions                         | 2 modules                          |  |
| Output contact                     | 1NO/NC with potential-free contact |  |
|                                    | 5A(AC1) / 2A(AC15) 250V AC         |  |
| Operating temperature              | -5 to +45°C                        |  |
| Detected temperature display range | <b>e</b> 0 to +45°C                |  |
| Adjustment range                   | +5 to +40°C                        |  |
| Tolerance                          | ±0.5°C to 20°C                     |  |
| Reserve charge                     | 48 hours                           |  |



### Wiring terminals

Power supply: L - Phase N - Neutral

- Output relay: 1 NO contact 2 - NC contact
- 3 Common
  Serial line: 4 TX
  - 5 GND (common) 6 - RX





# Wall-mounting timed thermostat - daily/weekly programming - battery-powered

The timed thermostat allows you to automatically control the weekly temperature and timing within the place of installation, together with the heating and air-conditioning systems.

- Powered with 3 alkaline batteries (1.5V AAA)
- Relay output contact for commanding the boiler, air-conditioner, zone solenoid valve, etc.
- Programming on a weekly basis (a programme with hourly profiles independently configurable for each day of the week)
- Setting of hourly profile on 24-hour basis, with 3 different temperature levels (T1, T2, T3) and profile display
- Programming of times with a resolution of 15 minutes without a limit in the number of daily changes
- Residual current circuit breaker for adjustment can be set and differentiated for HEATING and COOLING
- PARTY and HOLIDAY functions for programming special functioning speeds of different duration periods
- Functioning modes that can be set: AUTOMATIC / MANUAL / OFF
- Possibility to select the system thermal gradient self-learning function. This function optimises the heating anticipation (up to 2 hours) in order to guarantee the set temperature right from program start;

The device can be wall-mounted (fixed with plugs) or installed on a 3-module flush-mounting box.

Reference standards: EN 60730-1; EN 60730-2-7, EN 60730-2-9



### GW 10 701 - GW 14 701

| TECHNICAL DATA                                    |                                    |  |
|---|------------------------------------|--|
| Power supply 3 alkaline-type batteries (1.5V AAA) |                                    |  |
| Average battery life:                             | minimum 1 year                     |  |
| Dimensions  | 130 x 92 x 23mm                    |  |
| Output contact                                    | 1NO/NC with potential-free contact |  |
|   | 5A(AC1) / 2A(AC15) 250V AC         |  |
| Operating temperature                             | -5 to +45°C                        |  |
| Detected temperature display range                | 0 to +45°C                         |  |
| Adjustment range                                  | +5 to +40°C                        |  |
| Tolerance   | ± 0.5°C to 20°C                    |  |

Base for fixing on wall with terminal block





# Temperature control devices

# Electronic summer/winter thermometer with knob adjustment



Reference standards: EN 60730-1;EN 60730-2-9

| TECHNICAL DATA   |  |  |
|--|--|--|
| Power supply voltage                                   | 230V AC - 50/60Hz  |  |
| Type of output   | relay, with changeover contact<br>NO/NC 8(2)A / 250V AC            |  |
| Service connections (load)                             | 2 or 3 wires   |  |
| Indicator lights                                       | LED indicating load connected/<br>disconnected                     |  |
| Night-time reduction control                           | possibility of remote application, suitable for "Winter" operation |  |
| Reduction temperature<br>(referred to set temperature) | -4°C   |  |
| Adjustment range                                       | from +5°C to +30°C   |  |
| Hysteresis   | Δ t = 0.7°C  |  |
| Reading accuracy                                       | ± 1°C  |  |
| Operating temperature limits                           | 0°C to +50°C   |  |



Example of connection to boiler and clock for night-time reduction control

# Electronic thermostat for fan coil



Reference standards: EN 60730-1;EN 60730-2-9

| TECHNICAL DATA                                  |   |  |  |
|---|---|--|--|
| Power supply voltage 230V AC - 50/60Hz          |   |  |  |
| Type of output for type of control              |   |  |  |
| - fixed fan                                     | polarised single-pole three-way switch 5(2)A / 250V AC        |  |  |
| - solenoid valve (thermostat-controlled):       | polarised single-pole ON/OFF relay<br>5(2)A / 250V AC         |  |  |
| - fan + solenoid valve (thermostat-controlled): | relay + three-way switch, max. total capacity 5(2)A / 250V AC |  |  |
| Indicator lights                                | LED indicating load connected/<br>disconnected                |  |  |
| Adjustment range                                | from +5°C to +30°C  |  |  |
| Reading accuracy                                | ± 1°C   |  |  |
| Operating temperature limits O°C to +50°C       |   |  |  |

### Installation characteristics



- Depending on the type of installation, connect the speed control wires from the fan to terminals **5 6 7**:
- terminal no. 5 fan "Fast"
- terminal no. 6 fan "Medium"
- terminal no. 7 fan "Slow"

•The solenoid valve command is always thermostat-controlled.

•To change the ventilation setting, follow the instructions below:

a) - Thermostat-controlled ventilation - Connect the wire emerging above the thermostat terminal block (hole 1) to terminal no. 4

**b)** - **Fixed ventilation** - Connect the wire emerging above the thermostat terminal block (hole 1) to terminal no. **3**.

•The thermostat is factory-set for operation with thermostat-controlled ventilation.



## SIGNALLING

### Anti-blackout lamp

# Flush-mounting anti-blackout lamp

Flush-mounting anti-blackout lamp, 1 System module, suitable for auxiliary lighting in the event of a mains failure. Front LED indicating presence of mains and standby (steady green light).

| GW 20 835 - GW 21 835 |
|-----------------------|

| TECHNICAL DATA       |                              |  |
|----------------------|------------------------------|--|
| Power supply voltage | 230V AC                      |  |
| Battery              | Ni-Mh (2 elements from 2.4V) |  |
| Minimum autonomy     | 1 hour                       |  |
| Recharging time      | 12 hours                     |  |
| Lamp                 | White high efficiency LED    |  |
| Mains absorption     | Max 6.5mA                    |  |
| Dimensions           | 1 System module              |  |

# Extractable anti black-out lamp

Extractable lamp suitable as auxiliary lighting in the event of mains failure, with possibility to be used as flashlight. The lamp can be switched off via the frontal switch.



System: GW 20 833 - GW 21 833 Playbus: GW 30 501

| TECHNICAL DATA       |                           |  |
|----------------------|---------------------------|--|
| Power supply voltage | 230V - 50/60Hz            |  |
| Batteries            | Ni-Mh (4.8V / 40mAh)      |  |
| Minimum autonomy     | 2h                        |  |
| Recharging time      | 36 hours                  |  |
| Lamp                 | White high efficiency LED |  |
| Mains absorption     | Max 6 mA                  |  |
| Dimensions           | 2 System modules          |  |



# Electronic ringer with 3 different sounds

Acoustic signaller with multiple functions, suitable for producing three clearly distinguished signals, e.g. bathroom alarm (emergency type sound), main entrance bell (two-tone sound), secondary entrance bell (ringing sound).

Possibility of ringer volume adjustment (using a small tool) with a selector located on the front of the product.

| 0  | Volume TECHNICAL DATA |                      |                       |            |
|--|-----------------------|----------------------|-----------------------|------------|
|  | adjustment            | Power supply voltage | GW 20 641 - GW 21 641 | 12V 50Hz   |
|  | selector              |                      | GW 20 643 - GW 21 643 | 230V 50Hz  |
|  |                       | Sound intensity      | GW 20 641 - GW 21 641 | 90dB at 1m |
|  |                       |                      | GW 20 643 - GW 21 643 | 90dB at 1m |
|  |                       | Max. power absorbed  | GW 20 641 - GW 21 641 | 3 VA       |
| GW 20 641 - GW 21 641<br>GW 20 643 - GW 21 643 |                       |                      | GW 20 643 - GW 21 643 | 3 VA       |



### Stair riser lamp with white LED 12-230V AC

The product has a dual power supply input (12 - 230V AC), a light beam adjuster device, and an integrated white LED.

### Reference standards: EN 62094-1



| TECHNICAL DATA       |                         |
|----------------------|-------------------------|
| Power supply voltage | 12/230V AC double input |
| Type of lamp         | Bright white LED        |
| Draw                 | 12V 0.12 W/0.12 VA      |
|                      | 230V 0.6 W/3.6 VA       |





## SAFETY

# **Gas detectors**

The gas detectors reveal the presence of substances (CH<sub>4</sub>/GPL) that are dangerous for the domestic environment where they are installed

- Indicator lights and acoustic alarm signalling
- Closure of a solenoid valve, via relay
- Indicator lights for malfunctioning of sensor or device
- Device operating test function

The closure of the solenoid valve via the relay is carried out approximately 20s after the start of the alarm situation.

The push-button allows you to carry out the operational test: when pressed, the red LED lights up (alarm signalling), the buzzer sounds and, after about 20s, the relay is activated. Upon the release of the push-button, the signalling is immediately deactivated.

The detectors can be powered through the 12V power supply unit GW10720.

Owing to the particular thermal sensitivity of the LPG sensor, you are advised to position it far from the power supply unit, and apply a blanking module.

Reference standards: EN 50081-1; EN 50082-1



### **Connection diagram**



# Hethane gas (CH4)



# 12Vdc power supply unit

Insulation transformer suitable for the power supply of gas (methane and LPG) detectors. Internally protected against overloading, short-circuiting and excessively high temperatures.



GW 10 720

| Power supply: |
|---------------|
| L - Phase     |
| N - Neutral   |

**12V output:** +12V - Positive -12V - Negative

| TECHNICAL DATA       |                              |  |
|----------------------|------------------------------|--|
| Power supply voltage | 110/240Vac - 50/60Hz - 150mA |  |
| Output voltage       | 12V dc - 300mA               |  |
| Dimensions (mm)      | 52x33x17                     |  |

**Correct positioning of detectors** 



# HOTEL COMPONENTS

# "Do not disturb" and "Make up the room" command and light signalling

Inside the hotel room is located a 3-way switch with printed the symbols "Do not disturb" and "Make up the room". It is used to inform the service staff, thanks to an external double indicator lamp unit, the customer's will not to be disturbed or to clean the room.



The indicator lamp unit is supplied with 230V LED lamps (red for DND signalling, green for MUR signalling)



