Chiara - Technical details General information

Main technical data and reference standards for the devices in the range

Component	Reference standards Basic electrical data*			Prolonged operation	Resistance to abnormal heat and fire		
		Test voltage withstand (V)	Insulation resistance (MW)	Breaking capacity or utilization category	No. changes of position	Termopressione con biglia (°C)	Glow wire tests (°C)
Operating mechanisms	CEI 23-9	2000 at 50Hz	> 5	1.25 ln	40000	125	850
	(EN 60669-1)	for 1 minute		(200 changes	at In 250V~		
				of position)	$\cos \phi = 0.6$)		
Socket outlets	CEI 23-5/CEI 23-50/CEI 23-16	2000 at 50Hz	> 5	1.25 ln	10000	125	850
	(EN 60884-1)	for 1 minute		(100 changes	at In 250V~		
				of position)	$\cos \phi = 0.8$		
Latching relay	CEI 23-9/CEI 23-62	2000 at 50Hz	> 5	-	50000	125	850
	(EN 60669-1/EN 60669-2-2)	for 1 minute			a In 250V~		
					$\cos \phi = 0,6)$		
Monostable relays	CEI 94-4/CEI-EN 61810-1	2000 at 50Hz	> 5	1.25 ln	50000	125	850
	(EN 60669-1/EN 60669-2-2)	for 1 minute		(200 changes	at In 250V~		
				of position)	$\cos \phi = 0,6)$		
Automatic	CEI 23-3	2000 at 50Hz	-	1.53kA	8000	125	850
MCBs	(EN 60898)	for 1 minute					
Automatic	CEI 23-95	2000 at 50Hz	-	1.53kA	4000	125	850
RCDs		for 1 minute					
Supports and frames	CEI 23-9	-	-	-	-	75	650
	(EN 60669-1)						

*For the rated voltages and currents see the specifications for the individual part codes.

Clamping capacity of the terminals					
Flexible wires		Rigid wires			
Min. 0.75 mm ²	Max. 2x4 mm²	Min. 0.5 mm ²	Max. 2x2.5 mm²		

Cable traction resistance of terminals: > 50N

Adhesion of switches and device to the support: > 0.6J

Chiara - Technical details Installation solutions

Composition method for devices and supports



Specifications of screws and terminals

- Captive screws with open position captive screws with cross and slot head and clamping plate.
- Double input protected terminals for one or two conductors (rigid or flexible).

Chiara - Technical details Installation solutions

Installation on concrete walls



No. Modules	Screw distance	Recommended box
2 (with claws)	-	00 050
2 (with screws)	60 mm	00 050
3	83.5 mm	1SL006A00
4	108 mm	00 053
7	100 mm	1SL0064A00

Note: For further information on ABB boxes for concrete walls please refer to the catalog 1SLC001001D0905 - Insulating Enclosures and Installation Materials (see page 5/66)

Installation of plasterboard walls



No. Modules	Screw distance	Recommended box
2 (with screws)	-	10801/10802/10807
2 (with claws)	60 mm	10801/10802/10807
3	83.5 mm	10804
4	108 mm	Ave 254CG,
		BTicino PS564N,
		Gewiss GW24245
		Vimar V71604
7	100 mm	Bticino PS567N
		Gewiss 24246
		Vimar V71606

Note: For further information on ABB boxes for plasterboard walls please refer to the catalog 1SLC001001D0905 - Insulating Enclosures and Installation Materials (see page 5/66).

Protected installation with IP40/55 wall-mounted enclosures





IP40 wall-mounted enclosure

No. Modules	IP40 enclosure	IP55 enclosure
1 (on 2-module enclosure)	2CSK2140CH	2CSK2155CH
2	2CSK2240CH	2CSK2255CH
3	2CSK2340CH	2CSK2355CH
4	2CSK2440CH	2CSK2455CH

The watertight enclosures allow the direct assembly of devices without the aid of supports. The devices are inserted from the rear. See technical details on page 5/57. For further information on IP40/IP55 wall-mounted enclosures, please refer to the catalog 1SLC001001D0905 - Insulating Enclosures and Installation Materials (see page 5/66).

Protected installation with watertight escutcheon plate



IP55 wall-mounted escutcheon plate

No. Modules	IP55 escutcheon plate
2 (on a square or round box with screws, center	2CSK3255CH
distance 60mm)	
3	2CSK3355CH

Note: The watertight escutcheon plates provide a self-supporting solution that allows direct assembly of devices without the aid of supports. The devices are inserted from the rear.

Chiara - Technical details Installation solutions

Installation on raised floors with Undernet under-floor turrets



No. Modules	Dedicated adapter	Undernet tower
5 (max 20 contact blocks)	2CSK1625CH	10900 e 10901
6 (max 12 contact blocks)	2CSK1626CH	10902 e 10903

Note: The dedicated adapter provides a self-supporting solution that allows direct assembly of devices without the aid of supports. The devices are inserted from the rear. The use of finishing plates is not required.

For further information on Undernet under-floor turrets, please refer to the catalog 1SLC006001D0903 - Under-floor Distribution Systems (see page 5/66).

Installation on surface mounted boxes



No. Modules	Wall box	Frame
2	42 096	Use a 2M self-supporting frame
3	41 823	Use a 3M self-supporting frame
3	41 822	Use a 3M self-supporting frame
4	41 830	Use a 4M self-supporting frame

Note: The self-supporting frames allow the direct assembly of devices without the aid of supports. The devices are inserted from the rear. For further information on the wall boxes and duct systems, please refer to the catalog

For further information on the wall boxes and duct systems, please refer to the catalog 1SLC800001D0905 - Plastic and Metal Duct Systems (see page 5/66).

Installation on Lusy table towers

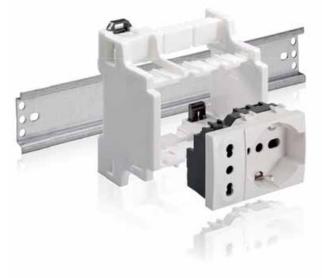


No. Modules	Lusy tower	Frame	
4	10 507	Use a 4M self-supporting frame	

Note: The self-supporting frames allow the direct assembly of devices without the aid of supports. The devices are inserted from the rear.

For further information on the Lusy table towers, please refer to the catalog 1SLC006001D0903 - Under-floor Distribution Systems (see page 5/66).

Installation on DIN rail adapter



No. Modules	Dedicated adapter
1	2CSK1608CH
2	2CSK1608CH
3	2CSK1608CH

Note: The DIN rail adapter allows devices to be assembled without the aid of supports. The devices are inserted from the front. See technical details on page 5/59.

Chiara - Technical details Selection of lights

Control devices	Lamps	
2CSK1001CH	Single-pole switch, 16A - 250V~	
2CSK1002CH	Double-pole switch, 16A - 250V~	
2CSK1004CH	Single-pole switch, 16A - 250V~, 2 modules	
2CSK1003CH	Single-pole two-way switch, 16A - 250V~	
2CSK1007CH	Single-pole two-way switch, 16A - 250V~, 2 modules	
2CSK1010CH	Intermediate switch, 16A - 250V~	
2CSK1008CH	Intermediate switch, 16A - 250V~, 2 modules	
2CSK1005CH	Single-pole push switch NO, 16A	
2CSK1016CH	Single-pole push switch NC, 16A	
2CSK1020CH	Single-pole push switch NO with cord pull, 16A with 2.25 m cord	Filament
2CSK1021CH	Single-pole push switch NC with cord pull, 16A with 2.25 m cord	2CSK1613CH White
2CSK1022CH	Single-pole push switch 1 NO and 1 NC, 16A, with ON	230V
2CSK1023CH	Single-pole push switch 1 NO and 1 NC, 16A, with OFF symbol	0.4W
2CSK1024CH	Single-pole push switch NO, 16A, with red diffuser	
2CSK1025CH	Single-pole push switch NO, 16A, with green diffuser	
2CSK1026CH	Single-pole push switch NO, 16A, with orange diffuser	
2CSK1027CH	Single-pole push switch NO, 16A, with white diffuser	
2CSK1028CH	Single-pole push switch NO, 16A, with BELL	
2CSK1029CH	Single-pole push switch NO, 16A, with KEY	
2CSK1030CH	Single-pole push switch NO, 16A, with STAIR LIGHT	
2CSK1031CH	Single-pole push switch NO, 16A, with backlit label holder plate	
2CSK1032CH	Single-pole push switch NO, 16A, with backlit label holder plate, 3 modules	

Signalling devic	Lamps	
2CSK1310CH	Warning light, ORANGE colour	Filament
2CSK1311CH	Warning light, WHITE colour	2CSK1613CH White
2CSK1312CH	Warning light, RED colour	230V
2CSK1313CH	Warning light, GREEN colour	0.4W



Chiara - Technical details Control devices

Switches, two-way switches, intermediate switches and pushbuttons

Area of application

Control (on and off) of ohmic-inductive loads:

- with filament and fluorescent lamps (corrected and uncorrected);
- dedicated circuits for powered equipment (aspirators, range hoods, shutters, blinds, fans, etc..) and controllable outlets.

To eliminate architectural barriers in creating installations, we recommend the use of luminous controls (Article 4 of Italian Ministerial Decree no. 236 del 14.06.1989).

Technical specifications					
Rated voltage	250V~				
Rated current	10A (16A for pushbuttons)				
Opening distance of the contacts	> 3 mm				
Dielectric strength	> 2000V~				

Reference standards

LV Directive EN 60669-1.

Customization of the control device keys

The illuminable keys of the Chiara wiring accessories' range are supplied with all most widely used functional symbols.

Wiring diagrams

The diagrams provided below are the most widely applied installation solutions in creating lighting points.

Backlighting of the control devices

Night-time loca	tion
	 Characteristics It allows the command key to be identified in the dark. We recommend the use of white, blue, green or red Chiara lamps. Applications Bedrooms Corridors
Functional sign	alling
Ĩ	Characteristics - This allows the command key to be identified and the ON/OFF status of a circuit to be signalled in the dark.

Applications

- General services of a building complex (entrance halls, stair lights, landings etc.)
- Public environments (cinemas, theatres etc.)

Signalling with symbols

Characteristics



This allows the command key and its specific function to be identified in the dark.

Applications

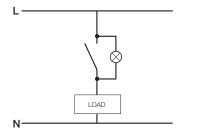
- Warehouses, shops, offices
- HotelsNursing homes, hospitals
- Nursing nomes, nospitals

With warning light

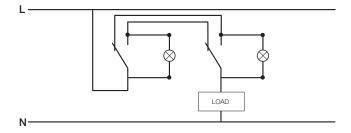
Characteristics Allows the ON/OFF status of an appliance or a lighting circuit, even at a distance. Visible from both a front and side position. Applications Signalling the switching on of lighting points outside the environment in which the control device is installed

Chiara - Technical details Control devices

Example of functional signalling

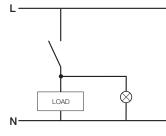


Warning light on when the switch is OFF (if the switch is in the ON state, the warning light is off while the load is ON).



The two warning lights switch on and off respectively when the load is in the OFF and ON state.

Example of remote signalling

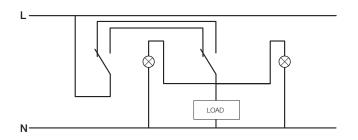


Warning light placed in parallel to the load, of which indicates the ON/OFF state (it is on when the switch is ON).

Instructions for installation in systems with relays and illuminable push switches

The lamps must be connected in parallel.

Using single-pole latching relays 2CSK1012CH, it is possible to connect up to four fluorescent lamps: by adding a 0.94μ F capacitor to the heads of the relay, up to twelve fluorescent lamps can be connected.



Two warning lights placed in parallel with the load (they switch on and off with it).

Using double-pole latching relays 2CSK1014CH, it is possible to connect two fluorescent lamps: by adding a 1.41μ F capacitor to the heads of the relay, up to twelve fluorescent lamps can be connected.

Relays

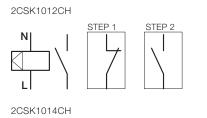
Relay with latching operation for control and adjustment from multiple lamp points by means of single-pole push switches with NO (normally open) contact.

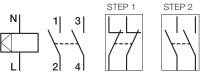
Technical specifications					
Power supply voltage (coil)	230V - 50/60Hz				
Output contact	2CSK1012CH 1NO / 2CSK1014CH 2NO; 10A (AC1) / 7A (AC15) - 250V~				

Reference standards

EN 60669-1, EN 60669-2-2.

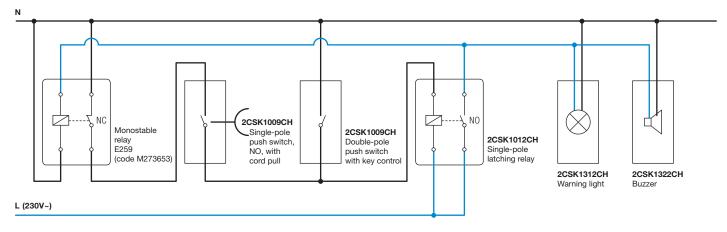
Wiring diagrams





Examples of application

The flush-mounted relays of the Chiara wiring accessories' range can be used to implement numerous functions. The example illustrates a disabled bathroom calling system with cancellation via a key operated push switch:





5

Chiara - Technical details Socket outlets

Plug sockets

Area of application

Powering of household appliances, lighting equipment etc.

Main features Italian and German standard sockets.

The cells of the sockets are segregated and protected when the plug is disconnected: the live parts are accessible only with the corresponding plug fully inserted.

Technical specifications				
Rated voltage	250V~			
Rated current	10A o 16A			
Shuttered and elastic live cells				

Possibility of coupling Chiara sockets with the various types of plugs on the market 2P, 10A 2P, 2,5A 2P+T, 10A 2P, 16A 2P+T, 16A Schuko American 2P+T, 16A 2P, 15A Plug sockets, 250V~, Italian standard with safety shutters P 11 : 2CSK1101CH P 17 • • • 2CSK1102CH P 17/11 ::: 2CSK1103CH Plug sockets, 250V~, Italian/German standard with safety shutters and side/central earth P 30 2CSK1108CH P 30/17 2CSK1109CH Interlocked socket outlets with automatic MCB P 17/11 2CSK1324CH P 30 2CSK1325CH Special sockets Shaver socket (1) 3 2CSK1113CH

⁽¹⁾ Shaver socket, European/American standard with insulating transformer 230V~ - 50/60 Hz

Reference standards

CEI 23-5, CEI 23-50, CEI 23-16 (IEC 60884-1).

Note: In general terms, no plug sockets of any standard for domestic use fall under the European low voltage directive, because there is no harmonized European standard for these types of sockets: in fact, each country has its own standard and therefore a single standard is impossible. For this reason the plug sockets do not bear the CE mark. All the sockets of the Chiara wiring accessories' range conforming to CEI 23-50 are however are certified by IMQ as a further guarantee of their quality and compliance with standards.

Plug sockets for dedicated lines

Plug sockets for dedicated lines allow outlet points to be differentiated according to their particular application, avoiding incorrect connection of unsupported appliances. Different coloured enclosures (red, orange, green) distinguish them from common power sockets.

There are as yet no standard regulations on the correspondence between the colour of the socket and the type of power supply. In order to distinguish the area of application, the following usage customs are adopted.

Red: continuous power supply with UPS (uninterruptible power supply) through an insulating transformer.

Orange: power supply protected by network-generator unit through an insulating transformer.

Green: safety power supply with network/generator unit.

Special sockets

Description	Code
2P shaver socket with insulating transformer. Power supply 230V~ -	2CSK1113CH
50/60Hz. Output voltage 125V~ (American standard 2P socket)	
or 230V~ (2P socket P11 type)	

Components



The shaver socket incorporates an insulating transformer with a power rating of 20 VA, protected against overload and resistant to short-circuits.

Power supply is guaranteed by a pushbutton that is operated automatically whenever the plug is inserted in the socket. The secondary circuit, to which the cells of the socket are connected, is isolated from the primary power supply circuit by double insulation:

additional protections (shutter devices) on the cells of the socket are therefore superfluous.

The socket is suitable for the insertion Italian standard plugs of the P11 type (2P) and American standard plugs (2P). The shaver socket is protected against overload with a thermal interruption device without auto-reclosing. After the protection is tripped, the cells of the socket are not energized. To reclose the circuit, the plug of the device that caused the overload must be disconnected, waiting a few minutes in order to allow the transformer to cool down.

Technical specifications					
Power supply	230 V~ 50-60 Hz				
Output voltage	230 V~ for plugs P11(2P) 2,5 A				
	120 V~ for plugs 2P 15 A 125 V~				
	American standard with non-				
	polarized flat pins				
Available power	20VA				
Operation with auto-protected	temperature				

Reference standards

EN 61558-2-5, EN 61000-3-2, EN 55014-1, EN 55014-2.

Chiara - Technical details Socket outlets

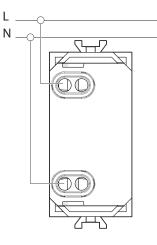
Description	Code
Flush-mounted USB charger 500-650mA, with male type A connector,	2CSK1160CH
power supply 230~ 50/60Hz, output voltage 5V DC	

Components



The flush-mounted USB charger allows you supply and recharge the most common portable electronic devices. Using only a USB cable with Type A male connector it is possible to power mobile phones, smartphones, tablets and cameras that support standard USB power supply (up to 650mA), independently of the manufacturer.

Wiring diagrams



Caution!

The device absorbs up to 60mW in the absence of connected electronic devices. To exclude this absorption, it is recommended to use a double-pole switch.

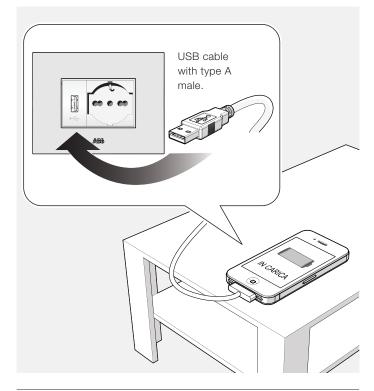
Operating method

Connect the USB cable with the type A male connector to the charger and the opposite end to the device to be powered. Type A, B, miniUSB and microUSB USB connectors can be used indifferently. The device is now being charged.

Caution: the device supplies power according to the USB data transmission protocol, with a maximum current of 650mA at 5V ____. Some devices may require a higher power supply current. Look up the manual of the connected device to check its absorption specifications.

The charging time depends on the connected device and may vary compared with the original charger.

Examples of application



Technical specifications	
Power supply	125-250V - 50/60 Hz
Input current	5A 230V
Output current	500-650mA at 5V DC
Max absorption in standby	60mW
Operating temperature	-20 +50°C
Storage temperature	-20 +80°C
Protection class	IP20
Place of use	indoors, dry
The device is protected against short	-circuits by an internal fuse
(not replaceable).	

Interlocked socket outlets

Description	Code
2P+E socket outlet, 16A - 250V~, interlocked with MCB, P17/11	2CSK1324CH
2P+E socket outlet, 16A - 250V~, interlocked with MCB, P30	2CSK1325CH
2P+E socket outlet, 16A - 250V~, with RCD 10mA, P17/11	2CSK1326CH

Components

Interlocked socket outlets with automatic MCB (PIA)



Interlocked socket outlets with automatic MCD (PID)



Interlocked socket outlets with automatic MCB (PIA)

These sockets are suitable for installation in the system terminations for protection of the load supplied from the outlet against dangers of short circuits and overloads..

Interlocked socket outlets with automatic RCD (PID).

These sockets are suitable for installation in the system terminations for protection of the load supplied from the outlet against dangers of short circuits and overloads, as well as protection of the user against contact voltages. The residual current function with sensitivity of 10 mA also acts in the presence of non-sinusoidal fault currents (alternating currents mixed with unidirectional pulsating currents).

In compliance with installation standards, they are particularly suitable for the protection of:

- terminal user devices in rooms where there is a greater risk of electrocution (bathrooms, showers, etc.)
- sockets that power class 1 users with electronic circuits
 sockets for portable user devices in domestic or similar
- environments (irons, drills, etc.).

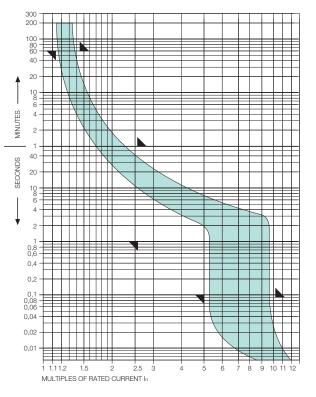
Operation

The MCB or RCD interlocked with the socket energises the cells of the socket only after the plug has been inserted and automatically cuts off voltage to the socket before the plug is fully extracted.

Therefore the plug is always inserted and extracted without an electrical arc.

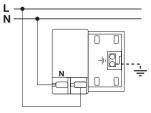
The lever of the circuit-breaker can be closed only after the plug is inserted; without the plug, the lever operates without effect and does not close the switch.

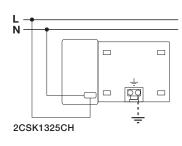
Current-time tripping diagrams for circuit-breakers of the Chiara range



Chiara - Technical details Socket outlets

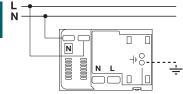
Wiring diagrams





2CSK1324CH

5



2CSK1326CH

Technical specifications	
Power supply voltage	230 V~ - 50 Hz
Residual current (sensitivity)	l∆n 10 mA
Operation dependent on the line voltage	they must be installed
	downstream of a general
	residual current circuit-
	breaker
Thermomagnetic tripping	with characteristic C
Double-pole isolation	with 1 protected pole
Breaking capacity	3000 A
Rated current corresponding to the standard	of the socket
Type A RCBO for alternating and unidirectiona	l pulsating currents
Front LED with green light indicates normal of	peration with the presence
of network power supply and contact closed	

Reference standards:

Interlocked socket outlets with MCB: LV Directive, Standard CEI 23-97. Interlocked socket outlets with RCD: LV Directive, Standard CEI 23-96.

TV/SAT sockets

The TV/SAT coaxial sockets for the Chiara series offer a complete range of products for implementing the terminal part of modern antenna systems. Manufactured fully from die cast Zama, they include a pressure terminal with safety screw in order to guarantee proper grip of the cable. Individual sockets

are available with male IEC or female F bushing, and double demixed sockets with both connection possibilities. Various levels of attenuation are available, ensuring that solutions are available for every type of installation.

Components



TV/SAT coaxial sockets



Double demixed TV/SAT coaxial sockets



Attenuation values of the TV/SAT coaxial sockets

Code	Bushing	Passing attenuation [dB]		Bridging attenuation [dB]			Inverse attenuation	Direct current transit	
		5÷40 MHz	47÷862 MHz	950÷2402 MHz	5÷40 MHz	47÷862	950÷2400 MHz	[dB]	
						MHz			
2CSK1117CH	Male IEC Terr.	-	-	-	0,5	0,5	0,5	-	NO
2CSK1118CH	Male IEC Terr.	-	-	-	0,5	0,5	0,5	-	YES
2CSK1132CH	Male IEC Terr.	≤2	≤2	≤3	≤7	≤7	≤8	≥35	NO
2CSK1136CH	Male IEC Terr.	≤2	≤2	≤2,5	≤10,5	≤10	≤11	≥35	NO
2CSK1137CH	Male IEC Terr.	≤1,5	≤1,5	≤2,5	≤14,5	≤14	≤14,5	≥35	NO
2CSK1138CH	Male IEC Terr.	≤1,5	≤1,5	≤2,5	≤18,5	≤18	≤18,5	≥35	NO
2CSK1119CH	Female SAT	-	-	-	≤0,5	≤0,5	0,5	-	YES

Attenuation values of double demixed TV/SAT coaxial sockets

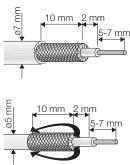
Code	Bushing	Passing attenuation [dB]		Bridging at [dB]	ttenuation	Inverse attenuation	Direct current transit
		TV	SAT	TV	SAT	[dB]	
2CSK1133CH	Male IEC Terr. Female SAT	-	-	≤2	≤2	-	YES
2CSK1120CH	Male IEC Terr. Female SAT	≤4	≤5	≤6,5	≤7	≥35	YES
2CSK1132CH	Male IEC Terr. Female SAT	≤3	≤4,5	≤10	≤11	≥35	YES
2CSK1131CH	Male IEC Terr. Female SAT	≤2	≤3	≤14	≤15	≥35	YES
2CSK1139CH	Male IEC Terr. Female SAT	≤1	≤2	≤18	≤19	≥35	YES

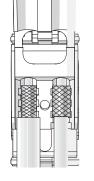
Coaxial cable housing

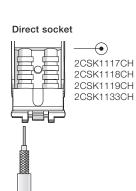
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Chiara - Technical details Socket outlets

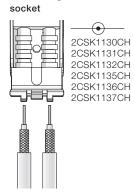
Instructions for installation



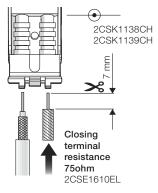




Feedthrough



Feedthrough socket converted to terminal socket



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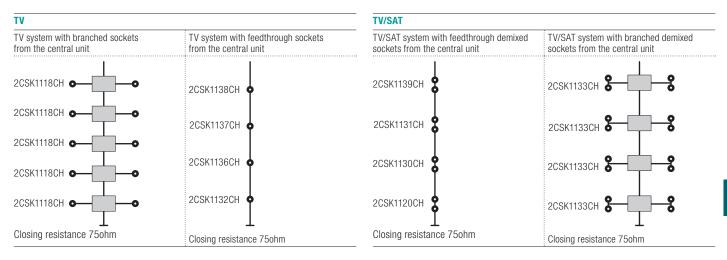
Technical specifications

Manufactured from die cast Zama. Pressure terminal. Available with bushing of type: male CEI, female F.

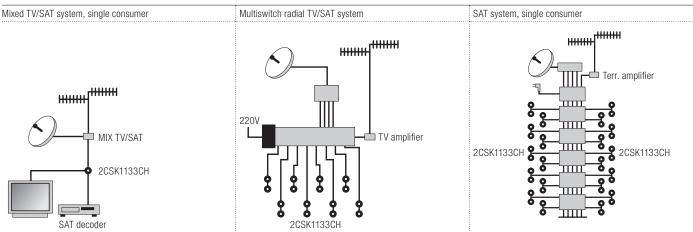
Reference standards

EN 50083-1, EN 50083-2, EN 50083-4

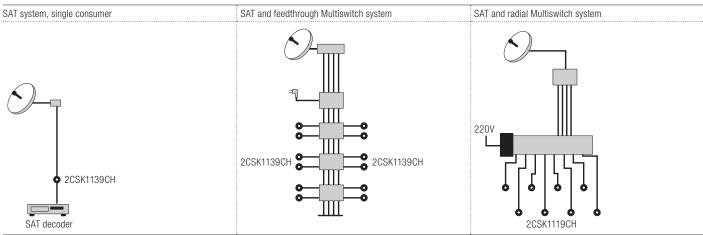
Wiring diagrams



TV/SAT



SAT



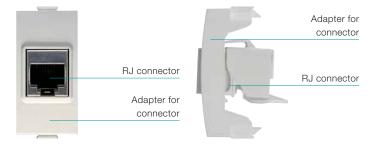
Chiara - Technical details Socket outlets

Network and telephone sockets

The range includes devices for the implementation of telephone and computer networks, RJ11 4-contact telephone connectors for telephones, telefax, modems and RJ12 6-contact telephone connectors for intercommunicating telephone installations.

RJ45 category 5e and 6 connectors are also available. These devices allow computer equipment (computers, modems, printers, etc) to be connected in a network and connection of multimedia devices.

Components



Code	Connector type	No. contacts	Cable type	Shielded	Category	Speed
2CSK1121CH	RJ11	4	twin core	NO	3	up to 16 Mb/s
2CSK1122CH	RJ12	6	twin core	NO	3	up to 16 Mb/s
2CSK1124CH	RJ45	8	UTP	NO	5e	up to 100 Mb/s
2CSK1125CH	RJ45	8	FTP	YES	5e	up to 100 Mb/s
2CSK1127CH	RJ45	8	UTP	NO	6	up to 10 Mb/s
2CSK1128CH	RJ45	8	FTP	YES	6	up to 10 Mb/s

FTP = cable shielded with aluminium tape

UTP = unshielded cable

5

Instructions for installation

Unshielded connectors:

- 1. wire the connector making sure that the connection terminals match;
- 2. operate the lever wiring device on the connector;
- 3. latch the connector on the adapter and proceed with the installation on the frame.

Shielded connectors:

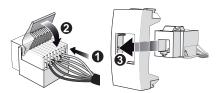
- 1. wire the connector making sure that the connection terminals match;
- position the cover of the connector and squeeze with pliers to make sure the contacts are tight;
- 3. apply the shielding, ensuring insulation of the connector;
- 4. latch the connector on the adapter and proceed with the installation on the support.

Keystone adapter 2CSK1135CH:

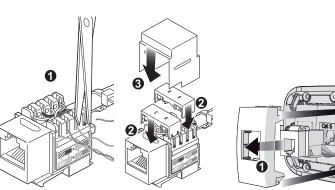
the structured wiring systems for data transmission are distinguished by their flexibility of use, installation independent of location and the use of the terminal outputs. The suppliers of components for wiring, when dealing with installations of a certain complexity and size, must be in able to show certification of conformity of the installation, directly or through accredited installations.

ABB meets this requirement with the adapter of the Chiara wiring accessories' range, which is compatible with various Keystone coupling connectors available on the market and enables integration between the Chiara wiring accessories' range and data transmission components of systems with structured wiring.

1. latch the connector on the adapter and proceed with the installation on the frame.



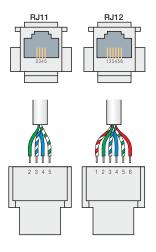
Unshielded connectors



Shielded connectors

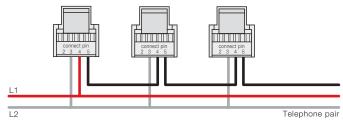
Keystone adapter 2CSK1135CH

Wiring diagrams for RJ11 and RJ12 telephone connectors



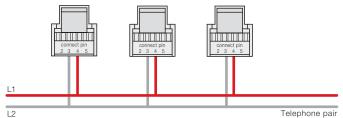
For telephone use, 2 wires of the telephone connectors, use the central contacts 3-4

Connection in series



Terminals 3 and 4 are connected via the internal contact to the telephone (closed with the receiver hung up). Lifting the receiver causes interruption of the downstream line (L1), guaranteeing secrecy of the conversation.

Connection in parallel



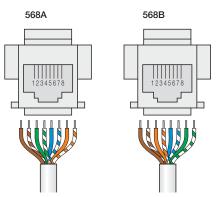
Each socket captures the line signal (there is no secrecy of conversation).

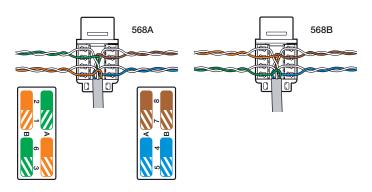


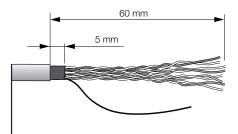
Note: extracting one of the plugs causes disconnection of sockets located downstream. In order to prevent this, you just need to insert a plug in the socket from which the telephone device was removed with a jumper between terminal 3 and 4.

Wiring diagrams for RJ45 data connectors

To obtain the EIA/TIA 568A or 568B configuration included below, follow the colour code shown on the terminal box.







Technical specifications			
Connections	With perforated insulation		
Conductors	non-butted, inserted in the appropriate blade slots		

Reference standards

EN 50083-1, EN 50083-2, EN 50083-4, ISO 11801.

Chiara - Technical details Protection devices

Fuse holders and overvoltage limiters

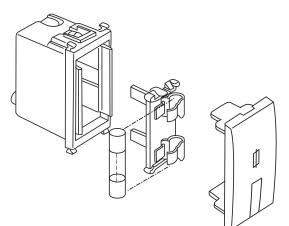
Description	Code
Fuse holder, for fuses Ø5x20 / Ø6.3x32 mm, max. 16A	2CSK1301CH

Components



Replacement of the fuse

After removing the removable cover with a screwdriver, proceed with replacement as in the drawing:



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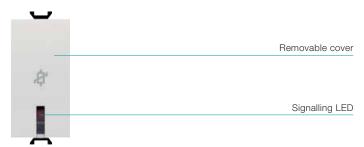
Replacement fuses

Fuses with dimension \emptyset 5x20mm or \emptyset 6.3x32 mm can be installed.

The use of the fuses on page 4/23 is recommended.

Description	Code
Overvoltage limiter, 75J, 230V~	2CSK1315CH

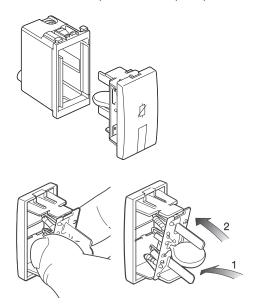
Components



This device provides protection for power supply sockets for all types of household appliances and in particular for those containing electronic components (Hi-Fi, TV, computers, video recorders, programming mechanisms, cash registers etc.) from damage caused by over-voltages present in power supply networks.

Instructions for installation and operation

The protection device is housed in the removable front cover. To replace it, after disconnecting the voltage from the installation, extract the cover from the limiter and separate the SPD block from the plastic cover, levering it with a screwdriver. Replace it with spare part 2CSY1302MY.

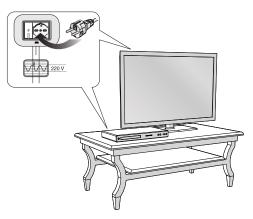


Functions

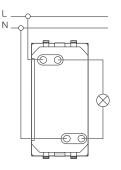
When the red warning light is on, it indicates that the protection has tripped and needs to be replaced (the load remains energised but it is not protected).

Examples of application

Over-voltages in domestic networks can be caused both by atmospheric interference and by control, operation or programming of connected inductive loads (air conditioners, burner motors, water pumps, reactors of fluorescent or discharge lamps, washing machines, etc.).



Wiring diagram



Technical specifications

Residual current limiting	protection (line-to-neutral)
Rated voltage (Un)	120-230 V~ 50/60 Hz
Number of ports	1
Rated load current IL	16 A
Tensione max continuativa (Uc)	250 V~
Test class	III
Protection level (Up)	< 1,2 kV
Test voltage of combined wave	2,5 kV
generator Uoc	
Rated flashover current (In)	1 kA (8/20 ns) 20 times
Max flashover current (Imax)	2 kA (8/20 ns) once
Temperature range	-5 °C - +40 °C
Internal integrated protection	fuse

Reference standards

LV Directive, Standard EN 61643-11

Chiara - Technical details Protection devices

Miniature circuit-breakers and Residual current circuit-breakers

Description	Code
Automatic MCB, 1P+N, C6, breaking capacity 1.5kA	2CSK1304CH
Automatic MCB, 1P+N, C10, breaking capacity 3kA	2CSK1305CH
Automatic MCB, 1P+N, C16, breaking capacity 3kA	2CSK1306CH
Automatic RCD, 1P+N, C6 - 10 mA, breaking capacity 1.5kA	2CSK1307CH
Automatic RCD, 1P+N, C10 - 10 mA, breaking capacity 3kA	2CSK1308CH
Automatic RCD, 1P+N, C16 - 10 mA, breaking capacity 3kA	2CSK1309CH
Automatic RCD, 1P+N, C6 - 30 mA, breaking capacity 1.5kA	2CSK1328CH
Automatic RCD, 1P+N, C10 - 30 mA, breaking capacity 3kA	2CSK1329CH
Automatic RCD, 1P+N, C16 - 30 mA, breaking capacity 3kA	2CSK1330CH

Components

Automatic RCD



Automatic MCB

	Manual reset control
0	
C16	Indication of the Characteristic curve

Automatic MCBs and automatic RCDs provide protection against over-currents and earth fault currents of terminal circuits. Protection class with the device embedded in smooth vertical walls with the associated support, frame and blank covers, if required: IP41.

Instructions for installation and operation

Use in dry and dust-free locations.

- Temperature between -5 °C and +40 °C..
- Suitability for installation on the supply side of a socket or device for the protection against overloads and short circuits of the equipment and, at the same time, for protection of the users against contact voltages.
- The sensitivity (operating residual current) of 10mA and

the suitability for operation also in the presence of nonsinusoidal fault currents (alternating currents mixed with unidirectional pulsating currents) allow the protection devices of the Chiara range to be classified as "type A RCBOs" (identified by the symbol), particularly suitable for the protection of:

- terminal uses in rooms where there is a greater risk of electrocution (bathrooms, showers, kitchens etc.), as prescribed by the CEI standards;
- class I consumer power sockets with electronic circuits (computers and accessories, electronic scales, electronic typewriters, cash registers etc.). In domestic and service industry networks non-sinusoidal fault currents are often present because of the use of electronic boards in domestic appliances.
- The electromagnetic part of the circuit breakers guarantees protection against overloads and short circuits; the residual current part of the devices, for current values of 10mA, guarantees protection of persons against the contact voltages.
- Closing the circuit: manually press the lever of the circuit breaker at the "I" symbol.
- Opening the circuit:
 - manually, by pressing the lever of the circuit breaker at the "0" symbol or the yellow test button (test);
 - automatically, due to thermal (overload), magnetic (short-circuit) or residual current (earth fault current) tripping.
- The device must not be used as a control breaker.
- To check that the circuit breaker is installed and behaving correctly, the yellow test button (test) must be pressed every month. If the device is correctly installed and powered, the circuit breaker trips; if it does not, you must immediately inform the installation technician because safety will be compromised. After the test, you need to press the main key near the "I" symbol in order to reset the circuit breaker.
- Thermomagnetic tripping with characteristic "C" (see the current-time tripping diagram provided below).
- Double-pole operation with one protected pole + N, type A for alternated fault currents and unidirectional pushbuttons.
- Operating residual current (sensitivity) I∆n 10mA; the circuit breaker must be connected according to the electrical diagram provided below.

5

Functions

- Green front LED for signalling normal operation: presence of line voltage and closed circuit.
- Internal temperature checking: the circuit breaker automatically operates the opening of the circuit as soon as the safety threshold is exceeded.
- Self-test function to check the electrical continuity of the internal residual current circuit (in the absence of continuity, the circuit breaker will open).
- Opening the circuit if voltages occur higher than the predefined threshold at the circuit breaker input(for example, in 380V~ three-phase systems the circuit breaker prevents an erroneous "line-to line " connections, instead of "line-to-neutral").

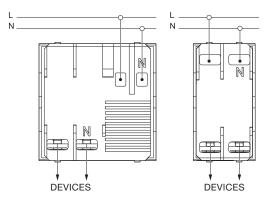
Characteristics

- Main lever operated control part: "I" symbol (closed circuit); "0" symbol (open circuit).
- Front LED for signalling the presence of line voltage and closed circuit.
- Yellow test button (test) for checking that the device is functioning properly.
- Terminals protected with captive screws for clamping two conductors up to 4 mm² each
- Construction of the thermo magnetic part as prescribed by Standards EN 60898 and IEC 60898.
- Construction of the residual current part according to Standards EN 61009 and IEC 61009.
- Power supply voltage: 120-230V~ ±10% 50-60Hz.

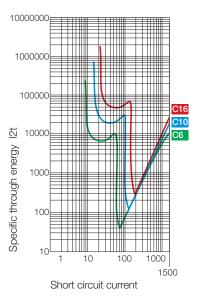
The supply line can be connected to either the upper or the lower terminals of the circuit breaker, which must be installed downstream of a general residual current circuit breaker (Standard CEI 64-8/5, paragraph 532.2.2.2).

The line voltage determines operation (Standard IEC 1009-1, paragraph 4.1.2).

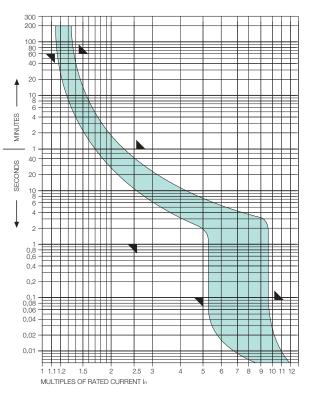
Wiring diagram



Characteristic curves

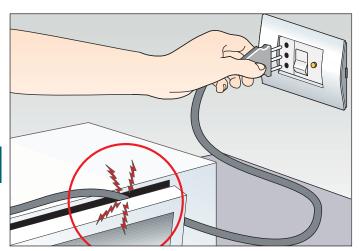


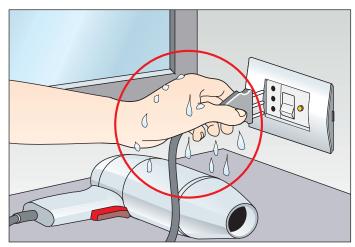
Current-time tripping diagrams for circuit-breakers of the Chiara range



Chiara - Technical details Protection devices

Examples of application





Technical specifications

Type of circuit breaker	MCB	RCD
Rated voltage	230V	230V
Rated frequency	50 ÷ 60Hz	50 ÷ 60Hz
Rated residual current	-	10mA or 30mA
Short-circuit breaking capacity	6A 1500A	6A 1500A
	10A 3000A	10A 3000A
	16A 3000A	16A 3000A
Correnti nominali	6 -10 -16A	6 -10 -16A
Number of poles	1P + N	1P + N
Tripping characteristic	•	
- Overcurrent protection	Туре С	Туре С
- Limitation class	3	3
- Residual current protection	-	Class A

Reference standards

Thermomagnetic: EN 60898-1 - Differential: IEC 61009-1

Chiara - Technical details Safety and comfort devices

Thermostats and time-programmed thermostats

Description	Code
Summer/winter electronic thermostat, relay output,	2CSK1202CH
1 contact NO 8A (AC1)/2A (AC15) - Power supply 230V~ 50/60Hz	

Components

Current value of the AMBIENT TEMPERATURE in °C. While adjusting the value of the DESIRED TEMPERATURE, it value is displayed (flashing). About 5 seconds after the last time the keys were pressed, it returns to displaying the AMBIENT TEMPERATURE. Display indicating the value of the DESIRED TEMPERATURE

> RELAY ENERGISED icon. This icon is displayed when power is requested from the system controlled by the thermostat. The type of icon displayed (ゐ or 禁) depends on the operating mode of the thermostat (heating or air conditioning).

Key to INCREASE the DESIRED TEMPERATURE (in steps of 0.5°C). The maximum value that can be set is 30 °C.

Key to DECREASE the DESIRED TEMPERATURE (in steps of 0.5 °C) The minimum value that can be set is 5.0 °C (anti-freeze temperature)

ANTI-FREEZE icon. This is displayed when the DESIRED TEMPERATURE is set to the minimum value (5.0 °C)

The electronic thermostats of the Chiara series are equipped with a summer/winter switch for heating and air conditioning systems.

Characteristics

- Display of the current ambient temperature
- Display of the comfort temperature
- Display of the night-time temperature set
- Possibility to increase or decrease of temperature in steps of 0.5°C
- Minimum configurable value that can be set 5°C (anti-freeze temperature) and maximum configurable value 30°C
- Display of the operating status of the thermostat by means of symbols
- Anti-freeze function set to 5°C

Instructions for installation and operation

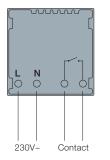
For correct operation, the thermostat must be installed at a height of approximately 1.5 metres from the floor, on internal walls, protected from direct sunlight and from any thermal interference such as heaters, lamps, televisions or any object that generates heat.

This device for controlling heating or air conditioning systems, uses a special technique that allows greater stability of the ambient temperature to be achieved while guaranteeing better comfort.

Areas of application

The environmental thermostats can be used for both heating and conditioning systems to control burners, pumps, valves, and refrigeration compressors.

Wiring diagrams



Technical specifications

roominour oppointoutiono	
Power supply	230V~ ±15% - 50Hz
Consumption	< 0.5 W
Output	Clean contact of 8A resistive relay
Operating temperature	from 0°C to +50°C
Adjustment range	from +5°C to +30°C
Precision	±1°C
Area of use	heating and air conditioning
Type of adjustment	PI
Proportional band	2.5°C

Reference standards

EN60730-1, EN60730-2-9, EN61000-3-2, EN61000-3-3, EN55014-1, EN55014-2

Chiara - Technical details Safety and comfort devices

Description	Code
Summer/winter electronic time-programmed thermostat with	2CSK1201CH
4 temperature levels, relay output, 1 NO/NC change-over contact	
8A (AC1)/2A (AC15) - Power supply 230V~ 50/60Hz	

Components

	Temperature levels
	Ambient temperature detected
A88 123 4447 95	Pushbuttons for selecting the temperature levels
1 1 C 1 C C	Summer/winter switching
Carlos and a start and a start	Diagram of the set temperature
N NO 00 10 11 11 11 11	Setting pushbuttons

Used in heating and air conditioning systems, the electronic time-programmed thermostats of the Chiara series include the possibility of summer/winter switching and the choice four levels of temperature: comfort, activity, reduction and anti-freeze. Each level is already preset in the memory of the device according to specific standards, that can be modified with the maximum simplicity of according to daily needs. On the display, values are displayed in real time for the programme activated, the current temperature, the time and the status of all the other functions set. It is possible to programme the desired temperature for every hour of the day (programming at 30 minute intervals is also possible), and for every day of the week. In addition, using a special function, the time-programmed thermostat of the Chiara series is able to automatically advance or delay switching on or off of systems in order to reach the ideal temperature exactly at the moment for which it was programmed.

Adjustment of the thermal residual current device from 0.2°C to 2°C.

Characteristics

- Preset, adjustable and modifiable temperature levels: comfort, activity, reduction, anti-freeze fixed at +5°C
- Change-over switching: winter for heating, summer for air conditioning
- Limitation of the temperature values that can be set
- Possibility to change at any time from comfort temperature to activity, reduction or anti-freeze
- Display of the time and the ambient temperature
- Temporary or permanent manual operation
- Deletion from memory or modification of all the set information (day, time, temperature levels, etc.)
- Availability of a totally free program, which can be programmed according to the strictest personal requirements
- Possibility to suspend the program in progress for a set time cycle (maximum 999 hours)
- Connection to a telephonic programming device for remote control
- Possibility to activate the pump for 2 minutes every day of the year
- Signalling of faults during operation of the installation (for example, boiler blocked)
- Signalling that the battery for maintaining data in memory is low

Preset temperature settings

- T1 Comfort temperature 20°C adjustable
- T2 Activity temperature 18°C adjustable
- T3 Reduction temperature 16°C adjustable
- T Anti-freeze temperature 5°C fixed

Shown on the display

- Days, hours, minutes
- Ambient temperature detected
- Temperature levels
- Daily programming
- Type of operation: manual, automatic, summer, winter

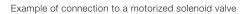
Programming

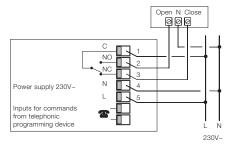
- 4 fixed programs
- 1 free program
- Programming at intervals of 30 minutes
- Holidays program
- Switching on or off with automatic management

Areas of application

In residential applications, such as apartments and villas with independent heating, apartments with centralized heating, apartments or villas with independent air conditioning. In the services sector in environments equipped with air conditioning systems with fan coils and in environments equipped with centralized heating and zone valves.

Wiring diagrams



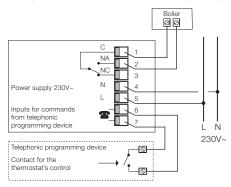


Technical specifications Power supply voltage 230 V - 50/60 Hz Maintenance of programs 72 hours minimum during power outages NO/COM/NC 8(2)A / 250 V~ Output contact Type of insulation Class II Protection class IP 30 (flush-mounted) Temperature adjustment range from + 5 °C to + 39 °C 0.5 °C Temperatures setting resolution 0.°C Temperature display resolution max 1°K/15 min. Thermal gradient Differential operation T modifiable from 0,2 °C to 2 °C Updating of the temperature display Once every 60 seconds -5°C + 50°C Operating temperature limits

Reference standards

LVD EN60730-2-7, EN60730-2-9, EMC EN60730-2-7, EN60730-2-9

Example of connection to a boiler and telephonic programmer



Chiara - Technical details Safety and comfort devices

Dimmer

Loads that can be controlled with the dimmer

Dimmer type		Loads						
			Fluorescent lamps	Toroidal transformers	Electronic transformers	Electro- mechanical transformers	Drills	Air agitators
Dimmer code	Description		();	<u> </u>		00	J	L
2CSK1205CH	Electronic dimmer with rotary control	YES	NO	NO	NO	NO	NO	NO
2CSK1207CH	Electronic dimmer with button control	YES	NO	YES	NO	YES	NO	NO
2CSK1204CH	Electronic dimmer with rotary control and two-way switch	YES	NO	NO	NO	NO	NO	NO

Description	Code
Electronic dimmer with rotary control for resistive loads	2CSK1205CH
100-500W, 230V~ - 50/60Hz	

Components

Electronic dimmer with rotary control for resistive loads 100-500W 230V \sim 50/60Hz (visible in the dark).

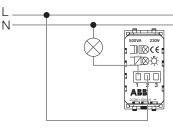
Operation

The load can be controlled and adjusted by rotating the knob. The light intensity of the location LED is attenuated as the brightness of the controlled lamps increases.

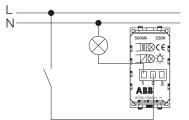
Wiring diagram

The connection can be made between phase and neutral or between phase and phase, always in series with the load.

Control with dimmer



Control with a switch and adjustment with a dimmer



Technical specifications

Rated voltage	230V - 50/60Hz	110V - 50/60Hz	
Resistive load power	100 - 500W	50 – 250W	
Inductive load power	100 – 500VA	50 – 250VA	
Technology	TRIAC	TRIAC	
Operating temperature	-5 °C ÷ +35 °C.		
Adjustable load	Filament and halogen lamps		

Reference standards

CEI 23-9 (EN 60669-1)

Description	Code
Electronic dimmer with pushbutton control for resistive and inductive	2CSK1207CH
loads 60-500W, (60-500VA) 230V~ - 50/60Hz	

Components

•	Location indicator light
\bigcirc	ON/OFF command button with adjustment by pressing
~	Line voltage presence indicator light

Electronic dimmer with pushbutton control for resistive and inductive loads 60-500W 60-500VA 230V~ -50/60Hz (visible in the dark).

Operation

The load can be controlled and adjusted using a pushbutton. The light intensity of the location LED is attenuated as the brightness of the controlled lamps increases.

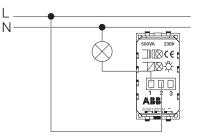
The load can be turned on, adjusted and turned off using the pushbutton present on the dimmer or with normal non-luminous NO pushbuttons connected to the dimmer.

- Storage of the adjustment set when the load was switched off (apart from network outages).
- Switch-on and switch-off of the load is gradual.
- Pressing the pushbutton quickly causes the load to be switched on or off. Adjustment is obtained by keeping it pressed. To reverse the direction of adjustment, interrupt and then resume pressing the pushbutton.
- If the pushbutton is pressed approximately between 0.3 s and 1 s, the dimmer will light up the controlled lamps, automatically and gradually, to their maximum brightness.

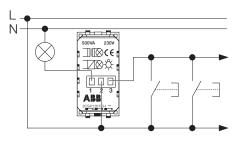
Wiring diagram

The connection can be made between phase and neutral or between phase and phase, always in series with the load.

Control and adjustment with a dimmer pushbutton



Control and adjustment with a dimmer pushbutton and NO button connected in parallel



Technical specifications		
Rated voltage	230V - 50/60Hz	110V - 50/60Hz
Resistive load power	60 - 500W	30 – 250W
Inductive load power	60 – 500VA	30 – 250VA
Technology	TRIAC	TRIAC
Operating temperature	-5 °C ÷ +35 °C.	
Adjustable load	Filament and haloge	n lamps, ferromagnetic
transformers for halogen lamps		ogen lamps

Reference standards

CEI 23-9 (EN 60669-1)

Chiara - Technical details Safety and comfort devices

Description	Code
Electronic dimmer with rotary control and with two-way switch for	2CSK1204CH
resistive loads 100-500W, 230V~ - 50/60Hz	

Components

•	Location indicator light
(\bigcirc)	ON/OFF command button with adjustment by rotation
	Line voltage presence indicator light

5

Electronic dimmer with rotary control and two-way switch for resistive loads 100-500W 230V~ -50/60Hz (visible in the dark).

Operation

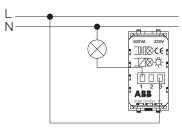
The load is controlled directly by means of a pressed two-way switch. Adjustment is performed by rotating the knob. The light intensity of the location LED is attenuated as the brightness of the controlled lamps increases.

Once the desired lighting level has been set, pressing the knob will switch the light source off, while pressing it again will switch it back on at the set lighting level.

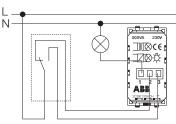
Wiring diagram

The connection can be made between phase and neutral or between phase and phase, always in series with the load.

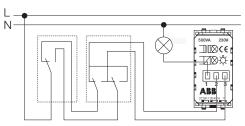
Control and adjustment with a dimmer



Control with two-way switch and dimmer, adjustment with dimmer



Control with two-way switch, intermediate switch and dimmer, adjustment with dimmer



Technical specifications

Rated voltage	230V - 50/60Hz	110V - 50/60Hz
Resistive load power	100 - 500W	50 – 250W
Inductive load power	100 – 500VA	50 – 250VA
Technology	TRIAC	TRIAC
Operating temperature	-5 °C ÷ +35 °C.	
Adjustable load	Filament and halogen lamps	
	Thanient and halogon	lampo

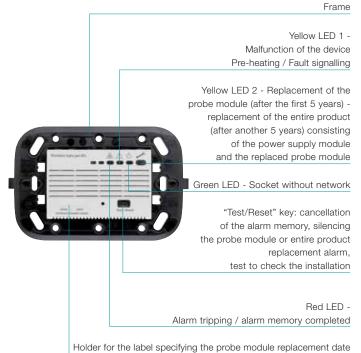
Reference standards

CEI 23-9 (EN 60669-1)

Gas detectors

Description	Code
Electronic natural gas detector with acoustic and indicator signal, relay	2CSK1210CH
output, 1 NO/NC change-over contact 6A (AC1)/2A (AC15) - 250V~.	
Power supply 230V~ - 50Hz.	
Equipped with dedicated frame for installation on type 503 box	
Electronic LPG gas detector with acoustic and indicator signal, relay	2CSK1211CH
output, 1 NO/NC change-over contact 6A (AC1)/2A (AC15) - 250V~.	
Power supply 230V~ - 50Hz.	
Equipped with dedicated frame for installation on type 503 box	

Components

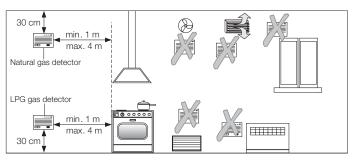


The wiring accessories natural gas (CH4) or LPG gas detectors, flush-mounted with 3 modules (503 box embedded in the wall) contribute to guarantee the safety of civil environments where gas operated domestic appliances are installed, such as: boilers, cookers.

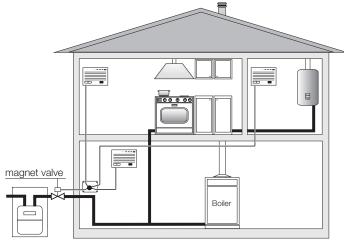
The equipment consists of a fixed power supply module and removable sensor module, which must be replaced after 5 years of continuous use. This allows a saving on the purchase and installation costs, with a lower impact on the environment due to the extension of the life time of the power supply/relay module for a further 5 years.

Positioning of the detector

The installation of the gas detector does not exonerate users from observance of all current laws and standards in the country of installation regarding the specifications, installation and use gas powered equipment, the ventilation of rooms and the release of combustion products.



- Install the natural gas detector at a maximum of 30 cm from the ceiling
- Install the LPG detector at a maximum of 30 cm from the floor surface.
- Install the detectors between 1 m and 4 m from the gas appliances.
- Do not install the detectors outdoors or in places exposed to atmospheric agents
- Do not install the detectors close to: sinks, air intakes, heating and air conditioning devices, windows and ventilation devices; in addition, the detectors must not be installed in closed spaces, such as behind a curtain or inside a cabinet.



Illustrative example: installation with 3 gas detectors (natural gas) that command the solenoid valve for shutting off the gassupply.

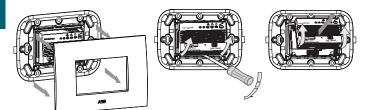
Chiara - Technical details Safety and comfort devices

Extraction of the probe module (for example: to replace it) CAUTION: always deactivate the line voltage 230V~

- 1. Remove the frame.
- 2. Delicately insert the flat blade of a small screwdriver and use it as a lever to uncouple the sensor module.
- 3. Rotate the sensor module upwards in order to uncouple it completely.

Replacement probe modules:

2CSY1220MC: Natural Gas replacement probe module 2CSY1223MC: LPG Gas replacement probe module



Characteristics

5

- Devices equipped with a control circuit with microprocessor that performs self-diagnosis tasks to ensure the perfect efficiency of the sensor over time.
- Sensor equipped with a special selective filter in order to avoid alarms in response to the presence of gas vapours that are not meant to be detected, such as steam from cooking, vapours from cleaning fluids etc.
- Devices equipped with an operating time meter, in order to signal the necessary replacement of the sensor module after the firsts 5 years of use.
- Luminous (red LED) and acoustic alarm signal.
- TEST (to verify that the device is operating properly) and Reset system with a single pushbutton.
- The gas detectors are equipped with an output relay that can command a valve to shut off the distribution of gas.

Key to signals			
Luminous LED	Acoustic BUZZER		
◯ off	□⊂∫ off		
-	↓)) intermittent		
on, fixed	-		

Reference standards

LVD CEI 216-8 - EMC EN 50270

Wiring diagrams

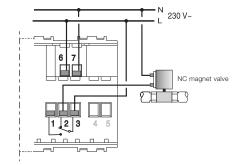
CAUTION: the power supply network must incorporate a device to guarantee omnipolar disconnection.

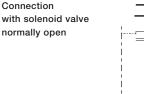
The detector must be powered by a voltage of 230V~ 50Hz with continuity in order to guarantee maximum safety and correct signalling of replacement within the declared time limits.

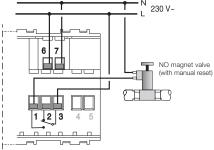
For the electrical connections, bring cables with a maximum cross-section of 2.5 mm² to the terminals of the detector.

The diagrams (illustrative examples) show the position of the relay contacts at rest (no alarm).

Connection with solenoid valve normally closed







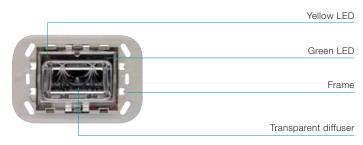
Technical specifications

Power supply voltage	230 V~ +/- 10% 50 Hz
Solenoid valve command relay	1 potential-free change-over contact
Capacity of relay contacts (max)	6 (2) A 250 V ~
Protection class	IP40
Type of insulation	Class II 🛛
Area of application	Domestic - type A
Semiconductor sensor	Installed inside the probe module
Operating temperature limits	- 10 °C ÷ + 40 °C
Operating humidity	90% UR (maximum)
Types of gas detected	Natural Gas - with model for natural gas
	LPG - with model for LPG gas
Alarm tripping	10% LIE (Lower Explosiveness Limit)
	For both models
Acoustic alarm	85 dB at 1 m
Sensor warm-up time at switch-on	1 minute
Storage temperature limits	- 15 °C ÷ + 50 °C

Emergency lighting

Description	Code
LED light for emergency lighting or steplight.	2CSK1303CH
Charge reserve up to 3h and recharge time 12h.	
Power supply 230V~ - 50Hz.	
Equipped with dedicated frame for installation on type 503 box	

Components



High efficiency LED-lit emergency device for embedded installation. Dimensions of 3 modules. Suitable for installation of frames of the Chiara wiring accessories' range.

Instructions for installation and operation

The light provides 6 distinct operating modes, that can be set by programming.

Mode	Description	Battery life	Terminals 1 and 2
1	inhibition	1h	Switch-on / switch-off /
	not activated		adjustment
2	inhibition	2h	Switch-on / switch-off /
	not activated		adjustment
3	inhibition	3h	Switch-on / switch-off /
	not activated		adjustment
4	Inhibition activated	1h	Connection for inhibition
			switch
5	Inhibition activated	2h	Connection for inhibition
			switch
6	Inhibition activated	3h	Connection for inhibition
			switch

To access programming mode you need to connect the batteries using the appropriate connector: the yellow LED will light up and the green LED will flash a number of times equal to the mode set (for example, 2 flashes=mode 2). This sequence will be repeated 3 times.

If you wish to change the operating mode, press the transparent diffuser: the yellow LED will switch off for a fraction of a second to indicate that the key has been pressed and the green LED will indicate the value of the new mode by the number of flashes. Each time the diffuser is pressed, it increases the operating mode by one unit. After three cycles of displaying the mode, the device will automatically complete the programming procedure, store the mode that has been set and the GREEN and YELLOW LEDs will switch off.

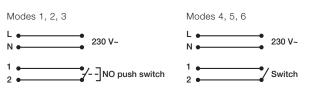
In modes 1-2-3 it is possible to adjust the lighting level (dimmering) by pressing the transparent diffuser.

Functions

The device is equipped with 2 signalling LEDs:

Green LED	Meaning
Flashing	Apparatus connected to the electrical network being
	quick-charged.
On	Apparatus connected to the electrical network being
	recharged for maintenance
Off	Apparatus in emergency state.
	·
Yellow LED	Meaning
On	The apparatus has faults
	(monthly test NOT passed)
Off	No malfunction

Wiring diagram



Technical specifications		
Power supply voltage	230V~ ±10%, 50-60 Hz.	
Emergency light flow	50 lumen with 1h autonomy 35 lumen with 3h autonomy	
Consumption	SE mode (not permanent) 5mA at 230V~ = 1.6W	
	SA mode (permanent) 30mA at 230V~ = 7 W	
	Ni-Mh batteries, AA 3.6V 1300mAh High Temperature	
Battery recharge time	12 hours quick charge	
Battery life	1h, 2h and 3h	
Lamp	2 white high efficiency 1W LEDs	
Signalling	2 LEDs, GREEN and YELLOW	
Ambient Temperature	25°C	

Reference standards

EN 60598-2-22

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Chiara - Technical details Safety and comfort devices

Description	Code
Removable anti-blackout light, 230V~. Charge reserve 4.5 h and	2CSK1214CH
recharge time 10-20h. To be combined with 230V~ plug sockets;	
particularly recommended for codes 2CSK1108CH and 2CSK1109CH.	

Components

	Green LED
C C C C C C C C C C C C C C C C C C C	Red LED
	Pushbutton for manual activation
	Battery
111	
	2P 10A plug, P11 type

The anti-blackout light is an automatic removable,

rechargeable electronic lamp that can be inserted in any Schuko socket or Italian P11 standard 10A bivalent socket. Socket outlets particularly recommended for holding the lamp are the sockets of the Chiara wiring accessories' range 2CSK1108CH and 2CSK1109CH, that allow the body of the lamp to be embedded in the socket outlet, thus minimizing the external dimensions.

The device was designed to light up automatically in the event of a blackout (no voltage warning), or to be used as a portable lighting device, useful in order to guarantee visibility and facilitate maintenance operations and/or searching for faults in unlit environments.

Functions

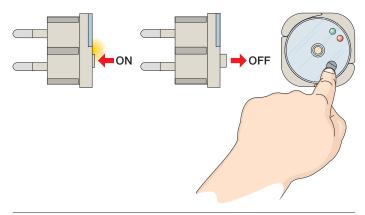
A light source is activated automatically whenever the line voltage is missing (blackout) thanks to rechargeable backup batteries.

- Possibility to extract it from the socket and use it as a normal pocket torch with an on/off button on the front.
- Long autonomy, 4.5 hours of continuous operation.
- Small dimensions protrusion from the Schuko profile (only 8 mm).

On the front part there are two LEDs (one red and one green) that indicate the state of the lamp when it is powered:

- Red LED on, recharging in progress. In the event of a blackout the lamp will remain off (battery saving condition, used in the case of prolonged absence).
- Green LED on, recharging in progress. In the event of a blackout the lamp will light up and will switch off automatically when the network is restored.

The pushbutton on the front part allows you to switch from one condition to another.



Technical specifications

2P 10A
19 mm
4 mm
230V~50-60 Hz
10-20 hours
4.5 hours

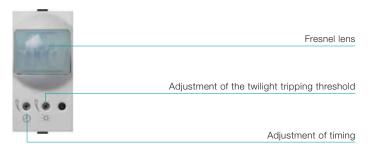
Reference standards

EN 60598-1, EN 60598-2

Other devices

Description	Code
IR motion detector with twilight sensor for control and adjustment of	2CSK1216CH
the operation time of lighting devices.	
Relay output NO 5A (AC1)/2A (AC15) - 250V~.	
Power supply 230V~ - 50/60Hz.	

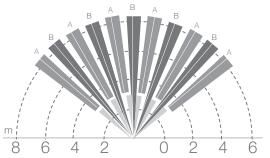
Components



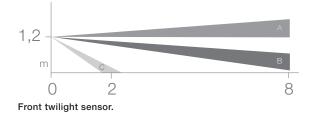
Switch with infrared presence sensor in order to switch lights on through adjustable twilight sensor threshold and delay cycle.

It operates the load automatically when persons or animals pass through the field of action of the sensor.

Sensor volumetric cover



Pyroelectric reading sensor and Fresnel lens with volumetric cover.



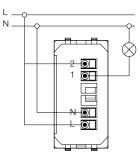
Instructions for installation

- for installation inside
- flush-mounted installation: 1.1-1.2 m from the walking surface

The apparatus cannot be installed in:

- environments with sudden changes in temperature.
- environments with high humidity.
- environments with presence of gas, corrosive fluids, sea air or dust.

Schema di collegamento



Examples of application

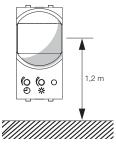


Technical specifications

Power supply	230V AC (L-N terminals)
Power relay output (terminals	1-2)
Max load	
- resistive loads	10A / 250V AC
- inductive loads	2A / 250V AC
Tripping threshold	0-300 Lux
	Adjustable by means of a front
	trimmer
Time delay	From approximately 5 s to
	approximately 5 min
	Adjustable by means of a front trimmer
Operating temperature	-5 a +35 °C.

Reference standards

LV Directive; EMC Directive; EN 60730



Chiara - Technical details Safety and comfort devices

Description	Code
Universal badge switch with location light Relay output	2CSK1426CH
with NO contact 10A (AC1). Power supply 230V~ 50/60Hz	

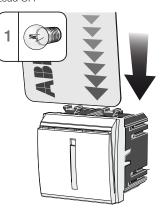
Components

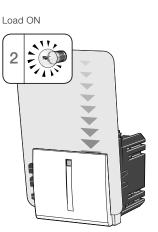
Badge slo	
Courtesy LED (on the front, under the slot	

Operation

Load OFF

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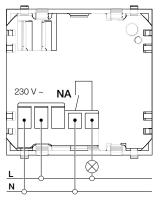




Vertical badge electronic switch, relay output 16 A 250 V~, power supply 230 V~ 50-60 Hz, modules.

Supplied without ISO card (badge). The device is equipped with a courtesy LED for night-time location.

Wiring diagram



Technical specifications

i o o i i o po o i i o a i o no	
Power supply	230 V~ ±10% 50-60 Hz
	relay with clean contact 10 A 250 V~ cos ø 1
, i	230 V~ 50-60 Hz: 30 mA, with relay active
Operating temperature	-5 °C +45 °C

Reference standards

LV Directive; EMC Directive; Standard EN 60669-2-1

Chiara - Technical details Wall-mounted enclosures

IP40 and IP55 wall-mounted enclosures



Area of application

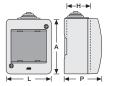
The IP40 wall-mounted enclosures, pursuant to Standard CEI 64-8, extend the area of application of the devices of the Chiara series to environments such as boiler rooms, warehouses, mechanical workshop, basements etc., where protection class IP40 is prescribed, defined by Standard EN 60529 (CEI 70-1).

This is guaranteed through devices installed in the enclosures, if the installation is carried out according to the supported procedures, through the use of connections, cable grommets and pipe ducts.

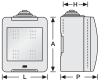
For devices with an open front (e.g. socket outlets) the protection class is less than IP40 but never less than IP20.

IP55 watertight wall-mounted enclosures, on the other hand, allow the application of the equipment of the Chiara series in environments such as building sites, sports installations, marinas, industrial and agricultural establishments, gardens, camp sites etc. The protection class IP55, defined by the Standard EN 60529 (CEI 70-1), is guaranteed by devices installed in the enclosures, if the installation is carried out according to the supported procedures, through the use of the suitable accessories and with the cover closed.

Dimensions of IP40 and IP55 enclosures



IP40 enclosure	no. modules	Н	Α	L	Р
2CSK2140CH	1	38	80	65	55
2CSK2240CH	2	38	80	65	55
2CSK2340CH	3	38	80	104	55
2CSK2440CH	4	38	80	130	55



IP55 enclosure	no. modules	Н	А	L	Р
2CSK2155CH	1	40,5	80	65	63
2CSK2255CH	2	40,5	80	65	63
2CSK2355CH	3	40,5	80	104	63
2CSK2455CH	4	40,5	80	130	63

Chiara - Technical details Wall-mounted enclosures

Because of the maximum depth dimension H, the IP40 and IP55 wall-mounted enclosures of the Chiara series cannot house the following contact blocks:

Code	Description	Code	Description
2CSK1204CH	Electronic dimmer with rotary control and two-way switch	2CSK1307CH	Automatic RCD 1P+N, C6 – 10 mA
	for resistive loads 100-500W	2CSK1308CH	Automatic RCD 1P+N, C10 – 10 mA
2CSK1205CH	Electronic dimmer with rotary control for resistive loads	2CSK1309CH	Automatic RCD 1P+N, C16 – 10 mA
	100-500W	2CSK1328CH	Automatic RCD 1P+N, C6 – 30 mA
2CSK1207CH	Electronic dimmer with pushbutton control for resistive	2CSK1329CH	Automatic RCD 1P+N, C10 – 30 mA
	and inductive loads	2CSK1330CH	Automatic RCD 1P+N, C16 – 30 mA
2CSK1317CH	Electro-mechanical bell, 12V, 5VA, sound intensity 80 dB	2CSK1324CH	Interlocked socket with MCB (2P+E 16A 230V P17/11)
2CSK1318CH	Electro-mechanical bell, 230V, 8VA, sound intensity 80 dB	2CSK1325CH	Interlocked socket with MCB (2P+E 16A 230V)
2CSK1321CH	Electro-mechanical buzzer, 12V, 5VA, sound intensity 70 dB	2CSK1326CH	Interlocked socket with automatic RCD 10mA
2CSK1322CH	Electro-mechanical buzzer, 230V, 8VA, sound intensity 70 dB		(2P+E 16A 230V P17/11)
2CSK1304CH	Automatic MCB 1P+N, C6	2CSK1012CH	Single pole latching relay, 230V, 1 10A output contact
2CSK1305CH	Automatic MCB 1P+N, C10	2CSK1014CH	4 sequence switch relay, 230V, 2 10A output contacts
2CSK1306CH	Automatic MCB 1P+N, C16		:

The installation of similar devices in the form of a DIN rail in the distribution board is recommended where possible.

Chiara - Technical details Other installation solutions

Support for DIN bar 1-2-3 modules

Description	Code
Support for DIN bar for 1-2-3 modules, customisable	2CSK1608CH

Components



Reference dimensions:

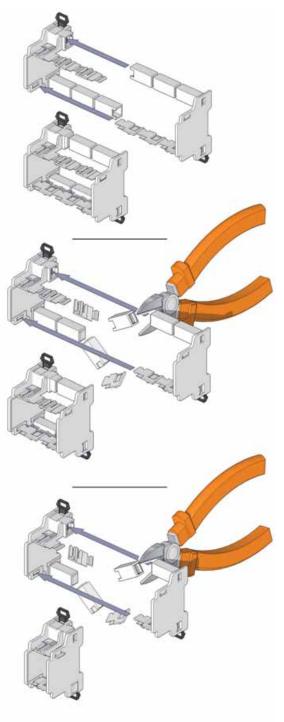
1 module version: 1,9 DIN modules

2 modules version: 3,4 DIN modules

3 modules version: 4,4 DIN modules

Instruction for installation

3 modules: snap assemble the two halves. 1 or 2 modules: using a cutter, cut along lines 1 or 2 respectively and assemble the two halves.



Chiara - Technical details Frames

The frames of the Chiara series are made from technopolymer with natural/pastel colour shades or surface galvanic painting, and are characterised by their minimal protrusion from the wall, since they are not fitted with an under-plate.

Reference standards

CEI 23-9 (EN 60669-1).



Frame that adheres to all surfaces

2 ÷ 8 mm

Customization

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Frames customized with a logo/text string can be supplied on request. They are produced by means of monochromatic pad printing on the areas highlighted below.

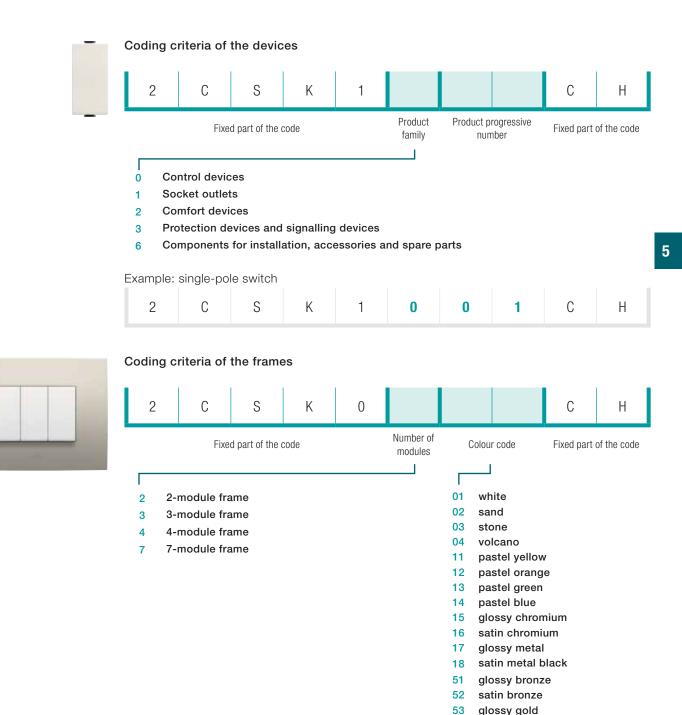
2 3 Logo inside a rectangle 10 mm in height and 45mm in length	
Positions 1-3-4-5 Logo in square with 13 mm sides.	5

Customization is possible with standard colours (black, Pantone cool gray 3C, Pantone 5425 C) or with a colour specified by the customer.

Minimum order batch: 36 pieces including various modularities.

For quotes and delivery times contact an ABB sales executive.

Chiara - Coding Order information



Example: technopolymer frame, 3 modules, sand colour

2	C S	К	0	3	0	2	С	Н
---	-----	---	---	---	---	---	---	---

satin gold

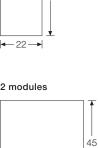
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Packaging

To enable automatic warehouse management using optical readers, the devices and frames of the Chiara wiring accessories' range are packaged in boxes that bear the EAN bar code and that protect the contents adequately against dust and shocks. For a better explanations of the installation methods, a specific instruction sheet is supplied. Individual packages are available for only for the codes with the lowest turnover.

Chiara Overall dimensions

Chiara code	Description	No. Modules	Depth mm	1 module
2CSK1001CH	Single-pole switch, 16A - 250V~	1	30	
2CSK1002CH	Double-pole switch, 16A - 250V~	1	30	
2CSK1003CH	Single-pole two-way switch, 16A - 250V~	1	30	
2CSK1004CH	Single-pole switch, 16A - 250V~, 2 modules	2	30	
2CSK1005CH	Single-pole push switch NO, 16A	1	30	
2CSK1006CH	Double-pole switch, 16A - 250V~, with key control	1	25	····· ↓ ↓ 22 →
2CSK1006CHU	Double-pole switch, 16A - 250V~, with universal key control	1	25	
2CSK1007CH	Single-pole two-way switch, 16A - 250V~, 2 modules	2	30	
2CSK1008CH	Intermediate switch, 16A - 250V~, 2 modules	2	30	2 modules
2CSK1009CH	Double-pole push switch, NO, 16A - 250V~, with key control	1	25	
2CSK1009CHU	Double-pole push switch, NO, 16A - 250V~,	1	25	
	with universal key control			
2CSK1010CH	Intermediate switch, 16A - 250V~	1	30	
2CSK1011CH	Change-over switch, 10A - 250V~, 3 positions		31	
2CSK1012CH	Single pole latching relay, 230V	- 1 -	31	
2CSK1014CH	4 sequence switch relay, 230V, 2 10A output contacts	1	31	
2CSK1016CH	Single-pole push switch NC, 16A		30	3 modules
2CSK1017CH	Double single-pole push switch, NO+NO, 16A - 250V~	1	30	
2CSK1018CH	Double single-pole push switch, NO+NO, 16A - 250V~,	1	30	
	with interlock			
2CSK1022CH	Single-pole push switch 1 NO and 1 NC, 16A, with ON	1	30	
2CSK1023CH	Single-pole push switch 1 NO and 1 NC, 16A, with OFF symbol	1	30	
2CSK1020CH	Single-pole push switch NC with cord pull, 16A	1	30	•
2CSK1021CH	Single-pole push switch NC with cord pull, 16A	1	30	
2CSK1028CH	Single-pole push switch NO, 16A, with BELL	1	30	
2CSK1029CH	Single-pole push switch NO, 16A, with KEY	1	30	
2CSK1030CH	Single-pole push switch NO, 16A, with STAIR LIGHT	1	30	
2CSK1024CH	Single-pole push switch NO, 16A, with red diffuser	1	30	
2CSK1025CH	Single-pole push switch NO, 16A, with green diffuser	1	30	
2CSK1026CH	Single-pole push switch NO, 16A, with orange diffuser	1	30	
2CSK1027CH	Single-pole push switch NO, 16A, with white diffuser	1	30	
2CSK1031CH	Single-pole pushbutton NO, 16A, with backlit label	2	30	
	holder plate push switch	2	00	
2CSK1032CH		3	30	
	Single-pole push switch NO, 16A, with backlit label	U	50	
	holder plate, 3 modules	4	22	
2CSK1101CH	2P+E socket outlet, 10A - 250V~, P11 type	1	22	
2CSK1102CH	2P+E socket outlet, 16A - 250V~, P17 type	1	22	
2CSK1103CH	2P+E socket outlet, 10/16A - 250V~, P17/P11 type	1	22	
2CSK1104CH	2P+E socket outlets, 10/16A, red	1	22	
2CSK1105CH	2P+E socket outlets, 10/16A, green	1	22	
2CSK1106CH	2P+E socket outlets, 10/16A, orange	1	22	
2CSK1108CH	2P+E socket outlet, 16A - 250V~, P30 type	2	31	
2CSK1114CH	2P+E socket outlets, 16A - 250V~, P30 type, red	2	31	
2CSK1115CH	2P+E socket outlets, 16A - 250V~, P30 type, green	2	31	
2CSK1116CH	2P+E socket outlets, 16A - 250V~, P30 type, orange	2	31	
2CSK1109CH	2P+E socket outlet, 16A - 250V~, P30/17 type	2	35	
2CSK1110CH	2P+E socket outlets, 16A - 250V~, P30/17 type, red	2	35	
2CSK1111CH	2P+E socket outlets, 16A - 250V~, P30/17 type, green	2	35	
2CSK1112CH	2P+E socket outlets, 16A - 250V~, P30/17 type, orange	2	35	
2CSK1113CH	2P shaver socket with insulating transformer	3	37,5	



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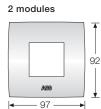


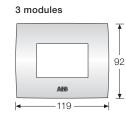
Chiara code	Description	No. Modules	Depth mm
2CSK1324CH	2P+E socket outlet, 16A - 250V~, interlocked with MCB,	2	37,5
001/4005011	P17/11	-	07.5
2CSK1325CH	2P+E socket outlet, 16A - 250V~, interlocked with MCB,	3	37,5
	P30	0	07 E
2CSK1326CH	2P+E socket outlet, 16A - 250V~, with RCD 10mA,	3	37,5
00////	P17/11		04
2CSK1117CH	TV coaxial socket, direct, male IEC connector ø 9.5 mm,	1	21
2CSK1118CH	insulated type	1	01
203KTTIOUT	TV/SAT coaxial socket, direct, male IEC connector Ø 9.5 mm, with feedthrough of direct current	1	21
2CSK1132CH	TV/SAT coaxial socket, feedthrough, male IEC connector	1	21
2001(1102011	ø 9.5 mm, attenuation 7dB	1	~ 1
2CSK1136CH	TV/SAT coaxial socket, feedthrough, male IEC connector	1	21
	ø 9.5 mm, attenuation 10dB		
2CSK1137CH	TV/SAT coaxial socket, feedthrough, male IEC connector	1	21
	ø 9.5 mm, attenuation 14dB		
2CSK1138CH	TV/SAT coaxial socket, feedthrough, male IEC connector	1	21
	ø 9.5 mm, attenuation 18dB		
2CSK1119CH	TV/SAT coaxial socket, direct, female F connector,	1	21
	with feedthrough of direct current		
2CSK1133CH	Double demixed TV/SAT coaxial socket, direct, male IEC	1	21
	connector ø 9.5 mm and female F connector		
2CSK1120CH	Double demixed TV/SAT coaxial socket, feedthrough,	1	21
	male IEC connector ø 9.5 mm and female F connector,		
	attenuation 7dB		
2CSK1130CH	Double demixed TV/SAT coaxial socket, feedthrough,	1	21
	male IEC connector ø 9.5 mm and female F connector,		
	attenuation 10dB		
2CSK1131CH	Double demixed TV/SAT coaxial socket, feedthrough,	1	21
	male IEC connector ø 9.5 mm and female F connector,		
	attenuation 14dB		
2CSK1139CH	Double demixed TV/SAT coaxial socket, feedthrough,	1	21
	male IEC connector ø 9.5 mm and female F connector,		
	attenuation 18dB		
2CSK1121CH	RJ11 telephone connector	1	21
2CSK1122CH	RJ12 telephone connector	1	21
2CSK1124CH	RJ45 connector, Cat. 5e, UTP (unshielded)	1	21
2CSK1125CH	RJ45 connector, Cat. 5e, FTP (shielded)	1	21
2CSK1127CH	RJ45 connector, Cat. 6, UTP (unshielded)	1	21
2CSK1128CH	RJ45 connector, Cat. 6, FTP (shielded)	1	21
2CSK1160CH	Flush-mounted USB charger 500-650mA	1	35
2CSK1210CH	Electronic natural gas detector	3	39
2CSK1211CH	Electronic LPG gas detector with acoustic and	3	39
	indicator signal		
2CSK1301CH	Fuse holder, for fuses Ø5x20 / Ø6.3x32 mm, max. 16A	1	26
2CSK1303CH	LED light for emergency lighting or steplight	3	50
2CSK1304CH	Automatic MCB, 1P+N, C6, breaking capacity 1.5kA	1	36
2CSK1305CH	Automatic MCB, 1P+N, C10, breaking capacity 3kA	1	36
2CSK1306CH	Automatic MCB, 1P+N, C16, breaking capacity 3kA	1	36
2CSK1307CH	Automatic RCD, 1P+N, C6 - 10 mA,	2	36
	breaking capacity 1.5kA		
2CSK1308CH	Automatic RCD, 1P+N, C10 - 10 mA,	2	36
	breaking capacity 3kA		

Chiara Overall dimensions

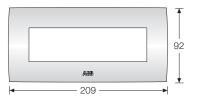
Chiara code	Description	No. Modules	Depth mm
2CSK1309CH	Automatic RCD, 1P+N, C16 - 10 mA,	2	36
	breaking capacity 3kA		
2CSK1315CH	Overvoltage limiter, 75J, 230V~	1	26
2CSK1328CH	Automatic RCD, 1P+N, C6 - 30 mA,	2	36
	breaking capacity 1.5kA		
2CSK1329CH	Automatic RCD, 1P+N, C10 - 30 mA,	2	36
	breaking capacity 3kA		
2CSK1330CH	Automatic RCD, 1P+N, C16 - 30 mA,	2	36
	breaking capacity 3kA		
2CSK1310CH	Warning light, ORANGE colour	1	20
2CSK1311CH	Warning light, WHITE colour	1	20
2CSK1312CH	Warning light, RED colour	1	20
2CSK1313CH	Warning light, GREEN colour	1	20
2CSK1317CH	Electro-mechanical bell, 12V	1	37
2CSK1318CH	Electro-mechanical bell, 230V,	1	37
2CSK1321CH	Electro-mechanical buzzer, 12V	1	37
2CSK1322CH	Electro-mechanical buzzer, 230V	1	37
2CSK1201CH	Summer/winter electronic time-programmed thermostat	3	38
2CSK1202CH	Summer/winter electronic thermostat	2	29,5
2CSK1205CH	Electronic dimmer with rotary control for resistive loads	1	39
	100-500W		
2CSK1204CH	Electronic dimmer with rotary control and two-way	1	39
	switch for resistive loads 100-500W		
2CSK1207CH	Electronic dimmer with pushbutton control for resistive	1	39
	and inductive loads 60-500W		
2CSK1214CH	Removable anti-blackout light, 230V	see drawing	••••••
2CSK1216CH	IR motion detector with twilight sensor for control and	1	32
	adjustment of the operation time of lighting devices		
2CSK1426CH	Universal badge switch with location light	2	32

Frames



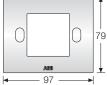


7 modules

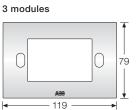


Self-supporting frames





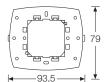
Screw distance: 60 mm



Screw distance: 83.5 mm

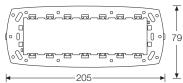
Supports

2 modules



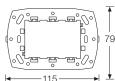
Screw distance of the box: 60 mm

7 moduli



Screw distance of the box: 100 mm

3 modules



Screw distance of the box: 83.5 mm

4 modules

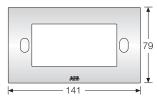
4 modules

ææ

141

92

-



Screwr distance: 108 mm

4 modules



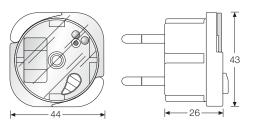
Screw distance of the box: 108 mm

5

Chiara Overall dimensions

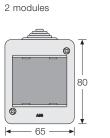
Safety and comfort devices

Anti-blackout light

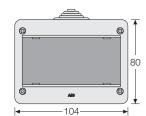


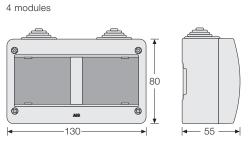
IP40 wall-mounted enclosures

3 modules

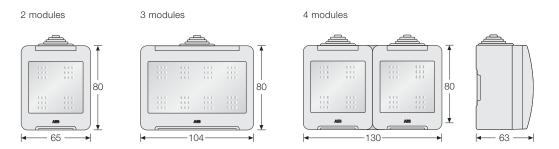


5

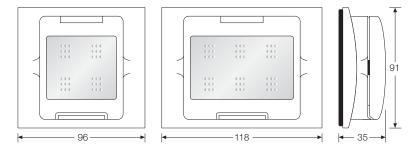




IP55 wall-mounted enclosures



IP55 flush-mounted escutcheon plate



All measurements are in millimetres.