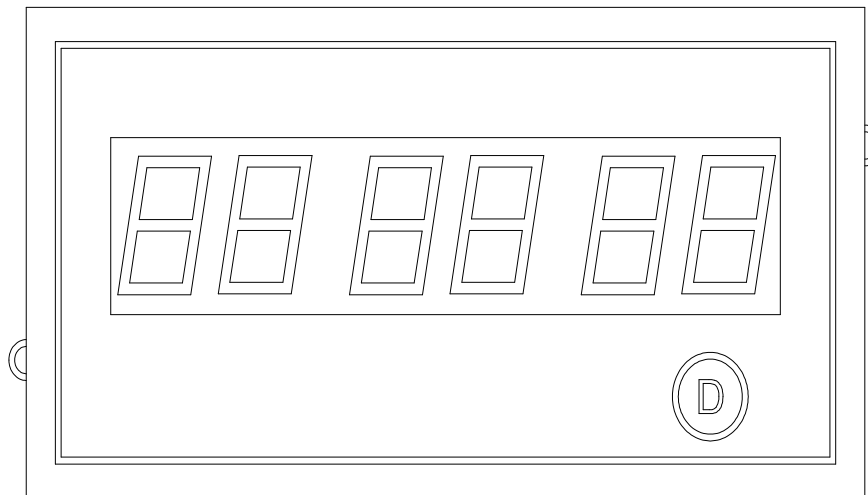


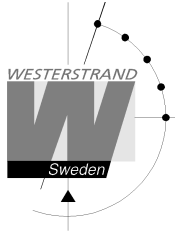
Instructions

DIGITAL PANEL CLOCK

With NTP-interface



GENERAL	2
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SYNCHRONISATION	5
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General

Digital clock for indoor use with NTP synchronisation.

Time is expressed in 12 or 24 hours format. Configuration is done using a WEB-browser.

If time is not initially programmed “ -- -- -- ” is shown instead of time information.

When synchronised, the clock is automatically set to correct time. The colon will flash when time from the NTP server is accepted.

The clock has adjustable light intensity. When pushing the D-button the light intensity is changed. There are 9 levels. The lowest level the display is blank.

LAN connection

The digital clocks are equipped with a RJ45 (10BASE-T) connector for direct connection to the LAN via a Ethernet switch. Each clock has a unique IP address. The IP address, gateway, subnet mask and server IP address is set up via a WEB-browser. If DHCP is used the clock will receive its IP address automatically from the DHCP server.

The clock has factory setting DHCP address. The MAC-adress is labeled at the clock. The IP address is displayed when pressing the D-button for 7 seconds.

NTP

To distribute correct time to different users in a Local Area Network (LAN) the Network Time Protocol (NTP) is used. NTP is a part of the protocol family TCP/IP. Westerstrand digital clocks type Ethernet LAN are operated and controlled by Time distributed in the Network.

WESTERSTRAND URFABRIK AB

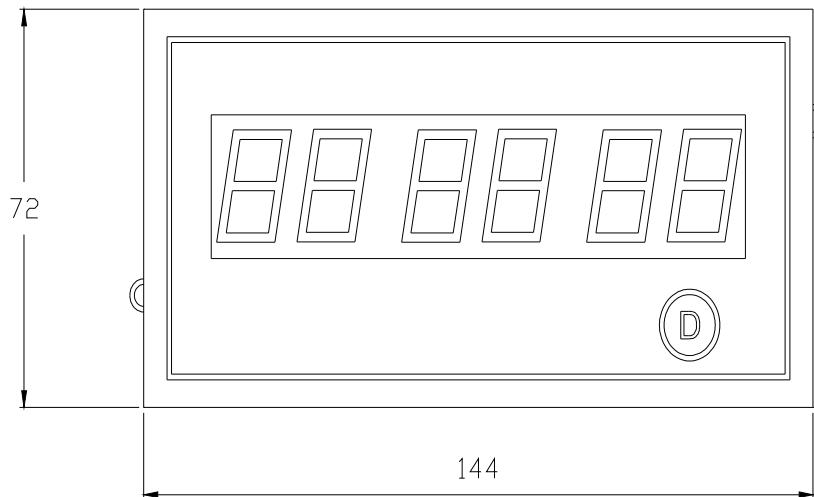
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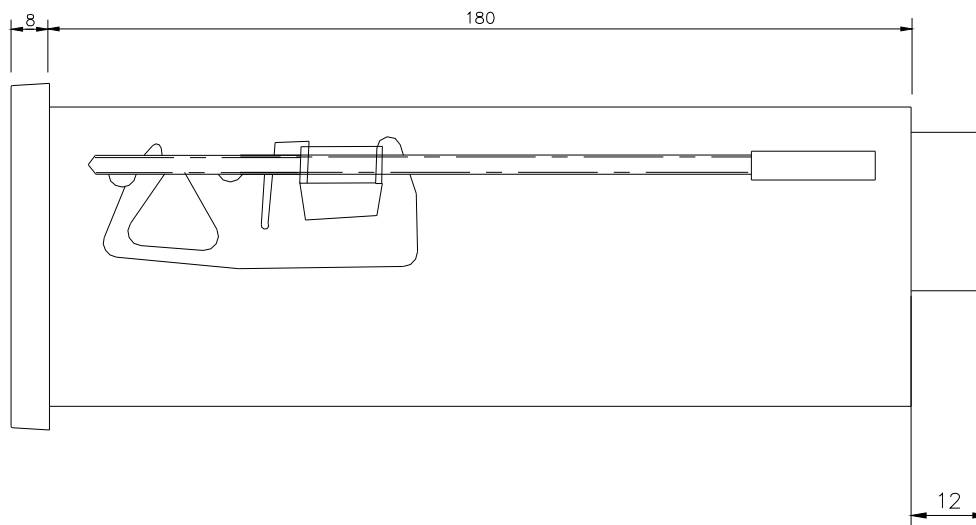
Installation / Mounting

The design of the clock is shown in the drawing below.

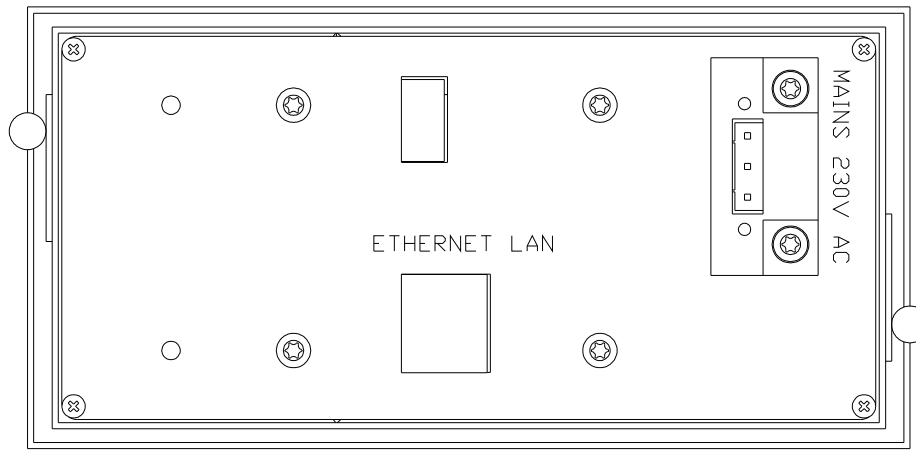


Measurements for mounting holes = 138 x 66 mm.

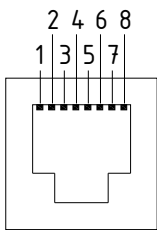
Thickness of panel = max. 7 mm.



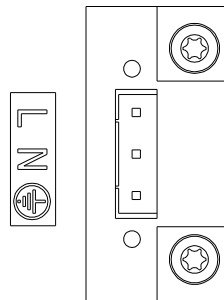
Rear connection



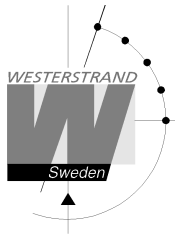
Connection mains



- 1: RX+
- 2: RX-
- 3: TX+
- 6: TX-



ETHERNET LAN
 10BASET RJ45



Electrical connection

Mains (230V AC, 50Hz) should be connected to the Power terminal. When the clock is permanently installed a readily accessible disconnect device shall be incorporated in the fixed wiring. Installation fuse max 10A. Power wire 1,5mm².

Connection to network is done via a RJ45 (10BaseT) connector.

Synchronisation

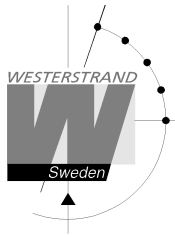
After power-on the digital clock is automatically synchronised to the NTP time signal and correct time is shown. If the NTP signal disappears, the clock continues by means of the built-in quartz crystal. During power failure the display is temporarily blanked.

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Configuration using a WEB-browser

Password

A password is required. Always enter user admin. Default password is password. If the first letter of the password is blank no question about user and password will appear.

If you forget the password, then a TELNET session must be started. The last line shows a number of characters within square brackets []. Contact Westerstrand and enter this value.

Anslut till 192.168.14.201 ? X

Användarnamn och lösenord krävs för servern 192.168.14.201 på Klockan höger om kartan..

Varning: Den här servern begär att du ska skicka ditt användarnamn och lösenord på ett sätt som inte är säkert (grundläggande autentisering utan säker anslutning).

Användarnamn:

Lösenord:

Kom ihåg lösenordet

OK Avbryt

After login a list of functions is displayed:

WESTERSTRAND
Sweden

Westerstrand Urfabrik AB
Box 133
SE-545 23 Töreboda, Sw
Tel: +46 (0)506 48000

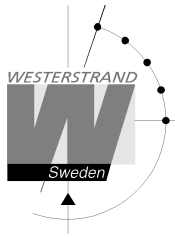
Status >>
General >>
Network >>
NTP >>
Help >>

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Status >>

Show status of the clock. The information is refreshed every 10th second or by a click on button Refresh.

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Box 133
SE-545 23 Töreboda, Sweden
Tel: +46 (0)506 48000

DIPAN-AP

IP=192.168.2.2
MAC=00-90-C2-F5-6C-C8

UTC=2019-05-23 05:53:10.566 Thu
LT=2019-05-23 08:53:10.566 Thu (Winter)
Country/Timezone=+3 (Kuwait) ,UTC=180 min.
No Day-Light-Savings

NTP server=194.58.200.20
Number of time settings=45

No Alarms

Uptime=64393 seconds
Firmware=DIPAN-AP108 (May 22 2019 11:17:23)

Refresh

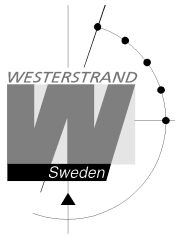
- IP= The IP address of the clock
- MAC= Unique address. Always 00-90-C2-aa-bb-cc. The last 3 numbers (aa-bb-cc) are found on the network card, e.g. F5-6C-C8
- UTC= Current UTC time
- LT= Current Local time
- Country/
Timezone= Country code or UTC offset
- NTP server= Address of NTP server
- Number of time settings= 45 (The clock has been synchronised 45 times)
- Uptime= 64393 (The clock has been running 64393 seconds since the last power failure or reset)
- Firmware= Firmware version

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General >>

Program general parameters

Westerstrand Urfabrik AB
Box 133
SE-545 23 Töreboda, Sweden
Tel: +46 (0)506 48000

General

Name	DIPAN-AP
Time (format YYMMDD HHMM)	800101 2242
Format	time=7:59, date=28.9
Show time (s)	25
Show temperature (s)	0
Temp. offset (-9..9 °C)	0
Temp. alarm low (°C)	-990
Dimmer (1..9)	6
Password	••••
Firmware Download	<input type="checkbox"/>

12/24 hour format 12h 24h
Show date (s)
Temp. alarm high (°C)
repeat

Save

Status >>
General >>
Network >>
NTP >>
Help >>

Name Symbolic name, max. 48 signs. This name is shown in the status menu.

12/24 hour 12h: Time is displayed in 12 hour format.
24h: Time is displayed in 24 hour format.

Dimmer Light intensity display 0..9. If 0 the display is blank.

Password Enter a new password. The password must be repeated.
Ignore password by choosing password with a blank as 1st character.

Firmware Download On (Checked): Open the clock for firmware download.
After restart this value always is Off. Also see section Firmware below.
If On is set by mistake, then the clock must be restarted

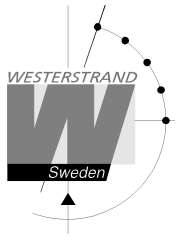
Save Save parameters. If new password was entered then the clock will restart. Then the web reader (e.g. Internet Explorer) also must be restarted.

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Network >>

Enter general network parameters.

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Tel: +46 (0)305 48000

Network

DHCP

IP 192.168.2.2 IP fallback 192.168.3.10
Gateway 192.168.1.1 Subnetmask 255.255.240.0
DNS 192.168.1.13

SNMP Setting

SNMP
SNMP server 192.168.14.1

Save and restart Wait 15 seconds after [Save and restart], then press Refresh

Status >>
General >>
Network >>
NTP >>
Help >>

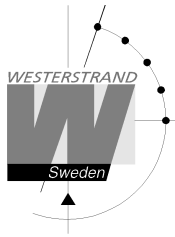
DHCP	Off – Static IP address according to IP below. On – DHCP IP address with fallback according to IP fallback below.
IP/IP fallback	IP address
Gateway	Network gateway
Subnetmask	Network subnet mask
DNS	IP address of DNS server
SNMP server	This function is used to enter the IP-address of the SNMP server. Up to three different SNMP servers can be used. If the check box to the right of the IP-address is marked then the Time Central will send SNMP traps to this address and if it is unmarked no traps will be sent.

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NTP >>

Enter NTP parameters.

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Box 133
SE-545 23 Töreboda, Sweden
Tel: +46 (0)506 48000

NTP

DHCP server	<input type="checkbox"/>
NTP server 1	<input type="text" value="192.168.1.237"/>
NTP server 2	<input type="text"/>
NTP server 3	<input type="text"/>
NTP server 4	<input type="text"/>
NTP server 5	<input type="text"/>
Broadcast/Multicast Client	<input type="checkbox"/>
Country/Timezone	<input type="text" value="+1d (Berlin,Brussels,Paris)"/>
Day Light Savings	<input checked="" type="checkbox"/>
Interval(s)	<input type="text" value="60"/>

Wait 15 seconds after [Save and restart], then press Refresh

NTP mode Client: Ask 'NTP server' for time
 DHCP: Ask automatically via the DHCP server
 Broadcast: Accept broadcast time messages.
 Client+ A Broadcast NTP message will restart an internal timer. If no broadcast NTP
 Broadcast: messages are received, then NTP request will start automatically according to
 'Interval(s)'.
 DHCP+ A Broadcast NTP message will restart an internal timer. If no broadcast NTP
 Broadcast: messages are received, the unit will try to receiver NTP server IP address by using
 the DHCP server option 042. I found NTP request will start automatically
 according to 'Interval(s)'.

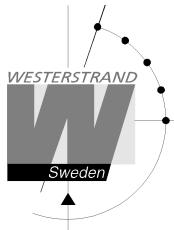
NTP Server Select NTP server, e.g. 192.168.1.237 or as an URL ntp1.sp.se. Also see DHCP server above.
 Up to five different NTP servers can be entered. If the first one fails it will automatically go to
 the next one and so on.

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Country/Timezone

- Select country code or time zone (UTC offset). A NTP server sends UTC time.
- Abbr. d This time zone uses DST
 s This time zone is located in the south hemisphere, i.e. reversed rules
- DST Period for Day-Light-Savings. DST takes place on the *first* Sunday in the interval.
 - No DST, winter>summer month=0
 s South hemisphere with reversed DST

UTC offset (h)	Abbr.	Location (examples)	DST
	LT	Same time zone as module ZIS-TB	Always same DST as ZIS-TB
-11	-11		-
-10	-10	Hawaii, Tahiti	-
-9	-9d	Anchorage	8-14/3 02, 1-7/11 02
-8	-8d	Los Angeles, San Francisco, Pacific time	8-14/3 02, 1-7/11 02
-7	-7		-
	-7d	Calgary, Denver, Mountain time	8-14/3 02, 1-7/11 02
-6	-6d	Chicago, Mexico City, Central time	8-14/3 02, 1-7/11 02
-5	-5d	New York, Montreal, Eastern time	8-14/3 02, 1-7/11 02
-4.5	-4.5	Caracas	-
-4	-4d	Thule	8-14/3 02, 1-7/11 02
-3	-3d	Nuuk, country GRN299	24-30 22, 24-30/10 23, Saturday
	-3	Buenos Aires	-, No DST from 2009
	-3ds	Rio de Janeiro	15-21/2 00, 15-21/10 01, s
-2	-2		-
-1	-1		-
0	UTC	Coordinated Universal Time	-
	0d	London, Dublin	25-31/3 01, 25-31/10 02
+1	+1	Alger, NT	-, European Normal Time
	+1d	Frankfurt, Brussels, Paris, Stockholm	25-31/3 02, 25-31/10 03
+2	+2	Johannesburg	-, s
	+2d	Athens, Budapest, Helsinki	25-31/3 03, 25-31/10 04
	ISR	Tel Aviv, Jerusalem	Static dates, table 2009-2047
+3	+3	Kuwait, Riyadh	-
	+3d	Moscow	25-31/3 02, 25-31/10 03
+4	+4	Dubai	-
+5	+5d	Yekaterinburg	25-31/3 02, 25-31/10 03
+5 ½	+5.5	New Delhi	-
+5 ¾	5.75	Kathmandu	-
+6	+6	Dhaka	-
+7	+7	Bangkok	-
+8	+8	Beijing, Hong Kong, Singapore, Shanghai	-
+9	+9	Tokyo	-
+10	10ds	Sydney	1-7/4 03, 1-7/10 02, s
+11	+11		-
+12	12ds	Wellington	1-7/4 02, 24-30/9, s
+13	+13		-

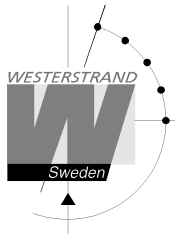
Interval Interval in seconds between NTP requests. (Used in client/server mode only).

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RASER

This program is used for finding network clocks and setting parameters. RASER sends broadcast messages on UDP port 9999. All Westerstrand Ethernet controllers will answer.

Install with setup file SETUP_RASERxxx.EXE (xxx=version e.g. 107). Icon 'RaSer' is created on the desktop. Start the program. Click on button [Help]. Manual RASER.PDF is displayed. Check this manual for further information.

Find a Westerstrand Ethernet module

1. Set firmware mask. Examples:

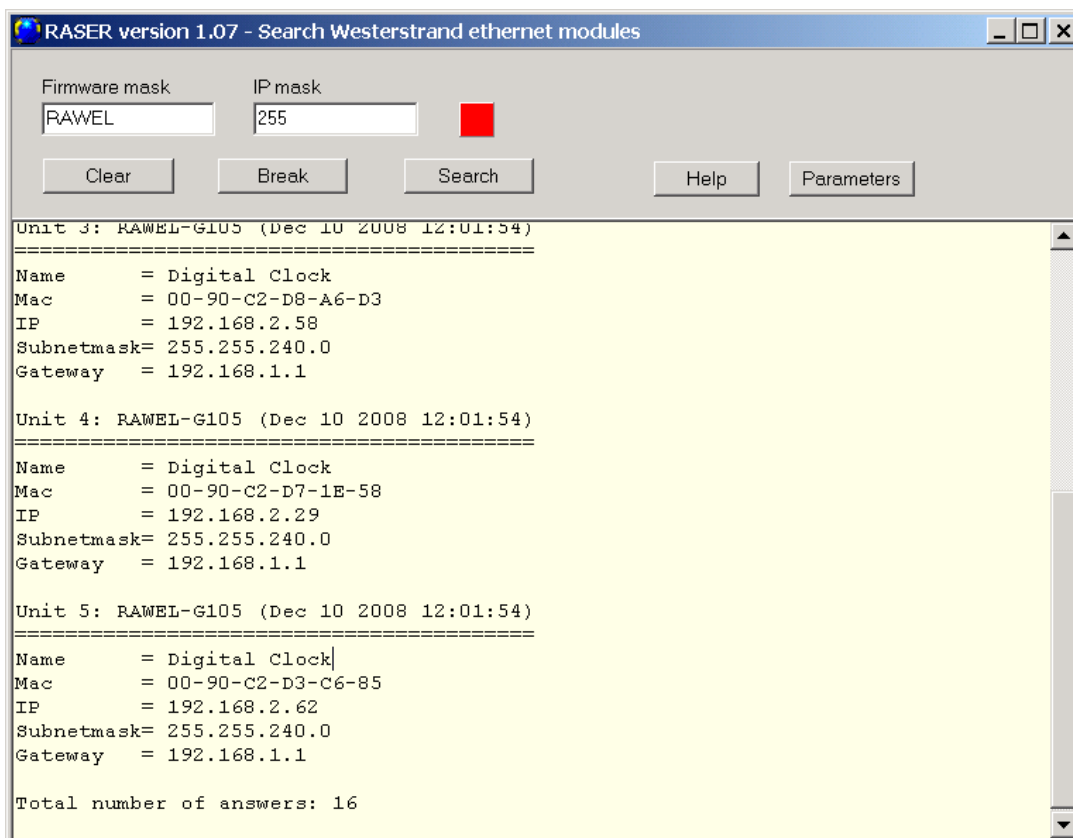
*	Search all Westerstrand Ethernet modules (default)
RAWEL	Search only modules with letter RAWEL (Digital Clocks) in the firmware text, e.g. RAWEL-G126

2. Set IP mask. Examples: 255 Broadcast to all, i.e. 255.255.255.255 (default)
 13 Only show answers from segment 255.255.13.255

3. Click on button [Search]. The box becomes green. Program RASER will timeout after 5 seconds. Break a search by a click on [Break].

Example

Here a search for all modules with firmware RAWEL.. was made. Total 16 units were found, but only 5 corresponds to mask RAWEL.

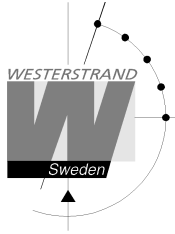


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Parameters

Set parameters in selected clocks. . Please contact Westerstrand for more information about parameter setting using RASER.

More functions

If the info window is right-clicked more functions are displayed.

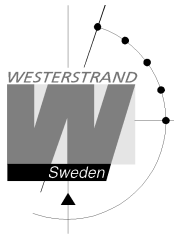
[Clear]	Blank the info window
[Log communication]	Logg communication. Test.
[About]	Show program information

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Technical specification

General	
Synchronisation	NTP
Digit height	20 mm
Diodes colour	Red
Network	
Protocols supported	SNTP version 3, RFC1769, SNMP v1 Enterprise MIB (RFC 1155 - 1157), HTTP, Telnet
NTP protocol modes	Unicast client mode (point to point), support for DHCP option 042, Broadcast/Multicast mode (point to multipoint). Multicast group address 224.0.1.1
Transport protocol	TCP/IP
IP address assignment	Static IP address or Dynamic (DHCP)
Compatibility	Ethernet version 2/IEEE 802.3
Ethernet	Supports 10BASE-T (RJ45) connections
Device Management	Web-Based (requires web browser) or via Telnet
Additional info.	Support for DNS
Power supply	
Connection voltage	230 V AC, -10%, +5% alt.
Power consumption	10 watts
Environmental	
Temperature range	0 °C till +40 °C
Protection class	IP 52
Standards compliance	EN 61000-6-3:2001 Emission EN 61000-6-2:2005 Immunity EN 50121-4:2000
Weight	1,0kg
Dimensions	144x72x200 mm

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