

## **CDSVAN** *Digital Conference Management System*

### **PSU04 - Power Supply Unit**



## **Operating instructions**

REV 1.3.1

Printed in Germany

Should you have any questions about this manual, please contact:

Brähler ICS Konferenztechnik  
International Congress Service AG  
Auf der Alten Burg 6  
D-53639 Königswinter  
T +49 (0)2244 930-0  
E [sales@braehler.com](mailto:sales@braehler.com)

You will find further information about our products on the internet at:

[www.braehler.com](http://www.braehler.com)

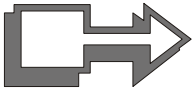
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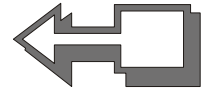


**! CAUTION !**

**DANGER OF ELECTRIC SHOCK  
DO NOT OPEN DEVICES!**

Do not open housing with mains cable connected.

Maintenance operations may only be done by  
qualified personnel.



Our equipment and installations have been built and tested according to the latest state of the art. In general conditions, they do not require any special maintenance.

However, please be aware of the following:

**Positioning** - secure and stable position of the equipment

**Ventilation** - operate equipment with proper ventilation. Avoid heat sources such as heating radiators etc.

**Mains connection** - pass all power cables so that they will not be damaged

**Cables connection** - avoid trip-traps

**Liquids** - avoid penetration of liquids into the housing

**Power sockets** - operate equipment only with power sockets that are connected to ground according to the relevant specifications and regulations

**Warning: Never expose equipment to rain or humidity.**

Rough handling of the equipment, such as strong shocks or vibrations, may result in damages. Inappropriate handling and storage, which is not conforming to the operating instructions, may also lead to equipment damages.



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## About this manual

### Symbols

The meanings of the symbols and fonts used in this manual are as follows:



Indicates an important note or instruction, if not followed, the operation of the unit, the security of your data, or even of your health are put at risk.



Gives supplementary informations, remarks, and tips.



Describes activities that must be performed in the order shown.

**Texts in bolded letters** require your special attention.

## Important remarks

### For customers in the EU and in the USA

The equipment is complying to the standards of the CE regulations. These standards are specified to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment can radiate radio frequency energy and if not installed and used according to the user manual it may cause harmful interference to radio communications. Any changes or modifications that are not expressly approved in this manual could void your authority to operate this equipment.

**The equipment must be connected to earth!**

### Safety

Check that the operating voltage of the unit is identical with the voltage of your local power supply. If a voltage conversion is required, consult your BRÄHLER ICS dealer or qualified personnel.

Should any liquid or solid object fall into the housing, unplug the unit and let it check by qualified personnel before operating it further.

Unplug the unit from the power outlet or set the main power switch to OFF if it's not used for several days. To disconnect the cord, pull it out holding the plug. Never pull the cord itself.

### Installation

Allow proper air circulation to prevent internal heat built-up. Do not place the unit on a surface that may block the ventilation holes.

Do not install the unit in a location near heat sources or in a place exposed to direct sunlight, excessive dust, humidity, mechanical vibration or shock.

To avoid moisture condensations do not install the unit where the temperature may rise rapidly.

### Cleaning

To keep the housing in its original condition, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use organic solvents such as thinners or abrasive cleaners since these will damage the cabinet.

### Repacking

Save the original shipping carton and packing material; they will become useful if you ever have to ship the unit. In this case please keep the manual together with the unit. For maximum protection, re-pack the unit as originally packed from the factory.

If not supplied with the equipment, a complete transportation and storage box system is available from BRÄHLER ICS. We recommend using this system for long-term protection and care.

**General**

Please keep this manual together with the PSU04. If you pass on the unit to other parties, please include this manual.



Please read the manual carefully, taking special care when you see this symbol as indicates important information!



This product conforms to the standards of the European regulations. Further information is available on request.



The warranty invalidates, if you cause, generate or precipitate inappropriate use or handling of the unit.



## The PSU04 Power Supply Unit

Thank you for choosing this product of BRÄHLER ICS.

The PSU04 is a power supply for conference units to use within the CDSVAN system for power supply and data refresh. It supports up to 32 channels.

The unit will be directly connected to the CDSVAN-PC and can control delegate units or interpreter consoles at 4 outputs.

LEDs on the front panel are showing the operating status of each output.

The maximum number of units, which can be powered at one output, depends on the necessary cable length within the customer specified system. For standard applications up to 20 units per outputs are possible.

The 4 outputs of the PSU04 are electronically short-circuited protected. In case of a short-circuit the output will be automatically switched OFF, which is indicated by a red LED on the front panel. When the short-circuit has been removed the output will be automatically activated.

At the LINK output e.g. the BRÄHLER AD/DA Converter B8 can be connected.

### Content of basic delivery

1 **Mains power cable**, 2 metres, black

1 **Set of rubber feet** (4 pcs.), for table assembly

1 **Rack mounting set 19"**, silver anodized mounting brackets for rack assembly

### Optional accessories (not in delivery)

#### **CAT5 data cable**

(several cable lengths available)

**CDSVAN System Components****CDSVAN discussion software** (Art. no. S5.0050)

Microphone management software

**CDSVAN interpretation software** (Art. no. S5.0060)

Interpretation system software

**DSP6/EDAT** (Art. no. 07.0275.C)

Digital Signal Processor Card with I/O adapter "EDAT"

**DV9** (Art. no. 05.4030)

Digital Delegates' Unit with language selector for up to 32channels

**EDV9** (Art. no. 05.4040)

Digital Delegates' Unit with language selector for up to 32channels, built-in version

**EPV9** (Art. no. 05.4050)

Digital Chairman's Unit with language selector for up to 32channels, built-in version

**EDV9-RFID** (Art. no. 05.4041)

Digital Delegates' Unit with language selector and RFID card reader for up to 32channels, built-in version

**EPV9-RFID** (Art. no. 05.4051)

Digital Chairman's Unit with language selector and RFID card reader for up to 32channels, built-in version

**DDV9** (Art. no. 05.4033)

Dual Digital Delegates' Unit with language selector for up to 32channels

**PV9** (Art. no. 05.4036)

Digital Chairman's Unit with language selector for up to 32channels

**DOLV** (Art. no. 05.4330)

Digital Interpreter Console for one interpreter for up to 32channels

**PSU01MA** (Art. no. 05.4211)

Power Supply Unit for Interpreter Consoles / channel selectors, with data refresh

**PSU01SL** (Art. no. 05.4210)

Additional Power Supply Unit for Interpreter Consoles / channel selectors, with data refresh

**B8** (Art. no. 07.0250)

AD/DA Interface

**RSP8V** (Art. no. 05.2070)

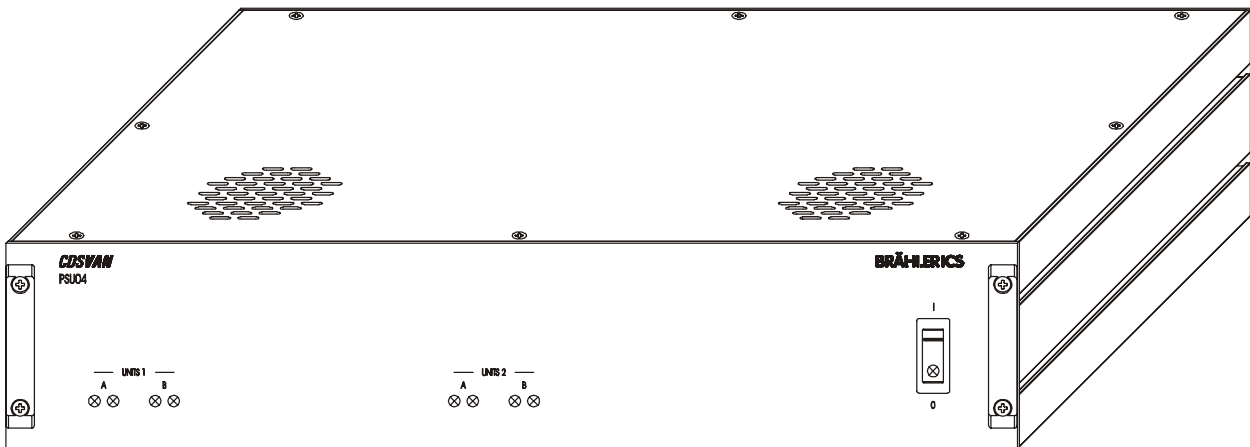
Digital Distribution Amplifier for channel selectors

**LAN-Cables** (different lengths available)

CAT5 / EIA / TIA-568B / AWG 24 (-26)

## Operating controls

### Front view



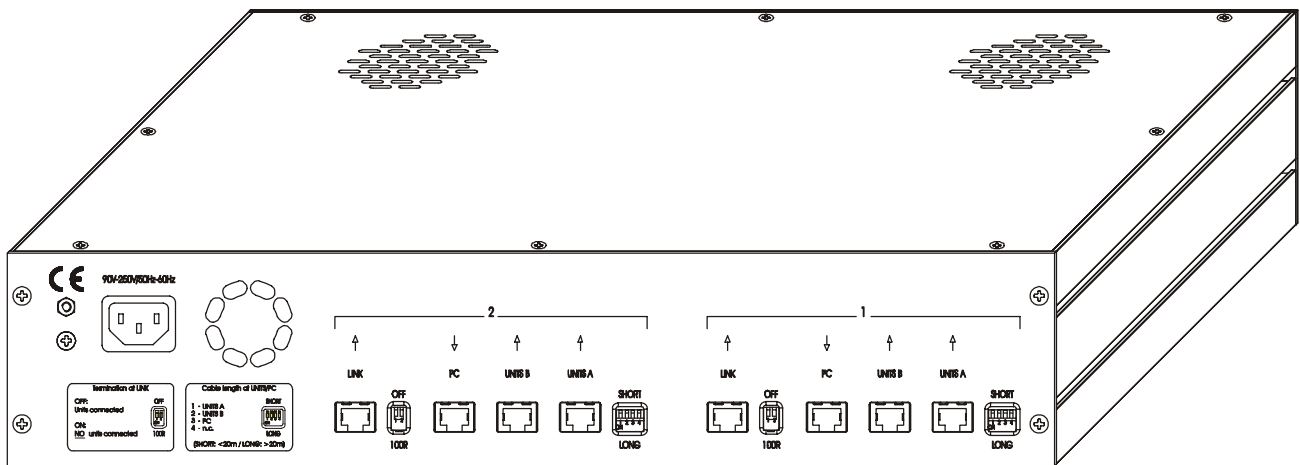
The front side of the PSU04 is equipped with:

- 1 power switch with green “power-on” light indication
- 4 green LEDs for 48VDC output indication
- 4 red LEDs for short-circuit indication



The failure can **not** be removed by switching on and off the system. This could damage the output line. Also do **not** plug and unplug the connector of the faulty line.

## Rear view



The backside of the PSU04 is equipped with:

- Mains power connector
- Screw for earthing
- Air outlet for ventilation
- RJ45 connectors
  - 2 PC (IN)
  - 2 LINK (OUT)
  - 2 UNITS A
  - 2 UNITS B
- 2 DIP-switches (OFF/100R)
- 2 DIP-switches (SHORT/LONG)

## Set-up

Before power-on the power supply unit PSU04, please connect the necessary cables. Then proceed with the DIP-switch settings regarding to your specific system. After correct DIP-switch settings and termination (see chapter "DIP-switch settings") you can power-on the PSU04. The green LED in the mains switch and the green LED's from the connected lines light up in case that the installation is correct.

In case of a short-circuit, the corresponding red indication LED on the front panel will light up. (See chapter "Short-circuit protection")

## Operation

### ON/OFF switch



Power ON/OFF switch with power „ON“ indication (Green light).

### Output indication

Green LED for +48VDC output indication UNITS 1, A/B and UNITS 2, A/B

### Short-circuit indication

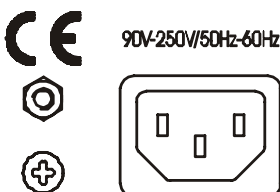
For power failure indication (short-circuit) UNITS 1, A/B and UNITS 2, A/B

### Short-circuit protection

The 4 outputs of the PSU04 are electronically short-circuit protected. In case of a short-circuit the output will be automatically switched off. A corresponding red LED on the front panel indicates this.

- Short-circuit < 2 sec.: Current limit to 1.5A max. per output
- Short-circuit > 2 sec.: Output will switch to "OFF", 65 sec. cycle time for switching the output to "ON" again, if the short-circuit has been removed

### Mains power connector



Inlet connector for non-heating apparatus. For mains power connection with the enclosed mains connection cable.

**Earth connection**

Terminal connection for additional earthing. Left beside the mains power inlet connector.

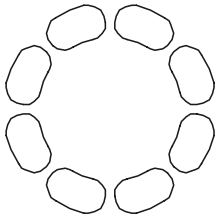


To avoid any power stroke, the metal housing of the PSU04 must be connected to earth via mains cable.



For low impedance grounding, the metal housing of the PSU04 can be additionally connected via extra ground at this earth connection on the backside of the unit.

**Air outlet**



Allow proper air circulation to prevent internal heat built-up.



Do not block the ventilation holes!

**RJ45 connections**

**PC (IN)**



PC



Two connectors for the connection of the CDSVAN-PC with CAT5 cable for the transfer of up to 32 language channels. (uplink/downlink from/to PC/DSP-Card, UNITS 1/UNITS 2)

**LINK (OUT)**



LINK



Two connectors for the connection of additional interfaces (e.g. AD/DA Converter B8).  
(downlink, UNITS 1/UNITS 2)

**UNITS A**



UNITS A



Two connectors for the connection of next units with CAT5 cable for the transfer of up to 32 language channels with 48VDC/1.3A nominal. (UNITS 1/UNITS 2)

**UNITS B**

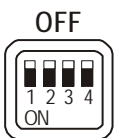


UNITS B



Two connectors for the connection of next units with CAT5 cable for the transfer of up to 32 language channels with 48VDC/1.3A nominal. (UNITS 1/UNITS 2)

**DIP-switches OFF/100R**



100R

DIP-switches for termination (100 Ohm) of the LINK outputs.

**DIP-switches SHORT/LONG**



LONG

DIP-switches for adapting of different cable length.

## DIP-switch settings

### Termination of LINK connectors

Electrical digital data lines have to be terminated to avoid data transmission errors.

The 2.generation of CDSVAN delegate units/ interpreter consoles (PV9, DV9, DDV9, EDV9, DOLV/E) are equipped with automatical termination.

For use with previous versions of delegate units/ interpreter consoles, please contact Brähler ICS for information.



Please use the following settings.

Unit connected to LINK:           Set single switches 1, 2 to "OFF"

No unit connected to LINK:       Set single switches 1, 2 to "100R"

### Cable length at UNIT/PC connectors

Different settings are needed for short or long cables.



Please use the following settings.

Short cables (<20m) at "UNITS A/B":   Single switch 1(UNITS A) and/or 2(UNITS B) to "SHORT"

Long cables (>20m) at "UNITS A/B":   Single switch 1(UNITS A) and/or 2(UNITS B) to "LONG"

### Maximum number of units

The maximum number of units which can be powered at one output depends on the necessary cable length within the customer specified system. For standard applications up to 20 units per output are possible.



## Troubleshooting table

Error description	Error cause	Error solution
After powering up the PSU04, the unit doesn't work. (Green indication LED in mains switch is off.)	No mains power.	Connect the mains power cable to the power outlet.
Unit doesn't work. (All LED's on the front panel are off.)	The internal power supply is defective.	Contact Brähler ICS for maintenance.  <b>Caution:</b> <b>Qualified personnel may only execute maintenance operations!</b>
After powering up the PSU04, the connected units in one or more lines do not work.	The number of connected units at the output is too high.  The maximum cable length per output is more than 100m. (Without additional power supply PSU01SL)  The cable connectors are not properly connected to the sockets of the units.  Connection cable in the corresponding line possibly defective.  The automatic termination of the last connected unit in the line is defective.	Reduce the number of connected units at the outputs.  Reduce cable length to 100m maximum or insert additional power supply PSU01SL.  Check all cable connections.  Disconnect all units. Connection of one unit each, until the failure appears again. Exchange according cable.  Change the relevant unit.
One or more of the 4 red LED's on the front panel light up.	Short-circuit at the corresponding outputs.	Check cables/connections and remove short-circuits.  Do <b>not</b> switch on and off the PSU trying to remove the short circuit.  Also do <b>not</b> plug and unplug the connector of the faulty line.
Cracks and distortion on the audio signal.	The number of connected units at the output is too high.  The maximum cable length per output is more than 100m.  Wrong setting of the DIP-switches.	Reduce the number of connected units at the outputs.  Reduce cable length to 100m maximum.  Check the DIP-switch settings.

## Appendix

### Technical data

#### Connections

- PC (IN) (2 x RJ45-socket)  
for the connection of the CDSVAN-PC with CAT5-cable for the transfer of 8 language channels
- LINK (OUT) (2 x RJ45-socket)
- UNITS (4 x RJ45-socket)  
for the connection of next units with CAT5-cable for the transfer of 8 language channels with 48VDC /1.3A nom.

#### Features

- Green lighted mains switch for power ON indication
- 4 green LEDs for 48VDC output indication
- 4 red LEDs for short-circuit indication at the corresponding 4 outputs
- 2 DIP-switches for adapting of different cable lengths
- 2 DIP-switches for termination (100 Ohm) of the LINK-outputs

#### Short-circuit protected outputs

- Short-circuit < 2s: Current limit at 1.5A max. per output
- Short-circuit > 2s: output will switch OFF
- 65s for switching the output ON again if the short-circuit has been removed

#### Power Supply

- Mains power: (90 ... 250)VAC, (50 ... 60)Hz
- Power consumption: 300VA max.

#### Housing

- 19", 2 HE, Aluminium, "silver" anodized
- W x H x D: (433 x 88 x 285)mm

#### Weight

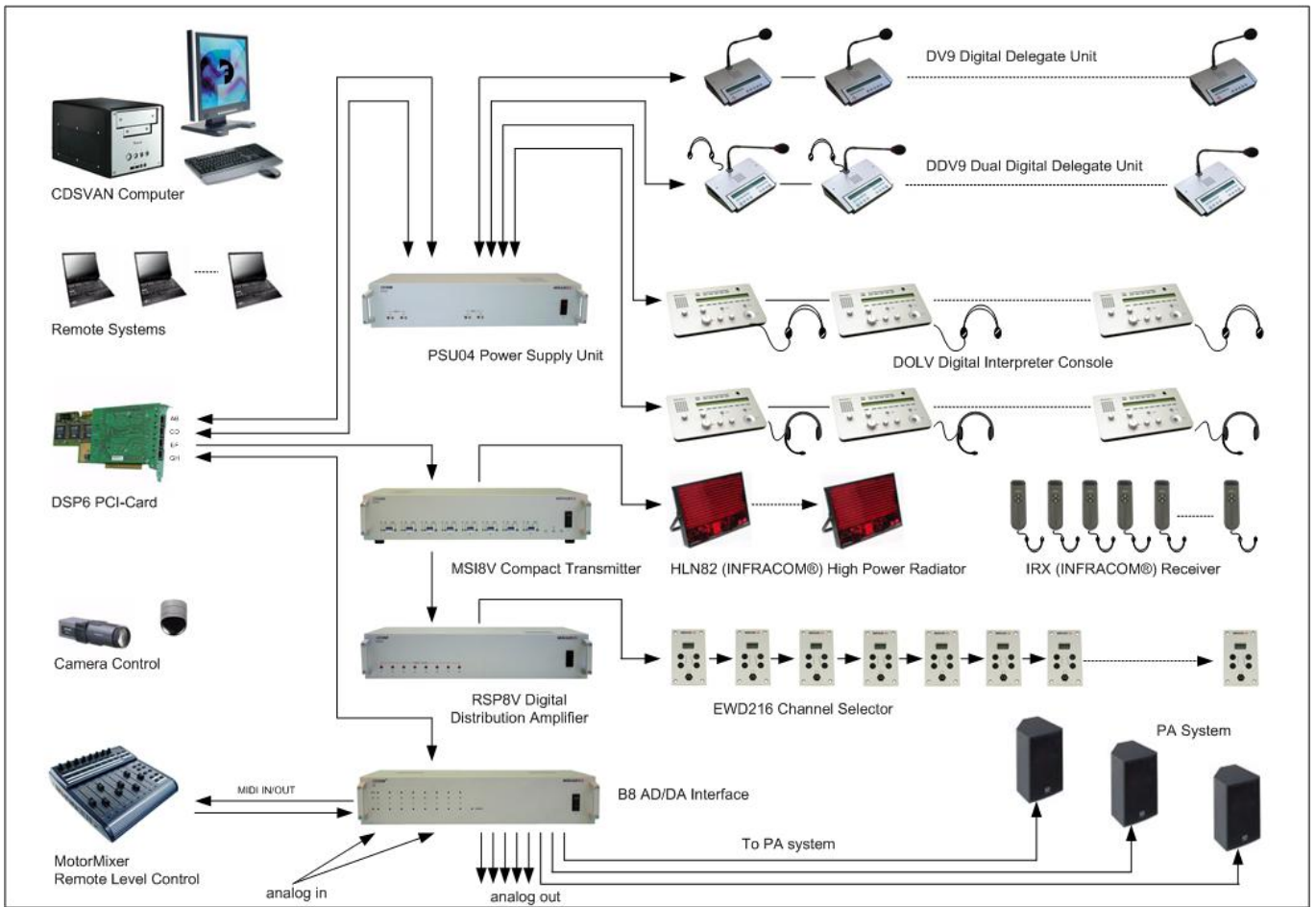
- 5 kg

#### Accessories (not included in delivery)

- CAT5 cable (EIA/TIA-568), shielded  
different cable lengths available

### Block diagram

General overview of CDSVAN components





# SERVICE FORM

Material return shipments for repair-, service-, or guaranty purposes please send to:  
BRÄHLER ICS Konferenztechnik AG, Auf der Alten Burg 6, D-53639 Königswinter, Germany  
Phone +49 (0)2244 930-100, Fax +49 (0)2244 930-450

Dear customer,

Please ask our sales staff for the **RMA number** (*Return of Material Authorization*).

**Without RMA number a treatment is not possible!**

Please always include this service form, fully completed, with any complaint or repair wish you may have. Please note that only returns with the proper and complete paperwork can be dealt within time.

**A detailed fault description will reduce costs and period of repair.**

Please contact us before you return equipment in order to find the most efficient way of sending.

**RMA number:** \_\_\_\_\_

Article description: \_\_\_\_\_ Serial no.: \_\_\_\_\_ Code: \_\_\_\_\_

Delivery note no.: \_\_\_\_\_ Invoice no.: \_\_\_\_\_

Reason for return/Fault description:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Company: \_\_\_\_\_

Contact person: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Notes/Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Transport damages have to be reported immediately to the responsible forwarding agent.

**Remarks for Non-EU customers:**

Please add to each return a delivery note or a proforma invoice, addressed to Brähler ICS AG, Königswinter, with following statements:

- Reason for return (repair or credit note)
- Exact declaration of the goods, exact no. of pieces, article no. / model, serial no.
- Price which was invoiced by us, better our invoice no. with date

Return shipments from Non-EU countries have to be sent **either by air freight** to Cologne airport, to the attention of:

Calenberg Oversea Logistics, Mrs. Taxacher, Welser Str. 8, 51449 Köln, Tel: +49 2203 3592-838

**or by the following courier services:**

DHL Express, Federal Express, TNT Worldwide Express, UPS Express

Please do not use any other courier service, because only the four companies mentioned above perform return shipments.

To enable quick and cost efficient customs clearance, kindly take care that the airway bill mentions

a) 'return for repair' as well as

b) the customs tariff code number of the goods (which will be advised by us together with the return of material authorization number)

Any expenses (duties and taxes) incurred by deviant handling will be charged to the sender.



## Table of language signs (ISO639)

<b>AB</b> Abkhazien	<b>HI</b> Hindi	<b>RM</b> RhaetoRoma, Rhaeto-Romance
<b>AA</b> Afar	<b>HU</b> Hungarian	<b>RO</b> Romanian
<b>AF</b> Afrikaans	<b>IS</b> Icelandic	<b>RU</b> Russian
<b>SQ</b> Albanian	<b>IN</b> Indonesian	<b>SM</b> Samoan
<b>AM</b> Amharic	<b>IA</b> Interlinga, Interlingua	<b>SG</b> Sangho
<b>AR</b> Arabic	<b>IE</b> Interlinge, Interlingue	<b>SA</b> Sanskrit
<b>HY</b> Armenian	<b>IK</b> Inupiak	<b>TN</b> Satswana
<b>AS</b> Assamese	<b>GA</b> Irish	<b>GD</b> ScotGaelic, Scots Gaelic
<b>AY</b> Aymara	<b>IT</b> Italian	<b>SR</b> Serbian
<b>AZ</b> Azerbaijan, Azerbaijani	<b>JA</b> Japanese	<b>ST</b> Sesotho
<b>BA</b> Bashkir	<b>JW</b> Javanese	<b>SN</b> Shona
<b>EU</b> Basque	<b>KN</b> Kanadian	<b>SD</b> Sindhi
<b>BN</b> Bengali, Bengali, Bangla	<b>KS</b> Kashmiri	<b>SI</b> Singhalese
<b>DZ</b> Bhutani	<b>KK</b> Kazakh	<b>SS</b> Siswati
<b>BH</b> Bihari	<b>RW</b> Kinyarwand, Kinyarwanda	<b>SK</b> Slovak
<b>BI</b> Bislama	<b>KY</b> Kirghiz	<b>SL</b> Slovenian
<b>BR</b> Breton	<b>RN</b> Kirundi	<b>SO</b> Somali
<b>BG</b> Bulgarian	<b>KO</b> Korean	<b>ES</b> Spanish
<b>MY</b> Burmese	<b>KU</b> Kurdish	<b>SU</b> Sundanese
<b>BE</b> Byeloruss, Byelorussian	<b>LO</b> Laothian	<b>SW</b> Swahili
<b>KM</b> Cambodian	<b>LA</b> Latin	<b>SV</b> Swedish
<b>CT</b> Cantonese	<b>LV</b> Latvian, Latvian, Lettish	<b>TL</b> Tagaigog
<b>CA</b> Catalan	<b>LN</b> Lingela	<b>TG</b> Tajik
<b>ZH</b> Chinese	<b>LT</b> Lithuanian	<b>TA</b> Tamil
<b>CO</b> Corsican	<b>MK</b> Macedonian	<b>TT</b> Tater
<b>HR</b> Croatian	<b>MG</b> Malagasy	<b>TE</b> Telugu
<b>CS</b> Czech	<b>MS</b> Malay	<b>TH</b> Thai
<b>DA</b> Danish	<b>ML</b> Malaysiam	<b>BO</b> Tibetan
<b>NL</b> Dutch	<b>MT</b> Maltese	<b>TI</b> Tigrinya
<b>EN</b> English	<b>MA</b> Mandarin	<b>TO</b> Tonga
<b>EO</b> Esperanto	<b>MI</b> Maori	<b>TS</b> Tsonga
<b>ET</b> Estonian	<b>MR</b> Marathi	<b>TR</b> Turkish
<b>FO</b> Faroese	<b>MO</b> Moldavian	<b>TK</b> Turkmen
<b>FJ</b> Fiji	<b>MN</b> Mongolian	<b>TW</b> Twi
<b>FI</b> Finnish	<b>NA</b> Nauru	<b>UK</b> Ukrainian
<b>FR</b> French	<b>NE</b> Nepali	<b>UR</b> Urdu
<b>FY</b> Frisian	<b>NO</b> Norwegian	<b>ZU</b> Uzbek
<b>GL</b> Galician	<b>OC</b> Occitan	<b>VI</b> Vietnamese
<b>KA</b> Georgian	<b>OR</b> Oriya	<b>VO</b> Volapök
<b>DE</b> German	<b>OM</b> Oromo	<b>CY</b> Welsh
<b>EL</b> Greek	<b>PS</b> Pashto, Pashto, Pushto	<b>WO</b> Wolof
<b>KL</b> Greenland, Greenlandic	<b>FA</b> Persian	<b>XH</b> Xhosa
<b>GN</b> Guarani	<b>PL</b> Polish	<b>JI</b> Yiddish
<b>GU</b> Gujarati	<b>PT</b> Portuguese	<b>YO</b> Yoruba
<b>HA</b> Hause	<b>PA</b> Punjabi	<b>ZU</b> Zulu
<b>IW</b> Hebrew	<b>QU</b> Quechua	





## Contact information

### Head Office

BRÄHLER ICS Konferenztechnik  
International Congress Service AG  
P.O.Box 3264  
D-53627 Königswinter, Germany

Auf der Alten Burg 6  
D-53639 Königswinter, Germany  
Tel.: +49 (0) 2244 930-0  
Fax: +49 (0) 2244 930-450  
<http://www.braehler.com>

### Event Technology

Tel.: +49 (0) 2244 930-200  
Fax: +49 (0) 2244 930-430  
E-Mail: [rental@braehler.com](mailto:rental@braehler.com)

### Conference Technology

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