

INSTALLATION AND OPERATION MANUAL
MANUAL DE INSTALACIÓN Y FUNCIONAMIENTO
INSTALLATIONS- UND BETRIEBSHANDBUCH
MANUEL D'INSTALLATION ET DE
FUNCTIONNEMENT
MANUALE D'INSTALLAZIONE E D'USO

MANUAL DE INSTALAÇÃO E DE
FUNCIONAMENTO
BRUGER- OG MONTERINGSVEJLEDNING
INSTALLATIE- EN BEDIENINGSHANDLEIDING
HANDBOK FÖR INSTALLATION OCH ANVÄNDNING
ΕΓΧΕΙΡΙΔΙΟ ΕΓΚΑΤΑΣΤΑΣΗΣ ΚΑΙ ΛΕΙΤΟΥΡΓΙΑΣ



Do not perform installation work, without referring to our installation manual.
No realice la instalación de este equipo, sin antes consultar este manual de instalación.
Bei der Installation unbedingt die Hinweise in der Installationsanleitung beachten.
Consulter notre manuel avant de réaliser une quelconque installation.
Realizzare l'installazione, seguendo quanto indicato in questo manuale.
Nao inicie os trabalhos de montagem, sem consultar o nosso manual de montagem.
Udfør ikke installationsarbejder uden først at konsultere vores vejledning.
Voer geen enkele handeling uit om de apparatuur alvorens deze hadleiding te hebben doorgelezen.
Utför inte några installationsarbeten utan att först läsa var installationsmanual
Μην ήσετε στην εγκατάσταση, χωρίς πριν να έχετε συμβουλευθεί αυτο το εγχειρίδιο εγκατάστασης

Specifications in this manual are subject to change without notice in order that HITACHI may bring the latest innovations to their customers.
Whilst every effort is made to ensure that all specifications are correct, printing errors are beyond Hitachi's control; Hitachi cannot be held responsible for these errors.

Las especificaciones de este manual están sujetas a cambios sin previo aviso a fin de que HITACHI pueda ofrecer las últimas innovaciones a sus clientes.
A pesar de que se hacen todos los esfuerzos posibles para asegurarse de que las especificaciones sean correctas, los errores de impresión están fuera del control de HITACHI, a quien no se hará responsable de ellos.

Bei den technischen Angaben in diesem Handbuch sind Änderungen vorbehalten, damit HITACHI seinen Kunden die jeweils neuesten Innovationen präsentieren kann.
Sämtliche Anstrengungen wurden unternommen, um sicherzustellen, dass alle technischen Informationen ohne Fehler veröffentlicht worden sind. Für Druckfehler kann HITACHI jedoch keine Verantwortung übernehmen, da sie außerhalb ihrer Kontrolle liegen.

Les caractéristiques publiées dans ce manuel peuvent être modifiées sans préavis, HITACHI souhaitant pouvoir toujours offrir à ses clients les dernières innovations.
Bien que tous les efforts sont faits pour assurer l'exactitude des caractéristiques, les erreurs d'impression sont hors du contrôle de HITACHI qui ne pourrait en être tenu responsable.

Le specifiche di questo manuale sono soggette a modifica senza preavviso affinché HITACHI possa offrire ai propri clienti le ultime novità.
Sebbene sia stata posta la massima cura nel garantire la correttezza dei dati, HITACHI non è responsabile per eventuali errori di stampa che esulano dal proprio controllo.

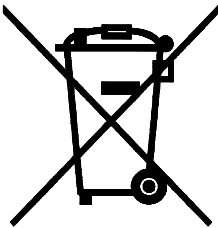
As especificações apresentadas neste manual estão sujeitas a alterações sem aviso prévio, de modo a que a HITACHI possa oferecer aos seus clientes, da forma mais expedita possível, as inovações mais recentes.
Apesar de serem feitos todos os esforços para assegurar que todas as especificações apresentadas são correctas, quaisquer erros de impressão estão fora do controlo da HITACHI, que não pode ser responsabilizada por estes erros eventuais.

Specifikationerne i denne vejledning kan ændres uden varsel, for at HITACHI kan bringe de nyeste innovationer ud til kunderne.
På trods af alle anstrengelser for at sikre at alle specifikationer er korrekte, har Hitachi ikke kontrol over trykfejl, og Hitachi kan ikke holdes ansvarlig herfor.

De specificaties in deze handleiding kunnen worden gewijzigd zonder verdere kennisgeving zodat HITACHI zijn klanten kan voorzien van de nieuwste innovaties.
Iedere poging wordt ondernomen om te zorgen dat alle specificaties juist zijn. Voorkomende drukfouten kunnen echter niet door Hitachi worden gecontroleerd, waardoor Hitachi niet aansprakelijk kan worden gesteld voor deze fouten.

Specifikationerna i den här handboken kan ändras utan föregående meddelande för att HITACHI ska kunna leverera de senaste innovationerna till kunderna.
Vi på Hitachi gör allt vi kan för att se till att alla specifikationer stämmer, men vi har ingen kontroll över tryckfel och kan därför inte hållas ansvariga för den typen av fel.

Οι προδιαγραφές του εγχειριδίου μπορούν να αλλάξουν χωρίς προειδοποίηση, προκειμένου η HITACHI να παρέχει τις τελευταίες καινοτομίες στους πελάτες της.
Αν και έχει γίνει κάθε προσπάθεια προκειμένου να εξασφαλιστεί ότι οι προδιαγραφές είναι σωστές, η Hitachi δεν μπορεί να ελέγξει τα τυπογραφικά λάθη και, ως εκ τούτου, δεν φέρει καμία ευθύνη για αυτά τα λάθη.

**ATTENTION:**

This product shall not be mixed with general house waste at the end of its life and it shall be retired according to the appropriated local or national regulations in a environmentally correct way. Contact to the corresponding authorities for more information.

**ATENCIÓN:**

Este producto no se debe eliminar con la basura doméstica al final de su vida útil y se debe desechar de manera respetuosa con el medio ambiente de acuerdo con los reglamentos locales o nacionales aplicables. Para obtener más información, póngase en contacto con las autoridades competentes.

**ACHTUNG:**

Dass Ihr Produkt am Ende seiner Betriebsdauer nicht in den allgemeinen Hausmüll geworfen werden darf, sondern entsprechend den geltenden örtlichen und nationalen Bestimmungen auf umweltfreundliche Weise entsorgt werden muss. Für weitere Informationen setzen Sie sich bitte mit den entsprechenden Behörden in Verbindung.

**ATTENTION:**

Ne doit pas être mélangé aux ordures ménagères ordinaires à la fin de sa vie utile et qu'il doit être éliminé conformément à la réglementation locale ou nationale, dans le plus strict respect de l'environnement. Pour de plus amples informations, contactez les autorités compétentes.

**ATTENZIONE:**

Indicazioni per il corretto smaltimento del prodotto ai sensi della Direttiva Europea 2002/96/EC e Dlgs 25 luglio 2005 n.151 Il simbolo del cassonetto barrato riportato sull'apparecchiatura indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti.

L'utente dovrà, pertanto, conferire l'apparecchiatura giunta a fine vita agli idonei centri di raccolta differenziata dei rifiuti elettronici ed elettrotecnici, oppure riconsegnarla al rivenditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente.

L'adeguata raccolta differenziata delle apparecchiature dismesse, per il loro avvio al riciclaggio, al trattamento ed allo smaltimento ambientalmente compatibile, contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il riciclo dei materiali di cui è composta l'apparecchiatura.

Vogliate contattare l'installatore, il rivenditore, o le autorità locali per ulteriori informazioni.

Lo smaltimento abusivo del prodotto da parte dell'utente può comportare l'applicazione delle sanzioni amministrative di cui all'articolo 50 e seguenti del D.Lgs. n. 22/1997.

**ATENÇÃO:**

O seu produto não deve ser misturado com os desperdícios domésticos de carácter geral no final da sua duração e que deve ser eliminado de acordo com os regulamentos locais ou nacionais adequados de uma forma correcta para o meio ambiente.

Contacte as autoridades correspondentes para obter mais informações.

**BEMÆRK:**

At produktet ikke må smides ud sammen med almindeligt husholdningsaffald, men skal bortskaffes i overensstemmelse med de gældende lokale eller nationale regler på en miljømæssig korrekt måde.

Kontakt de pågældende myndigheder for at få yderligere oplysninger.

**ATTENTIE:**

Dit houdt in dat uw product niet wordt gemengd met gewoon huisvuil wanneer u het weg doet en dat het wordt gescheiden op een milieuvriendelijke manier volgens de geldige plaatselijke en landelijke reguleringen.

Neem contact op met de betreffende overheidsdienst voor meer informatie.

**OBS!:**

Det innebär att produkten inte ska slängas tillsammans med vanligt hushållsavfall utan kasseras på ett miljövänligt sätt i enlighet med gällande lokal eller nationell lagstiftning.

Ta kontakt med ansvarig myndighet om du vill ha mer information.

**ΠΡΟΣΟΧΗ:**

Σημαίνει ότι το προϊόν δεν θα πρέπει να αναμειχθεί με τα διάφορα οικιακά απορρίμματα στο τέλος του κύκλου ζωής του και θα πρέπει να αποσυρθεί σύμφωνα με τους κατάλληλους τοπικούς ή εθνικούς κανονισμούς και με τρόπο φιλικό προς το περιβάλλον.

Για περισσότερες λεπτομέρειες, επικοινωνήστε με τις αντίστοιχες αρχές.



DANGER – Immediate hazard which WILL result in severe injury or death.

PELIGRO – Riesgos inmediatos que PRODUCIRÁN lesiones personales graves e incluso la muerte.

GEFAHR – Unmittelbare Gefahrenquellen, die zu schweren Verletzungen oder zum Tod führen.

DANGER – Dangers instantanés de blessures corporelles sévères ou de mort.

PERICOLO – Pericolo immediato che PRODURRÀ ferite gravi o la morte.

PERIGO – Problemas imediatos que IRÃO resultar em graves ferimentos pessoais ou morte.

FARE – Overhængende fare, som VIL resultere i alvorlig personskade eller dødsfald.

GEVAAR – Onmiddellijke risico's die ernstige persoonlijke verwondingen of de dood ten gevolge kunnen hebben.

FARA – Omedelbar risk som medför svår personskada eller död.

KINAYNO – Άμεσος κίνδυνος που ΘΑ έχει ως αποτέλεσμα σοβαρές σωματικές βλάβες ή θάνατο.



WARNING – Hazards or unsafe practices which COULD result in severe personal injuries or death.

AVISO – Riesgos o prácticas poco seguras que PODRÍAN producir lesiones personales e incluso la muerte.

WARNUNG – Gefährliche oder unsichere Anwendung, die zu schweren Körperverletzungen oder zum Tod führen kann.

ATTENTION – Utilisation dangereuse ou sans garantie de sécurité qui PEUT provoquer de sévères blessures personnelles ou la mort.

AVVISO – Pericoli o azioni pericolose che POTREBBERO avere come esito lesioni fisiche gravi o il decesso.

AVISO – Riesgos o prácticas poco seguras que PUEDEN producir lesiones personales e incluso la muerte.

ADVARSEL – Farer eller farlig brug, som KAN resultere i alvorlig personskade eller dødsfald.

WAARSCHUWING – Gevaren of onveilige praktijken die ernstig persoonlijk letsel of de dood tot gevolg KUNNEN hebben.

VARNING – Risker eller osäkra tillvägagångssätt som KAN leda till svåra personskador eller dödsfall.

ΠΡΟΕΙΔΟΠΟΙΗΣΗ – Κίνδυνοι ή επικίνδυνες πρακτικές, οι οποίες ΜΠΟΡΕΙ να έχουν ως αποτέλεσμα σοβαρές σωματικές βλάβες ή θάνατο.



CAUTION – Hazards or unsafe practices which COULD result in minor personal injury or product or property damage.

PRECAUCIÓN – Riesgos o prácticas poco seguras que PODRÍAN provocar lesiones personales de menor importancia o daños en el producto u otros bienes.

VORSICHT – Gefährliche oder unsichere Anwendung, die geringfügigen Personen-, Produkt- oder Sachschaden verursachen kann.

PRECAUTION – Utilisation dangereuse ou sans garantie de sécurité qui PEUT provoquer des blessures mineures ou des dommages au produit ou aux biens.

ATTENZIONE – Pericoli o azioni pericolose che POTREBBERO avere come esito lesioni fisiche minori o danni al prodotto o ad altri beni.

CUIDADO – Perigos e procedimentos perigosos que PODERÃO PROVOCAR danos pessoais ligeiros ou danos em produtos e bens.

FORSIGTIG – Farer eller farlig brug, som KAN resultere i mindre skade på personer, produkt eller ejendom.

LET OP – Gevaren of onveilige praktijken die licht persoonlijk letsel of beschadiging van het product of eigendommen tot gevolg KUNNEN hebben.

VARSAMHET – Risker eller farliga tillvägagångssätt som KAN leda till mindre personskador eller skador på produkten eller på egendom.

ΠΡΟΣΟΧΗ – Κίνδυνοι ή επικίνδυνες πρακτικές, οι οποίες ΜΠΟΡΕΙ να έχουν ως αποτέλεσμα την πρόκληση ελαφρών σωματικών βλαβών ή καταστροφή περιουσίας.

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Note:

1. This installation manual introduces the new CSNET WEB accessory KNX001

For additional information concerning programming and software operation, please refer to the Technical Catalogue in CD ROM of CSNET WEB.

1. Safety Summary

⚠ Caution

This interface KNX001 must be installed by skilled personal (electrician, EIB installer or other skilled technician).

Do not connect voltage input to the control system before installation has been correctly completed.

Read this manual carefully before performing installation work.

Read this manual in order to configure the KNX001.

⚠ Attention

Do not install KNX001 in places... :

- outdoor.
- with vapour, oil or dispersed liquids.
- exposed to sun radiation.
- with heat sources nearby (sulphuric surroundings).
- where accumulation, generation or leaks of inflammable gases has been detected.
- that are near the sea, in saline, acid or alkaline surroundings.
- with wet environment

⚠ Attention

Install KNX001 away from possible sources of electromagnetic waves.

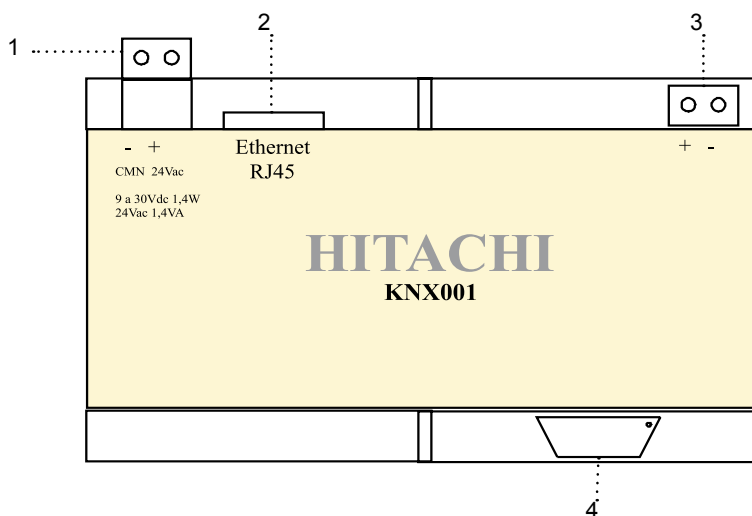
Respect local electrical standards.

Use a power circuit that is not subject to peak demands.

Ensure that there is enough free space around the KNX001 so that the heat may dissipate adequately (refer to "Installation Work").

If you install the KNX001 in vertical position, install the power supply in the lower part and the temperature control outputs in the upper part.

2. Components names



Components supplied:

- KNX001 device
- 1 console cable DB9 male - DB9 female (1,8 m length).
- CD ROM: Software configuration, compatible with OS Windows® and user manual.
- Power adaptor: 12 V DC, 300 mA

Component names:

1. Power Supply Terminals
2. CSNET WEB Port
3. KNX TP-1 Port
4. PC-Console

3. Specifications

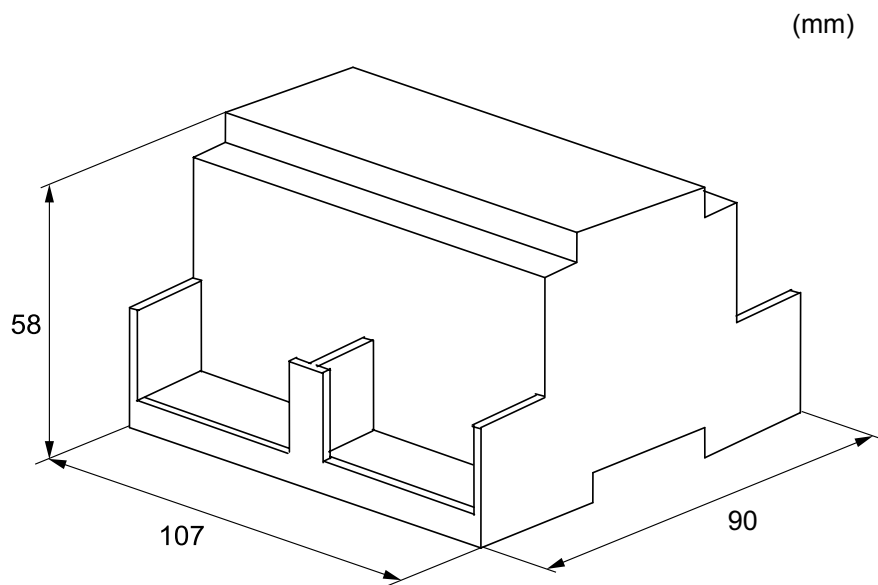
Cover	PC plastic type (UL 94 V-0). Grey. RAL 7035.	
Dimensions	Width 107mm - Height 90 mm - Depth 58 mm	
Weight	2 kg	
Power Supply	9 a 30 VDC $\pm 10\%$ 1.4W. 24 VAC $\pm 10\%$ 1.4VA. Terminal: Screw type removable (2 poles) for 2.5 mm ² (12 AWG) cable.	
Assembly	Surface, Wall an over rail DIN EN60715 TH35.	
CSNET WEB Port	1 x Ethernet 10BT RJ45. - (TCP/IP Modbus protocol)	
KNX Port	1 x KNX TP1 (EIB) Opto insulated. Screw type removable (2 poles) for 2.5 mm ² (12 AWG) cable	
Indicators LED	1 x Power Supply. 2 x Ethernet Port activity (LNK, ACT).	2 x KNX Port activity (Tx, Rx) 1 x programming/bus KNX. ¹
Push button	1 x programming KNX. ¹	
Port type	RS232. DB9 female (DCE) connector DB9.	
Configuration	By RS232 port.	
Firmware	Updates allowed by RS232 port	
Temperature range	-40°C a +70°C	
Relative Humidity	5% a 95%, without condensation	
Protection	IP20 (IEC60529).	
RoHS Conformity	RoHS compliance according, directive 2002/95/EC.	
Certification	CE	

¹ For servicing purposes. Not available

4. Installation work

When unpacking the KNX001, check that it has not suffered damage during transport.

4.1 Dimensional data



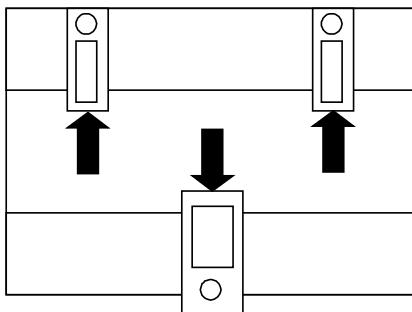
4.2 Installation process

1. Ensure that there is no power supply connected to any part of KNX001 (power terminals and EIB bus).
2. Install the device following the detailed explanations in 4.2.1 and 4.2.2. It is recommended to install KNX001 inside an electrical box.
3. Connect current adaptor to the KNX001 keeping right polarity (see technical characteristics for power supply connections).
4. Connect CSNET WEB to KNX001 by ETH connector. CSNET WEB connection can be done directly by ethernet crossed cable CAT5 or directly from LAN installation of the building. In the last case used non crossed ethernet CAT5 cable in order to connect KNX001. Consult to computer net administrators for TCP connection. KNX001 is connected to CSNET WEB by port 502.
5. Connect EIB bus to KNX TP1 (EIB) and keep correctly polarity.
6. Connect current adaptor to the power net.
7. Provide power to EIB bus.
8. Follow the instructions in TCXX0055_rev0 attached inside of CD ROM for KNX001 configuration and start up.

4.2.1 Wall Assembly

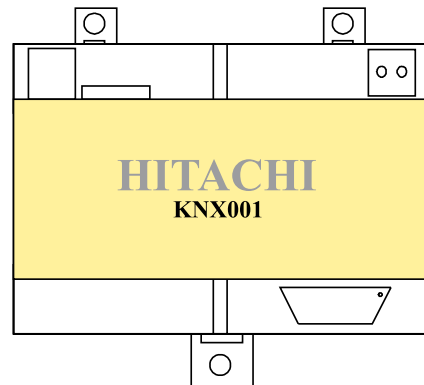
Pull the upper plastic parts and lower plastic part outside until fixing holes are visible from front side and a 'click' is heard (see right figure below).

Back side view



Plastic parts positionated for rail DIN assembly

Front side view



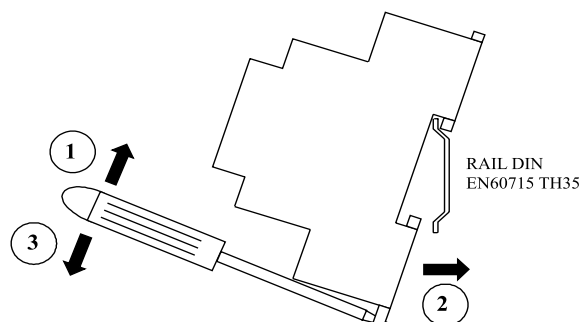
Plastic parts ready for wall assembly

Use the holes of the plastic parts for wall mounting.

4.2.2 Rail DIN Assembly

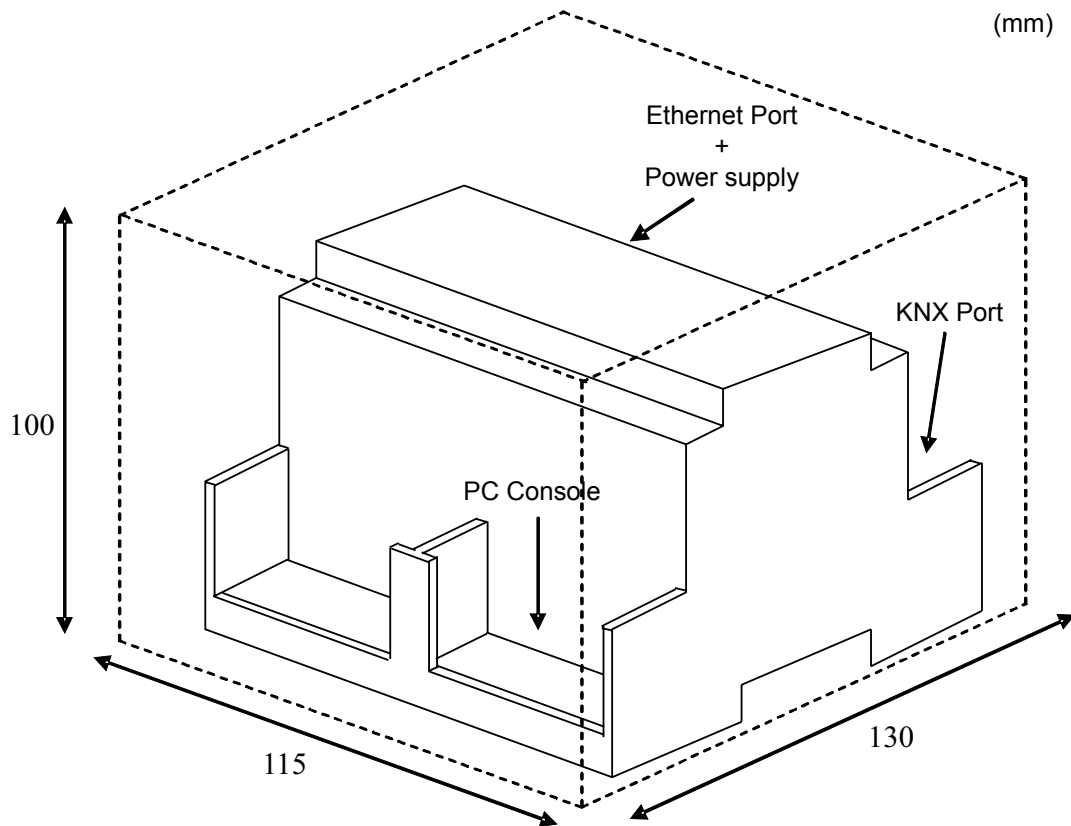
Hang upper side of the device from the upper side of DIN profile. Using a screwdriver pull the lower plastic part (see drawing) and push the lower side of the device against the profile.

Side view

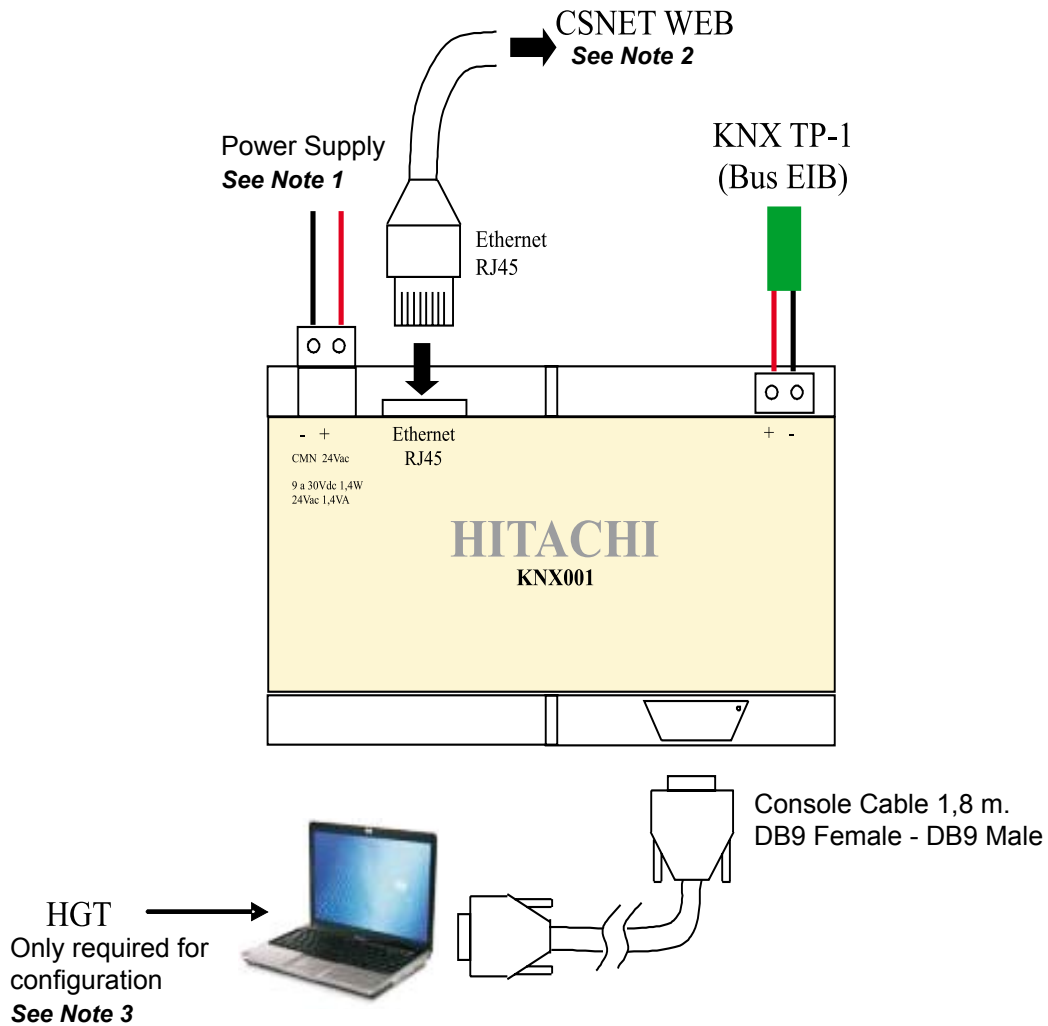


4.2.3 Servicing space

Minimum space recommended for the interface and its external connections.



4.3. Wiring Connections



Notes:

1. Use always a DC Power Supply:

- Keep correctly polarity in terminals + & -. Ensure that supplied voltage are between allowed limits (9 a 30 VDC). If power source is grounded, connect - terminal only to ground circuit, never + terminal.

If it is used a AC Current:

- Ensure that power supply is 24 VAC. Do not connect any terminal to ground circuit and do not connect any other device that could suffer any earth leakage current in their terminals.

2. CSNET WEB connection can be done directly by ethernet crossed cable CAT5 or directly from LAN installation of the building. In the last case used non crossed ethernet CAT5 cable in order to connect KNX001. Consult to computer net administrators for TCP connection. KNX001 is connected to CSNET WEB by port 502.

3. Use HGT software for KNX001 configuration. Check HGT user manual for details.

5. Operation

Unit types to be connected to KNX001 are Packaged and Chiller. It is not allowed to connect both types simultaneously. Maximum Packaged units supported are 128 indoor units. In case of Chiller, maximum number are 8 Chillers.

These two types of units require different signals in interface. Next table shows signals for each type of unit.

■ Packaged

Name	Description/State
OnOff	On/Off setting order Read/Write: ON, OFF
Mode	Mode Setting order Read/Write: COOL, DRY, FAN, HEAT, AUTO
Fan	Fan Setting order Read/Write: LOW, MED, HIGH
TempSet	Setting Temperature Read/Write: 17°C ~ 30°C
Louver	Louver Setting Read/Write: 8 positions: 0 ~ 7 and AUTO
Central	Central Setting Read/Write: OnOff, Mode, TempSet, Fan
TIn	Inlet Temperature Read: °C
TOut	Outlet Temperature Read: °C
TGas	Gas Pipe Temperature Read: °C
TLiquid	Liquid Pipe Temperature Read: °C
ErrorCode	Alarm Code Read: 0 ~ 100
StopCause	Compressor Stop Cause Read: 0 ~ 200
ValveOpen	Indoor Unit Expansion Valve Opening Read: 0 ~ 100
OperCondition	Unit Operation Condition Read: OFF, THERMO-ON, THERMO-OFF, ALARM
Defrost	Defrost Read: On, Off
ExtAmbTemp	Ambient Temperature Read: °C
Timer	Timer disabled Read/Write: Enabled/Disabled
Error Comunicación	Error Communication Unit It's a signal generated to indicate that the machine is not set into CSNET WEB.

■ Chiller

Name	Description/State
OnOff	On/Off setting order Read/Write: ON, OFF
Mode	Mode Setting order Read/Write: COOL, HEAT
TempSet	Setting Temperature Read/Write: °C
Central	Central Setting Read/Write: Local, Remoto
WaterTin	Water Inlet Temperature Read: °C
WaterTOut	Water Outlet Temperature Read: °C
ErrorCode	Alarm Code Read: 0 ~ 100
OperCondition	Unit Operation Condition Read: OFF, THERMO-ON, THERMO-OFF, ALARM
Defrost	Defrost Read: On, Off
ExtAmbTemp	Ambient Temperature Read: °C
Timer	Timer disabled Read/Write: Enabled/Disabled
Error Comunicación	Error Communication Unit It's a signal generated to indicate that the machine is not set into CSNET WEB.