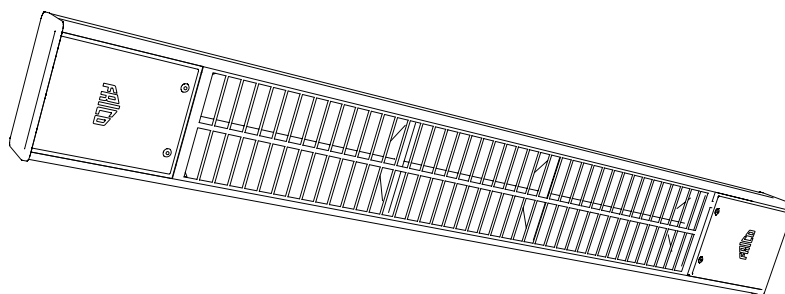


Original instructions
Infracalm
INC



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Infracalm

EN Ecodesign Regulation (EU) 2015/1188 concerning local space heaters does not apply to all application areas. The Regulation applies when an installation is intended to provide thermal comfort for people in the premises. The Regulation does not apply to heating installations of a more technical nature e.g. in engineering/utility rooms, in production processes, frost protection, etc. The Regulation also does not apply to installations in vehicles, offshore or outdoors. It is up to the installer responsible for the installation to assess whether the Ecodesign Regulation is applicable or not.

SE EU-kommissionens Ecodesignförförordning (EU) 2015/1188 för rumsvärmare skiljer på användningsområden för olika installationer. Förförordningen gäller då installationen är avsedd att skapa värmekomfort för människor som vistas i lokalen. Förförordningen gäller inte för installationer som är avsedda för värmebehov av mer teknisk art såsom grundvärme i maskinrum, värmebehov i produktionsprocesser, frostskydd, etc. Förförordningen gäller heller inte installationer i fordon, offshore eller utomhus. Vid installationstillfället är det upp till ansvarig installatör att bedöma om Ecodesignförförordningen är applicerbar eller inte.

FR La réglementation relative à l'écoconception (UE) 2015/1188 concernant les dispositifs de chauffage décentralisés ne s'applique pas à tous les cas. Elle s'applique lorsqu'une installation est destinée à assurer un confort thermique à des personnes dans les locaux. Elle ne s'applique pas au chauffage d'installations d'une nature plus technique (salles des machines/de service, processus de production, protection contre le gel, etc.). Elle ne s'applique pas non plus aux installations qui se trouvent à bord de véhicules, offshore ou en extérieur. Il appartient à l'installateur de déterminer si la réglementation relative à l'écoconception s'applique ou non.

DE Die Ökodesign-Verordnung (EU) 2015/1188 über Einzelraumheizgeräte trifft nicht auf alle Anwendungsgebiete zu. Die Verordnung findet Anwendung, wenn eine Installation dazu bestimmt ist, innerhalb eines Raumes ein für den Menschen angenehmes Temperaturniveau zu erreichen. Die Verordnung findet keine Anwendung auf Heizungsinstallationen technischer Natur, z. B. in Technik-/Wirtschaftsräumen, bei Produktionsprozessen, für Frostschutz usw. Die Verordnung findet ebenfalls keine Anwendung bei Installationen in Fahrzeugen, Offshoreanlagen und Außenbereichen. Der Monteur, der für die Installation verantwortlich ist, muss beurteilen, ob die Ökodesign-Verordnung anwendbar ist oder nicht.

NO Økodesigndirektivet (EU) 2015/1188 som gjelder varmeovner, gjelder ikke alle bruksområder. Direktivet gjelder når en installasjon har som formål å skape en komfortabel temperatur for personene på stedet. Direktivet gjelder ikke til oppvarmingsinstallasjoner av det mer tekniske slaget, som i produktutviklingsrom, bruksområder, i produksjonsprosesser, frostbeskyttelse etc. Direktivet gjelder heller ikke installasjoner som befinner seg i kjøretøy, offshore eller utendørs. Det er opp til installatøren som er ansvarlig for installasjonen å vurdere hvorvidt Økodesigndirektivet er gjeldende eller ikke.

NL De codesignverordening (EU) 2015/1188 betreffende lokale ruimteverwarmers is niet van toepassing op alle toepassingsgebieden. De verordening is van toepassing in het geval een installatie bedoeld is om mensen in het pand te voorzien van verwarmingscomfort. De verordening is niet van toepassing op verwarmingsinstallaties van een meer technische aard, bijv. in machinekamers/bijkeukens, in productieprocessen, ten behoeve van vorstbeveiliging, enz. De verordening is ook niet van toepassing op installaties in voertuigen, offshore of buiten. Het is de taak van de installateur die verantwoordelijk is voor de installatie om te bepalen of de codesignverordening wel of niet van toepassing is.

ES El Reglamento (UE) 2015/1188 sobre diseño ecológico en relación con los aparatos de calefacción local no se aplica a todas las áreas de aplicación. El Reglamento se aplica cuando una instalación sirve para proporcionar confort térmico a las personas que están en el interior. El Reglamento no se aplica a instalaciones de calefacción de naturaleza más técnica, por ejemplo en salas de ingeniería o cuartos de servicio, en procesos de producción, protección contra heladas, etc. El Reglamento no se aplica a instalaciones en vehículos, en alta mar o al aire libre. Corresponde al instalador responsable de la instalación evaluar si se aplica el Reglamento sobre diseño ecológico o no.

IT Il Regolamento sulla progettazione ecocompatibile (UE) 2015/1188 relativo alle batterie di riscaldamento locali per gli ambienti non è in vigore per tutte le aree di applicazione. Il Regolamento si applica quando lo scopo di un impianto è quello di fornire comfort termico per gli occupanti degli ambienti. Il Regolamento non si applica agli impianti di riscaldamento di natura più tecnica, ad esempio locali tecnici/ripostigli, all'interno di processi di produzione, protezione antigelo, ecc. Inoltre, il Regolamento non si applica alle installazioni all'interno di veicoli, offshore o all'aperto. È responsabilità dell'installatore incaricato dell'installazione valutare se il Regolamento sulla progettazione ecocompatibile è applicabile o meno.

PL Jeśli chodzi o miejscowe ogrzewacze pomieszczeń, Rozporządzenie (UE) 2015/1188 dotyczące ekoprojektu nie ma zastosowania do wszystkich obszarów zastosowa. Rozporządzenie to ma zastosowanie, kiedy zadaniem instalacji jest zapewnienie komfortu termicznego dla ludzi przebywających w budynkach. Rozporządzenie nie ma zastosowania do instalacji grzewczych mających charakter bardziej techniczny, np. w pomieszczeniach przemysłowych/gospodarczych, w procesach wytwórczych, jako ochrona przed zamarzaniem itp. Rozporządzenie nie ma również zastosowania do instalacji w pojazdach, morskich lub na zewnątrz. Do instalatora odpowiedzialnego za instalację należy ocena, czy Rozporządzenie dotyczące ekoprojektu ma zastosowanie czy nie.

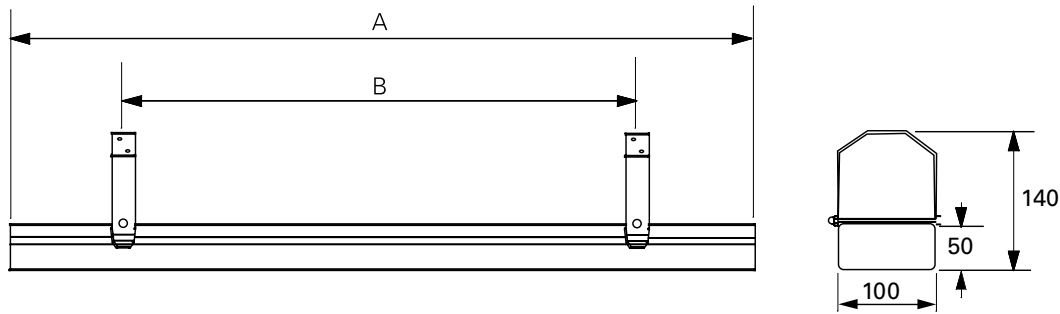
RU Положения требований Экодизайн (EU) 2015/1188 по приборам локального обогрева не охватывают все возможные области их применения. Требования Экодизайн применяются, когда установка предназначена для обеспечения теплового комфорта людей в помещениях. Эти Требования не распространяются на установки и системы обогрева более сложного технического характера, например, при обогреве технических, служебных и производственных помещений, при организации защиты от замерзания и т. д. Также требования Экодизайн не применяются в случае установки оборудования в транспортных средствах, сооружениях на море и на открытых площадках. Ответственность за определение необходимости применения или не применения требований Экодизайн несет организация, осуществляющая монтаж данного оборудования.

FI Paikallisia tilalämmittimiä käsittelevä Ecodesign-asetus (EU) 2015/1188 ei kata kaikkia käyttökohteita. Asetus on voimassa ainoastaan silloin, kun lämmittimellä halutaan parantaa tiloissa olevien ihmisten lämpömukavuutta. Asetus ei koske teknisempiä lämmitysjärjestelmiä esim. konehuoneissa/kodinhoituhuoneissa, tuotantoprosesseissa, pakkassuojausta, jne. Asetus ei myöskään koske ajoneuvoissa, laivoissa ja ulkona käytettäviä järjestelmiä. Asentajan on määritettävä sovelletaanko asennukseen Ecodesign-asetusta vai ei.

DK Ecodesign-regulativet (EU) 2015/1188 vedrørende produkter til lokal rumopvarmning gælder ikke for alle anvendelsesområder. Regulativet gælder, når en installation har til hensigt at give varmekomfort for personer i lokalerne. Regulativet gælder ikke for varmeinstallationer af en mere teknisk egenskab, f.eks. i teknikrum eller lign., i produktionsprocesser, til frostbeskyttelse etc. Regulativet gælder heller ikke for installation i køretøjer, offshore eller udendørs. Det er op til den installatør, som er ansvarlig for installationen, at vurdere om Ecodesign-regulativet er gældende eller ej.

Infracalm

Dimensions



	A [mm]	B* ¹ [mm]	B _{MIN} * ² [mm]
INC05E	711	500	300
INC10E/10D	1251	900	600
INC15E	1756	1200	800
INC20E/20D	2181	1500	1000

*¹) Recommendation

*²) Minimum distances between brackets

SE: *¹) Rekommendation, *²) Minimavstånd mellan konsoler

NO: *¹) Rekommasjon, *²) Minimumsavstand mellom brakketene

DE: *¹) Empfehlung, *²) Mindestabstand zwischen den Konsolen

RU: *¹) Рекомендованные расстояния, *²) Минимальные расстояния

FR: *¹) Recommendation, *²) Distances minimales entre les consoles

ES: *¹) Recomendación, *²) Distancias mínimas entre soportes

NL: *¹) Advies, *²) Minimumafstand tussen beugels

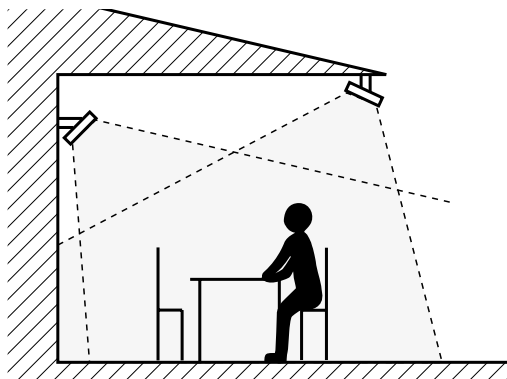
PL: *¹) Zalecenie, *²) Minimalne odległości między wspornikami

IT: *¹) Raccomandato, *²) Distanza minima tra staffe

FI: *¹) Suositus, *²) Minietäisyys kannakkeiden välillä

DK: *¹) Anbefaling, *²) Minimumsafstande mellem beslag

Positioning



Installation height

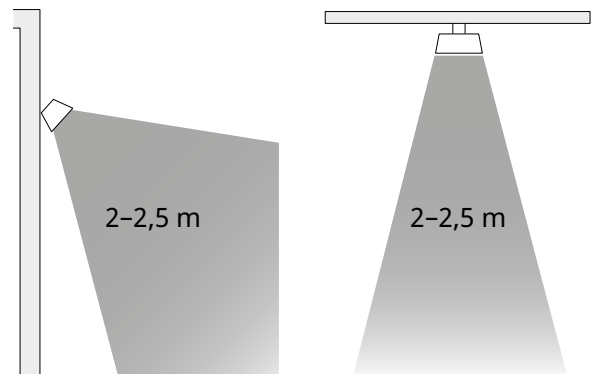


Fig.1: The heaters should heat from at least two directions for even heating

SE: För jämn uppvärmning bör infrorna värma från minst två håll.

NO: For jevn oppvarming bør infraene varme fra minst to sider.

DE: Für eine gleichmäßige Wärmeleistung sollten die Strahler aus mindestens zwei Richtungen heizen.

RU: Приборы должны располагаться по крайней мере с двух сторон от человека.

FR: Pour un chauffage uniforme, les émetteurs doivent chauffer dans au moins deux directions.

ES: Para garantizar una calefacción uniforme, deben colocarse de modo que el calor llegue desde al menos dos direcciones.

NL: De stralers moeten voor een gelijkmatige verwarming vanuit minimaal twee richtingen werken.

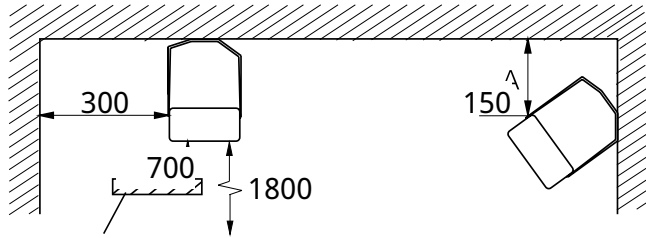
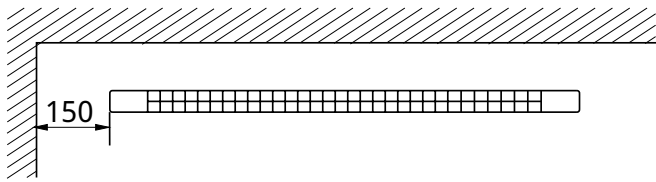
PL: Aby zapewnić równomierne ogrzewanie, ciepło powinno pochodzić co najmniej z dwóch kierunków.

IT: Per avere un riscaldamento uniforme, il calore deve provenire da almeno due direzioni.

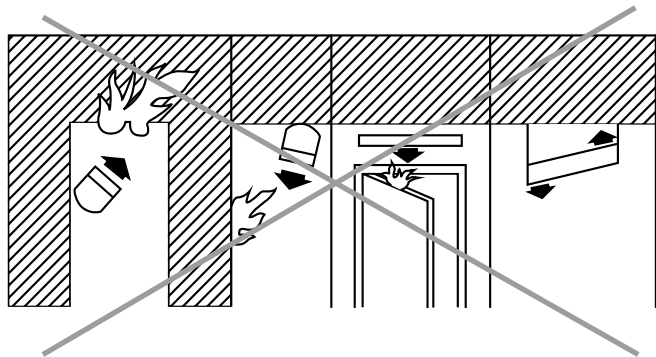
FI: Tasaisen lämmityksen varmistamiseksi lämmittimien tulisi lämmittää vähintään kahdesta suunnasta.

DK: Terrassevarmere bør varme fra mindst to retninger for at give jævn varme.

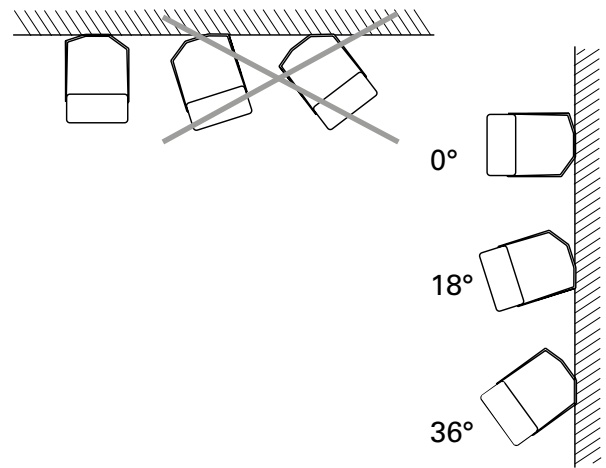
Minimum mounting distance



Flammable material

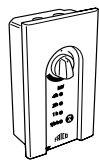


- SE: Minimiavstånd, Brännbart material
- NO: Minsteavstand, Brennbart materiale
- DE: Mindestabstand, Entflammbares Material
- RU: Минимальные расстояния при установке, Легковоспламеняемые материалы
- FR: Distances minimales, Matériau inflammable
- ES: Distancias mínimas, Material inflamable
- NL: Minimale afstand, Brandbaar materiaal
- PL: Minimalne odległości, Materiał łatwopalny
- IT: Distanze minime, Materiali infiammabili
- FI: Minimietäisyydet, Tulenarka materiaali
- DK: Minimumsafstande, Brændbart materiale

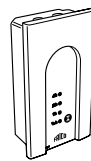


Controls

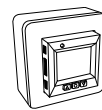
10739	CIRT*
10740	CBT*
92790	TAP16R*
205540	TEP44
20550	SKG30
211780	PDK65*
211781	PDK65S
93044	RTX54
93012	RB3



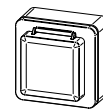
CIRT



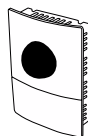
CBT



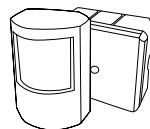
TAP16R



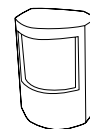
TEP44



SKG30



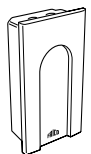
PDK65



PDK65S



RTX54



RB3

*) See separate manual.

- SE: Se separat manual.
- NO: Se egen håndbok
- DE: Siehe separates Handbuch.
- RU: См. отдельную инструкцию.
- FR: Consultez la notice associée
- ES: Consulte el manual correspondi

- NL: Zie aparte handleiding.
- PL: Patrz oddzielna instrukcja.
- IT: Vedere il manuale specifico.
- FI: Katso erillinen käyttöohje.
- DK: Se separat manual.

Technical specifications

Infracalm (IP24)

Item number	Type	Heat output [W]	Voltage [V]	Amperage [A]	Max. element temperature [°C]	Length [mm]	Weight [kg]
190090	INC05E	500	230V~	2,2	750	711	1,5
190091	INC10E	1000	230V~	4,3	750	1251	2,2
190092	INC10D	1000	400V2~	2,5	750	1251	2,2
190093	INC15E	1500	230V~	6,5	750	1756	3,0
190094	INC20E	2000	230V~	8,7	750	2181	3,7
190095	INC20D	2000	400V2~	5,0	750	2181	3,7



EN: Heat output

SE: Värmeeffekt
 NO: Varmeeffekt
 DE: Heizleistung
 RU: Тепловая мощность
 FR: Puissance
 ES: Potencia calorífica
 NL: Verwarmingscapaciteit
 PL: Moc grzewcza
 IT: Potenza termica
 FI: Lämmitys teho
 DK: Varmeydelse

EN: Max. element temperature

SE: Maximal elementtemperatur
 NO: Maksimal elementtemperatur
 DE: Max. Elementtemperatur
 RU: Макс. темп. нагревательного элемента
 FR: Température max. d'élément
 ES: Temperatura máx. del elemento
 NL: Max. elementtemperatuur
 PL: Maks. temperatura elementu grzejnego
 IT: Max. temperatura superficiale
 FI: Vastuksen maksimilämpötila
 DK: Maks. elementtemperatur

EN: Voltage

SE: Spänning
 NO: Spenning
 DE: Spannung
 RU: Напряжение
 FR: Tension
 ES: Tensión
 NL: Voltage
 PL: Napięcie
 IT: Tensione
 FI: Jännite
 DK: Spænding

EN: Length

SE: Längd
 NO: Lengde
 DE: Länge
 RU: Длина
 FR: Longueur
 ES: Longitud
 NL: Lengte
 PL: Długość
 IT: Lunghezza
 FI: Pituus
 DK: Længde

EN: Amperage

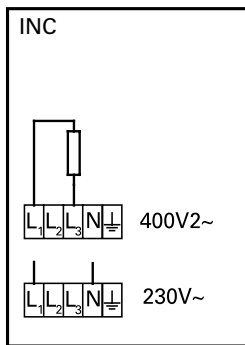
SE: Ström
 NO: Strøm
 DE: Stromstärke
 RU: Сила тока
 FR: Intensité
 ES: Intensidad
 NL: Stroomsterkte
 PL: Natężenie prądu
 IT: Corrente
 FI: Virta
 DK: Strømstyrke

EN: Weight

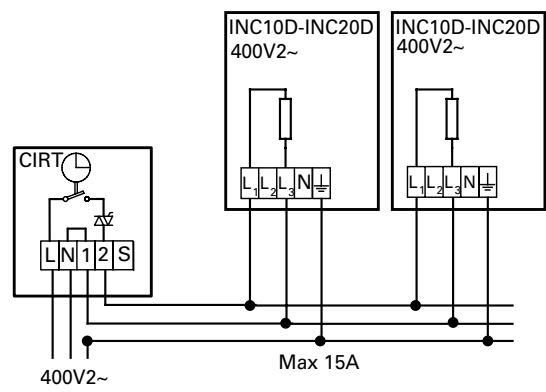
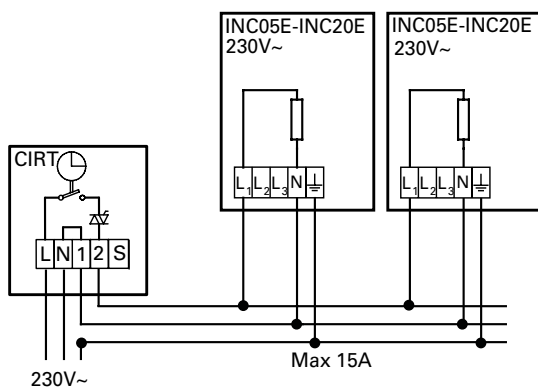
SE: Vikt
 NO: Vekt
 DE: Gewicht
 RU: Вес
 FR: Poids
 ES: Peso
 NL: Gewicht
 PL: Masa
 IT: Peso
 FI: Paino
 DK: Vægt

Wiring diagrams

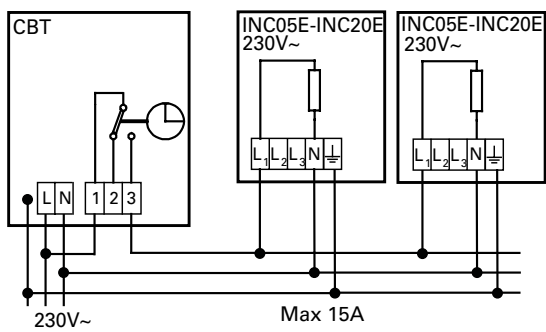
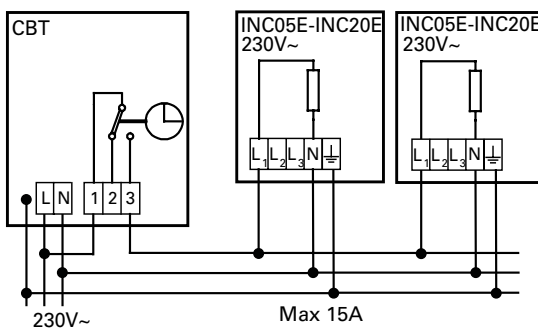
Internal



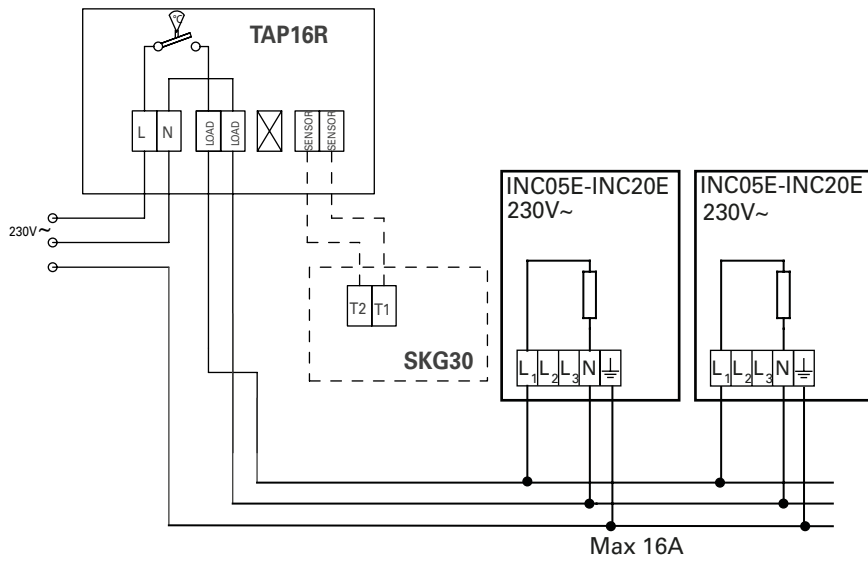
Output control with timer



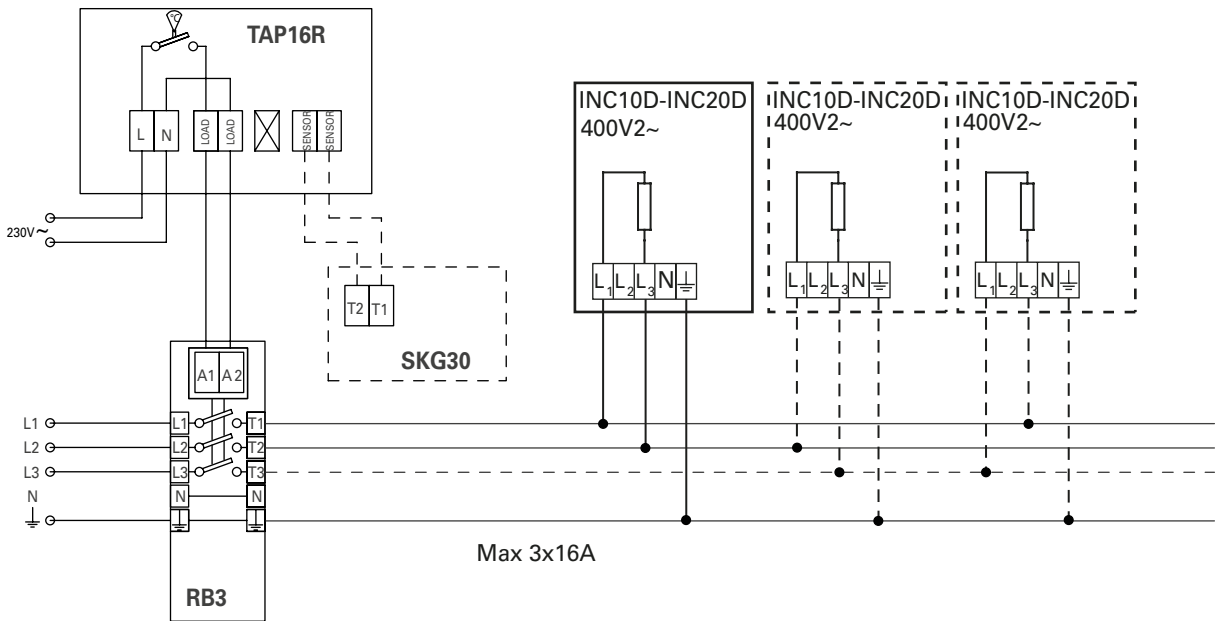
Control with timer



Control by thermostat and black bulb sensor 230V~



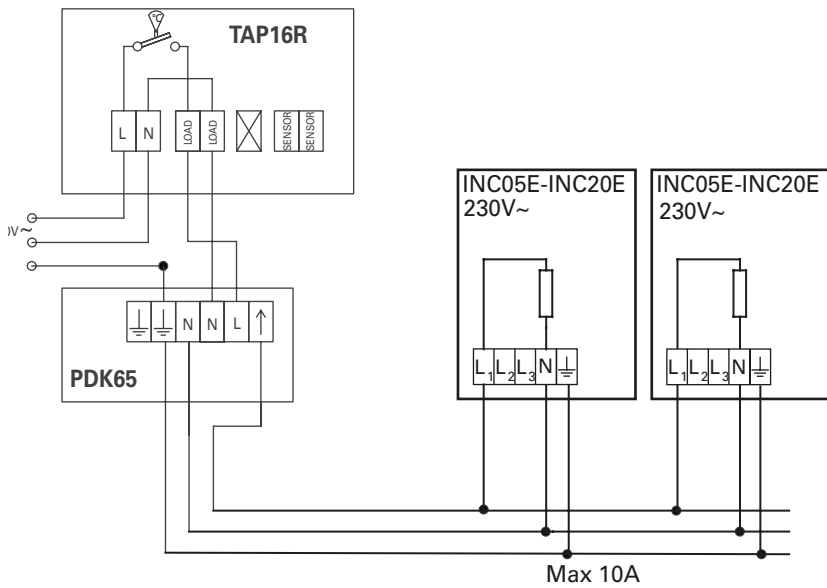
Control by thermostat, relaybox and black bulb sensor 400V2~



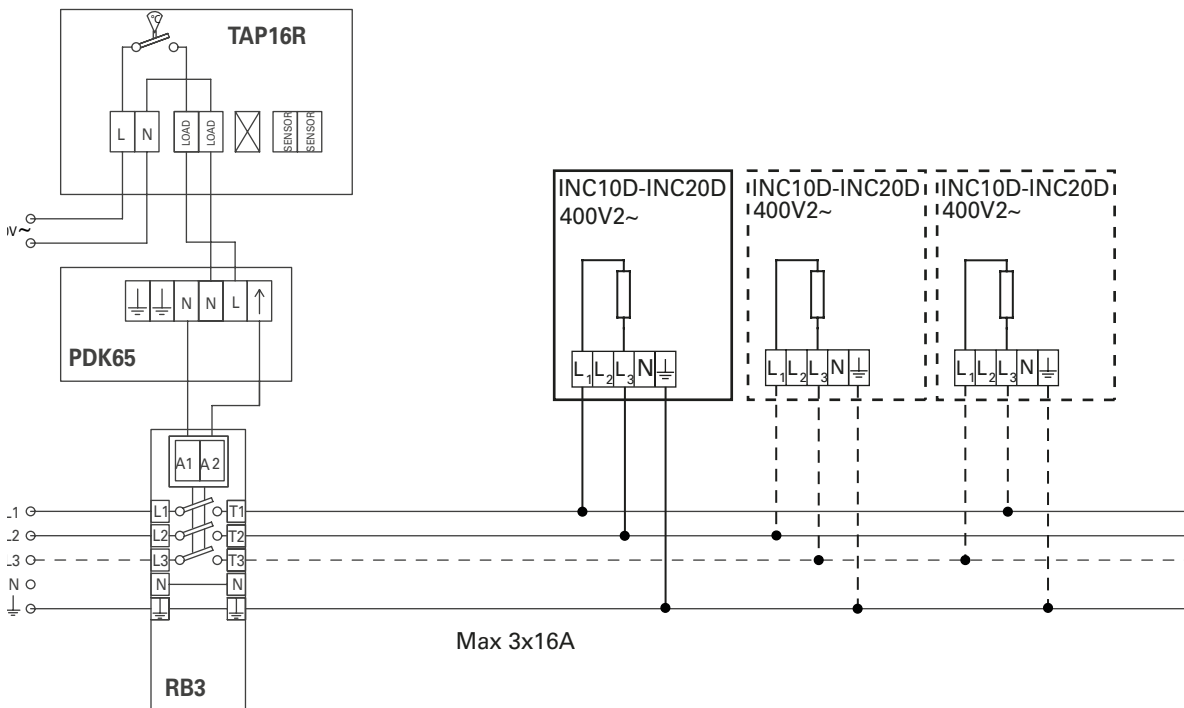
- EN: SKG30, black bulb sensor
- SE: SKG30, svartkroppsgivare
- NO: SKG30, black bulb sensor
- DE: SKG30, Schwarz-Kugel-Sensor
- RU: SKG30, черный шаровой датчик температуры
- FR: SKG30, sonde à boule noire

- ES: SKG30, sensor de lámpara negra
- NL: SKG30, zwarte bol sensor
- PL: SKG30, czujnik ciepła promieniowania
- IT: SKG30, sensore sferico colore nero
- FI: SKG30, lämpötila-anturi
- DK: SKG30, blacksensor

Control by thermostat and presence detector 230V~



Control by thermostat, relaybox and presence detector 400V2~



- EN: PDK65, presence detector
- SE: PDK65, närvarodetektor
- NO: PDK65, bevegelsessensor
- DE: PDK65, Präsenzmelder
- RU: PDK65, датчик присутствия
- FR: PDK65, détecteur de présence

- ES: PDK65, detector de presencia
- NL: PDK65, aanwezigheidsmelder
- PL: PDK65, czujnik ruchu
- IT: PDK65, rilevatore di presenza
- FI: PDK65, läsnäoloanturi
- DK: PDK65, bevægelsessensor

Installation and operating instructions

General Instructions

Read these instructions carefully prior to installation and use. Keep this manual for future reference.

The product may only be used as set out in the assembly and operating instructions. The guarantee is only valid should the product be used in the manner intended and in accordance with the instructions.

Application

Infracalm provides year round comfort to wind protected outdoor balconies, patios and restaurant terraces. Infracalm is also suitable for temporary heating, e.g. in premises that are used occasionally, or for spot heating. Protection class: IP24.

Positioning

The heaters must be placed so that they enclose the area to be heated, see fig. The normal assembly height is 2–2,5 metres above the ground/floor. A rule of thumb for infrared heaters equipped with metal tubular elements is that 750–1000 W/m² increases the experienced temperature by about 10°C. The output demand can be reduced if the area to be heated is protected. If the area only has a roof, at least 1000 W/m² should be installed. 750 W/m² is sufficient if the area has three walls. For enclosed areas, the output demand must be calculated. A green house for example requires 250-300 W/m². Optimum comfort is achieved if the heat is distributed from at least two directions.

Mounting

Infracalm is installed horizontally on the ceiling or on the wall with the supplied adjustable mounting brackets. The angle of the heater can be adjusted for optimum comfort. The standard brackets cannot be used for angled installation on the ceiling, because the distance then becomes less than the minimum distance. Infracalm can also be suspended by wire. For minimum distance, see diagrams on introductory pages. The distance between the brackets is adjustable and can be chosen according to the most appropriate place for installation. The mounting brackets enable wall mounting in three different angles; parallel to the wall, 18° or 36° angle. For ceiling mounting the bracket must always be mounted with 0° to

the ceiling. See the introduction pages.

- Choose the desired angle and fasten the bracket onto wall or ceiling. The holes are Ø5 mm, c-c distance is 25 mm.
- Fasten the heaters, snap into the brackets and secure it by tightening the securing screws (104 mm long) and the domed nuts (spanner width 7 mm).

Connection

Infracalm is intended for permanent installation. The installation, which should be preceded by an isolator switch with a contact separation of at least 3 mm, should only be wired by a competent electrician and in accordance with the latest edition of IEE wiring regulations.

The terminal block, which also enables connection to other heaters, is situated on the same end of the heater as the data label. The supplied cable gland are to be mounted in the knock-outs. Please note that the inlet must be tight. See wiring diagrams.

Control

A stepless output control and a timer are available for outdoor use.

When using this product as a local space heater according to Ecodesign Regulation (EU) 2015/1188, it must be supplemented with one of the following approved controls.

- TAP16R, electronic thermostat that includes:
 - Electronic room temperature control plus week timer
 - Room temperature control with open window detection
 - Adaptive start control
- TAP16R and SKG30, black bulb sensor that include:
 - Electronic room temperature control plus week timer
 - Room temperature control with open window detection
 - Adaptive start control
 - Black bulb sensor
- TAP16R and PDK65, presence detector that include:
 - Electronic room temperature control plus week timer
 - Room temperature control with open window detection

- Room temperature control with presence detection

The product can be controlled in a different way, e.g. by an overall control system (BMS), but in that case the responsibility lies with the installer to ensure that the control system is programmed to make the installation meet the requirements of Ecodesign Regulation (EU) 2015/1188.

Start-up

When the unit is used for the first time or after a long period of non-use, smoke or an odour may result from dust or dirt which has collected on the element. This is completely normal and disappears after a short time.

Maintenance

The power supply to the unit must be disconnected during all service, repair and maintenance work. Wait until the unit is cold.

The unit has no moving parts so the maintenance requirement is small, but it must be kept clean and free from dust and dirt. If the reflector is not clean the thermal radiation from the unit will decrease and the heater will become hotter. A large amount of dirt can cause overheating.

The surface of the reflector is sensitive and must be cleaned with care. If the reflector is dirty it must be cleaned or replaced by a specialist.

- The product should always be handled with clean gloves. Make sure the product is clean before it is switched on.
- Presence of aerosols, lacquer, solvents, dust and similar may cause a coating on the product and discolor them.
- A slight change of colour of the product over time is normal. Incorrect installation or uncommonly high ambient temperature can cause increased discoloration. The output is not affected.

Packaging

Packaging materials are chosen with consideration to the environment and are therefore recyclable.

Handling of product at end of working life

This product may contain substances necessary for the functionality of the product but potentially dangerous for the environment. The product should not be disposed of mixed with general household waste but delivered to a designated collection point for environmental recycling. Please contact the local authority for further details of your nearest designated collection point.

Safety

- *For all installations of electrically heated products a residual current circuit breaker 300 mA for fire protection should be used.*
- *The unit must not be fully or partially covered as overheating can result in a fire risk!*
- *The unit must not be placed directly under fixed wall sockets!*
- *The unit must not be used if the unit or the cord is damaged. Risk of injury!*
- *The heater is equipped with a protective grille to prevent contact or to prevent large objects from touching the hot lamp. The unit must not be used without this protective grille.*
- *The cable and plug must not be placed inside the hot radiant area.*
- *This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.*
- *Children of less than 3 years should be kept away unless continuously supervised.*
- *Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction*

concerning use of the appliance in a safe way and understand the hazards involved.

- *Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.*

CAUTION — Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.



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