4power!

WÜRTH ELEKTRONIK

#redCUBE

WE speed up the future

REDCUBE Terminals are the most reliable high-power contacts on PCB level. Low contact resistance guarantees minimum self-heating. Four different designs cover all leading processing technologies and offer a wide range of applications.

www.we-online.com/redcube

- Flexibility in processing and connection technologies
- Highest current ratings up to 500 A
- Board-to-Board and Wire-to-Board solutions
- Extremely low self-heating
- Robust mechanical connection

REDCUBE PRESS-FIT

REDCUBE PLUG

REDCUBE SMD

REDCUBE THR

REDCUBE PRESS-FIT

The current rating of **REDCUBE PRESS-FIT** is impressive. With the same ampacity, **REDCUBE PRESS-FIT** has the lowest heat development compared to other parts that supply power for PCBs.

Ampacity up to 500 A

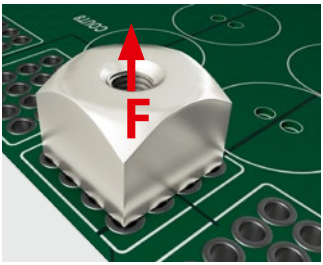
Simple & Quick Processing

APPLICATIONS

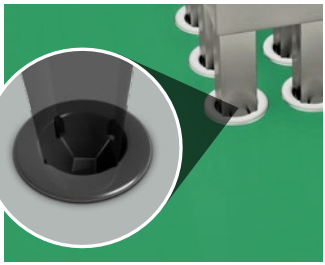
- High current Wire-to-Board & Board-to-Board connections
- Mounting of copper bars on PCBs
- Angled assembling of cable, PCB and housing
- Mounting of IGBT modules

REMARKABLE PERFORMANCE

With the lowest Failure-In-Time value, **REDCUBE PRESS-FIT** is the most reliable technology on PCB. The FIT value is up to 30 times better than that of a SMD solder joint.
REDCUBE PRESS-FIT is suitable for two-side mounting and allows very compact design of modules.



Extraction Force 10 kg/Pin



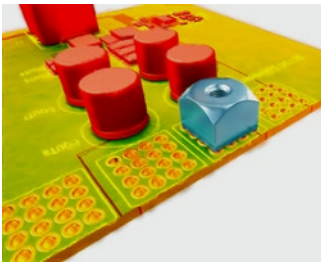
Press-Fit Technology

ADVANTAGES

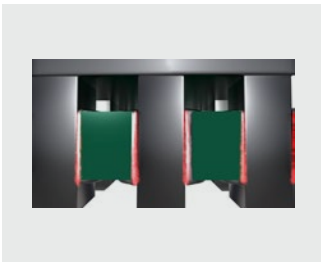
- Simple & quick processing
- No cold solder joints
- High process safety
- Low self heating

PRESS-FIT PROCESS

Pressing the pins into the PCB, a high friction between pin and plated through-hole generates a homogeneous cold-welding between materials. This results in a gastight, strong mechanical connection with contact resistance less than 200 µOhm. No other technology transfers power up to 500 A at this low heat development.



Lowest Heat Development



Cold Welding between Materials

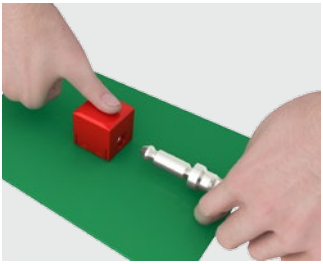
CHARACTERISTICS

- Homogeneous material transition between pin and through-hole plating
- Contact resistance less than 200 µΩ
- Gastight electrical and mechanical connection
- Extremely strong mechanical connection

REDCUBE PLUG

The new quick and easy pluggable solution **REDCUBE PLUG** offers all press-fit advantages; it is a multiple times pluggable solution for high-current applications.

Ampacity up to 120 A



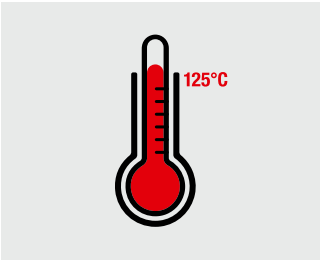
Plugging instead of Screwing

APPLICATIONS

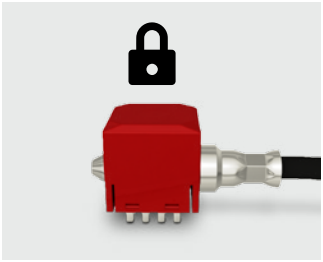
- High current and reversible Wire-to-Board connections
- Battery charger
- Multiple times pluggable solutions
- Mounting in very tight spaces
- Mounting areas with difficult access

OUTSTANDING FEATURES

REDCUBE PLUG consists of a **REDCUBE** Terminal, surrounded by a glass fiber-reinforced plastic housing. Pushing on the top of the housing allows mating the corresponding cable connector. After actuating, the spring returns to its initial position and locks the cable connector automatically into the housing.



Heat Resistance up to +125 °C



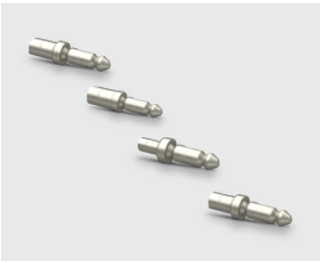
Automated Locking Function

ADVANTAGES

- Quick and easy assembling
- Tool-free and screwless mounting
- Multiple times pluggable
- Press-Fit advantages

SIMPLE PROCESSING

REDCUBE PLUG uses standard tools for the press-fit process. A general hexagonal crimper is used to install the contact on to the wire, this simple lug like crimp set the bond in place. A special posttreatment technology and specific plating of the cable connector guarantee optimal crimping results.



Cross Sections: 4, 6, 10 & 16 mm²

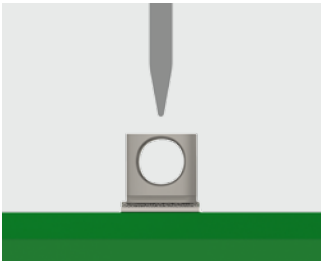
Crimp Connection

CHARACTERISTICS

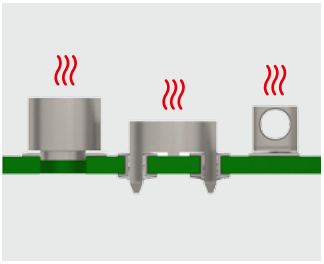
- Standard hexagonal crimping tools
- Gastight and strong crimp connection
- Special plating for optimal crimping results

REDCUBE SMD & THR

REDCUBE SMD and **THR** are the result of the growing demand in electronic market: high current technology in combination with fully automated, timesaving processing.



Pick & Place



Reflow Soldering

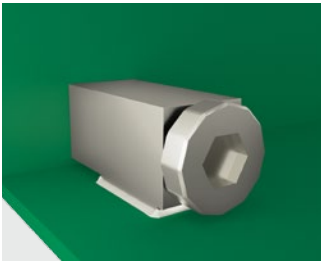
APPLICATIONS

- High current Wire-to-Board and Board-to-Board connections
- Angled assembling of cable, PCB or housing

IMPRESSIVE CHARACTERISTICS

A large connecting area of **REDCUBE SMD** achieves a low contact resistance and best holding forces. The small size of **REDCUBE SMD** allows a high packing density without critical heat development on the PCB.

Ampacity up to 70 A



90° Board-to-Board

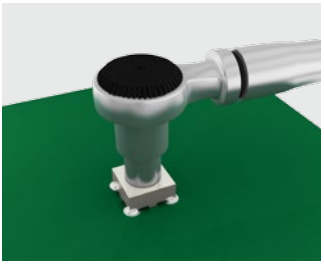
ADVANTAGES

- Simple and fast automated assembly
- High packing density
- Efficient and timesaving soldering process
- Angled assembling of cable, PCB or housing
- Tape & Reel

SPECIAL DESIGN

REDCUBE THR have a special design for best soldering results. Milling from solid material the torques are significant better compared to stamped contacts. **REDCUBE** THR have the highest ampacity of fully automatically processed high-current components.

Ampacity up to 85 A



Best Holding Forces

ADVANTAGES

- Optimal current distribution in multilayer applications
- Fully automated reflow soldering
- High mechanical stability
- Low heat development
- Low profile
- Tape & Reel

Overview

REDCUBE TERMINALS		THREAD SIZE / DIAMETER	TYPE	CONNECTION TO REDCUBE	PACKAGING	CURRENT UP TO (*20 °C)	OPERATING TEMPERATURE
REDCUBE PRESS-FIT		M2.5 – M10	Internal Thread	Screwable Connection	Bulk	500 A	-55 °C to +150 °C
		M3 – M10	External Thread				
		M3 – M10 Ø3.2 – Ø8.2	Right Angled				
		M3 – M8 Ø3.2 – Ø10.5	Two Part				
REDCUBE PLUG		Cable Cross Section: 4 mm² – 16 mm²	–	Pluggable Connection	Bulk	120 A	-45 °C to +125 °C
REDCUBE SMD		M3 – M5	Internal Thread	Screwable Connection	Bulk, Tape & Reel	70 A	-55 °C to +150 °C
		M3 – M4	External Thread				
		M3 Ø3.3	Right Angled				
REDCUBE THR		M3 – M5	Internal Thread	Screwable Connection	Bulk, Tape & Reel	85 A	-55 °C to +150 °C
		M3 – M5	External Thread				

**Operating current is defined by the PCB, cross section of the cable and cable lug. Suggested cable cross section according to VDE 0100.*