



MEDICAL  
EQUIPMENT ONLY



Crabtree



Crabtree



**CAPITAL**  
MEIGaN SOCKETS



A continual programme of new product design and development coupled with the perfection and improvement of existing products, ensures that the Crabtree range caters for the ever-changing needs of the market.

The Crabtree Capital range of power, control, lighting and ceiling accessories are fully design co-ordinated to offer consistent styling and inherent safety features across a broad range of applications



Unique labyrinth switch design minimises visible arc flash and prevents front access to live parts.

Positive drive switch action prevents balancing between the 'on' and 'off' position and gives reliable indication of the contact position.

### **MEIGaN Medical Electrical Installation Guidance Notes**

The MEIGaN guidance notes have been produced by the MHRA (Medicines & Healthcare products Regulatory Agency) and department of health

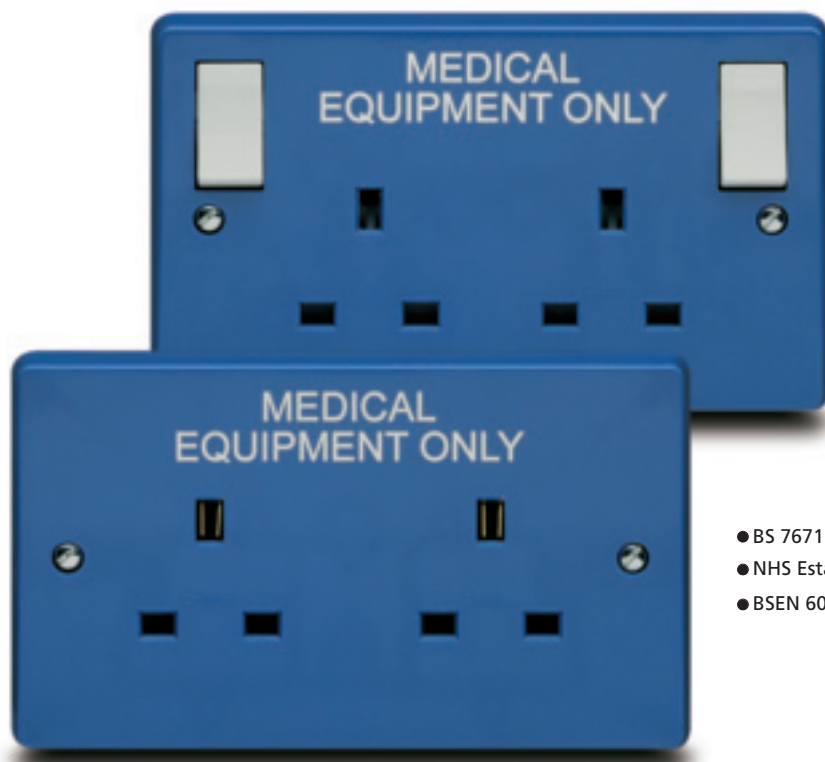
It is intended to be used by healthcare organisations and medical device suppliers responsible for permanent electrical installation of medical devices and associated equipment.

The guidance covers electrical wiring and installation up to the terminals of permanently installed medical devices and to the supply outlets in new buildings, refurbished or upgraded rooms.

### **MEIGaN IPS Socket outlet requirements**

MEIGaN guidance notes state "It is recommended that the IPS socket outlets shall be Switched double pole or un-switched, clean earth sockets, colour coded blue and engraved in white lettering 'Medical equipment only'." Page 18, Para 6.1

The Isolated Power Supply (IPS) is required by MEIGaN to increase the supply resilience by reducing the impact of the first fault conditions downstream of the IPS. The IPS is usually combined with an Uninterruptible Power Supply (UPS) that prevents disruption of the supply owing to problems upstream of the UPS



## **MEDICAL EQUIPMENT ONLY**

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The MEIGaN Guidance notes are supplements to the following relevant requirements of which still apply

- BS 7671 IEE Wiring regulations
- NHS Estates HTM 06-01 Electrical services, supply & distribution
- BSEN 60601-1-1:2006 Medical electrical equipment

## MEIGaN Sockets are all required to be clean earth.

### The reasons for generating a clean earth

If a metal back box is used that is in contact with the building earth, a large amount of current can flow through this path if there is a significant difference in potential between the earth reference bar (ERB) and the building earth at that point. This condition is more likely to occur in an old building where there may be a link between earth and neutral elsewhere in the wiring. The fault current can create large amounts of noise into the equipment that is being fed from the supply.

The presence of this fault can often be demonstrated by measuring the touch voltage between the ERB and the earth of the portable device.

The problem can be reduced by eliminating the current path between the ERB and the building earth provided by the earth connection in the mains socket. I.e. Use of a clean earth socket

## High Integrity Earth

### Twin earth terminals.


All standard Crabtree twin switched sockets include 2 earth terminals to allow one model to be used in all situations where high integrity installation are required. Regulation 543.7.1 & 543.7.2 include the needs of high integrity earth protection as "... requires an accessory to be provided with 2 separate earth terminals"


## Clean Earth.

### Twin earth terminals for both earth bars


The Crabtree clean earth and MEIGaN range are what we believe, the first complete clean earth 2 gang sockets providing 2 earth bars completely separated and easily identified, with 2 terminals on the functional earth and 2 earth terminals on the clean earth.


## Metal Back box

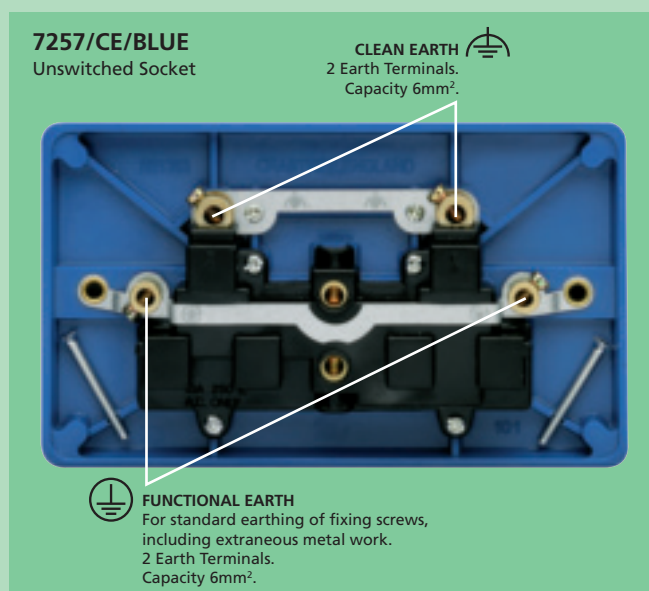
The clean earth cable would be connected directly to the clean earth terminal on the clean earth busbar mounted on the top section of the socket marked with  (clean earth symbol)

The functional earth cable would be connected directly to the metal back box earth terminal, which then would be connected to the functional earth terminal on the busbar mounted on the middle section of the socket marked with  (functional earth symbol)

## Insulated Back box

The clean earth cable would be connected directly to the clean earth terminal on the clean earth busbar marked with 

The functional earth cable would be connected directly to the functional (dirty) earth terminal on the busbar marked with 



DESCRIPTION	LIST NUMBER
<b>MEIGaN IPS sockets BLUE clean earth</b>	
13A DP 2 gang switched socket all BLUE clean earth with outboard white rockers	4307/DCE/BUE
13A 2 gang unswitched socket all BLUE clean earth	7257/CE/BUE
<b>Additional products for Healthcare Installations</b>	
13A DP 1 gang switched socket with GREEN rocker twin earth	AM4304/D/GRN
13A DP 1 gang switched socket with RED rocker twin earth	4304/WH/RD
13A DP 1 gang switched socket all RED twin earth	4304/RED
13A DP 2 gang switched socket with RED rocker twin earth	4306/WH/RD
13A DP 2 gang switched socket all RED twin earth	4306/RED
13A DP 2 gang switched socket with outboard RED rocker twin earth	4307/RD
13A DP switched fused connection unit with RED rocker twin earth	4827/RD
13A DP switched fused connection unit all RED twin earth	4827/RED
13A unswitched fused connection unit all RED twin earth	4828/RED

Dimensions: 1 gang 86mm x 86mm, 2 gang 146mm x 86mm

- All Crabtree sockets conform to BS 1363 – part 2 1995
- All Crabtree switched sockets includes twin earth terminals for use where compliance with BS7671:2008 regulation 543-7 (IEE wiring regulations)
- Crabtree also offer an Anti-microbial accessory range see Main Crabtree catalogue for information



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Although every effort has been made to ensure accuracy in the compilation of the technical detail within this publication, specifications and performance data are constantly changing. Latest details can be obtained from Crabtree.

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