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MEDICAL

APPLICATION PRODUCT GUIDE



CROSS-INDUSTRY MEDICAL EXPERTISE



Since 1947, Omega Fusibili SpA has been synonymous of professional reliability, and engineering excellence.

Today, Omega Group is a **trusted partner in the Med-Tech industry**, providing advanced solutions for medical applications in hybrid operating rooms (ORs), patient monitoring systems, respiratory and critical care, dental clinics, and aesthetic medicine technologies.

We offer a comprehensive portfolio built around leading brands in switching and control components, high-performance connectivity, medical-grade power supplies, and secure power connection technologies such as IEC Lock. Our solutions are designed to meet the demanding requirements of modern healthcare environments, where performance, safety, and durability are strongly requested.

Omega Group provides advanced power solutions **compliant with international medical standards**, featuring low leakage current, high efficiency, and reliable performance in critical applications.

High-reliability connectors capable of tens of thousands – even up to one million – mating cycles, to customized cable assemblies manufactured in cleanroom conditions, using technologies ensuring durability, precision, and efficiency.

Our offering also includes ergonomic and highly reliable human-machine interface (HMI) solutions – such as footswitches, joysticks, and control systems – engineered for intensive use in demanding medical environments.

In addition, our secure IEC Lock systems prevent accidental disconnections, ensuring uninterrupted power supply in operating rooms, ICUs, and diagnostic laboratories.

With deep expertise in standards such as **IEC 60601-1, including 2 MOPP and 2 MOOP** protection requirements, we ensure maximum safety for both patients and operators in patient-care environments.

With its value-added service, Omega Group is more than a distributor. We deliver tailored, value-added solutions that integrate seamlessly into medical devices and systems – helping manufacturers and healthcare providers enhance safety, reliability, and performance.



OVER 32,000
REFERENCES IN STOCK



NATIONAL DELIVERIES
IN 48 HOURS



INTERNATIONAL
DELIVERIES

Omega Group delivers reliable solutions for the Medical Diagnostics Industry, Hybrid Operating Rooms (ORs), Patient Monitoring Systems and Mobility Devices, based on leading technologies in control, connectivity and power.



MEDICAL DIAGNOSTICS
INDUSTRY SOLUTIONS



HYBRID OPERATING
ROOMS (ORS)



PATIENT MONITORING
SYSTEMS



DENTAL CLINICS



AESTHETIC LASERS AND
ENERGY DEVICES



RESPIRATORY
& CRITICAL CARE





ODU Connectors is a German company that has been manufacturing high-performance electrical contacts and connectors for over 80 years. It currently offers specific connector lines for medical electrical applications that meet the requirements of the Medical Device Regulation (MDR), specifically IEC 60601-1. The key feature of **ODU** electrical contacts (and complete connectors) is that they are designed to withstand tens of thousands of mating cycles over their lifetime, without maintenance.

ODU MINI-SNAP®

Circular plastic & metal connector



High voltage solutions for up to 1,000 V AC /16 A
Up to 5,000 mating cycles
2-34 contacts. Up to IP68 rating
Quick mating with push pull locking
IEC 60601-1 compliant

ODU MEDI-SNAP®

Miniature circular connector



5,000 mating cycle and more
500 autoclaving cycles
Advanced electromechanical shielding option, 6 sizes, 3 termination types
Up to 250 V AC/DC, up to 16 A
Coax contact available
IEC 60601-1 compliant. Up to IP68

ODU MINI-MED®

Space-saving and compact product design



1,000 mating cycles and more
2 - 6 contacts, IP67
Cost-effective miniaturized solution including cable assembly with overmolding

ODU-MAC® PUSH-LOCK

Highly modular & customized hybrid connector solutions



Easy pushpull locking
Handles signal, power, HV up to 6,300 V, RF, fluids, data, fiber optics
5,000-10,000 mating cycles
Simple, ergonomic use

ODU-MAC® ZERO



The only NON-MAGNETIC modular connector on the market, making it ideal for installation on MRI machines
4 different cable outlets: straight, right angle, 45° or in-line
Quick separation with snap-in locking
Break-away function / emergency release
Bio-compatibility upon request
Suitable for a wide range of ODU-MAC® modules including coax
Up to 60,000 mating cycles, Up to 70 contacts

FIBER OPTIC



Over up to 100,000 mating cycles
GOF (multimode/singlemode) and POF system solutions
Fiber only and hybrid systems
Available as a fully assembled solution
IP6K8 class in mated condition, IP68 and IP6K9K class also in unmated condition
Operating temp -40°C to +85°C
Expanded Beam and Physical Contact technology

SILICONE-OVERMOLDED SYSTEM SOLUTIONS



Hygienic and robust
Complies with DIN EN ISO 10993-5
new surface with unique haptics
no stick-slip effect

CUSTOMIZED OVERMOLDING



Cost-effective tools
Customized overmolding
Global availability
Fast prototyping and delivery

HIGH SPEED DATA TECHNOLOGY



Analog and digital signals
Reliable and innovative solutions for modern high-speed data transmission
Highest contact safety for reliable transmission in the high-frequency range
EEPROMs for smart communications in the operating room

HIGH DENSITY TECHNOLOGY



High-density technology allows the maximum number of contacts in the smallest possible space
Despite their small footprint, the contacts' dependability and robustness are guaranteed

EMC SHIELDING



Advanced EMC (Electromagnetic Compatibility) shielding solutions
Designed to ensure signal integrity and protect connections from external electromagnetic interference (EMI)

CABLE ASSEMBLIES AND SYSTEM SOLUTIONS



Reliable First-class, customized cable assembly - including under class 9 cleanroom conditions
Space-saving arrangement of hoses, cables and plugs for device modules
Large selection of cables and third-party products in stock for immediate processing

ODU SPRINGTAC CONTACT



Maximum number of contact points Up to 1 million mating cycles
Low mating and demating forces
High vibration and shock resistance
Low contact resistance
High current-carrying capacity

CUSTOMIZED SOLUTIONS



Special insulator, designed in accordance with IEC 60601-1
Implementation of clearance and creepage distances
To satisfy specific customer requirements in the low-voltage and high-voltage range

100% NON-MAGNETIC



Many different standard products in catalogue
Certified as Amagnetic components
Suitable for installation on MRI machines



Herga Technology Ltd. is a **leading UK-based designer and manufacturer of high-quality footswitches**, hand controls, and related switching solutions, with headquarters in Bury St. Edmunds, United Kingdom. The company was founded in **1947** and has built decades of expertise in ergonomic and robust switching products for demanding applications.

Herga's product portfolio includes a wide range of single and multi-pedal footswitches, available with electrical, pneumatic (air), Bluetooth wireless and USB interfaces, suitable for industrial, medical, commercial and OEM applications.

Herga footswitches are engineered for durability, comfort, and safety, with options for custom colours, logos, cable configurations, and protective bases. Many products are certified to industry standards such as IEC/UL 60601-1 for medical use and offer high ingress protection ratings (IPX2 to IPX8), making them suitable for harsh environments.

USB FOOTSWITCH



UL 60601-1 approved
1, 2 or 3 switch foot pedal or hand control
Plug & play technology, no additional drivers required
Windows™, Linux™ & Mac™ OS
Waterproof versions to IPX8 possible

BLUETOOTH FOOTSWITCH



UL 60601-1 approved; accessible battery compartment
1000+ hours use; LED battery indicator
Range up to 10 m
Custom colors/logos
IPX7 (IPX8 on request); 2 x AAA batteries

MD FOOTSWITCH SERIES

UL 60601-1 approved



UL 60601-1 approved
Combines electrical and pneumatic switches with high flexibility
Combines standard electrical footswitches and puck (bellows) switches
IPX7 protection (IPX8 on request)

PNEUMATIC SWITCH



PVC Housing
100mm diameter
Operating temperature +10°C to +40°C
Available with or without a mounting base

ELECTRIC HAND CONTROL



Ergonomic design with large, easy-to-use buttons
Available in IP54 or IP68 versions
Interlockable switches
Lightweight construction
Large, robust hook available

PNEUMATIC HAND CONTROL



2, 4 & 6 way variants available
Ergonomic, comfortable design with softtouch buttons
Curly or straight tubing
Multiple colour and layout options
Compatible with 6891 airswitches
Fully waterproof



COSEL is a Japanese company that has been manufacturing power supplies, AC/DC switching devices, DC/DC converters, and filters for nearly 60 years.

Distinctive features include high quality, reliability, energy efficiency, and durability, along with high safety standards, often complying with international regulations for medical devices.

PCA SINGLE OUTPUT

Medical Safety Approvals (ANSI/AAMI
ES60601-1, EN60601-1 IEC60601-1-2 4th Ed.)



Leakage Current (0.50mA MAX)
Low Profile (41mm) for 1U Applications
Output Voltage Adjustable to near 0VDC
Remote Monitoring via Communication Interface, Alarm Function
AUX (Selectable Voltage Range 5V-12V)
Digital Interface RS232 or PMBus

AEA BF RATED



Small Foot Print, High Power Density
Medical Safety Standards ES60601-1,
EN60601-1 3rd Edition, UL62368-1
Leakage current 3 mA @240 VAC
Output Voltages 24V to 48VDC
High Peaking up to 3 times convection
rating
Less than 1U high (600W only)

GMA BF RATED



2" X 4" Industry Standard footprint
Medical Safety Standards
ES60601-1, EN60601-1 3rd
Edition, UL62368-1
Leakage current 13/30 100/240
Output Voltages 12V to 56VDC

AC/DC 2MOPP BF RATED UMA



2" X 3" Industry Standard footprint
Medical Safety Standards ES60601-1, 3rd
Edition; BF RATED
UL62368-1
Leakage current 0.2/240 VAC
Output Voltages 5V to 48VDC

MH SERIES PCB MOUNT



High Isolation up to 3KV
2 MOOP
Wide Input Range 4:1
Remote On/Off
UL62368-1, EN62368-1, EN60601-1 3RD Ed
SIP 8 Foot Print
Output Voltage Adjustment
OCP Auto-Recovery
Output 3.3 to 15 VDC and +/-12 & 15 VDC

COSELSYNC. CXLA SERIES

AC-DC Medical Adapter (BF)



AV & ICT, and Medical Safety Approval:
IEC62368-1, IEC60601-1 Ed. 3.2. 2 x MOPP
Extremely Low Leakage Current
Efficiency: Compliant with DoE Level VII
No-load ≤ 0.15 W
Wide Operation Temperature Range:
-30 °C to 70 °C (with power derating)
Interfaces: AC Input C14, C8, C6. DC
Output Plug Type: 5.5x2.5 Barrel
Straight, Min. DIN 4P with Lock, Others



APEM is a globally recognized company specializing in the design and manufacturing of **high-quality human-machine** interface (HMI) components. Founded in 1952 and headquartered in France, APEM has built a strong reputation for innovation, reliability, and precision engineering. The company offers a wide range of products, including switches, joysticks, keypads, and indicator lights.

APEM is part of the IDEC Corporation group, strengthening its global presence and technological capabilities.

With manufacturing facilities and offices around the world, APEM serves customers globally while maintaining high standards of quality and performance.

PBA: METAL PIEZO SWITCH



Diam. 16, 19, 22 or 30 mm bushing
Sealed to IP68 or IP69K
Easy to clean metal surface
Long life (50 million cycles)
Ring or dot illumination
Custom configurations

IX: COMPACT NO/NC



12 mm diameter compact bushing
Flexible elastomer membrane actuator
Recommended for harsh environments
Illuminated or non-illuminated
Sealing : IP67, IP69K
Marking on request

METAL PIEZO KEYPADS



In standard 12 keys. Smooth aluminum front face for a modern design
Easy to clean. Protected against water, dust and frost.
Wear-free, no consumption
No risk of unintentional activation by wind or water

MEMBRANE SWITCH PANELS



Entirely customizable graphic design
Tactile feedback: integration of snap domes with different forces
Visual feedback by integration of LEDs
Indestructible marking printed on rear of upper polyester layer
Sealing up to IP65/IP67 and resistance to salt spray
Long life: up to 1 million cycles
Connection and output interface: choice of connector and pitch

MINI JOYSTICK NV SERIES



Compact 5-way navigation thumb controls, switching technology
4 or 5-direction switch-based joystick (4 directions + pushbutton)
Bushing Ø 16 mm
Sealed to IP69K
Robust: shock, vibration and salt spray resistant
1 million lifecycles

MINI JOYSTICK TS SERIES



TS series thumbstick
Proportional two axis joystick in a miniature package
Available with USB output and illuminated ring
Non-contact Hall-effect technology
IP67 above panel sealing
Redundant outputs available

IP SERIES SWITCHES



Versatile range easy to customize
Illuminated or non-illuminated momentary action pushbuttons
Sealed to IP67
Round or square actuator
Numerous terminal options, gold plated silver contacts

AV SERIES: METAL AND ROBUST PUSH BUTTON SWITCH



Ø 16, 19, 22 or 30 mm
Momentary (NO) or NC/NO latching
Actuator and bushing: nickel plated, chrome plated, varnished polished or stainless steel
Flat or curved actuator available
Marking and illumination available
Front panel sealing: IP65

TOGGLE SWITCHES



Wide range with multiple ratings; sealing up to IP67 and IP69K; various lever finishes and sealing boots available
Up to 3 positions switch, with momentary or alternate functions
PCB solder lugs, quick-connect or wire wrap termination options
Numerous ratings, sealing, lever finish options and sealing boots

E-STOP SWITCHES



Emergency Stop Switches
Ø 16 and 22 mm
Front sealing: IP65
Approved according to EN 60947-5-1, EN 60947-5-5
Illuminated or not-illuminated

ROCKERMEC SWITCH SOLUTION



Consists of two Multimec™ 5E switches, a sealing that also provides functionality and a rocker cap called 10A
Small dimension 10.6 x 28 mm, h=12.15 mm
Panel sealed to IP67
Lifetime (Sealing): 500,000 cycles
Standard cap colors: grey, red, black and frosted white
Standard legend options available
Available as a module

ULTRANAVIMEC™ NAVIGATION SOLUTION



Ideal for applications where space is limited
Five positions: a select button in the middle and four navigational positions around it
LED illumination via PCB-mounted chip-LEDs
Compact solution Ø22.14 mm, h=7.15 mm
IP67 - Lifetime (Sealing) 500,000 cycles
Standard cap colors: blue, grey, red, black, signal white and frosted white.
Standard legend options available
Available as a module

INDUSTRIAL INDICATORS: (LB/LBW SERIES)



IP65 LED sealing
LBW: Ø22 mm mounting hole - 26mm round or square operators
LB: Ø16 or Ø18 mm mounting hole - 18 or 22 mm round, square or rectangular operators
Up to 3 contacts (silver-gold plated) up to 5 A
Fully qualified: UL, CE, TUV, CCC, CSA

Q10 SERIES LED INDICATOR



5 mm flush diffused LED, standard, hyper bright or water clear
Flush chamfered bezel style (200 mm long)
Available in RGB
IP67 sealing option (EN60529)
Temperature Range: -40 °C to +85° C
Life Expectancy: 100,000 hours
Stainless Steel 316L

FINGERTIP PROPORTIONAL SERIES 3000



Hall effect sensing, 1,2 or 3 axis
PWM, CAN J1939, CANopen
Low profile (less than 20 mm below panel)
-25 °C to +70 °C - 5 V or 3.3 V
IP66. Mechanical life: 10 million cycles
EMC Emissions Level: EN61000-6-3:2001, CISPR 22:2005, Class B 30 MHz-11GHz
ESD: EN61000-4-2 (extended)



IEC Lock by Scolmore, an international group specializing in high-quality solutions, is the patent holder for IEC Lock technology, developed to enhance the safety and reliability of power connections. IEC Lock cables feature a patented locking mechanism that prevents accidental disconnection of the plug from the IEC socket, ensuring a stable and continuous power supply. Compared to standard IEC cables, IEC Lock models are designed to withstand vibrations or accidental pulls, drastically reducing the risk of accidental disconnections in environments such as operating rooms, intensive care units, or diagnostic laboratories.

POWER CORDS



C13 or C19 sockets with locking system
International plugs, also 90° version
Cables colors: black, red, orange, blue, white

C13 + REWIRABLE SOCKET



Current/Voltage: 10A 250V
Wireable
Compact size
Also 90° version

C13-C19 PANEL MOUNTING SOCKETS



C13- Current/Voltage: 10A 250V
C19- Current/Voltage: 16A 250V
Locking system, multi-tier modules available

C19 + REWIREABLE CONNECTOR



Rear Release Locking Mechanism
Rewireable. Anti-Vibrate
Fits any standard C20 inlet. Easy pull handle
16A Max / 250V~ (Europe & Australia)
20A Max / 250V~ (USA)
Slotted and Cross head housing screws
Appliance inlet suitable for cold conditions

CX PANEL MOUNT CONNECTOR



Secure Locking Side and Bottom Tabs
10A, 15A, 16A, 20A (125V-250V)
Used on PDUs, servers and most network devices
Designed to fit 1.5mm panels
Will sit alongside the current PA13 and PA19 range

C14 IEC DUAL LOCKING CONNECTOR



Secure Locking Side and Bottom Tabs
Cannot be accidentally pulled or vibrated out of the outlet
A European, USA, Canada, Australian, and Japanese approved Dual Locking C14
10A / 250V~ (Europe & Australia)
15A / 250V~ (America, Canada & Japan)



OTHER MEDICAL SOLUTIONS

Lumberg



HIGH CURRENT CONTACTS



High Current Contact bush for tab contacts (standard) for PCB and lead frames

Mating with tab contact: Thickness 0,5 / 0,8 / 1,0 / 1,5 / 2 mm

Plugable from top, bottom or lateral direction

Rated current: 60 A at 20° C. Possibility up to 200 A

Applicable for Reflow soldering on PCB and Laser welding on lead frame

With or without soldering pin

Approvals: LV215

CIRCULAR CONNECTORS M16, SERIE 03



Threaded joint (diameter 16 mm). Metal housing (nickel plated)

IP40 / IP68, Solder terminals

IP68, Crimp contacts for 5;6;8; pin configuration - AISG

3 to 14 poles (flash gold-plated or goldplated)

Rated current : up to 5 A

Rated voltage : up to 250V AC

MICROMODUL 1,27MM & RAST 1,5-2,5MM CONNECTORS



IDT (Insulation Displacement Technology) even in custom lengths

From 4 to 26 contacts (Micromodul)

1,2A per contact @ 32 VAC. THT or SMT

Direct and indirect mating for cable-to-board and cable to cable connections (RAST)

RAST standard keying prevents mismatching

For signal and low load currents up to 3A (1,5 mm) and 6 A (2,5 mm)

JOHNSON ELECTRIC



ROTARY DC SOLENOIDS



Accurate position and speed control using PWM, suitable for sensitive medical devices

Low-noise, shock-free motion ideal for patient environments

Long life (>100 million cycles) enabling low maintenance and continuous operation

LINEAR TUBULAR SOLENOIDS



Delivers strong force for short strokes with long life (~25 million cycles)

Available in various sizes, push/pull configurations, and magnetic latching options

Resistant to shock and vibration, suitable for harsh environments and lock/latch applications

MICROSWITCHES



Ultraminiature, Subminiature and Miniature series

Comply with UL, EN, CSA, and CCC standards

Maximum Electrical Voltage 250 VAC

From IP40 to IP68



4000 SERIES BUCANEER



Miniaturized and versatile circular connector (19,7mm diam over coupling ring)
Quick-turn bayonet coupling mechanism to connect cable rapidly
Rated to IP66, IP67, IP68 & IP69K standards
3-12 contacts. Up to 13 A, 600 V AC/DC
Max cable O/D 7 mm
UL, CSA & VDE approvals

6000 SERIES BUCANEER



Circular connector with an easy to use 30 degree locking mechanism
Environmental sealing up to IP68 and IP69K
Available with rugged metal or plastic housings
2-22 contacts. Up to 16 A, 227 V AC/DC
Max cable O/D 10 mm
UL, CSA & VDE approvals

DATA CONNECTORS DUST AND WATERPROOF RANGE



Circular connector for USB applications
Mini-USB, Micro-USB, USB-C
IP66, IP67, IP68 & IP69K protection
Different configurations and locking style
Front + rear & PCB panel mount options
Single & double ended cable / panel mount options (1m, 2m, 3m, 5m)



CLASS CC & J FUSES



Class CC Fuses:
600 V, 200 kA interrupting rating
Size: 13/32" x 1 1/2"
Rejection design (prevents lower-rated fuses). Range: 0.1-30 A
Class J Fuses:
600 Vac, ≥200 kA interrupting rating
Current-limiting
Not interchangeable with other classes

BS88 FE FUSES



BS88 fuse (complies with British electrical safety standards)
BS88 (Part 1 and Part 2) and IEC 60269-1 / 60269-2
Wide variety of current ratings and nominal voltage options
Ensures safe and reliable circuit protection compatible with these standards

FUSE DISCONNECTOR CH SERIES



DIN-rail fuse holders for IEC 10x38 fuses
Available with or without indication
1, 2, and 3-pole versions
IP20 finger-safe design
Wide range of accessories available
Can be ganged together for specific application needs



MOTORIZED ASSISTANCE



Swift electric help for medical gear.
Hygienic design and stainless-steel suitable for clean rooms

AUTOMATION & MOTORIZATION



Electric traction with an IT system for autonomous and secure operations

SIMPLIFIED SOLUTIONS TO HELP HEALTHCARE WORKERS



DIRECT PATIENT ENVIRONMENT ACCORDING TO IEC 60601-1



Maximum patient and operator protection IEC 60601-1 sets out stringent requirements for protection against electric shock in medical applications where patients and operators may come into direct contact with electrical equipment and systems.

To minimize this risk to a minimum, manufacturers must always integrate two protective measures into their products:

- 2 MOPP (Means of Patient Protection) > Protective measures for patients
- 2 MOOP (Means of Operator Protection) > Protective measures for operators

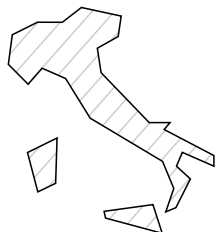
The patient environment is the space in which intentional or unintentional contact can occur between the patient, the operator and parts of the Medical Electrical Equipment (ME Equipment). A patient is a living being undergoing a medical, surgical, or dental procedure. This concept is aligned with the definition of an active medical device under the MDR (Medical Devices Regulation (EU) 2017/745). Compliance with IEC 60601-1 supports meeting relevant safety requirements of the MDR. The IEC 60601-1 standard applies to medical electrical equipment and systems intended for use in the patient environment, including those that may come into direct physical or electrical contact with the patient, or are located in the immediate vicinity of the patient.

In applications where the equipment or systems are not intended to be used within the patient environment, protection of persons other than the patient (e.g., operators or medical staff) through two Means of Operator Protection (2 MOOP) is generally considered sufficient.



OUR OFFICES IN EUROPE

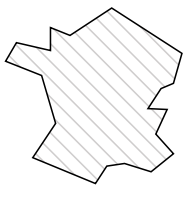
ITALIA



1300 sqm. of commercial offices
5200 sqm. warehous
7100 Pallet spaces
15000 Locations



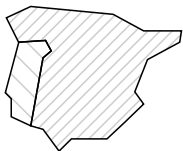
FRANCE



300 sqm. of commercial offices
600 sqm. warehous
1200 Pallet spaces
4000 Locations



SPAIN AND PORTUGAL



400 sqm. of commercial offices
700 sqm. warehous
450 Pallet spaces
7000 Locations



AUTOMATED INNOVATION

SERVICE

- Delivery in 48 hours
- Over 32,000 part numbers instock
- Updated on-line catalogue
- Yearly fixed prices



CUSTOMIZATION

- Custom packaging
- Barcodes
- Fuses with custom characteristics
- Kit on request



AUTOMATION

- Wiring products
- Technical modifications
- Assembled





omegafusibili.it



Omega Fusibili S.p.A.

Via Edison, 10 - 20057 Assago (MI) - Italia
Tel. +39.02.488481 | Fax +39.02.4882522
omega@omegafusibili.it | www.omegafusibili.it



Omega Composants Sarl

220 rue Ferdinand Perrier
69800 Saint-Priest - France
Tel. +33 (0)4 78 90 85 64 | Fax. +33 (0)4 78 90 84 65
omega@omegacomposants.fr | www.omegacomposants.fr



Ermec S.L.

Avda. de Arraona 85 - Nave 4
08210 Barberà del Vallès
Barcelona (SPAIN)
Tel. +34 93 450 1600
info@ermec.com | www.ermec.es



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