




PANEL SWITCHES

PCB SWITCHES

LED INDICATORS

JOYSTICKS

PANEL SOLUTIONS



YOUR PROJECTS, OUR COMPONENTS



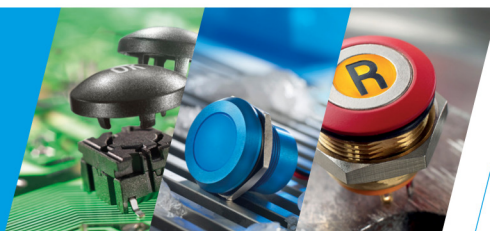
A LEADING WORLDWIDE MANUFACTURER OF HUMAN- MACHINE INTERFACE PRODUCTS AND SOLUTIONS SINCE 1952

SWITCHING TECHNOLOGIES, OUR CORE BUSINESS

Organized in 3 businesses, APEM's HMI solutions are designed, fully tested and qualified for demanding applications. They guarantee the highest level of robustness and reliability to meet international standards.

Components

Toggle, pushbutton, rocker, slide, tact and rotary switches, industrial controls, LED indicators, for panel or PCB: APEM offers the broadest range in these switch markets.



Joysticks

Easy to operate and highly reliable, APEM joysticks are suitable for all size and shape requirements from thumb and finger operation to full hand grip products.



Panel solutions

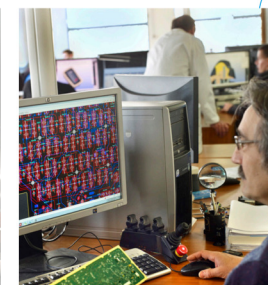
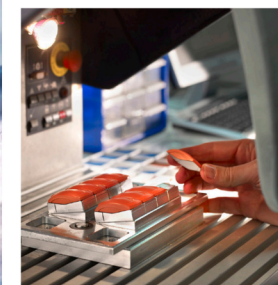
Relying on APEM's already qualified product ranges and mastery of the main panel technologies, the teams are able to design complete and fully customized HMI solutions for customers.



TECHNICAL AND INDUSTRIAL EXCELLENCE

APEM controls all phases of product development and manufacturing with vertically integrated production and advanced technologies.

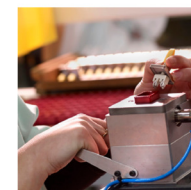
APEM's dedication and experience facilitates a quick and effective response to the most complex requirements. This technical expertise ensures the continuity of APEM's vast portfolio of products and the strength of our valued partnerships.



YOUR EXPERT PARTNER

APEM's expansive product range is comprised of more than 50,000 part numbers. Colors, markings, finishes, shapes and dimensions offer an unlimited number of options, creating complete custom solutions for unique customer requirements.

For over 65 years, top manufacturers worldwide have placed their trust in APEM to develop and manufacture reliable high performance HMI components & solutions for their most demanding applications. APEM continues to meet and exceed these demands with innovation, quality and service.



APEM EXPERTISE

APEM DEVELOPS, PRODUCES AND SELLS A WIDE RANGE OF HUMAN MACHINE INTERFACE (HMI) PRODUCTS. HMI PRODUCTS CONSIST OF A DIVERSE VARIETY OF SWITCH PRODUCTS.

Since its creation in 1952, APEM has chosen to vertically integrate all phases of production. The raw materials needed in manufacturing panel or PCB switches and indicators, such as plastic pellets or aluminum coils, are all processed in our production facilities.

Based on the industrial and technological experience acquired during its 70 years' existence, APEM controls all phases of product development and manufacturing. This industrial expertise ensures the continuity of our product ranges over time and is a guarantee for sustainable partnerships with our customers.

APEM is committed to mastering new tools and current technologies in order to offer its clients up-to-date solutions that are always at the cutting edge of innovation.

1 Product Development

Our products are internally designed and developed by our team of engineers. Product prototyping is facilitated by the use of 3D printers, EDM/WEDM machining centers and laser cutting machines which helps us develop new product concepts.

2 Industrialization & Tooling

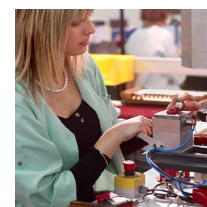
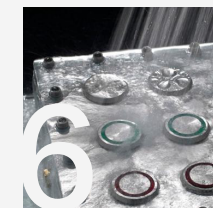
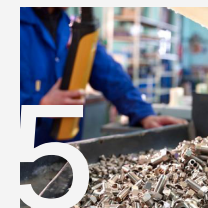
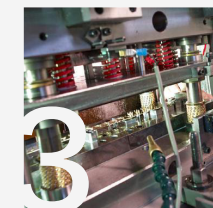
APEM manages the production of its plastic injection molds and other tooling at various worldwide manufacturing locations. The control of the industrialization and tooling phases allows APEM to meet extremely high quality standards.

3 Turning & Stamping

Various APEM tool shops have turning and stamping capabilities. From simple hand turned lathes to hydraulic presses and automated systems for mass-produced items. APEM's turning capabilities include CNC and CAM type machines handling various materials such as brass, aluminum or stainless steel up to 316L in diameters from 2 mm to 30 mm. Metal parts are stamped from bi-metal reels of brass, copper or stainless steel in presses from 20 to 160 tons.

4 Molding

Several APEM locations produce thermoplastic parts using Arburg and Engel molding machines. These machines are capable of high volume part production and run 24 hours a day 7 days a week. Many types of molding processes are used: in-mold process, automated or robotized over-molding of materials including thermoset, thermoplastic, silicone and elastomer.



5 Electroplating

Most of electroplating processes are carried out by APEM in the original factory in Montpezat de Quercy. Depending on final product specifications, primary parts are then plated with different metals: nickel, gold, silver or palladium. APEM's high quality requirements include X-ray testing of primary parts for plating thickness and resistance. This production phase involves the use of acids and toxic chemicals, making operator safety a top priority. APEM is increasingly committed to producing in conformity with the REACH regulations, which ensures protection of the environment.

6 Testing & Inspection

Thanks to a fully integrated quality management system, APEM is recognized in the HMI market for the quality of its products. All APEM production plants are ISO 9001 certified and the French plants have recently obtained the ISO TS and ISO 14001 certifications. In-house laboratories test and qualify all products to international standards. The French test laboratories are UL certified environments. Additionally, APEM products are tested by specialized test houses for specific qualifications (VDE, ATEX, CECC or MIL spec.). Products used in extremely harsh environments (defense, oil industry) are 100 % tested.

7 Assembly

Final stage of production for a switch or an indicator the assembly can be manual, semi-automatic or fully automated. The assembly of our finished products requires particular detail and precision from APEM teams. The assembly stage includes mounting of primary parts, product wiring, hot marking, laser marking, pad printing as well as mechanical engraving and UV printing. Our assembly workshops integrate ESD protected areas for our electrostatic-sensitive products.

8 Hub & Logistics

From order entry to delivery, our logistics chain makes all necessary efforts to deliver on time to customers all around the world. APEM opened its European logistics hub in Montauban (France) to centralize finished product stock management and increase the reactivity and flexibility of international deliveries.

APEM CUSTOM CAPABILITIES

THE UNIQUE EXPERTISE OF APEM ALLOWS OUR COMPANY TO BE ONE OF THE FEW PLAYERS IN THE MARKET OFFERING SUCH A WIDE RANGE OF HUMAN MACHINE INTERFACE PRODUCTS WITH INFINITE CONFIGURATION AND CUSTOMIZATION POTENTIAL.

APEM offers 3 types of responses to customer's request

CHOOSING A STANDARD COMPONENT

Thanks to a wide variety of series, our experts will help the customer to find the right switch or indicators in our catalog. More than 300 standard series are available!



Toggle switches



Pushbutton switches



Rocker switches



Subminiatures, slide, dip and coded PCB switches



MEC tactile PCB switches



LED indicators

ADAPTATION OF A STANDARD PRODUCT

The adaptation of a standard product (marking, connection, shape, backlighting...) allows for the creation of a product meeting customer specific requirements.

Based on technical know-how and a diversified product offering, APEM can propose rapid and simplified product customization without excessive development costs.

DEVELOPMENT OF COMPLETE EXCLUSIVE INTERFACE SOLUTIONS

APEM professional dedicated teams are happy to assist customers in the development of complete turnkey solutions with responsiveness and flexibility.

With a great development capability, the control of numerous technologies and integrated processes (lean engineering, APQP model) allows us to respond effectively to all switching issues.

APEM's Know-how

75 % of APEM's turnover is achieved with custom products.

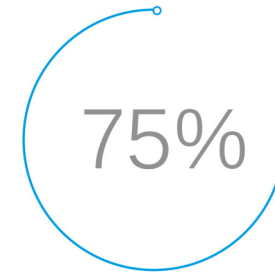
STANDARD - CUSTOM

Our team of experts in HMI customization relies on controlled processes to exceed customer expectations.

This technical expertise ensures the continuity of all our ranges. Our teams rely on this expertise developed over the years to customize human machine interface products effectively and at a lower cost.

Submitting a custom product project to APEM's teams provides the assurance of having:

- A unique contact person for all phases of design and production
- A product qualification system
- Advanced design software



Reliable products for demanding environments

In the market segments served by APEM, HMI solutions can be safety critical and/or subject to harsh conditions (extreme temperatures, vibrations, shocks, high pressure washing, corrosive substances...).

In these environments, the RELIABILITY of hardware, electronics and software is critical to guarantee the SAFETY of the operator or user. APEM offers robust HMI components fully tested and qualified for these demanding applications to guarantee the highest level of robustness, and reliability in line with national and international standards.



APEM STANDARD PRODUCTS / COMPONENTS

The chart below highlights APEM's basic offering of standard HMI components, which are continuously supplemented to satisfy market and new customer needs. Full series technical information is available on our website: for each product series you will find key features, technical specifications, mounting drawings and a selection of the most typical models.

Find all the series available for each product family on www.apem.com



PANEL SWITCHES											
	Toggles	Pushbutton Switches	Rocker Switches	Micro Switches	Pushwheel Switches	Keylock Switches	Industrial Controls	Emergency Stop	Switch Guards	Sealing Boots	Hardware
PCB SWITCHES											
	Slide Switches	Tactile Switches	DIP & Coded Rotary Switches	Toggle Switches	Pushbutton Switches	Rocker Switches	Emergency Stops	MEC Switches			
LED INDICATORS											
	Professional Grade Panel Mount LED Indicators	Night Vision (NVG) Compatible LED Indicators	Rear Mount LED Indicators	Snap-in Plastic LED Indicators	Based LED Indicators for Bulb Replacement	Halo Panel Mount LED Indicators					

LET US HELP YOU

TO CHOOSE THE RIGHT COMPONENT

CUSTOMIZATION FOR YOUR EXACT NEEDS

TERMINAL OPTIONS

- Flying lead
- Label
- Resistance
- Connector
- Cable

MATERIALS

- Thermoshrinkable sleeves for better electrical insulation
- Tube + epoxy
- Overmolding ensuring rear panel sealing

MARKING

	COST	DURABILITY	BACKLIGHTING
Pad printing	😊	😊	😞
Hot stamping	😊	😊	😊
Laser etching	😊	😊	😊
Chemical	😞	😊	😊

COLORS



Plastic parts in select materials are available in specific colors (RAL, pantone) or create a completely custom color. Metal parts can be anodized in a wide range of colors.



FINISHES



Raw brass



Stainless steel



Bright chrome plating



Satin chrome plating



Black chrome plating



Gold plating



Satin bright gold



Satin light gold



Polished bright gold

SHAPES

Metal actuators can easily be adapted:

- Shape
- Diameter
- Length

For plastic parts, the change of injection mold cavities allows for the creation of new shapes.

ACCESSORIES

- Switch guards
- Rubber boots
- Hardware
- Caps (MEC)

EXPLORE THOUSANDS

OF CUSTOMIZATION SOLUTIONS

AD PRINTED MARKING TO INDICATE THE ACTUAL FUNCTION OF THE SWITCH IN THE CUSTOMER'S APPLICATION

SPECIFIC BACKLIGHTING USE OF CLEAR POLYCARBONATE INSTEAD OF PLAIN POLYAMIDE FOR VISIBILITY IN ANY VIEWING ANGLE

IR SERIES

CUSTOMIZED FOR INCREASED VISIBILITY



LARGE DIAMETER: 16 MM



FRONT PANEL SEALING



CUSTOMIZATION MADE: COLOR, MATERIAL, MARKING

APEM offers a large range of components consisting of panel or PCB switches & indicators, in different colors, markings, finishes, shapes and dimensions... creating an unlimited combination of possibilities.

If you have a specific requirement, an APEM team professional is happy to assist you in the development of a complete turnkey solution with responsiveness and flexibility.



APEM

an IDEC company

AT A GLANCE



70 YEARS OF TRUST BUILT ON QUALITY



1,400 EMPLOYEES WORLDWIDE



50,000 + PART NUMBERS

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