A TAILORED PRODUCT

Because the cabin of an off-road vehicle requires an ergonomically functional environment, APEM offers a large range of more than 30,000 part numbers, based on existing or slightly adapted components. Different combinations of colors, markings, finishes, shapes and dimensions provide unlimited possibilities, allowing APEM to create the perfect solution for your cabin.

Turnkey interface solutions with numerous advantages

Simplicity, reactivity and flexibility without heavy investment cost...

Durable products

Sealing up to IP69K
UV-resistant materials
Specific sealed connections
Resistance to shocks and vibrations

| PANEL MOUNTED SWITCHES | PCB MOUNTED SWITCHES | JOYSTICKS | SWITCH PANELS | LED INDICATORS |

OUR EXPERTISE AT YOUR SERVICE

A GLOBAL APPROACH FOR MORE SIMPLICITY

The explosive increase in the number of options and equipment connected to a vehicle imposes the choice of bus-type interconnections (CAN J1939...).

APEM simplifies the integration of these new technologies by offering ready-for-use CAN solutions.

Our teams can develop complete inferface solutions combining components (switches, keypads, indicators, joysticks), standard electronic board and programming.

LONG-TERM RELIABILITY

The capital investment represented by the purchase of an off-road vehicle has to be amortized and made profitable. For this reason, users give priority to robust and reliable vehicles, whatever the conditions of use.

Controlling all the phases of manufacturing, APEM has been offering quality products for more than 60 years. Our interfaces have proven their effectiveness in harsh environments. Dust, moisture, mud, grease or hydrocarbons do not affect their life expectancy.

WORLDWIDE SALES & CUSTOMER SUPPORT

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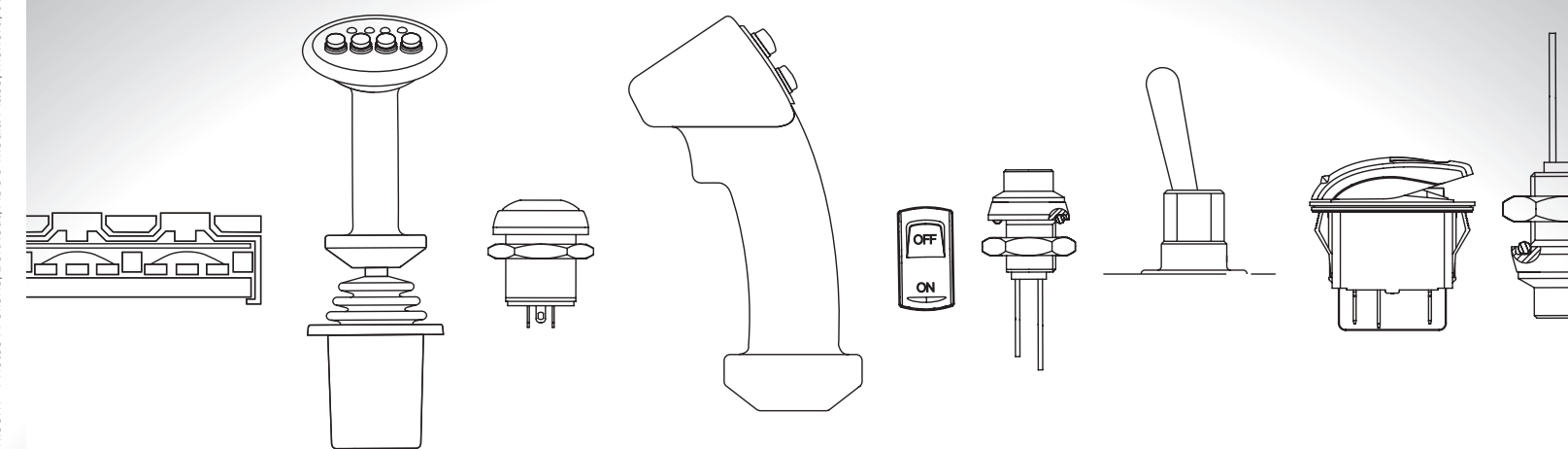danmec@mec.dk

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MORE THAN 130 DISTRIBUTORS WORLDWIDE
(Complete list available on www.apem.com)

OFF-ROAD VEHICLES

A WORLD OF SWITCHING CAPABILITIES

PROVEN RELIABILITY

Long life

GLOBAL SOLUTION
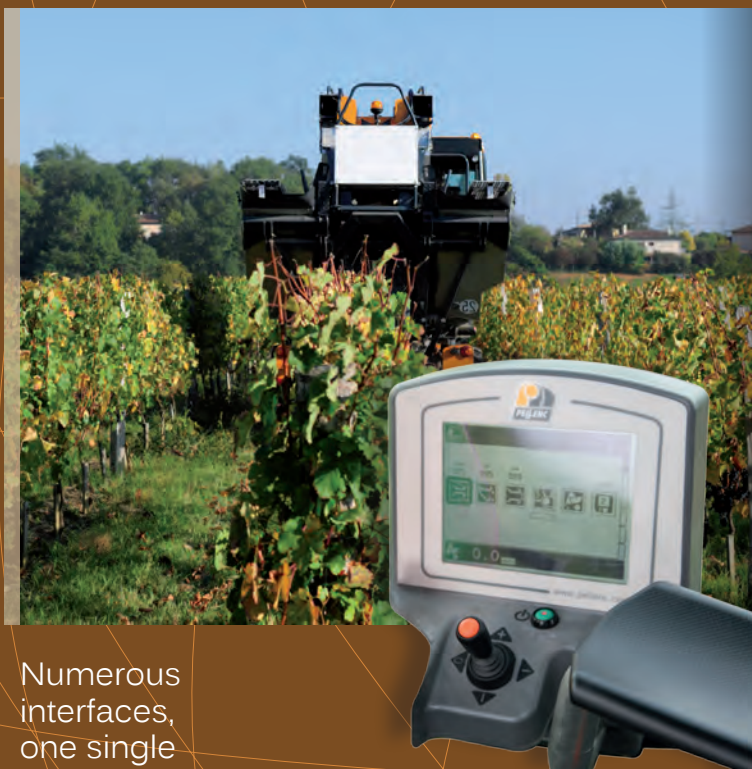
Numerous interfaces, one single supplier

CUSTOMIZED DESIGN

Precise and visually-appealing digital printing

SPECIFIC TECHNOLOGY

Intuitive ergonomics, patented design

100% RESISTANT

Robust contacts

PANEL MOUNTED SWITCHES | **PCB MOUNTED SWITCHES** | **JOYSTICKS** | **SWITCH PANELS** | **LED INDICATORS**

PANEL MOUNTED SWITCHES

Series	Description	Key features	Customization	Technical specifications
9/8/82	Metal keypads	Brushed 316 stainless steel / Color legends / Low behind-panel depth / Backlighting up to 3 colors / Illuminated rings and legends / Supplied w. stainless steel front face (Series 8) / Round keys Ø14mm (Series 82)	Independent key modules / Round keys (Ø17, Ø20), square keys (17x17, 22x22) (Series 9) / Square keys 12.5x12.5 or 15x15 (Series 8) / Braille embossing / Supplied with or without front face / Optional addition of indicators or displays / Compatible w. standard APEM interfaces: CAN, USB, RS232, ZigBee / Customizable front face shape and key layout	Indelible recessed marking / Protection up to IK09 (Series 9) or IK07 (Series 8) / 1 million cycles / IP65 / Withstand salt environment
Membrane switch panels	Membrane switch panels	Small thickness (less that 1mm) / Tailored design at competitive cost (low capital investment)	Numerous options / LED indicators / Tactile feedback / Connectors	1 million cycles / IP68
Capacitive switch panels	Capacitive switch panels	Small thickness / Uniform backlighting	Slider, tactile area, proximity detection	Up to IK10 / IP69K / Long life expectancy
Rubber keypads	Rubber keypads	Tactile feedback / Backlighting	-	1 million cycles / IP68
MEC	Tactile switches	Very compact / High quality / Excellent tactility	Illuminated models / Marking / Several key colors / Several operating forces (from 2,5N to 6,5N) / Large variety of key caps (from 5 to 30mm)	IP67 / 10 million cycles / NC/NO version / Double pole version
FP	Large illuminated pushbutton switches	Excellent tactility / Full actuator illumination	Illuminated or non-illuminated symbols / Single or bi-color LED / Wide choice of actuator colors / Pad printing or laser etched marking	Bushing dia. 24 mm, 30mm / Double pole version / Up to 1 million cycles / Momentary or latching

PCB MOUNTED SWITCHES

Series	Description	Key features	Customization	Technical specifications
I	Pushbutton switches	Wide range - 11 products in series / Front mounting / rear mounting (IZ) / Flush version (IA) / Bushing dia. 12mm (IP) / 16mm (IR) / 25mm (IF) / Excellent tactile feedback / Snap-in models (IB, IQ, IF)	Illuminated models / Marking / Wide choice of colors and shapes / Boot for double sealing / Specific hardware	IP67 / Up to 5A / UL versions on request / Hall effect version available for long life expectancy or proportional output
5000	Toggle switches - low current rating	Robust / Compact behind panel / Very wide range / Different bushing diameters (6mm and 12mm) / Locking lever versions	17 standard lever types / 12 terminal types / Various lever finishes / Different lever shapes / Security caps / Numerous insulating caps and sealing boots	Up to 4 poles / 8 electrical functions / Up to 100,000 cycles / Sealed versions / Up to 4A / 30VDC / UL, CSA, CECC or VDE approved versions
12000	Toggle switches - low current rating High quality	Very robust / For harsh environments / High peformance version (12000X778) / Compact behind panel / High sealing level / Locking lever versions		Up to 4 poles / 8 electrical functions / Up to 150,000 cycles / IP 67 / Up to 4A / CECC approved versions
600	Toggle switches - high current rating	Robust / Locking lever versions	Various lever finishes / Different lever shapes / Security caps / Numerous caps and sealing boots	Up to 4 poles / 8 electrical functions / Up to 15A / UL, CSA, VDE and NF approved versions
3500	Toggle switches - high current rating Environmentally sealed	Very robust / For harsh environments / High sealing level / Locking lever versions		8 electrical functions / IP67 / IP69K / Up to 15A / Double pole version / CECC approved models
K	Rocker switches	Wide range / Attractive design / Version with unlocking actuator (KL) / Modules of up to 6 switches with CANBus output (KS)	Illuminated or non-illuminated symbols / Wide choice of colors / Actuator and switch block can be ordered separately / Single of bi-color LED / Connectors for quick mounting / Mounting accessories for different panel cut-outs	Double pole version / Up to 10A / Up to 150,000 cycles / Up to IP68

JOYSTICKS / LED INDICATORS

Series	Description	Key features	Customization	Technical specifications
Q	LED indicators	Wide choice of LED colors / Diameters 6/8/12/14/16/19 and 22mm / Three bezel styles / Three bezel finishes (bright chrome, black chrome, satin grey)	Custom engraving on flush bezel versions / From 2 to 220V / Solder lug/faston terminals or wires	IP67 / UL / 100.000 hours / Low behind-panel depth
1000	Low profile switch joysticks	Easy to install and operate / Compact behind panel / Wide range of handles	Pushbutton color on handle / Output wiring and connectors	Microswitch technology / Up to 5 million cycles / Up to IP67 / Several operating forces / Double pole version
MS/CJ	Proportional joysticks for critical applications	Midsize / Wide range of handles / Easy to drop into existing cut-outs	Number, type and color of pushbuttons and other front face components / Output, wiring and connectors	Hall effect technology / Up to 10 millions cycles / Up to IP68 / Several operating forces / Input voltage: voltage (0 to 35V), CANbus J1939, CANOPEN, USB ...
HG/AG	Hand grip proportional joysticks for harsh environments	Very robust / Wide range of handles	Integration of a custom rubber keypad on front face / Number, type and color of pushbuttons and other front face components / Integration of microjoystick and roller on front face for additonal axis / Output, wiring and connectors	Hall effect technology / Up to 10 million cycles / Up to IP67(AG), IP68(HG) / Several operating forces / Input voltage: voltage (0 to 35V), CANbus J1939, CANOPEN, USB ...
TS	Miniature proportional joysticks	1 or 2 axis / Mounting on joystick or panel / 8 handle options	Output, wiring and connectors	Hall effect technology / Up to 1 million cycles / Up to IP69K / Output signals: voltage, PWM, USB
4000	Potentiometer joysticks	Up to 3 axis / Very robust / Wide range of handles	Pushbutton color on handle / Output, wiring and connector	Potentiometer technology / Up to 5 million cycles / IP65 / Optional microswitches / Output signals: voltage