



CONSTRUCTION MACHINERY

APEM offers high-reliability Human Machine Interface (HMI) products for special vehicles.

With vertically integrated manufacturing, APEM guarantees an uncompromised reliability through its custom product development, manufacturing excellence and outstanding service. APEM offers a very broad range of HMI components designed for off-highway vehicles, including joysticks, switches and keypads.

APEM IN CONSTRUCTION MACHINERY

FIELD PROVEN RELIABILITY

UNPARALLELED RANGE



YOU HAVE SPECIFIC NEEDS, WE HAVE DEDICATED SOLUTIONS



SAFETY
is essential on
construction sites

KL SERIES

The KL rocker is the perfect solution for construction vehicles thanks to its **reliable** interlocking mechanism preventing accidents due to unintended operation.



ERGONOMICS
is critical for
construction workers

TS SERIES

The TS thumbstick is a proportional two axis joystick similar in size and operation to “gamepad” controls, but in a **rugged** industrial package.



PRODUCTIVITY
is key for
construction
companies

XD RT HANDLE

Build the optimal joystick **ergonomics** for the operator by using our large range of HMI components.



EFFICIENCY
driven by innovation

NV SERIES

Instead of an expensive display controller, use our **intuitive** NV to navigate the touch panel while keeping your hand on the joystick.



THE WIDEST RANGE OF HMI COMPONENTS FOR JOYSTICKS

INTEGRATE OUR HMI COMPONENTS IN YOUR DESIGN
OR SELECT OUR CUSTOM JOYSTICK & HANDLE SOLUTIONS



IA SERIES
Field proven reliability



HR SERIES
Versatile range



CW SERIES
Compact thumbwheel



TS SERIES
Miniature hall effect joysticks



IX SERIES
Compact and illuminated



NV SERIES
"push to validate" switch based joystick



IM SERIES
Exceptional tactile feedback



FNR SERIES
Robust and reliable

XD SERIES

Shallow mounting depth < 60 mm
Extremely robust, resists high axial load (1780 N - 400 lbf)

WE CUSTOMIZE OUR FIELD-PROVEN QUALIFIED COMPONENTS TO BUILD YOUR UNIQUE HMI

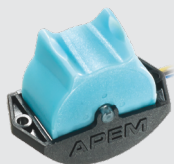


TAILOR-MADE FNR CONTROL



FNR SERIES & CUSTOM ACTUATORS

A rugged rocker available with custom actuator options designed to fit all hand sizes, reduce index fatigue and avoid inadvertent actuation



HR SERIES

Best-in-class thumbwheel



ROCKERMEC

The PCB-mounted compact solution



TOGGLE*

Compact toggle ideal as a joystick-mounted FNR

*see our toggle range on apem.com



MT SERIES

Highly sealed rocker switch

CUSTOM START / STOP SOLUTIONS



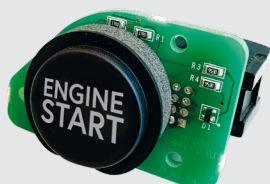
AV30 SERIES

Large illuminated metal switch



FD24 SERIES

Double legend depending on the red/ green illumination



MULTIMEC™ 5G

Illuminated PCB switch sealed up to IP67

CONTACT US TO BUILD YOUR UNIQUE HMI

OUR PRODUCTS

WHETHER IT'S A STANDARD
PRODUCT OFFERING
OR A CUSTOMIZED
SOLUTION, LET APEM'S
DECADES OF EXPERIENCE
WORK FOR YOU

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XD SERIES

HALL EFFECT ROBUST JOYSTICK

TOP APPLICATIONS:
 LOADER, EXCAVATOR, TELEHANDLER, MINING



DESIGNED FOR CONSTRUCTION

- 10 million lifecycles
- Extreme robustness
- Available with CAN bus J1939-71
- Shallow mounting depth
- IP67 above panel sealing
- Up to 1780 N - 400 lbf horizontal load (depending on handle)
- SIL2 / Pld capable

| SERIES | MECHANICAL LIFECYCLES | AXIS | TECHNOLOGY | OUTPUT OPTIONS | | | | | | MOUNTING OPTIONS | ABOVE PANEL SEALING |
|--------|-----------------------|-------------|-------------|----------------|------|--------|-----|-----|---------|------------------|---------------------|
| | | | | Single | Dual | Analog | PWM | USB | CAN bus | | |
| XD | 10 million | 1 to 2 axis | Hall effect | X | X | | | | X | Drop-in | IP67 |

HJ SERIES

HALL EFFECT ROBUST JOYSTICK

TOP APPLICATIONS:
LOADER, DUMP TRUCK



HEAVY DUTY AND FIELD PROVEN

- 5M cycles
- Standard or custom handle
- CAN options available
- Up to IP69K
- Up to 180 Nm horizontal load (depending on handle)
- SIL2 / PId capable

| SERIES | MECHANICAL LIFECYCLES | AXIS | TECHNOLOGY | OUTPUT OPTIONS | | | | | | MOUNTING OPTIONS | ABOVE PANEL SEALING |
|--------|-----------------------|---------|-------------|----------------|------|--------|-----|-----|---------|--------------------------|---------------------|
| | | | | Single | Dual | Analog | PWM | USB | CAN bus | | |
| HJ | 5 million | 1, 2, 3 | Hall effect | X | X | X | | X | X | Drop-in or rear mounting | IP69K |

XF SERIES

SMALL HALL EFFECT JOYSTICK

TOP APPLICATIONS:
COMPACT VEHICLES, ROAD CONSTRUCTION, MINING



AVAILABLE WITH CAN BUS

- 5M cycles
- Many outputs available, including CAN bus J1939
- Available with 1, 2 or 3 axis
- Very compact
- SIL2 / Pld capable
- Up to IP67 above panel sealing

| SERIES | MECHANICAL LIFECYCLES | AXIS | TECHNOLOGY | OUTPUT OPTIONS | | | | | | MOUNTING OPTIONS | ABOVE PANEL SEALING |
|--------|-----------------------|---------|-------------|----------------|------|--------|-----|-----|---------|--------------------------|---------------------|
| | | | | Single | Dual | Analog | PWM | USB | CAN bus | | |
| XF | 5 million | 1, 2, 3 | Hall effect | X | X | X | | X | X | Drop-in or rear mounting | IP67 |

3000 SERIES

PREMIUM HALL EFFECT JOYSTICK

TOP APPLICATIONS:
LOADER, ROAD CONSTRUCTION



COMPACT, PRECISION HALL EFFECT JOYSTICK

- Precision contactless Hall effect technology
- Compact for low profile applications
- Robust with over 10 million mechanical lifecycles

| SERIES | MECHANICAL LIFECYCLES | AXIS | TECHNOLOGY | OUTPUT OPTIONS | | | | | | MOUNTING OPTIONS | SEALING |
|--------|-----------------------|---------|-------------|----------------|------|--------|-----|-----|---------|--------------------------|---------|
| | | | | Single | Dual | Analog | PWM | USB | CAN bus | | |
| 3000 | 10 million | 1, 2, 3 | Hall effect | X | X | X | X | | | Drop-in or rear mounting | IP67 |

HR SERIES

PROPORTIONAL THUMBWHEEL

TOP APPLICATIONS:
EXCAVATOR, TELEHANDLER, SKID STEER



ROLLER AVAILABLE WITH MANY OPTIONS

- Up to 5M cycles
- Electronics sealed up to IP68
- Available with detents, friction, latching and 360° infinite wheel
- 7 colors and 4 shapes in standard
- Illumination of the body in option
- SIL2 / Pld capable

| SERIES | MECHANICAL LIFECYCLES | AXIS | TECHNOLOGY | OUTPUT OPTIONS | | | | MOUNTING OPTIONS | SEALING |
|--------|-----------------------|------|-------------|----------------|------|--------|-----|------------------|---------|
| | | | | Single | Dual | Analog | PWM | | |
| HR | 5 million | 1 | Hall effect | X | X | X | | Rear mounting | IP68 |

CW SERIES

MINIATURE PROPORTIONAL THUMBWHEEL

TOP APPLICATIONS:
EXCAVATOR, TELEHANDLER, LOADER



MINIATURE THUMBWHEEL

- Up to 3M cycles
- Snap-in mounting
- Custom actuator on request
- Spring to center

| SERIES | MECHANICAL LIFECYCLES | AXIS | TECHNOLOGY | OUTPUT OPTIONS | | | | MOUNTING OPTIONS | SEALING |
|--------|-----------------------|--------|-------------|----------------|------|--------|-----|------------------|---------|
| | | | | Single | Dual | Analog | PWM | | |
| CW | 3 million | Single | Hall effect | X | X | X | X | Snap-in | - |

TS SERIES

PROPORTIONAL HALL EFFECT THUMBSTICK

TOP APPLICATIONS:
TELEHANDLER, EXCAVATOR, LOADER



PRECISION FINGERTIP CONTROL

- Illuminated version available
- Ergonomically designed for repetitive operation over extended periods
- Highly reliable: up to IP67 and IP69K sealing
- Easy integration with rear or drop-in mounting & compact size
- Available with multiple handle options and material

| SERIES | MECHANICAL LIFECYCLES | AXIS | TECHNOLOGY | OUTPUT OPTIONS | | | | | | MOUNTING OPTIONS | PANEL SEALING |
|--------|-----------------------|------|-------------|----------------|------|--------|-----|-----|---------|--------------------------|---------------|
| | | | | Single | Dual | Analog | PWM | USB | CAN bus | | |
| TS | 1 million | 1, 2 | Hall effect | X | X | X | | X | | Drop-in or rear mounting | IP67, IP69K |

NV SERIES

NAVIGATOR SWITCH

TOP APPLICATIONS:
ROAD CONSTRUCTION, TELEHANDLER



IDEAL AS DISPLAY CONTROLLER

- Compact momentary micro switching thumbstick
- Available with "push to validate" option, ideal for navigation in display menu
- Enhanced tactile feedback
- Easy integration in joystick handle
- Sealed up to IP69K

| SERIES | MECHANICAL LIFECYCLES | AXIS | BUSHING DIMENSIONS | TECHNOLOGY | TERMINAL OPTIONS | MOUNTING OPTIONS | SEALING |
|--------|-----------------------|------|---------------------|------------|----------------------------|------------------|---------|
| NV | 1 million | 1,2 | Ø16 mm (.629 in) | Switching | Wire leads or connector | Panel | IP69K |

BHN/BL SERIES

PROPORTIONAL PADDLE

TOP APPLICATIONS:
DUMP TRUCK, ROAD CONSTRUCTION



STYLISH AND ROBUST

- Available in 2 heights
- Soft touch sculpted grip
- 5 color options
- Sealed up to IP67
- Custom actuator on request
- SIL2 / PLd capable

| SERIES | MECHANICAL LIFECYCLES | AXIS | TECHNOLOGY | OUTPUT OPTIONS | | | | MOUNTING OPTIONS | SEALING |
|--------|-----------------------|--------|-------------|----------------|------|--------|-----|------------------|---------|
| | | | | Single | Dual | Analog | PWM | | |
| BHN/BL | 10 million | Single | Hall effect | X | X | X | X | Drop-in | IP67 |

FNR SERIES

FNR ROCKER SWITCH

TOP APPLICATIONS:
EXCAVATOR, LOADER, TELEHANDLER



FOR EFFORTLESS FORWARD/REVERSE CONTROL

- 2 or 3 positions, momentary or maintained
- Sealed up to IP67
- 1 NO/NC in each direction
- Illumination with marking
- SIL2 / PLd capable

| SERIES | POLES | MAXIMUM RATINGS | BUSHING DIMENSIONS | TERMINAL OPTIONS | MOUNTING OPTIONS | SEALING |
|--------|---------|-----------------|--------------------|---------------------------|------------------|--------------|
| FNR | 2 NO+NC | 1A /24V | Ø20 mm (787 in) | Flying leads, solder lugs | Panel | IP69K & IP67 |

IA SERIES

DUSTPROOF PUSHBUTTON SWITCH

TOP APPLICATIONS:
EXCAVATOR, LOADER, TELEHANDLER



THE REFERENCE IN THE CONSTRUCTION INDUSTRY

- Dustproof: Membrane on top with no gap between actuator and panel
- Frost, sand and hydrocarbon resistant
- Sealed up to IP67
- Flush on panel
- SIL2/PId capable

| SERIES | POLES | MAXIMUM RATINGS | BUSHING DIMENSIONS | TERMINAL OPTIONS | MOUNTING OPTIONS | SEALING |
|--------|---------|-----------------|---------------------|------------------|------------------|--------------|
| IA | 1 NO+NC | 2A 24VDC | Ø16 mm (.629 in) | Flying leads | Panel | IP65 IP67 |

IX SERIES

COMPACT PUSHBUTTON SWITCH

TOP APPLICATIONS:
EXCAVATOR, LOADER, TELEHANDLER



THE NEXT STANDARD

- Compact
- Available with backlit marking
- Dustproof: Membrane on top with no gap between actuator and panel
- Frost, sand and hydrocarbon resistant
- Flush on panel
- Sealed up to IP67/IP69K
- SIL2/PId capable

| SERIES | POLES | MAXIMUM RATINGS | BUSHING DIMENSIONS | TERMINAL OPTIONS | MOUNTING OPTIONS | SEALING |
|--------|---------|-----------------|---------------------|--------------------------|------------------|---------------|
| IX | 1 NO/NC | 2A 28VDC | Ø12 mm (.472 in) | Solder lugs / Wire leads | Panel | IP67 IP69K |

IM / IP / IS SERIES

COMPREHENSIVE PUSHBUTTON RANGE

TOP APPLICATIONS:
SKID STEER LOADER, GRADER, TELEHANDLER



EXTENSIVE COMPACT RANGE

- Compact
- Available with illumination
- Available with snap action and audible tactile feedback (IM)
- Marking in option
- Sealed up to IP67
- Momentary or latching
- Up to SIL2/Pld capable

| SERIES | POLES | MAXIMUM RATINGS | ILLUMINATED | BUSHING DIMENSIONS | MOUNTING OPTIONS | TERMINAL OPTIONS | | | | SEALING |
|--------------|---------|-----------------------------|-------------|----------------------|------------------|------------------|-------------|---------------|--------------|---------|
| | | | | | | PCB | Solder lugs | Quick-connect | Flying leads | |
| IM | 1 NO/NC | (1A 250VAC)* 3A •28VDC | | Ø 12 mm (.472 in) | Panel | x | | x | | IP67 |
| IP momentary | 1 | (2A 250VAC)* 5A 28VDC | x | Ø 12 mm (.472 in) | Panel | x | x | x | x | IP67 |
| IP latching | 1 | (2A 250VAC)* 4A 12VDC | x | Ø 12 mm (.472 in) | Panel | x | x | x | x | IP67 |
| IS | 1 | (2A 250VAC)* 100mA 48VDC | | Ø 12 mm (.472 in) | Panel | x | x | x | | IP67 |

IHS / IHL SERIES

HALL EFFECT PUSHBUTTON RANGE

TOP APPLICATIONS:
BACKHOE LOADER, EXCAVATOR



HALL EFFECT TECHNOLOGY

- Long life: 5M cycles
- Hall effect technology
- Momentary (IHS) or proportional (IHL)
- Sealed up to IP67

| SERIES | MAXIMUM RATINGS | BUSHING DIMENSIONS | MOUNTING OPTIONS | TERMINAL OPTIONS | SEALING |
|--------|-----------------|----------------------|------------------|------------------|---------|
| IHS | 5mA 24VDC | Ø 12 mm (.472 in) | Panel | Flying leads | IP67 |
| IHL | 1,25mA 4,5VDC | Ø 12 mm (.472 in) | Panel | Flying leads | IP67 |

FD SERIES

DOUBLE ICON ILLUMINATED PUSHBUTTON SWITCH

TOP APPLICATIONS:
CONSTRUCTION MACHINERY DASHBOARD (ENGINE START)



DOUBLE ICON ILLUMINATED PUSHBUTTON

- 3 standard legends (0/1, START/STOP, ON/OFF)
- Sealed up to IP69K
- Threaded or snap-in versions

| SERIES | POLES | MAXIMUM RATINGS | BUSHING DIMENSIONS | TERMINAL OPTIONS | | | | | MOUNTING OPTIONS | SEALING | ILLUMINATION |
|--------|-------|-------------------------|---------------------------|------------------|---------------|-----|--------------|-------|------------------------------------|-----------------------------|--------------|
| | | | | Solder lugs | Quick connect | PCB | Flying leads | Cable | | | |
| FD | 1,2 | 4A 12VDC 200mA 12VDC | Ø24 (.944) Ø26 (1.024) | X | | | | | Panel, Snap-in or threaded bushing | IP69K (threaded bushing) | X |

AV30 START STOP

METAL PUSHBUTTON

TOP APPLICATIONS:
CONSTRUCTION MACHINERY DASHBOARD (ENGINE START)



RUGGED METALLIC PUSHBUTTON

- Robust pushbutton
- Stainless steel actuator and bushing
- Appealing aesthetics
- Easily customizable: marking, illumination

| SERIES | POLES | MAXIMUM RATINGS | BUSHING DIMENSIONS | TERMINAL OPTIONS | | | | | MOUNTING OPTIONS | SEALING | ILLUMINATION |
|--------|-------|-----------------|--------------------|------------------|---------------|-----|--------------|-------|------------------|---------|--------------|
| | | | | Solder lugs | Quick connect | PCB | Flying leads | Cable | | | |
| AV | NO/NC | 1 A 30 VDC | Ø30 (1.18) | X | X | X | X | X | Panel | IP67 | X |

KR / KH / KL SERIES

ROCKER SWITCH

TOP APPLICATIONS:
DUMP TRUCK, LOADER



SEALED, CUSTOMIZABLE ROCKER

- Protected against accidental actuation (KH)
- Patented locking system for safety application (KL)
- Customized laser etched legends
- Illuminated versions
- Up to IP68/IP69K

| SERIES | POLES | MAXIMUM RATINGS | BUSHING DIMENSIONS | MOUNTING OPTIONS | TERMINAL OPTIONS | | | SEALING | ILLUMINATION |
|--------|-------|-----------------|--------------------|------------------|------------------|---------------|-------|---------------|--------------|
| | | | | | Solder lugs | Quick-connect | Screw | | |
| KR | 1, 2 | 20 A 12 VDC | 36.8 x 21.08 mm | Panel | X | X | X | IP68 or IP69K | X |
| KH | 1, 2 | 10 A 24 VDC | 36.8 x 21.08 mm | Panel | X | X | X | IP69K | X |
| KL | 1, 2 | 10 A 24 VDC | 36.8 x 21.08 mm | Panel | X | X | X | IP68 or IP69K | X |

MT SERIES

SEALED ROCKER SWITCH

TOP APPLICATIONS:
CONCRETE CUTTER



SELECTOR SWITCH FOR ERGONOMIC INTERFACE

- Environmentally sealed (IP68)
- Multiple functions available
- Various contact materials that allow usage from dry circuit applications up to 4 A

| SERIES | MAXIMUM RATINGS | BUSHING DIMENSIONS | TERMINAL OPTIONS | | MOUNTING OPTIONS | SEALING |
|--------|-----------------|--------------------|------------------|-----|------------------------------|---------|
| | | | Solder lugs | PCB | | |
| MT | 4 A 30 VDC | Ø17,46 | X | X | Panel, Vertical-Through hole | IP68 |

CW SERIES

MODULAR AND STYLISH PUSHBUTTON

TOP APPLICATIONS:
ROLLER, GRADER, PAVER



NEW INDUSTRIAL STYLE

- Stylish design
- Sealed up to IP67 with rubber boot option
- Illumination in option
- Selector switch available

| SERIES | APPROVALS | POLES | SEALING | PANEL CUT OUT | TERMINAL | CONTACT TYPE | RATINGS |
|--------|-------------|---------|------------------|----------------------|----------|--------------|-------------------------------|
| CW | UL, CE, CCC | Up to 6 | IP65, up to IP67 | Ø 22 mm (.866 in) | Screw | IP67 | Heavy duty (up to 10 Amps) |



MW SERIES

FOR DEMANDING ENVIRONMENTS

TOP APPLICATIONS:
ROLLER, GRADER, PAVER



DUSTPROOF

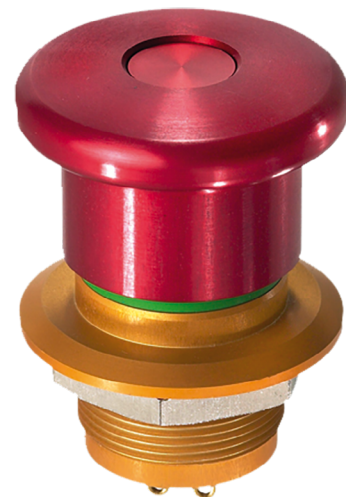
- Dustproof: no gap between actuator and panel
- Sealed up to IP66
- Selector switch available

| SERIES | APPROVALS | POLES | SEALING | PANEL CUT OUT | TERMINAL | CONTACT TYPE | RATINGS |
|--------|-----------|---------|--------------|----------------------|---------------------|--------------|-------------------------------|
| MW | CE, CCC | Up to 2 | IP65 IP66 | Ø 22 mm (.866 in) | Solder/tab or screw | Monobloc | Heavy duty (up to 10 Amps) |

ES SERIES

HEAVY DUTY METAL SAFETY SWITCH

TOP APPLICATIONS:
ROAD CONSTRUCTION



METAL SAFETY SWITCH

- Sealed up to IP65, IP67 & IP69K
- Compact body
- Complies with EN60947-5-1
- Impact resistant to IK10

| SERIES | POLES | MAXIMUM RATINGS | BUSHING DIMENSIONS | TERMINAL OPTIONS | | MOUNTING OPTIONS | SEALING |
|--------|-------|-----------------|------------------------|------------------|-----|------------------|-----------------------|
| | | | | Solder lugs | PCB | | |
| ES | 2,3 | 1A 24VDC | Ø22.28 mm (.877 in) | X | X | Panel | IP65 IP67 IP69K |



XA / XW SERIES

ROBUST EMERGENCY STOP

TOP APPLICATIONS:
ROAD CONSTRUCTION



”SAFE BREAK ACTION” TECHNOLOGY

- Exclusive safety technology ensuring that the machinery is stopped if actuator is broken
- Sealed up to IP67
- Compact behind panel
- Available with illumination
- Twist or pull to release

| SERIES | SAFE BREAK TECHNOLOGY | PANEL CUT OUT | OPERATOR SIZES | NUMBER OF CONTACTS | TERMINAL CONNECTION | OPERATION | ILLUMINATION |
|--------|-----------------------|---------------|--|------------------------------------|---------------------|-------------------------------------|--------------|
| XA | X | 16 mm | Ø 29 mm (1.141 in) Ø 40 mm (1.574 in) | Up to 4 NC : 1,2,3,4 / NO : 0,1 | Solder, PCB | Push to lock, pull or turn to reset | Option |
| XW | X | 22 mm | Ø 38 mm (1.496 in) Ø 40 mm (1.574 in) Ø 60 mm (2.362 in) | Up to 4 NC : 1,2,3,4 / NO : 0,1 | Screw, solder, PCB | Push to lock, pull or turn to reset | Option |

3500 / CT SERIES

HIGH PERFORMANCE TOGGLE SWITCH

TOP APPLICATIONS:
PAVER, LOADER, MINING



MARKET LEADER

- High current rating
- Very broad range: 5 finishes, 6 levers styles, 3 types of locking, 3 types of terminals...
- Sealed up to IP67/IP69K
- Available accessories: guard and boot

| SERIES | APPROVALS | POLES | MAXIMUM RATINGS | BUSHING DIMENSIONS | MOUNTING OPTIONS | TERMINAL OPTIONS | | | | SEALING |
|--------|-----------|-------|-----------------|--------------------|------------------|------------------|---------------|-------|-----------|------------|
| | | | | | | Solder lugs | Quick-connect | Screw | Connector | |
| 3500 | CECC | 1,2 | 15A 28VDC | Ø12.2 mm (.49 in) | Panel | X | X | X | | IP67 IP69K |
| CT | UL | 1,2 | 10A 125/250 VAC | Ø12.2 mm (.48 in) | Panel | X | X | X | X | IP67 |

MULTIMEC 5 SERIES

TACTILE PCB SWITCH

TOP APPLICATIONS:
LOADER, TELEHANDLER



LARGE SELECTION OF STANDARD ACCESSORIES

- 10 million activations
- Front panel sealing to IP67 depending on cap solutions
- Different haptic options
- Wide range of cap options

| SERIES | POLES | MAXIMUM RATING | MOUNTING OPTIONS | SEALING | MECHANICAL LIFE |
|-----------------------------|-------------------------|----------------|-----------------------------|---------|-----------------------|
| Multimec 5 series - 5E & 5G | Single pole / momentary | 50mA - 24VDC | Trough hole or SMT mounting | IP67 | 10,000,000 operations |

Q SERIES

LED INDICATOR

TOP APPLICATIONS:
ROAD CONSTRUCTION, LOADER



LARGE VARIETY OF SIZES AND COLORS

- Reverse diode protection available
- Wide variety of LED colors
- Wire customization available
- Optional sealing up to IP67
- Many different panel cut-out sizes
- Available with custom and secret until lit legends

| SERIES | PANEL CUT-OUT | MAXIMUM RATINGS | BEZEL STYLES | BEZEL FINISHES | TERMINAL OPTIONS | | | TYPE OF ILLUMINATION | LED COLORS |
|--------|---------------------------------------|-----------------|-------------------------------|-----------------------|------------------|------|------|--|---|
| | | | | | Fastons | Pins | Wire | | |
| Q | Ø6, 8, 10, 12, 14, 16, 19, 22, 25, 30 | 2VDC -220VAC | Prominent, recessed & flushed | Bright, satin & black | X | X | X | Fixed light, bi-color, RGB, night vision | Suitable for in cab use and outside use which are daylight viewable |

KP6 CAN BUS KEYBOARD

RUBBER KEYPADS

TOP APPLICATIONS:
LOADER, GRADER, EXCAVATOR



STANDARD SOLUTION FOR MULTIPLE BUTTON APPLICATIONS

- CAN bus or direct wiring output options
- CAN solution e-marking qualified (EMI, EMC)
- Backlit and quick front assembly
- Bargraph & indicators available
- Braille usage and glove usage compatible

| SERIES | SEALING | OPERATING VOLTAGE | COMMUNICATION PROTOCOL | MOUNTING | EXTRA FEATURES |
|--------|------------|-------------------|------------------------|------------------------|---|
| KP6 | up to IP67 | 12 to 24 VDC | Can J1939 or discrete | Snap-in front mounting | Special illumination / phantom marking / special key colors |

REMOTE CONTROL

PANEL SOLUTIONS

TOP APPLICATIONS:
ALL CONSTRUCTION EQUIPMENTS AND VEHICLES



- Plug and play product
- Backlighting
- IP67/IP69K sealing
- Up to SIL2/PLd capable

CUSTOMIZATION OPTIONS

Based on 9 mastered technologies (membrane, elastomeric...) and high performance APEM components

Design for outdoor and dusty environment

APEM Available Communication Protocols as a standard : CAN bus, RS485/422, USB

Consideration of ergonomic constraints in the design for user-friendly operation

Developed to withstand falls

COMPLETE DASHBOARD

PANEL SOLUTIONS

TOP APPLICATIONS:
ALL CONSTRUCTION EQUIPMENTS AND VEHICLES



- Rear or front panel mounting
- Backlighting

- IP67/IP69K sealing
- Up to SIL2/PLd capable

CUSTOMIZATION OPTIONS

Based on 9 mastered technologies (membrane, elastomeric...) and high performance APEM components

Design for outdoor and dusty environment

APEM Available Communication Protocols as a standard : CAN bus, RS485/422, USB

UV, shock & vibration resistance



APEM
an IDEC company

AT A GLANCE



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info@apem.com

USA

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Tel: (+1) 978 372 1602
info@apem.com

CHINA

IDEC Shanghai
8th Floor, Tower 2,
Enterprise Centre,
No.209 Gong He Road,
Shanghai, 200040, P.R.C
Tel: +86 21 6076 1355
apem@apem.com.cn

JAPAN

IDEC Corporation
2-6-64 Nishimiyahara,
Yodogawa-ku, Osaka,
Japan 532-0004
apem-sales@jp.idec.com

SINGAPORE

IDEC Izumi Asia Pte Ltd
31 Tannery Lane
Singapore 347788
Tel: +65 6746 1155
apem.apec@idec.com

BENELUX

Belgicestraat 7/1
1930 ZAVENTEM
Belgium
Tel B: (+32) 27 25 05 00
Tel NL: (+31) (70) 799 91 51
be.sales@apem.com

FRANCE

55, avenue Edouard Herriot
BP1
82303 CAUSSADE Cedex
Tel: (+33) 5 63 93 14 98
fr.commercial@apem.com

GERMANY

Gewerbehof Giesing
Paulsdorfferstr. 34, 2. OG
D-81549 MUNICH
Tel: (+49) 89 45 99 11 0
de.info@apem.com

ITALY

Via Marconi 147G
12030 MARENE (CN)
Tel: (+39) 0172 74 31 70
apem.italia@apem.com

SWEDEN

Torshamnsgatan 39
S-16440 KISTA
Tel: (+46) 8 626 38 00
se.info@apem.com

UNITED KINGDOM

Drakes Drive
LONG CRENDON,
Bucks HP18 9BA
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