MACHINE TOOLS INDUSTRY
SAFE CONTROL
SWITCHES | SAFETY | PANEL | AUTOMATION

APEM
an IDEC company
MACHINE TOOLS INDUSTRY

Our knowledge of factory automation enables us to provide competitive and flexible solutions for the machine tools industry worldwide.

In addition to safety standard compliance, machine tool manufacturers have been seeking to downsize their products and improve maintenance efficiency in recent years.

IDEC satisfies these needs with a wide range, including PLC, HMI, safety products, and panel solutions.
IDEC offers a broad range of products and solutions

WIDE RANGE OF PRODUCTS
HUMAN-MACHINE INTERFACE SOLUTIONS
SAFETY SOLUTIONS
PANEL SOLUTIONS

PROVIDING “IDEC QUALITY”
To ensure lean manufacturing and quality products, IDEC has developed a quality assurance system where the IDEC and APEM works closely together to achieve outstanding construction, technology and ease-of-use to the entire product line.

COMPLIANCE TO INTERNATIONAL SAFETY STANDARDS
We provide solutions that enhance safety and productivity, as a leading manufacturer in safety products and technologies. Machine tool manufacturers that develop and manufacture turning machines and machining centers are required to meet international safety standards to design machines. International safety standards are revised regularly in order to further improve the level of safety. Our range of products help ensure compliance to safety standards. EN ISO 13849-1 / EN ISO 14119 / GS-ET-19
### OUR PRODUCTS

#### HMI SOLUTIONS

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HMI SOLUTIONS

LBW SERIES, FLUSH, COMPACT AND EASY TO INSTALL

- WIDE RANGE OF ACTUATORS
- LOW-PROFILE DESIGN
- EASY WIRING
- HIGHLY RELIABLE CONTACTS
- COLLECTIVE MOUNTING

FLUSH SILHOUETTE SWITCHES: ONLY 2MM ABOVE THE PANEL
## LB/LBW SERIES
### SWITCHES

<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Hole Size (mm)</th>
<th>Bezel Size (mm)</th>
<th>Action</th>
<th>Structure</th>
<th>Terminal Style</th>
<th>Protection Degree</th>
<th>Contact Material / Contact Rating</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>Ø18.2</td>
<td>Ø22</td>
<td>Light</td>
<td>Removable Contact Block</td>
<td>Screw Terminal, Solder/Tab Terminal</td>
<td>X, X</td>
<td>IP65</td>
<td>Silver Contacts: 3A (125V AC), 2A (30V DC)</td>
</tr>
<tr>
<td></td>
<td>□18.2</td>
<td>□22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Silver with Gold Contacts: 0.1A (125V AC / 30V DC)</td>
<td>X, X, X, X</td>
</tr>
<tr>
<td></td>
<td>18.2×24.2</td>
<td>18×22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBW</td>
<td>Ø22.3</td>
<td>Ø26</td>
<td>Light</td>
<td></td>
<td>X</td>
<td>X</td>
<td>IP65</td>
<td>Silver Contacts: 3A (125V AC), 2A (30V DC)</td>
</tr>
<tr>
<td></td>
<td>□22.5</td>
<td>□26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Silver with Gold Contacts: 0.1A (125V AC / 30V DC)</td>
<td>X, X, X, X</td>
</tr>
</tbody>
</table>
FLUSH LW SERIES
SWITCHES

MANY OPTIONS INCLUDED ILLUMINATED KEYLOCK

- New designs: metallic bezel, flush switches, 25mm bushing
- Terminal options: screw, solder/tab, PCB
- Up to 3PDT + illumination

<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Hole Size (mm)</th>
<th>Bezel Size (mm)</th>
<th>Action</th>
<th>Structure</th>
<th>Terminal Style</th>
<th>Protection Degree</th>
<th>Contact Material / Contact Rating</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBW</td>
<td>Ø25.3</td>
<td>Ø28</td>
<td>Light</td>
<td>Removable Contact Block</td>
<td>Screw Terminal, Solder/Tab Terminal, PC Board Terminal</td>
<td>IP65</td>
<td>Silver Contacts: 3A (125V AC), 2A (30V DC) Silver with Gold Contacts: 0.1A (125V AC / 30V DC)</td>
<td>X X X X X X</td>
</tr>
</tbody>
</table>

TOP APP: OPERATION PANEL
HIGH RATINGS WITH SLICK AND REFINED STYLE

- 5 functions in one series
- Customizable
- Black or metallic bezel
- Low profile design

<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Hole Size (mm)</th>
<th>Bezel Size (mm)</th>
<th>Action</th>
<th>Structure</th>
<th>Terminal Style</th>
<th>Protection Degree</th>
<th>Contact Material / Contact Rating</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW</td>
<td>Ø22</td>
<td>Ø30</td>
<td>Heavy</td>
<td>Removable Contact Block</td>
<td>Screw Terminal</td>
<td>IP65</td>
<td>Silver Contacts: 4A (24V DC), 5A (120V AC), 3A (240V AC)</td>
<td>UL X CSA X TÜV X CCC X CE</td>
</tr>
</tbody>
</table>

TOP APP : OPERATION PANEL
AV SERIES

SWITCHES

METAL PUSHBUTTON SWITCHES

• Great robustness
• 16 to 30mm panel cut-out
• Stainless steel actuator and bushing
• Appealing aesthetics
• Easily customizable: marking, illumination (ring or dot)

<table>
<thead>
<tr>
<th>Series</th>
<th>Panel cut-out (mm)</th>
<th>Panel Sealing</th>
<th>Robustness</th>
<th>Mechanical life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16</td>
<td>22</td>
<td>24</td>
<td>30</td>
</tr>
<tr>
<td>AV</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
PBA SERIES

PIEZO SWITCHES

- IP68 / IP69K panel sealing
- 16 to 30mm panel cut-out
- Illuminated models (ring or dot)
- Tri colour versions available
- Easily customizable

<table>
<thead>
<tr>
<th>Serie</th>
<th>Panel cut-out (mm)</th>
<th>Panel Sealing</th>
<th>Material</th>
<th>Mechanical life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16</td>
<td>19</td>
<td>22</td>
<td>30</td>
</tr>
<tr>
<td>PBA</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IP68/IP69K</td>
<td>Stainless steel or aluminum</td>
</tr>
</tbody>
</table>

TOP APP : CONTROL PANEL
YW SERIES
SWITCHES

COST EFFECTIVE SWITCHES

- Heavy duty rugged construction
- Efficient, easy to assemble & low maintenance
- Flexible modular construction
- Resistant to demanding environment

<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Hole Size (mm)</th>
<th>Bezel (mm)</th>
<th>Action Structure</th>
<th>Terminal Style</th>
<th>Protection Degree</th>
<th>Contact Material / Contact Rating</th>
<th>International Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>YW</td>
<td>Ø22</td>
<td>Ø30</td>
<td>Heavy Removable Contact Block</td>
<td>X</td>
<td>IP65</td>
<td>Silver Contacts: 10A (110V AC), 8A (24V DC)</td>
<td>X X X X X</td>
</tr>
</tbody>
</table>

TOP APP : OPERATION PANEL
HMI SOLUTIONS

Q SERIES
INDICATORS

BROADEST RANGE ON THE MARKET

- Up to IP67, full rear end sealing
- Many sizes, colours, brightness, bezel types, finish & custom engraving
- SS 316L available of specific ranges
- High contrast illumination & intensity for well lighted areas

<table>
<thead>
<tr>
<th>Series</th>
<th>Panel cut-outs (mm)</th>
<th>Maximum rating</th>
<th>Bezel style</th>
<th>Bezel finishes</th>
<th>Terminal Style</th>
<th>Type of illumination</th>
<th>LED colours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>Ø6, 8, 10, 12, 14, 16, 19, 22</td>
<td>2VDC - 220VAC</td>
<td>Prominent, recessed &amp; flushed</td>
<td>Bright, satin &amp; black</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
HMI SOLUTIONS

FOILMEC™ SERIES
TACTILE PCB SWITCHES

RELIABILITY FOR HIGH END ILLUMINATED KEYBOARDS

• Designed for using under overlay
• Impervious to top layer damage
• Full illumination with chip-LEDs on the PCB
• Possibility of indicator for easy status readout
• Different haptic options

<table>
<thead>
<tr>
<th>Serie</th>
<th>Dimensions (mm)</th>
<th>Lifetime</th>
<th>Functions</th>
<th>Terminal style</th>
<th>Sealing</th>
<th>Maximum rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foilmecc™ series</td>
<td>15 x 15; h=12,5</td>
<td>10 millions</td>
<td>NO or NC/NO</td>
<td>PCB mounted</td>
<td>IP67</td>
<td>0.5 to 50 mA - 24 VDC</td>
</tr>
</tbody>
</table>

TOP APP: CONTROL PANEL
MULTIMEC 5 SERIES
TACTILE PCB SWITCHES

ABSOLUTE RELIABILITY AND FUNCTIONALITY

• 10M trouble-free actuations
• Superior sealing
• Excellent illumination with integrated chip-LEDs
• Large selection of standard accessories
• NC/NO version for extra security

<table>
<thead>
<tr>
<th>Serie</th>
<th>Dimensions (mm)</th>
<th>Lifetime</th>
<th>Functions</th>
<th>Terminal style</th>
<th>Sealing</th>
<th>Maximum rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimec 5 series</td>
<td>10 x 10; h=6.4</td>
<td>10 millions</td>
<td>NO or NC/NO</td>
<td>PCB mounted</td>
<td>IP67</td>
<td>0.5 to 50 mA - 24 VDC</td>
</tr>
</tbody>
</table>

TOP APP: CONTROL PANEL
### TS Series Joysticks

**HMI SOLUTIONS**

**TS SERIES**

**JOYSTICKS**

**PROPORTIONAL THUMB CONTROLS**

- 1M cycle
- Similar in size and operation to “gamepad” controls, but in a rugged industrial package
- Available with USB interface
- IP67 panel sealed
- SIL2/Pld capable

<table>
<thead>
<tr>
<th>Series</th>
<th>Mechanical lifecycles</th>
<th>Axis</th>
<th>Technology</th>
<th>Output option</th>
<th>Mounting options</th>
<th>Sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS</td>
<td>1 million</td>
<td>1, 2</td>
<td>Hall effect</td>
<td>X</td>
<td>X X X X X</td>
<td>Drop-in or rear mounting</td>
</tr>
</tbody>
</table>

**TOP APP: REMOTE CONTROL**
HMI SOLUTIONS

CW/HR SERIES
JOYSTICKS

MINIATURE THUMBWEEL

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

BROAD RANGE

- Up to 5M cycles
- Electronics sealed up to IP67
- Available with detents, friction, latching and 360° infinite wheel
- 7 colors and 4 shapes as standard
- Optional illumination
- SIL2 / Pld capable

<table>
<thead>
<tr>
<th>Series</th>
<th>Mechanical lifecycles</th>
<th>Axis</th>
<th>Technology</th>
<th>Output options</th>
<th>Mounting options</th>
<th>Sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW</td>
<td>3 million</td>
<td>1</td>
<td>Hall effect</td>
<td>Single</td>
<td>Drop-in</td>
<td>Electronics</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dual</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Analog</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PWM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td>5 million</td>
<td>1</td>
<td>Hall effect</td>
<td>X</td>
<td>Rear mounting</td>
<td>IP68</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOP APP: CONTROL PANEL, REMOTE CONTROL
### 3000 SERIES JOYSTICKS

**BROAD RANGE**

- Class leading installed depth <20 mm
- 5 V or 3.3 V operation
- EMC Shielded
- Metal mechanisms

<table>
<thead>
<tr>
<th>Series</th>
<th>Mechanical lifecycles</th>
<th>Axis</th>
<th>Technology</th>
<th>Output option</th>
<th>Mounting options</th>
<th>Sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000</td>
<td>10 million</td>
<td>1, 2, 3</td>
<td>Hall effect</td>
<td>X</td>
<td>X</td>
<td>Drop-in or Rear mounting</td>
</tr>
</tbody>
</table>

**TOP APP**: CONTROL PANEL, REMOTE CONTROL
MEMBRANE KEYBOARDS

FULLY CUSTOMIZED KEYBOARD

- 100% customized overlay
- Sealed up to IP65 and/or IP67
- Optional shielding
- Option for ATEX compatibility
- Quick time to market

Custom membrane keyboards

Tactile feedback
LED indicator, backlight possibilities
Embossing & finger guide option
Output from 0.5 to 2.54 mm pitch
SAFETY SOLUTIONS

Ø16 XA SERIES, SHORT BODY UP TO 4 CONTACTS

2 WAYS OF Resetting: Pulling OR turning

- ILLUMINATED OR NON-ILLUMINATED
- PUSH-TO-LOCK, PULL OR TURN-TO-RESET OPERATOR
- SAFETY LOCK MECHANISM
- DIRECT OPENING ACTION MECHANISM
- REVERSE ENERGY STRUCTURE
- SAFE BREAK ACTION WITH REMOVAL CONTACT
<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Hole Size (mm)</th>
<th>Operator Size (mm)</th>
<th>Terminal Style</th>
<th>Protection Degree</th>
<th>Contact Material / Contact Rating</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>XA (Unibody)</td>
<td>Ø16.2</td>
<td>Ø29 Ø40</td>
<td>Solder/Terminal</td>
<td>IP65 IP40</td>
<td>Silver with Gold Contacts: 0.22A (125V AC), 1A (30V DC)</td>
<td>X X X X X</td>
</tr>
<tr>
<td>XA (w/ Removable Contact Block)</td>
<td>Ø16.2</td>
<td>Ø30 Ø40</td>
<td>Solder/Terminal</td>
<td>IP65</td>
<td>Silver with Gold Contacts: 0.22A (125V AC), 1A (30V DC)</td>
<td>X X X X X</td>
</tr>
</tbody>
</table>

**EMERGENCY STOP SWITCHES**

**TOP APP: OPERATION PANEL**

SAFETY SOLUTIONS
**Ø16 X6 SERIES**

**EMERGENCY STOP SWITCHES**

**SMOOTH DESIGN AND SHORT BODY**

- Prevent dust build-up
- Push-to-lock, pull or turn-to-reset operator
- Safety lock mechanism
- Direct opening action
- Safe break action

<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Hole Size (mm)</th>
<th>Operator Size (mm)</th>
<th>Terminal Style</th>
<th>Protection Degree</th>
<th>Contact Material / Contact Rating</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ø15.2</td>
<td>Ø30 Ø40</td>
<td>X X</td>
<td>IP65</td>
<td>Silver with Gold Contacts: 0.22A (125V AC), 1A (30V DC)</td>
<td>UL X X X X X</td>
</tr>
</tbody>
</table>

**TOP APP : OPERATION PANEL**
Ø22 XW SERIES
EMERGENCY STOP SWITCHES

THE WORLD’S SAFEST E-STOP

- Illuminated type, mechanical indicator type available
- Push-to-lock, pull or turn-to-reset operator
- Direct opening action mechanism
- Safety lock mechanism
- Safe break action with removal contact

<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Hole Size (mm)</th>
<th>Operator Size (mm)</th>
<th>Terminal Style</th>
<th>Protection Degree</th>
<th>Contact Material / Contact Rating</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ø22.3</td>
<td>Ø40, Ø60</td>
<td>Solder Terminal</td>
<td>IP65, IP67</td>
<td>Silver with Gold Contacts: 0.22A (125V AC), 1A (30V DC)</td>
<td>X X X X X</td>
</tr>
<tr>
<td>XW</td>
<td>Ø22.3</td>
<td>Ø38</td>
<td>Solder/Tab Terminal</td>
<td>IP65</td>
<td>Silver with Gold Contacts: 0.22A (125V AC), 1A (30V DC)</td>
<td>X X X X X</td>
</tr>
<tr>
<td>XW (Mechanical Indicator)</td>
<td>Ø22.3</td>
<td></td>
<td>PC Board Terminal</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOP APP : OPERATION PANEL
HE3B/HE5B SERIES
THREE-POSITION ENABLING SWITCHES

ENHANCED SAFETY

- Duplicated contacts to meet the highest safety standards
- Exceptional tactile feedback and ergonomics
- Different sizes and shapes to fit all teaching pendants

<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Hole Size (mm)</th>
<th>Contact</th>
<th>Protection Degree</th>
<th>UL</th>
<th>CSA</th>
<th>TÜV</th>
<th>CCC</th>
<th>CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HE3B</td>
<td>Ø16</td>
<td>2</td>
<td>IP40 IP65</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HE5B</td>
<td>Ø16</td>
<td>2</td>
<td>IP65</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

TOP APP : TEACHING PENDANTS
LD6A SERIES
LED SIGNALIGHT TOWERS

ERGONOMICALLY DESIGNED FOR VISUAL AND AUDIBLE RECOGNITION

- Steady / flashing / alarm models available
- Flashing cycle complies with IEC standards
- Stylish design
- Easy installation and assembly
- High visibility from all directions
- 5 mounting options, including: direct mount, pole mount, side mount

<table>
<thead>
<tr>
<th>Series</th>
<th>Housing Color</th>
<th>Illumination Color</th>
<th>Protection Degree</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD6A</td>
<td>Dark gray, Light</td>
<td>Red, Yellow, Blue, Green,</td>
<td>IP54, IP65</td>
<td>UL</td>
</tr>
<tr>
<td></td>
<td>gray</td>
<td>Pure white</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

TOP APP: STATUS INDICATION
HS1T SERIES
INTERLOCK SWITCHES

SUPER ROBUST, SAFETY LOCKING MECHANISM

- 5000N locking strength
- Unique safety structure
- 2- and 4-contact models available
- Spring clamp terminals
- M20 cable entry with side and end entry option

<table>
<thead>
<tr>
<th>Series</th>
<th>Contact</th>
<th>Actuator Retention Force</th>
<th>Dimensions (mm)</th>
<th>Protection Degree</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS1T</td>
<td>2,4</td>
<td>5000N</td>
<td>40 (W) × 40 (L) × 143 (H)</td>
<td>IP67</td>
<td>UL</td>
</tr>
</tbody>
</table>

TOP APP: MACHINE GUARDING
HS5L SERIES
INTERLOCK SWITCHES

SPACE-SAVING COMPACT DESIGN

- 1400N locking strength
- 2- and 4-contact models available
- Spring clamp terminals
- Spring loaded actuator
- Emergency release button

<table>
<thead>
<tr>
<th>Series</th>
<th>Contact</th>
<th>Actuator Retention Force</th>
<th>Dimensions (mm)</th>
<th>Protection Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS5L</td>
<td>2, 4</td>
<td>1400N</td>
<td>35 (W) × 61.6 (L) × 127 (H)*</td>
<td>IP67</td>
</tr>
</tbody>
</table>

International Approvals

<table>
<thead>
<tr>
<th>UL</th>
<th>CSA</th>
<th>TÜV</th>
<th>CCC</th>
<th>CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
HS5D SERIES
INTERLOCK SWITCHES

SIMPLE METHOD FOR INTERLOCK SAFETY

• Head removal detection for fail safe performance
• Small size with 3 contacts
• The head orientation can be rotated, allowing 8 different actuator entries
• Double insulation structure eliminates the need for grounding
• Metal head is available for more aggressive applications

<table>
<thead>
<tr>
<th>Series</th>
<th>Contact</th>
<th>Dimension (mm)</th>
<th>Protection Degree</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSSD</td>
<td>3</td>
<td>30 (W) × 30 (L) × 91 (H)</td>
<td>IP67</td>
<td>UL X</td>
</tr>
</tbody>
</table>

TOP APP: MACHINE GUARDING
SAFETY SOLUTIONS

HR SERIES
SAFETY RELAY MODULES

SAFETY CIRCUIT MONITORING

- Safety monitoring compliant to EN ISO 13849
- Single and dual channel safety monitoring
- Removable terminals with push in feature
- Time delay options for Category 1 Stop requirements
- Configurable logic functions available

<table>
<thead>
<tr>
<th>Series</th>
<th>Type</th>
<th>Supply voltage</th>
<th>Contacts</th>
<th>Form factor</th>
<th>Category</th>
<th>Performance Level/ SIL</th>
<th>Terminal configuration</th>
<th>UL</th>
<th>CSA</th>
<th>TÜV</th>
<th>CCC</th>
<th>CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR1</td>
<td>Safety Relay</td>
<td>24Vdc</td>
<td>Volt Free contacts / Transistor</td>
<td>22.5</td>
<td>4</td>
<td>Ple/SIL3</td>
<td>Screw/Spring clamp</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HR2</td>
<td>Safety Relay</td>
<td>24Vdc</td>
<td>Volt Free contacts / Transistor</td>
<td>22.5/45</td>
<td>4</td>
<td>Ple/SIL3</td>
<td>Screw/Spring clamp</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>FS1A</td>
<td>Programmable safety logic</td>
<td>24Vdc</td>
<td>4 OSSD. 11 Signal</td>
<td>22.5</td>
<td>4</td>
<td>Ple/SIL3</td>
<td>Screw/Spring clamp</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

TOP APP: CONTROL PANEL
PANEL SOLUTIONS

LF1D SERIES, EXCELLENT RESISTANCE AGAINST HARSH ENVIRONMENTS

- SPECIAL OPTICAL LENS SUITABLE FOR ILLUMINATION OF MACHINE TOOLS
- OIL-PROOF
- EASY VISUAL INSPECTION
- REDUCED MULTI-SHADOW MAKES VISUAL INSPECTION EASY
- UNIFORM LIGHTING – ILLUMINATES MULTISHADOW
- IP69K
- MANY SIZE OPTIONS AVAILABLE TO SUIT THE APPLICATION
# LF1D/LF2D SERIES

**LED ILLUMINATION UNITS**

<table>
<thead>
<tr>
<th>Series</th>
<th>Light Distribution</th>
<th>Shape</th>
<th>Illumination Surface</th>
<th>Total Luminous Flux (typ.)</th>
<th>Reference Illuminance (typ.) at 1m</th>
<th>Protection Degree</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF1D</td>
<td>Standard</td>
<td>Surface mount</td>
<td>Reinforced glass/ Polycarbonate</td>
<td>560 – 3000lm</td>
<td>180 – 1,700lx</td>
<td>IP67/67F/67G/69K</td>
<td>X X X</td>
</tr>
<tr>
<td>LF2D</td>
<td>Diffused</td>
<td>Recessed mount</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X X X</td>
</tr>
</tbody>
</table>

**International Approvals**

- UL
- CSA
- TUV
- CCC
- CE

**Notes:**
- LF1D Standard Surface mount with Reinforced glass/ Polycarbonate.
- LF2D Diffused Recessed mount.

**Protection Degrees:**
- IP67/67F/67G/69K

**Total Luminous Flux (typ.):**
- 560 – 3000lm

**Reference Illuminance (typ. at 1m):**
- 180 – 1,700lx
**LF1B-N SERIES**

**LED ILLUMINATION UNITS**

**COST EFFECTIVE INDUSTRIAL LIGHTS**

- Compact design for narrow spaces
- 6 different lengths and 6 distinct colors
- IP65 (waterproof, dustproof)
- Sizes from 210mm to 1080mm

---

<table>
<thead>
<tr>
<th>Series</th>
<th>Reference Illuminance (typ.) at 0.5m</th>
<th>Protection Degree</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF1B-N</td>
<td>20 to 1,300 lx</td>
<td>IP65</td>
<td>UL: X</td>
</tr>
</tbody>
</table>

---

**TOP APP : LED ILLUMINATION PANEL SOLUTIONS**
RJ/ RU SERIES
SLIM POWER RELAYS/UNIVERSAL RELAYS

COMPACT AND RUGGED POWER RELAYS

- Large switching capacity
- Excellent durability
- High visibility LED indicator
- Wide variety of models
- SPDT: 12A, DPDT: 8A

FULL FEATURED UNIVERSAL MINIATURE RELAYS

- Latching lever models available
- No internal wires. Simple construction and high reliability
- Marking plate for easy identification of relays
- 2PDT: 10A, 4PDT: 6A

<table>
<thead>
<tr>
<th>Series</th>
<th>No. of Poles</th>
<th>Contact</th>
<th>Contact Rating</th>
<th>UL</th>
<th>CSA</th>
<th>TÜV</th>
<th>CCC</th>
<th>CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJ</td>
<td>1-pole / 2-pole</td>
<td>SPDT / DPDT</td>
<td>12A/8A (250V AC, DC30V)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>RU</td>
<td>RU</td>
<td>DPDT / 4PDT</td>
<td>10A/3A (250V AC, DC30V)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

TOP APP : CONTROL PANEL
PS5R-V/PS6R SERIES
SWITCHING POWER SUPPLIES

SPACE-SAVING DIN-RAIL SWITCHING POWER SUPPLIES

- Reduces installation space inside the panel
- Reduced wiring & flexible installation
- DIN rail mount
- Alarm Output for “DC low” (PS6R only)
- Expansion DC/DC converters for simple addition of 5V, 12V & 15V (PS6R only)

<table>
<thead>
<tr>
<th>Series</th>
<th>Output Capacity</th>
<th>Input Voltage</th>
<th>International Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS5R-V</td>
<td>10W/15W/30W/60W/90W/120W/240W</td>
<td>100 to 240V AC</td>
<td>UL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>PS6R</td>
<td>120W/240W/480W</td>
<td>100 to 240V AC</td>
<td>X</td>
</tr>
</tbody>
</table>

TOP APP: CONTROL PANEL
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Together, IDEC and APEM are now one of the world’s largest manufacturers of human machine interface (HMI) components, panels and systems.

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