OWN ASICS
TECHNOLOGY LEADER
SOLUTION PARTNER

At a glance
✓ Technology leading manufacturer of inductive and photoelectric sensors as well as Safety and RFID systems
✓ World market leader for miniature sensors, sensors with long operating distances and devices for particularly demanding operating conditions (all-metal, high-pressure and high-temperature resistant sensors)
✓ Represented in over 60 countries worldwide, headquarters in Switzerland
✓ 14 own subsidiaries in all major markets
✓ More than 500 employees worldwide
✓ 8000 products

GLOBAL EXPERIENCE, LOCAL SUPPORT

Production
Contrinex manufactures its own sensors, safety and RFID systems in 4 production locations: Switzerland (since 1972), Hungary (since 1995), China (since 2003) and Brazil (since 2009).
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For special products see Contrinex catalog, downloadable from our website: www.contrinex.com
Detailed data sheets for these products can be found on the Contrinex website:

**INDUCTIVE**

**EXCELLENCE IN NORMAL ENVIRONMENTS**

**BASIC**

**KEY ADVANTAGES**

- Exceptional price/performance ratio
- Excellent accuracy
- Outstanding temperature compensation
- Vibration and shock resistant
- Long operating distances

**INDUSTRIES**

Textiles, green energy, machine tools, automotive manufacturing, logistics, packaging machines

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>6.5 mm</th>
<th>M8</th>
<th>C8</th>
<th>M12</th>
<th>M18</th>
<th>M30</th>
<th>C40</th>
<th>C44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classics</td>
<td>1.5 ... 2</td>
<td>1.5 ... 4</td>
<td>1.5 ... 2</td>
<td>2 ... 8</td>
<td>5 ... 8</td>
<td>10 ... 15</td>
<td>15 ... 40</td>
<td>15 ... 40</td>
</tr>
<tr>
<td>Extra Distance</td>
<td>3</td>
<td>3 ... 6</td>
<td>3</td>
<td>6 ... 10</td>
<td>12 ... 20</td>
<td>22 ... 40</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**INDUCTIVE**

**FULL FUNCTIONALITY, SMALLEST SIZE**

**MINIATURE**

**KEY ADVANTAGES**

- Smallest self-contained inductive sensors on the market
- Miniature sensors are ideal for mounting where space is limited
- Outstanding temperature stability from -25°C (-13°F) to +70°C (+158°F)
- High switching frequency up to 5000 Hz
- Light weight of the sensor
- Electronics vacuum potted for optimum long-term reliability under high stress

**INDUSTRIES**

Micromechanics, robotics, machine tools, automation equipment, special purpose machines

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>3 mm</th>
<th>M4</th>
<th>4 mm</th>
<th>M5</th>
<th>C5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classics</td>
<td>0.6 ... 1</td>
<td>0.6 ... 1</td>
<td>0.8 ... 1.5</td>
<td>0.8 ... 1.5</td>
<td>0.8 ... 1.5</td>
</tr>
<tr>
<td>Extra Distance</td>
<td>-</td>
<td>-</td>
<td>2.5</td>
<td>2.5</td>
<td>-</td>
</tr>
</tbody>
</table>
INDUCTIVE

EXTREME DURABILITY IN HARSH ENVIRONMENTS

EXTREME

KEY ADVANTAGES

✓ Mechanically and chemically extremely robust
✓ Corrosion resistant
✓ IP 68 and IP 69K, sea-water resistant
✓ Pressure resistant up to 80 bar (1160 psi)
✓ Factor 1 on steel and aluminum

INDUSTRIES
Automotive manufacturing, mobile equipment, packaging, machine tools

<table>
<thead>
<tr>
<th>Housing size (d, mm)</th>
<th>M8</th>
<th>M12</th>
<th>M18</th>
<th>M30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Inox</td>
<td>3 ... 6</td>
<td>2 ... 15</td>
<td>5 ... 20</td>
<td>20 ... 40</td>
</tr>
</tbody>
</table>

INDUCTIVE

PRESSURE RESISTANT UP TO 100 BAR (1451 PSI)

EXTRA PRESSURE

KEY ADVANTAGES

✓ Pressure resistant up to 100 bar (1451 psi)
✓ Mechanically and chemically rugged
✓ Impervious: IP 68
✓ Gas-tight sensing face
✓ Miniature devices

INDUSTRIES
Pneumatics, lubrication systems, pumps, valves

<table>
<thead>
<tr>
<th>Housing size (d, mm)</th>
<th>Ø 3 mm</th>
<th>M5</th>
<th>Ø 6.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classics</td>
<td>0.8</td>
<td>0.6</td>
<td>-</td>
</tr>
<tr>
<td>Extra Distance</td>
<td>-</td>
<td>-</td>
<td>2.5</td>
</tr>
</tbody>
</table>
**SENSORS**

**INDUCTIVE**

**PRESSURE RESISTANT UP TO 500 BAR (7255 PSI)**

**HIGH PRESSURE**

**KEY ADVANTAGES**

- Highest operating (500 bar / 7255 psi) and peak pressure (1000 bar / 14510 psi) on the market
- Resistant to pressure cycles – 50 times longer lifetime under pressure than the market standard
- Gas-tight sensing face
- Large temperature range \(-25^\circ C \text{ (-13^\circ F)} \ldots +100^\circ C \text{ (+212^\circ F)}\)

**INDUSTRIES**

Hydraulic and fluid power, concrete pumps, injection molding machines

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>M5 / P5</th>
<th>M8 / P8</th>
<th>M12 / P12</th>
<th>M14 / P20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra Distance</td>
<td>1</td>
<td>1.5</td>
<td>1.5 ... 2.5</td>
<td>3</td>
</tr>
<tr>
<td>Full Inox</td>
<td>-</td>
<td>-</td>
<td>1.5</td>
<td>-</td>
</tr>
</tbody>
</table>

**INDUCTIVE**

**TEMPERATURE RESISTANT UP TO +120°C (+248°F)**

**EXTRA TEMPERATURE**

**KEY ADVANTAGES**

- Temperature resistant up to +120°C (+248°F)
- Excellent long term reliability
- Outstanding accuracy

**INDUSTRIES**

Machine tools, green industry, aerospace, automotive manufacturing

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>M5</th>
<th>M8</th>
<th>M12</th>
<th>M18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classics</td>
<td>0.8</td>
<td>4</td>
<td>2 ... 4</td>
<td>5</td>
</tr>
</tbody>
</table>

Detailed data sheets for these products can be found on the Contrinex website:
**INDUCTIVE**

**TEMPERATURE RESISTANT UP TO +230°C (446°F)**

**HIGH TEMPERATURE**

**KEY ADVANTAGES**
- Models with external electronics for temperatures of up to +230°C (+446°F)
- Models with integrated electronics for temperatures of up to +180°C (+356°F)
- Excellent long term reliability

**INDUSTRIES**
- Paintshops, surface treatment, bakery equipment

<table>
<thead>
<tr>
<th>Housing size (sn mm)</th>
<th>M8</th>
<th>M12</th>
<th>M18</th>
<th>M30</th>
<th>M50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classics</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>10</td>
<td>25</td>
</tr>
</tbody>
</table>

**INDUCTIVE**

**ECOLAB APPROVED FOR HARSHEST CLEANING PROCESSES**

**WASHDOWN**

**KEY ADVANTAGES**
- Corrosion resistant
- Food safe
- Mechanically and chemically rugged
- Full Inox housing
- IP 68 / IP 69K protection
- One-piece full-metal housing
- Waterproof sensor, sea-water resistant

**INDUSTRIES**
- Food and beverage, pharmaceutical industry, offshore and marine applications, industrial cleaning systems

<table>
<thead>
<tr>
<th>Housing size (sn mm)</th>
<th>M12</th>
<th>M18</th>
<th>M30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Inox</td>
<td>6</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>
**SENSORS**

**INDUCTIVE**

**ANALOG OUTPUT FOR DISTANCE CONTROL**

**ANALOG OUTPUT**

**KEY ADVANTAGES**

- Longest sensing ranges
- Best temperature stability
- Excellent repeat accuracy
- Resolution in µm range

**INDUSTRIES**

Machine tools, printing

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>C8</th>
<th>M8</th>
<th>M12</th>
<th>M18</th>
<th>M30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra Distance</td>
<td>0 ... 4</td>
<td>0 ... 4</td>
<td>0 ... 6</td>
<td>0 ... 20</td>
<td>0 ... 40</td>
</tr>
</tbody>
</table>

**INDUCTIVE**

**DURABLE AND RELIABLE IN WELDING CELLS**

**WELD-IMMUNE**

**KEY ADVANTAGES**

- Resistant to electromagnetic fields of up to 40 millitesla
- Extremely robust
- Easy to clean – even using harsh methods
- No false switching caused by metal dust or chips
- Factor 1
- No extra protection needed
- Long operating distances

**INDUSTRIES**

Automotive manufacturing, welding equipment

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>M12</th>
<th>M18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Inox</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

---

Detailed data sheets for these products can be found on the Contrinex website:
PHOTOELECTRIC

THE SMALLEST ON THE MARKET

CYLINDRICAL SUBMINIATURE

KEY ADVANTAGES

✓ Ø 4 and M5 housings for target detection in limited spaces
✓ Rugged metal housing
✓ Accurate target detection due to cylindrical light beam
✓ Rugged sapphire glass or glass sensing face, scratch and chemically resistant
✓ Shock and vibration resistant due to fully vacuum potted electronics
✓ High system reserves (excess gain)

INDUSTRIES

Precision engineering, semiconductors, electronics, vending machines

<table>
<thead>
<tr>
<th>Housing size (Ø, mm)</th>
<th>Ø 4 mm</th>
<th>M5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffuse</td>
<td>10 ... 50</td>
<td>10 ... 50</td>
</tr>
<tr>
<td>Through-beam</td>
<td>-</td>
<td>250</td>
</tr>
</tbody>
</table>

PHOTOELECTRIC

M12 STANDARD SIZE FOR MULTIPLE USES

CYLINDRICAL MINIATURE

KEY ADVANTAGES

✓ M12 miniature sensor series
✓ Rugged metal housing
✓ Accurate and speed independent target detection; response time 0.5 msec (laser: 0.1 msec)
✓ Shock and vibration resistant due to fully vacuum potted electronics
✓ High system reserves (excess gain)
✓ Easy adjustment (due to visible red light)
✓ Laser sensor (protection class 2)

INDUSTRIES

Automotive manufacturing, machine tools, logistics, textiles, green energy, packaging, filling machines

<table>
<thead>
<tr>
<th>Housing size (Ø, mm)</th>
<th>M12</th>
<th>M12 Laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffuse</td>
<td>300</td>
<td>-</td>
</tr>
<tr>
<td>Reflex</td>
<td>1500</td>
<td>-</td>
</tr>
<tr>
<td>Through-beam</td>
<td>10,000</td>
<td>50,000</td>
</tr>
</tbody>
</table>
PHOTOELECTRIC

M18 STANDARD SIZE, INCLUDING 90° SENSING CYLINDRICAL SMALL

**KEY ADVANTAGES**
- Small sensor M18
- Models for lateral sensing
- Rugged metal housing
- Accurate and speed-independent target detection
- Shock and vibration resistant due to fully vacuum potted electronics
- High system reserves (excess gain)
- Easy adjustment (due to visible red light)
- Laser sensor (protection class 2)

**INDUSTRIES**
Automotive manufacturing, machine tools, logistics, textiles, green energy, packaging, filling machines, aerospace

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>M18</th>
<th>M18W (90°)</th>
<th>M18 Laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffuse</td>
<td>40 ... 600</td>
<td>40 ... 600</td>
<td>40 ... 250 / 60 ... 600</td>
</tr>
<tr>
<td>Reflex</td>
<td>2000</td>
<td>2000</td>
<td>-</td>
</tr>
<tr>
<td>Through-beam</td>
<td>20,000</td>
<td>20,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Background suppression</td>
<td>10 ... 120</td>
<td>10 ... 120</td>
<td>-</td>
</tr>
</tbody>
</table>

PHOTOELECTRIC

5 X 7 MM STEEL HOUSING AND NARROW FOCUS CUBIC SUBMINIATURE

**KEY ADVANTAGES**
- Cubic 5 x 7 x 40 mm sensors
- Rugged metal housing
- Accurate target detection due to cylindrical light beam
- Rugged sapphire-glass sensing face, scratch and chemically resistant
- Shock and vibration resistant due to fully vacuum potted electronics
- High system reserves (excess gain)

**INDUSTRIES**
Precision engineering, semiconductors, electronics, vending machines

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>5 x 7 x 40 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffuse</td>
<td>20 / 50 / 90</td>
</tr>
</tbody>
</table>
PHOTOELECTRIC

POWERFUL SENSORS IN 30 X 30 MM HOUSING

CUBIC MINIATURE

KEY ADVANTAGES

- Complete miniature sensor series in rugged Crastin® housings
- Diffuse sensors with precise background suppression
- Polarizing filter (reflex sensors)
- Changeover outputs
- Analog outputs

INDUSTRIES

Packaging, logistics, filling machines

<table>
<thead>
<tr>
<th>Housing size (d, mm)</th>
<th>□ 30 x 30 x 15 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffuse</td>
<td>600 / 1200</td>
</tr>
<tr>
<td>Reflex</td>
<td>2000 / 4000</td>
</tr>
<tr>
<td>Through-beam</td>
<td>6000 / 12,000</td>
</tr>
<tr>
<td>Background suppression</td>
<td>15 ... 200</td>
</tr>
<tr>
<td>Analog output</td>
<td>10 ... 100</td>
</tr>
</tbody>
</table>

PHOTOELECTRIC

EXCELLENT VALUE FOR DEMANDING APPLICATIONS

CUBIC SMALL

KEY ADVANTAGES

- Small sensor series for peak performance
- Sensing face of glass or coated plastic
- Fiber-optic amplifiers (blue light and high frequency)
- Color sensor

INDUSTRIES

Logistics, packaging, filling machines, printing, quality control, sorting processes, food and tobacco, wood processing machines

<table>
<thead>
<tr>
<th>Housing size (d, mm)</th>
<th>□ 40 x 40 x 19 mm</th>
<th>□ 40 x 50 x 15 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffuse</td>
<td>2000</td>
<td>30 ... 1200</td>
</tr>
<tr>
<td>Reflex</td>
<td>6000</td>
<td>4000</td>
</tr>
<tr>
<td>Through-beam</td>
<td>15,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Background suppression</td>
<td>-</td>
<td>30 ... 500</td>
</tr>
<tr>
<td>Color (diffuse)</td>
<td>-</td>
<td>30 ... 40</td>
</tr>
</tbody>
</table>
PHOTOELECTRIC

TOP QUALITY, RUGGED AND COST-EFFECTIVE
CUBIC COMPACT

KEY ADVANTAGES

✓ Universal sensor series [50 x 50 x 18 mm and 65 x 83 x 25 mm]
✓ Designed to cost
✓ AC/DC models
✓ Various connections possible

INDUSTRIES
Automotive manufacturing, machine tools, logistics, textiles, green energy, packaging, filling machines

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>50 x 50 x 18 mm</th>
<th>65 x 83 x 25 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffuse</td>
<td>300 / 800</td>
<td>2000</td>
</tr>
<tr>
<td>Reflex</td>
<td>4000</td>
<td>6000</td>
</tr>
<tr>
<td>Through-beam</td>
<td>15,000</td>
<td>-</td>
</tr>
<tr>
<td>Background suppression</td>
<td>-</td>
<td>50 ... 1000</td>
</tr>
</tbody>
</table>

PHOTOELECTRIC

FIBER-OPTIC AMPLIFIERS, FIBERS

HIGHLIGHTS

✓ Wide range of fiber-optic amplifiers, including IO-Link
✓ Fiber-optic solutions for the most demanding environments
✓ Wide range of synthetic and glass fibers available

INDUSTRIES
Precision engineering, printed circuit board production, electronics, handling systems, vending machines, special machinery

<table>
<thead>
<tr>
<th>Housing size (s, mm)</th>
<th>30 x 30 x 15 mm</th>
<th>31 x 60 x 10 mm</th>
<th>40 x 40 x 19 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber-optic amplifier</td>
<td>60 / 120</td>
<td>200</td>
<td>150</td>
</tr>
<tr>
<td>Fiber-optic amplifier</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>blue light</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiber-optic amplifier</td>
<td></td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>IO-Link</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Detailed data sheets for these products can be found on the Contrinex website:
ULTRASONIC SENSORS

RELIABLE DETECTION OF SOUND-REFLECTIVE TARGETS

HIGHLIGHTS
✓ Detection independent of target material, color, shape or surface
✓ Ready-to-use cylindrical sensors with integral connector
✓ Easy adjustment by either potentiometer or teach-in
✓ Dual output sensors, including analog and digital
✓ High resolution analog output, current or voltage
✓ Normal length or short housings and 90° sensing
✓ Reduced blind zone
✓ High excess gain – insensitive to dirt and ambient noise

INDUSTRIES
Packaging, food and pharmaceuticals

CAPACITIVE SENSORS

COST-EFFECTIVE WITH ANY TARGET MATERIAL

HIGHLIGHTS
✓ Detection of virtually all target materials
✓ Easy adjustment with potentiometer and LED
✓ Detection through non-metallic pipes and containers
✓ Sensors for use in harsh chemical environments
✓ Reliable level control of sticky and viscous materials
✓ Sensors with hygienic, FDA-compliant, PTFE housings

INDUSTRIES
Plastics, food and pharmaceuticals, agriculture

<table>
<thead>
<tr>
<th>Operating principle</th>
<th>With background supp.</th>
<th>With analog output</th>
<th>Diffuse &amp; reflex</th>
<th>Reflex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miniature (M12)</td>
<td>30 ... 400</td>
<td>30 ... 400</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Small (M18)</td>
<td>30 ... 700</td>
<td>50 ... 1000</td>
<td>50 ... 1000</td>
<td>0 ... 700</td>
</tr>
<tr>
<td>Compact (M30)</td>
<td>-</td>
<td>60 ... 6000</td>
<td>60 ... 6000</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Housing size</th>
<th>M12</th>
<th>M18</th>
<th>M30</th>
<th>G1 26 mm/17 mm</th>
<th>48.5 x 32 x 120 x 80 x 30 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>2</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>High performance</td>
<td>2 ... 4</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>-</td>
</tr>
</tbody>
</table>
SAFETY

EXCELLENT PRICE/PERFORMANCE RATIO

HIGHLIGHTS

- Light-curtains for hand and finger protection
- Access control barriers with 3 or more beams
- IP 69K version available
- Performance Level PL e, according to EN ISO 13849-1
- Type 4 according to EN IEC 61496-1/2
- Automatic and manual restart mode, muting and stepping operation*
- Device and mirror columns
- High quality at attractive prices

INDUSTRIES

Automotive manufacturing, machine tools, logistics, textiles, green energy, packaging, filling machines

<table>
<thead>
<tr>
<th>Resolution / beam gap</th>
<th>14 mm</th>
<th>30 mm</th>
<th>300 mm</th>
<th>400 mm</th>
<th>500 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution / beam gap</td>
<td>14 mm</td>
<td>30 mm</td>
<td>300 mm</td>
<td>400 mm</td>
<td>500 mm</td>
</tr>
<tr>
<td>Suitable for</td>
<td>finger protection</td>
<td>hand protection</td>
<td>access control</td>
<td>access control</td>
<td>access control</td>
</tr>
<tr>
<td>Available protective heights</td>
<td>142...1690 mm</td>
<td>279...1827 mm</td>
<td>932...1532 mm</td>
<td>832...1232 mm</td>
<td>1032 mm</td>
</tr>
<tr>
<td>Number of beams</td>
<td>17...209</td>
<td>17...113</td>
<td>4...6</td>
<td>3...4</td>
<td>3</td>
</tr>
<tr>
<td>Max. operating range</td>
<td>3.5 m</td>
<td>12 m</td>
<td>50 m</td>
<td>50 m</td>
<td>50 m</td>
</tr>
<tr>
<td>Automatic restart mode</td>
<td>✓*</td>
<td>✓*</td>
<td>✓*</td>
<td>✓*</td>
<td>✓*</td>
</tr>
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*in combination with suitable Contrinex Safety Relay

Hand protection devices on a bending machine for automotive industry
TOTAL TRACKING - HIGH AND LOW FREQUENCY SOLUTIONS

HIGHLIGHTS
LF TECHNOLOGY FOR DIFFICULT OPERATING CONDITIONS

- Low frequency technology
- Mechanically and chemically resistant all-metal tags and read/write modules
- Tags embeddable in metal
- For operating temperatures up to +125°C (+257°F)

HF TECHNOLOGY (13.56 MHZ)

- ISO 15693 compliant
- Networking of up to 253 read/write modules
- Net management via USB possible
- Handheld read/write devices
- Embeddable tags (even in metal)
- High temperature resistant tags up to +250°C (+482°F)

INDUSTRIES
Automotive manufacturing, machine tools, logistics, textiles, green energy, packaging, filling machines

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<th>Tags</th>
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ALL OVER THE WORLD

EUROPE
Austria
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MIDDLE EAST
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United Arab Emirates

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