Secura® Pulse  Deterrence and detection
Betafence quality

The drive for quality is the common thread running throughout the Betafence product range and is assured day after day by the way that we work, following ISO 9001 principles.

Betafence technology

Betafence is not only the European market leader in perimeter systems, but is also the technology trend-setter in the sector.

Betafence safety

All Betafence products are developed in accordance with the most recent European safety standards. The safety of the user is therefore always assured.

Betafence-Gallagher partnership

For the Secura®Pulse system, Betafence has partnered with Gallagher, the global market leader in electric-fence security. In that segment, Gallagher is the absolute benchmark, with continued focus on the development of solutions for security applications. Gallagher holds a number of unique patents and operates according to its own Code of Practice, which even surpasses the international standard IEC/EN 60335-2-76. The standard 2-year factory guarantee underscores the reliability of their products. The Secura®Pulse system is perfectly compatible with the Betafence perimeter system.

Sensible investment

In specific cases, a sturdy or high enclosure is no longer sufficient to protect your property and assets against intruders. To make matters worse, intruders are increasingly organised and professional.

That is why you should put your trust in Secura®Pulse from Betafence. Secura®Pulse is security that is 100% watertight. It is both a deterrent barrier and a zone-detection system that notifies you of the zone that an attempted intrusion is taking place.

Electric-fence security is the security perimeter system preferred by many insurance companies and is therefore a sensible investment that you will probably earn back more quickly than you think.
deterrence and detection

Secura®Pulse security consists of an unobtrusive network of wires carrying a powerful electric pulse around the perimeter and at access points. On contact the intruder receives a powerful and controlled shock which is usually sufficient to deter potential intruders but does not raise an alarm. If, despite the shock, an attempt is made to scale the fence or cut the electric fence wires, an alarm is then automatically transmitted to the control centre combined with the location of the zone where the attempted intrusion is taking place. The security personnel can then attend the exact area of the breach faster, giving a greater chance of apprehending the intruder.

10 questions that you should ask when purchasing an effective perimeter protection system:

1 | Does the system deter potential intruders and does the system detect intruders?
   Yes [ ] No [ ]

2 | Is the system nearly free of false alarms?
   Yes [ ] No [ ]

3 | Is the system delivered and guaranteed by the same company?
   Yes [ ] No [ ]

4 | Is the system safe for people, animals and birds?
   Yes [ ] No [ ]

5 | Will the system continue to work without disruption in bad weather?
   Yes [ ] No [ ]

6 | Does the system provide sufficient security, even without additional stand alone security?
   Yes [ ] No [ ]

7 | Does the system serve as a major obstacle to scaling attempts from within and outside?
   Yes [ ] No [ ]

8 | Is the system interface user friendly?
   Yes [ ] No [ ]

9 | Is the system easy to maintain and upgrade?
   Yes [ ] No [ ]

10 | Is the system aesthetically harmonious?
   Yes [ ] No [ ]

Secura®Pulse meets all the requirements for effective exterior security.

Applications

- Airports
- Defence
- Distribution
- Justice
- Lifestyle estates
- Petrochemical
- Retail parks
- Transportation
Foolproof, quickly installed & aesthetically harmonious

The discrete design of the components of the Secura®Pulse system ensures that they are always aesthetically harmonious. In addition, they have been designed to make rapid installation possible. Due to the special high-tensile insulators, the Secura®Pulse electric fences are always taut resulting in faultless alarm notification and disruptions are virtually unheard of. The use of specially wrapped steel wire on the fencing and the high-voltage power cable designed especially for this purpose, further guarantee the long life of the installation.

Components of the Secura®Pulse system:

1. Omega profile
   - Can be used as a start profile, end profile and corner profile
   - Can also be used on gates
   - 3 lengths (1.06 m; 2.10 m; 2.60 m)

2. Insulators
   - End high-tensile insulators
   - Corner insulators

3. Intermediate profiles with integrated insulators
   - 3 lengths (1.06 m; 2.10 m; 2.60 m)
   - Universal spacers

Meeting the standard

In accordance to the European IEC/EN 60335-2-76 standard, the following regulations must be taken into consideration:

- The physical fence must be at least 1.5 m high.
- Only one energiser or several synchronised energisers are permitted per perimeter. These may be divided into zones.
- Barbed wire or concertina wire may not be used.
- The earth for the Secura®Pulse installation must be at least 2 metres away from other earths, and preferably more than 10 meters.
- Identification of the Secura®Pulse system: standardised warning signs installed every 10 metres, visible on both sides of the fence and on every gate or access point.
High-voltage gate switch [HVGS]

The HVGS provides an uninterrupted high-voltage circuit from the enclosure to the gate. Depending on how it is configured, it can also send an alarm, or not, if a gate is standing open. This would have no effect on the proper operation of the rest of the perimeter (see diagrams).

To make installation of the Secura®Pulse high-voltage gate switch (HVGS) on the gate possible, Betafence has developed several peripherals. The large contact surfaces facilitate simple alignment.

**Situation 1**
Gate closed, HV circuit closed, no short-circuit to earth

**Situation 2**
Gate open, HV circuit still closed, but short-circuited to earth through the short-circuit screw: alarm condition.

**Situation 3**
Gate open, HV circuit still closed, but not short-circuited to earth because there is no short-circuit screw: no alarm condition.

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In most perimeter protection systems, the gate is the weakest link. Even a locked gate is the quickest and easiest route of access for the potential intruder. That is why special attention was taken with the Secura®Pulse system with gate security that can be applied perfectly to Robusta siding and revolving gates. The secret of the Secura®Pulse gate security is in the patented, ‘cannot be sabotaged’, gate switch, which integrates the gate completely into the total perimeter.

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Gate closed, HV circuit closed, no short-circuit to earth

Situation 2
Gate open, HV circuit still closed, but short-circuited to earth through the short-circuit screw: alarm condition.

Situation 3
Gate open, HV circuit still closed, but not short-circuited to earth because there is no short-circuit screw: no alarm condition.
At the core of the electric fence lies the power energiser. Here too, Secura®Pulse offers you a broad range of quality choices. You could choose to go for the top model: the Trophy Plus Dual Pulse. With the Trophy Plus, you can define, monitor and administer as many as 6 security zones. The system is also flexible allowing configuration of the pulse rhythm, current strength and alarm levels to mention but a few.

For each Trophy Plus Dual Pulse power energiser, 3 security zones can be administered. A second Trophy Plus Dual Pulse power energiser is added as a slave to achieve 6* zones

For more zones, please contact your Betafence representative.

Optionally, you can get the Trophy Plus Dual Pulse in an electricity cabinet suitable for outdoor use. The cabinet can be placed in the immediate vicinity of the perimeter, which is especially useful and cost-effective when the distance from the enclosure to the building is large. You can then save a great deal on high-voltage cable.

The principle of electrified wire security is simple. First, we need to have a closed isolated high voltage circuit with an earthing system that is literally intertwined with the circuit. Next, that circuit is linked to a voltmeter, which measures the return of the pulses, and on the basis of that, then generates an alarm.

The high-voltage pulse of 3 to 7 kilovolts lasts less than 1 millisecond, recurs every 1.2 seconds, and is therefore absolutely safe. Nevertheless, it is sufficiently powerful to deter, even with insulating clothing.

### Trophy Plus Dual Pulse

<table>
<thead>
<tr>
<th>Function</th>
<th>3x or 6x HV zones</th>
<th>1x HV earthing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stored energy</td>
<td>15 Joules stored at 100% energy level</td>
<td>15 Joules stored at 100% energy level</td>
</tr>
<tr>
<td>Input</td>
<td>2x or 4x Programmable (BAI - Balanced Alarm Input), 24 hours, complete activation or individual activation of zones</td>
<td></td>
</tr>
<tr>
<td>Programmable outputs</td>
<td>6x of 12x Programmable (complete activation, alarm only or HS alarm, BAI alarm, individual alarm). Can be reset by timer, in real time or actively. Voltage-free relay contact (10A-24V)</td>
<td></td>
</tr>
<tr>
<td>Operation</td>
<td>Separate intelligent graphic operations panel and LCD screen/keys/soft-key functions</td>
<td></td>
</tr>
</tbody>
</table>

### Power

<table>
<thead>
<tr>
<th>Grid power</th>
<th>90-265 VAC 50-60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>-10 to +40°C</td>
</tr>
<tr>
<td>DC output</td>
<td>12-15 V DC, 0.5 A fuse</td>
</tr>
<tr>
<td>Power consumption</td>
<td>40 W per zone</td>
</tr>
<tr>
<td>Power consumption</td>
<td>8 hours (standard)</td>
</tr>
</tbody>
</table>

### Mechanical

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>390 mm</td>
<td>490 mm</td>
<td>120 mm</td>
<td>6.2 kg incl. battery</td>
</tr>
</tbody>
</table>

Secura®Pulse power energisers
Trophy Plus Dual Pulse: Top model

- “Double Pulse” configuration: up to 14 kV between the wires
- Independent high-voltage zones, each with its own voltage generator
- The possibility of synchronising between different power energisers
- Modular configuration possibility as 3 or 6 zones
- Intelligent adaptation of the power consumption in combination with built-in battery power
- Easy, user-friendly configuration and administration by means of a separate hand-held terminal.

Medal 500 / Medal 1000

1 x HV (high voltage) zone plus HV earth
1 x (low-voltage) gate contact

Medal 500 : 4 Joules
Medal 1000 : 9 Joules

1 x connection for turning on/off remotely
1 x connection for gate contact

Contacts (Com/N/O,N/C)
Output 1 : Choice: every alarm or gate alarm
Output 2 : Choice: each alarm or zone/earth alarm
Defined as: Mimic or Latch

Alarms : HV Zone, HV earth, LV Gate
         (audible via internal siren for 5 min.)
General : Turned on/zone-pulse indication, AC power on, Battery power,
          Battery low, Stop position (for critical battery condition, internal
          buzzer alternately audible).

90-265 VAC, 50-60 Hz
-10 to +40°C
12 - 14 V, 0.5 A (limited power)

Medal 500 : 35 W; Medal 1000 : 50 W

Medal 500 (int. 1.2Ah batt) Medal 1000 (int. and ext. 55Ah batt)

Height : 320 mm
Width : 230 mm
Depth : 130 mm
Weight : 3 kg incl. battery

The Medal 500 and Medal 1000 are single-zone power energisers which offer somewhat fewer programming options than the Trophy Plus, but guarantee the same quality and reliability. They also have intelligent battery supply, advanced AC power and lighting strike protection.

The 10 most powerful points about Secura®Pulse:

1 | Efficient deterrence
2 | Realtime monitoring
3 | Immediate alarm
4 | Increased chance of apprehension
5 | Permanent operation
6 | No undesired alarm
7 | Integrated and aesthetic system
8 | Specific security as you desire
9 | Can be combined with existing fencing
10 | Applies to national and international standards

1: Normal operation
The power energiser generates HV pulses that run through the entire circuit. They are measured upon ‘arrival’ and must achieve a strength level that has been predetermined. If that does not occur, then the alarm is triggered.

2: Cut wire (sabotage)
The power energiser generates HV pulses that run through the entire circuit. They no longer arrive, however. After several missed pulses (configurable) the system goes into alarm mode.

3: Short-circuit due to climbing over the fence
The power energiser generates HV pulses that run through the entire circuit. Climbing over it causes a short circuit with the earth as a result of which the HV pulses no longer arrive. After several missed pulses (configurable) the system goes into alarm mode.