Central Battery Systems AC/AC
Automatic Test System AT-S+ with STAR+ Technology – Features

Features:
• Shortened inspection effort due to STAR+ technology; automatic function monitoring of up to 20 luminaires per circuit
• Reduced installation expenditures by STAR+ technology; freely programmable mixed operation of the switching modes per luminaire in one circuit
• Less installation costs as no data line is required to the luminaires
• Automatic luminaire search function
• Plain text display on the control module down to the last luminaire
• Flexible data storage for test log and system configuration with memory card
• 30 minutes functionality in compliance with model directive for fire protection requirements on electrical wiring systems (MLAR model conduit systems directive), version 11/2005, tested by national material testing office

Reliable STAR technology for AC safety power sources

ATS+ offers all the known benefits of our STAR technology, now also for AC safety power sources. It is the perfect symbiosis of CEWA GUARD and STAR technology.

The Automatic Test System AT-S+ individually monitors each CG-S luminaire (up to 20 per circuit), and it does all this using the power supply cable alone.

The new STAR+ technology allows the switching mode of every connected V-CG-S luminaire to be freely programmed within a 50 or 60 Hz supply network using the system’s controller.

This means that maintained light, switched maintained light and non-maintained light modes can be combined in one and the same circuit – there is no need for separate data cables!

The control module with its nonvolatile program memory and large graphic display automatically monitors and controls all components of the test system as well as emergency luminaires connected to it. Faults occurring are shown by the display, forwarded via freely configurable signal contacts and saved to an inspection book.

An integral search function automatically detects all system-dependent luminaires and modules that are assigned an address during installation. A central monitoring device can be connected via an interface.
Central Battery Systems AC/AC
Automatic Test System AT-S+ with STAR+ Technology – What is STAR+?

Identify STAR+ market requirements and consistently implement them!
The continuing development of the CEWA GUARD monitoring system has led to the creation of the
Switching Technology
Advanced Revision,
or STAR for short. This CG-STAR technology allows different switching modes to be implemented
in one and the same circuit, and the switching mode of each individual luminaire can be re-pro-
grammed at any time.

As a result, this technology offers not just the proven CEWA Guard safety when it comes to operating
a safety lighting system, it also gives planners the confidence and flexibility of knowing that the sys-
tem can respond and adapt at any time to any changes that are made to a building and its use.

We have united both forms of technology to STAR+ to take advantage of CEWA GUARD and STAR
technology in projects in which batteries as power sources for safety services are not needed,
but where generators, dual systems (secondary power supply) or central converter systems are used.
This now gives you a highly flexible test system with all the familiar benefits.

Rental current feed

Light switch for luminaire 3

Operation of the STAR+ technology

SOU S+ Central Battery Systems AC/AC
Automatic T est System AT-S+ with STAR+ T echnology – What is STAR+?

S = Switching
T = Technology
A = Advanced
R = Revision
+ = AC single luminaire monitoring
Your Advantages:
The number of outgoing circuits needed can be sharply reduced, since continuously operating, stand-by and switchable permanent lighting can be realised in one common circuit. This allows the use of shorter cable distances, reduces installation costs and minimises the effects of burning materials. Any mode of operation can be assigned at a later date – without encroachment in the lighting installation. This enables simple project planning without having to take all possible types of operation into account.

With symbiosis of CEWA GUARD technology and the patented STAR technology to STAR+ technology, no supplementary data line to the luminaires is needed even with use of an AC power source for safety services.

Conventional Installation:
- Maintained light 1 (DS)
- Non-maintained light 1 (BS)
- Non-maintained light 2 (BS)
- Maintained light 2 (DS)
- Switched maintained light 1 (DLS)
- Switched maintained light 2 (DLS)

- Each type of switching mode requires two circuits
- Only one type of switching mode is possible per circuit
- Any later modifications involve a large amount of work and expense

AT-S+ Installation with STAR+ Technology:
- All types of switching modes
- All types of switching modes

- Only two outgoing circuits for all types of switching modes
- Maintained light, non-maintained light and switched maintained light are possible in one common circuit
- Later circuit modifications do not pose any problems
Central Battery Systems AC/AC
Automatic Test System AT-S+ with STAR+ Technology – Strong in detail

**AT-S+ cabinet**
- Cable infeed from above
- Triple deck tension spring installation terminal with neutral wire disconnect terminal
- Control unit CU S+ 2
- DC/DC converter 2
- AC module
- Fuse circuit breaker D02 25 A per field
- Circuit switching modules SU S+ 2 x 6 A
- Fuse circuit breaker
- 6-fold mains distribution box (optional)
- Cable infeed from below

Large connection compartment for convenient wiring
All connections on triple deck installation terminals in the upper part of the central unit.
The control unit, DC/DC converter and the AC module are wired at terminal as standard.
Wiring of the SU-S+ modules at terminals is optional.
Central Battery Systems AC/AC
Automatic Test System AT-S+ with STAR+ Technology – Strong in detail

**Freely programmable control unit**
- Three buttons for:
  - test (emergency operation)
  - function test
- Connection for blocking switch and external phase monitor
- Flexible data storage for system and inspection book configuration. System programming is on any PC via optional SD card reader and CEAG software.
- Status LED displays
- Data bus connection
- Five zero-potential signal contacts
- Three freely assignable function buttons
- Graphic display, 128 x 64 pixels, backlit, contrast and brightness can be set via programmes
- 7 control buttons for user-friendly navigation
- Four control inputs for analogue connection of power source to the test system for safety services

**Switching unit SU S+ 2 x 6 A**
- Connection for luminaire circuits 2 x 6 A
- LED, circuit On
- End circuit fuse, circuit 1
- End circuit fuse, circuit 2
- DIL switch
- Terminator
- RS 485 bus connection
- Connection for safety power source 230 V AC
- LED fault, circuit 1
- LED fault, circuit 2
- Service button
- Top hat rail housing, 6 subunits

**Switching over unit SOU S+ 2 x 4 A**
- Connection of end circuits 2 x 4 A
- Rental current feed 230 V AV
- Connection for safety power source 230 V AC
- Top hat rail housing, 10 subunits
- End circuit fuse, circuit 1
- End circuit fuse, circuit 2
- RS 485 bus connection
- DIL switch
- Terminator
- LED On, circuit 1
- LED fault, circuit 1
- LED On, circuit 2
- LED fault, circuit 2
- Service button
Central Battery Systems AC/AC
Automatic Test System AT-S+ with STAR+ Technology – Distribution box SU1 and SOU1

AT-S+ SU1

- Type plate
- Sighting window
- Circuit designation field
- Cable infeed from above
- Power source feed for safety service
- End circuit terminals
- RS 485 bus connection
- Switching unit SU S+ 2 x 6 A
- Cable infeed from below

AT-S+ SOU1

- Type plate
- Sighting window
- Circuit designation field
- Cable infeed from above
- Two feeders (rental current and power source for safety service)
- End circuit terminals
- RS 485 bus connection
- Switching over unit SOU S+ 2 x 4 A
- Cable infeed from below
Central Battery Systems AC/AC

Automatic Test System AT-S+ with STAR+ Technology – Distribution box ESF30 SU2 and ESF30 SOU2

AT-S+ ESF30 SU2

- Cable infeed from above
- Screwless PE/N terminal strip
- Switching units SU S+ 2 x 6 A

AT-S+ ESF30 SOU2

- Cable infeed from above
- Screwless PE/N terminal strip
- Switching over units SOU S+ 2 x 4 A
### Ordering details

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope of supply</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Test System AT-S C30</td>
<td>Automatic Test System type AT-S C30 incl. CU-S, DC/DC.2 and AC module 30 free module slots</td>
<td>40071360500</td>
</tr>
<tr>
<td>Automatic Test System AT-S C16</td>
<td>Automatic Test System type AT-S C16 incl. CU-S, DC/DC.2 and AC module 16 free module slots</td>
<td>40071360501</td>
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<tr>
<td>Automatic Test System AT-S C4</td>
<td>Automatic Test System type AT-S C4 incl. CU-S, DC/DC.2 and AC module 4 free module slots</td>
<td>40071360502</td>
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<tr>
<td>Automatic Test System AT-S C0</td>
<td>Automatic Test System type AT-S C0 incl. CU-S, DC/DC.2 und AC module no free module slot</td>
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<tr>
<td>Distribution box AT-S SU4</td>
<td>Distribution box type AT-S SU4 incl. 4 switching units SU-S 2 x 6 A</td>
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<tr>
<td>Distribution box AT-S SU2</td>
<td>Distribution box type AT-S SU2 incl. 2 switching units SU-S 2 x 6 A</td>
<td>40071360505</td>
</tr>
<tr>
<td>Distribution box AT-S SU1</td>
<td>Distribution box type AT-S SU1 incl. 1 switching unit SU-S 2 x 6 A</td>
<td>40071360506</td>
</tr>
<tr>
<td>Distribution box AT-S SOU2</td>
<td>Distribution box type AT-S SOU2 incl. 2 switching over units SOU-S 2 x 4 A</td>
<td>40071360508</td>
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<tr>
<td>Distribution box AT-S SOU1</td>
<td>Distribution box type AT-S SOU1 incl. 1 switching over unit SOU-S 2 x 4 A</td>
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</table>

### Ordering details

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<tr>
<th>Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Automatic Test System AT-S ESF30 C30-P</td>
<td>Cabinet for automatic test system with 30 minutes functionality, incl. CU-S control unit, DC/DC.2 converter, AC supply with space reserve for expansion to max. 60 end circuits, but maximum of 30 SU-S 2 x 6 A circuit assemblies</td>
<td>40071360723</td>
</tr>
<tr>
<td>Automatic Test System AT-S ESF30 C10-P</td>
<td>Cabinet for automatic test system with 30 minutes functionality, incl. CU-S control unit, DC/DC.2 converter, AC supply with space reserve for expansion to max. 20 end circuits, but maximum of 10 SU-S 2 x 6 A circuit assemblies</td>
<td>40071360722</td>
</tr>
<tr>
<td>Automatic Test System AT-S ESF30 SU5</td>
<td>Distribution box for automatic test system with 30 minutes functionality, incl. 5 SU-S 2 x 6 A circuit assemblies</td>
<td>40071360730</td>
</tr>
<tr>
<td>Automatic Test System AT-S ESF30 SU4</td>
<td>Distribution box for automatic test system with 30 minutes functionality, incl. 4 SU-S 2 x 6 A circuit assemblies</td>
<td>40071360727</td>
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<tr>
<td>Automatic Test System AT-S ESF30 SU2</td>
<td>Distribution box for automatic test system with 30 minutes functionality, incl. 2 SU-S 2 x 6 A circuit assemblies</td>
<td>40071360724</td>
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<td>Automatic Test System AT-S ESF30 SOU5</td>
<td>Distribution box for automatic test system with 30 minutes functionality, incl. 5 SOU-S 2 x 4 A circuit assemblies</td>
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<tr>
<td>Automatic Test System AT-S ESF30 SOU3</td>
<td>Distribution box for automatic test system with 30 minutes functionality, incl. 3 SOU-S 2 x 4 A circuit assemblies</td>
<td>40071360731</td>
</tr>
<tr>
<td>Automatic Test System AT-S ESF30 SOU2</td>
<td>Distribution box for automatic test system with 30 minutes functionality, incl. 2 SOU-S 2 x 4 A circuit assemblies</td>
<td>40071360728</td>
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<tr>
<td>Automatic Test System AT-S ESF30 SOU1</td>
<td>Distribution box for automatic test system with 30 minutes functionality, incl. 1 SOU-S 2 x 4 A circuit assemblies</td>
<td>40071360726</td>
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<tr>
<td>AT-S+ RV30-1</td>
<td>E30 junction box AT-S+RV30-1 for small cabinets type AT-S+/SU with 1 Neozed fuse inside</td>
<td>40036071031</td>
</tr>
<tr>
<td>Reduction</td>
<td>Reduction M32 to M20 cable glands for E30 junction boxes incl. M20 cable gland</td>
<td>40071071033</td>
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</tbody>
</table>
## Central Battery Systems AC/AC
### Automatic Test System AT-S+ with STAR+ Technology – Technical data

<table>
<thead>
<tr>
<th>Type</th>
<th>AT-S’ C30</th>
<th>AT-S’ C16</th>
<th>AT-S’ C4</th>
<th>AT-S’ C0</th>
</tr>
</thead>
</table>

### Modules:
- **Control module: CU-S**
  - 1
- **DC/DC.2-converter**
  - 1
- **AC module**
  - 1
- **Switching unit SU S’ 2 x 6 A**
  - 0-30
- **Switching over unit SOU S’ 2 x 4 A**
  - –
- **Safety load disconnector mains feed**
  - yes
- **Load disconnector mains feed**
  - –
- **No. of branching distributors**
  - 6

### Electrical cabinet construction:
- **Rated voltage**
  - 400/230 V
  - 400/230 V
  - 400/230 V
  - 230 V
- **Rated frequency**
  - 50 or 60 Hz
  - 50 or 60 Hz
  - 50 or 60 Hz
  - 50 or 60 Hz
- **AC network**
  - TN-C-S
  - TN-C-S
  - TN-C-S
  - TN-C-S
- **Insulation class**
  - 1
  - 1
  - 2*1
  - 2*1
  - 2*1
  - 2*1
  - 2*1
  - 2*1
- **Degree of protection**
  - IP20
  - IP20
  - IP54
  - IP54
  - IP65
  - IP65
  - IP65
  - IP65
  - IP65
- **Max. current rating mains [∑ L1, L2, L3] [A]**
  - 90
  - 74
  - 48
  - –
  - 25
  - 16
  - 10
  - 25
  - 10
- **Max. rated power mains [KVA]**
  - 20.7
  - 17
  - 11
  - –
  - 5.7
  - 3.7
  - 2.3
  - 5.7
  - 2.3
- **Three-phase distribution**
  - yes
  - yes
  - yes
  - no
  - no
  - no
  - no
  - no
  - no
- **Connection cross-section for mains supply**
  - 50 mm²
  - 50 mm²
  - 50 mm²
  - 4 mm²
- **Connection cross-section for branching distributors**
  - 16 mm²
  - 16 mm²
  - 16 mm²
  - –
- **Max. conductor size final circuits**
  - 4 mm²
  - 4 mm²
  - 4 mm²
  - 4 mm²
- **Max. number of final circuit terminals**
  - 60
  - 32
  - 8
  - –

### Mechanical cabinet construction:
- **Cabinet height (max.)**
  - 2050
  - 1800
  - 800
  - 600
- **Cabinet width (max.)**
  - 800
  - 600
  - 600
  - 400
- **Cabinet depth (max.)**
  - 400
  - 400
  - 250
  - 250
- **Material**
  - Sheet steel
  - Sheet steel
  - Sheet steel
  - Sheet steel
- **Design**
  - Cabinet
  - Cabinet
  - Wall cabinet / surface mounted
  - Wall cabinet / surface mounted
- **Door stop**
  - right
  - right
  - right
  - right
- **Outer coating**
  - Textured powder paint
  - Textured powder paint
  - Textured powder paint
  - Textured powder paint
- **Colour**
  - RAL 7035
  - RAL 7035
  - RAL 7035
  - RAL 7035
- **Partial viewing door**
  - yes
  - yes
  - yes
  - yes
- **Lock**
  - 3 mm two-way
  - 3 mm two-way
  - 3 mm two-way
  - 3 mm two-way
- **Cable entry from above**
  - yes
  - yes
  - yes
  - yes
- **Cable entry from below**
  - yes
  - yes
  - no
  - no
- **Base (optional)**
  - 100/200
  - 100/200
  - –
  - –

*1 housing has insulation class II. The earth conductor must however be routed in the housing.
## Central Battery Systems AC/AC

**Automatic Test System AT-S+ with STAR+ Technology – Technical data**

### Table: Technical Data

<table>
<thead>
<tr>
<th>AT-S’ SU4</th>
<th>AT-S’ SU2</th>
<th>AT-S’ SU1</th>
<th>AT-S’ SOU2</th>
<th>AT-S’ SOU1</th>
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<tbody>
<tr>
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<td>4</td>
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<tr>
<td>–</td>
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<td>–</td>
<td>2</td>
<td>1</td>
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<tr>
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<table>
<thead>
<tr>
<th>Parameter</th>
<th>AT-S’ SU4</th>
<th>AT-S’ SU2</th>
<th>AT-S’ SU1</th>
<th>AT-S’ SOU2</th>
<th>AT-S’ SOU1</th>
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<tbody>
<tr>
<td>Rated voltage</td>
<td>230 V</td>
<td>230 V</td>
<td>230 V</td>
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<tr>
<td>50 or 60 Hz</td>
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<tr>
<td>TN-C-S</td>
<td>TN-C-S</td>
<td>TN-C-S</td>
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<td>Cabinet width (max.)</td>
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<tr>
<td>Wall cabinet / surface mounted</td>
<td>Wall cabinet / surface mounted</td>
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<tr>
<td>Door stop</td>
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