



| Quote Number | | Quote Name | | Quote Date | Expiration Date | Currency |
|----------------|-----|----------------------------|--|------------------|-----------------|----------------|
| 20081-006-LD-D | | Build Sheet – FSA Spec 463 | | FSA | FSA | USD |
| Sales Person | | Manufacturing Plant | | Quote Entered By | | Contact No. |
| Larry Davis | | Asco | | Larry Davis | | 737-703-5000 |
| Quoted To: | | | | FOB: | | |
| N/A | | | | Jobsite | | |
| Line No. | Qty | Part | Description | | Unit Price | Extended Total |
| 000010 | 1 | ABB – 600 Amp | 600 Amp, 3 Pole Open Transition ATS Including: <ul style="list-style-type: none">277/480VNema 3R2 Year Warranty | | Included | Included |
| 000020 | 1 | Freight | Freight | | Included | Included |
| 000030 | 1 | Startup | Onsite Startup, Testing and Training by Factory Rep. | | Included | Included |
| | | | Total Quote: | | | \$5,000.00 |

ELECTRIFICATION PRODUCTS

**The world's first
true all-in-one ATS is here.**



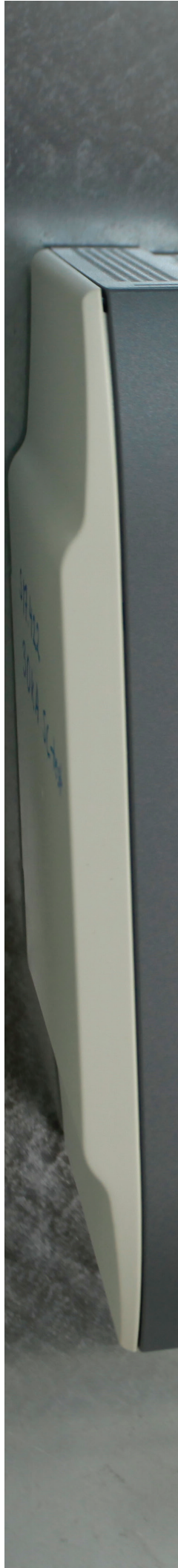
Introducing TruONE™ ATS from ABB.

A critical breakthrough for critical power.

The all-new TruONE™ is the world's first true purpose-built automatic transfer switch, engineered to incorporate switch and controller in one seamless unit.

Performance tested beyond standard requirements, TruONE™ stands ready to ensure the steady delivery of critical power at all times. Its self-contained design reduces the number of wires and connections, which speeds installation and minimizes the potential for connection failures to ensure best-in-class reliability. Its predictive maintenance and modular components reduce downtime and service costs. And its advanced connectivity is ready for the future. In addition, unlike typical ATS solutions, TruONE™ allows emergency manual operation under load for immediate power restoration in the event of an equipment malfunction.

TruONE™ represents a major shift in engineering and a critical breakthrough for critical power.



ABB



AUTO

59 s 11:06
System overview
S1 OK OK S2
S1 connected to load
Load current
393.0 A
Generator stop delay TruONE



I ON

II ON



AUTO



LOAD

LOAD

LOAD

A/L1

B/L2

C/L3

SOURCE

SOURCE

SOURCE

S1 S2

S1 S2

S1 S2

The one ATS with all these advantages

—
01 Detachable HMI.
Three levels of control
to meet different cus-
tomer requirements.
—

02 All-in-one concept
that brings easy and
fast installation.



Easy to Install

Reduces installation time by up to 80%.

Why waste time piecing together an ATS from multiple components and as many as 20 connection wires, not to mention the time spent testing? TruONE™ is the first automatic transfer switch to put it all together, including the controller with detachable HMI. It can be installed with a single wire using standard enclosures.



Safety and Protection

Reduces risk of operator injury.

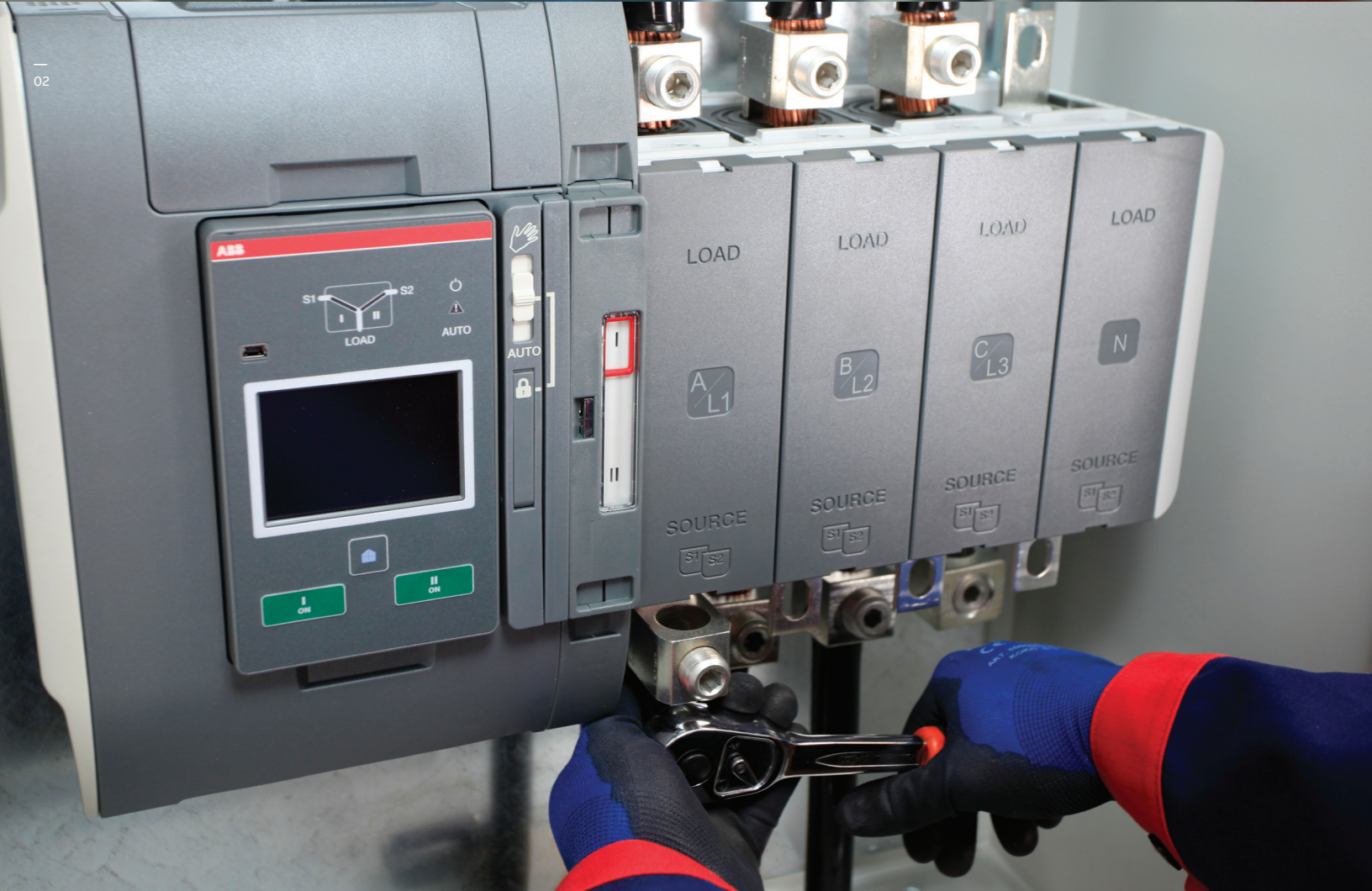
TruONE™ enables emergency manual operation—even under load—without opening the panel door when the HMI is mounted to the ATS frame. The HMI can be detached from the frame for door mounting, offering more flexibility for the panel designer. Best of all, regardless of the HMI installation method, there's no need for connecting dangerous line voltages to the door, so the risk of operator injury due to equipment malfunction is reduced.



Optimum Interface

Simplifies connectivity.

TruONE™ features cloud-based connectivity through the ABB Ability™ Electrical Distribution Control System (EDCS). ABB Ability simplifies implementation and use of TruONE™ in coordination with other ABB devices, ensuring one common user interface and one common software environment. Market-leading modular connectivity with seven communication protocols ensures easy installation and connectivity now and far into the future.



Even more advantages.



Speed Up Your Project

Now you can speed up your project even more, thanks to TruONE™ automatic commissioning capabilities. Pre-made configuration files can be uploaded from your PC to TruONE™, minimizing the risk of human error and reducing programming time by 80%.



Continuous Operation

TruONE™ features predictive maintenance, self-diagnostics and customer-replaceable critical modules to simplify service and significantly reduce downtime and service costs. Say goodbye to blinking lights and stopping motors. TruONE™ provides a fast in-phase open transition of power, ensuring unnoticed generator use during business hours.



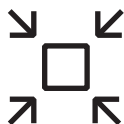
Energy Efficiency

Full compatibility with ABB Ability™ EDCS allows data processing from the site's electrical equipment to deliver analysis and make recommendations for optimizing the electrical system's performance. This allows remote monitoring of plants, energy consumption and costs at a glance, making implementation of energy management strategies easier and faster.



Optimized Logistics

TruONE™ features a wide voltage range from 200 to 480 VAC (with +/-20% tolerance), reducing the need to stock multiple SKUs, reducing inventory and saving space in the warehouse.



Space Saving

TruONE™ features plug-in factory and field-mount accessorizing, so you don't need extra space inside the panel. Even in the case of specialized customer needs, you can use standard cabinets.

Reliable in extreme conditions.

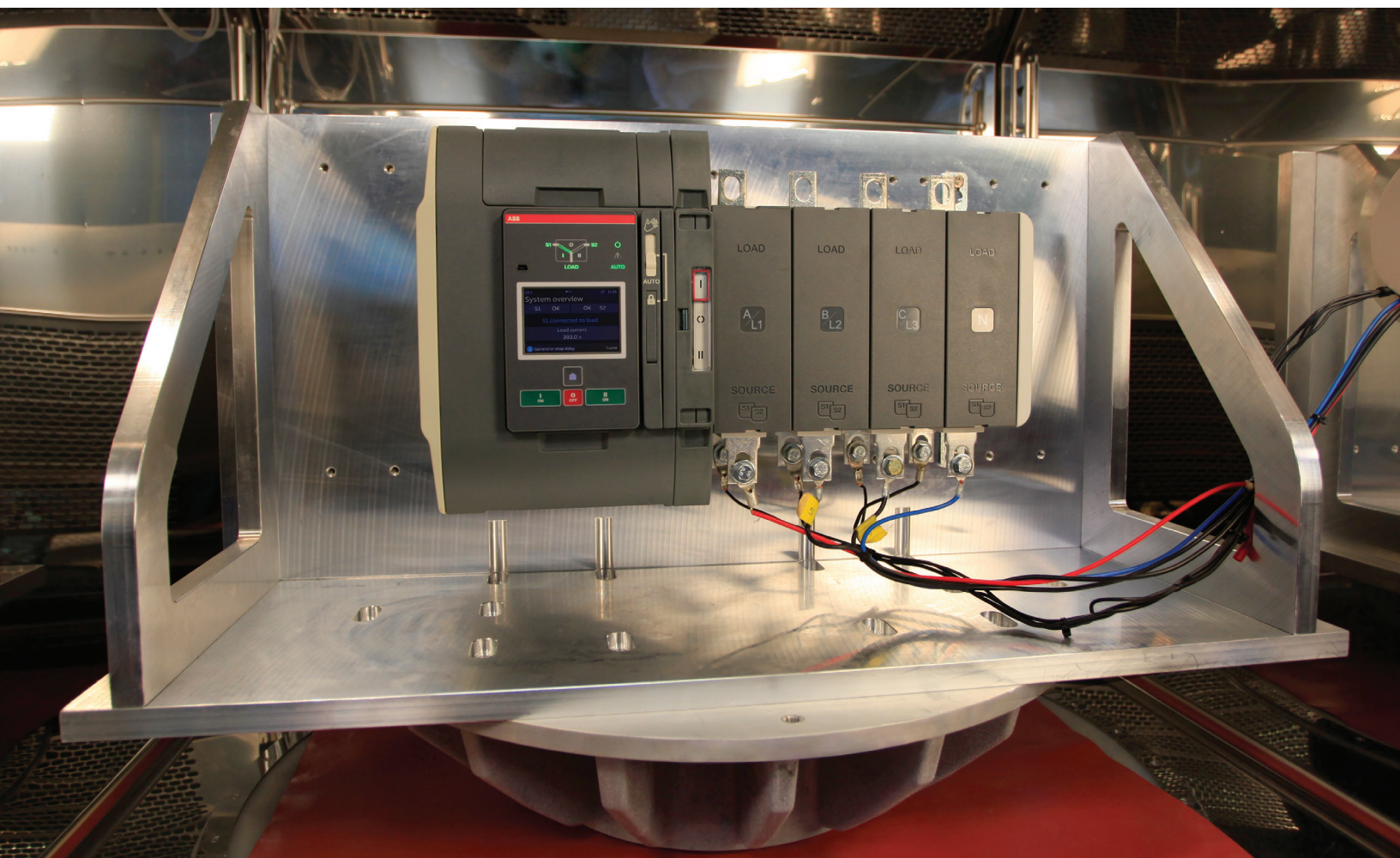
You can be sure TruONE™ exceeds standard requirements for performance and reliability to bring you dependable operation in even the most challenging electrical, mechanical and environmental conditions.



TruONE™ is the only ATS to guarantee safe and reliable operation during dramatic variations in temperature (-25–+70°C) and voltage (200–480 VAC with +/-20% tolerance), and it's tolerant of vibrations (acc. IEC 60068-2-6) and shocks (acc. IEC 60068-2-27). TruONE™ also has true short-circuit resilience, able to take the hit and remain fully operational after exposure to even the most dangerous phenomena.

Site conditions can change due to unexpected situations, but the performance of TruONE™ does not.

—
Testing for vibrations,
shocks and a wide
temperature range.





The one ATS for all applications.

Bring the highest level of convenience, efficiency and critical power security to your product, project or facility.

TruONE™ is the superior solution for:

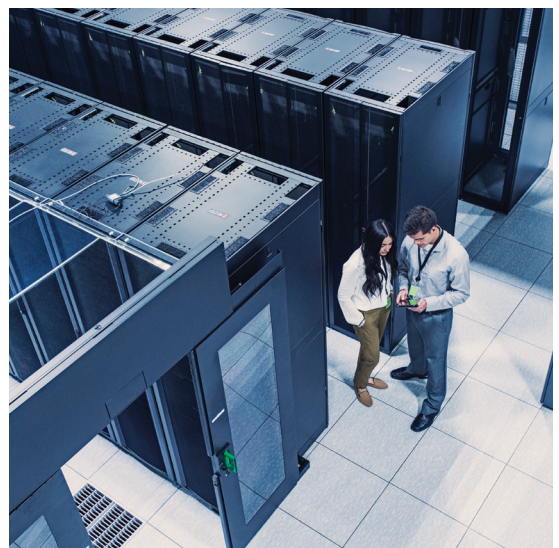
- Genset OEMs
- Panel builders
- Consultants and engineers
- Contractors
- Facilities managers

TruONE™ provides superior critical power security for:

- Hospitals
- Sports arenas
- Retail environments
- High-rise buildings
- Commercial buildings
- Financial environments
- Data centers
- And more

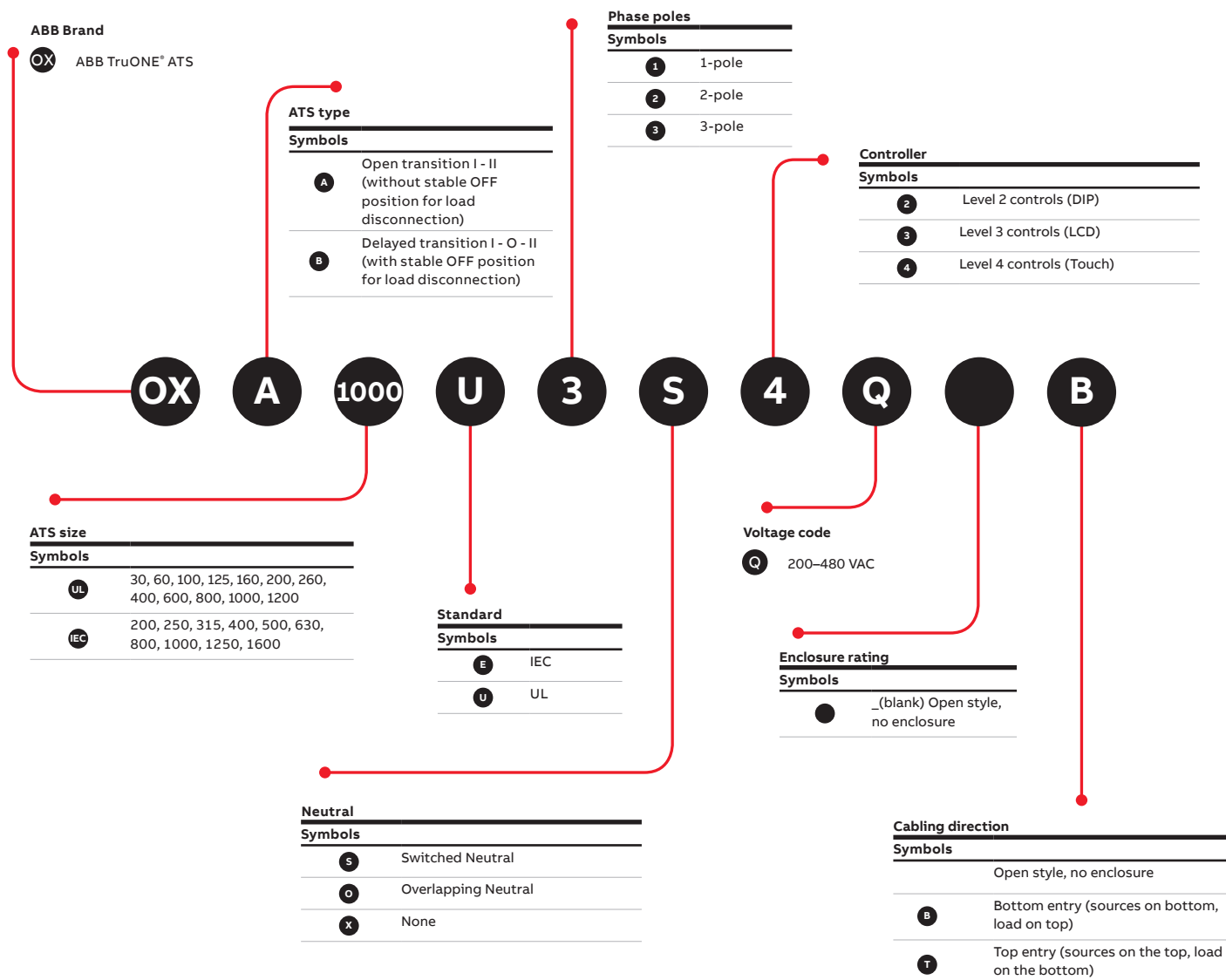
There's only one TruONE™ ATS.

Get the unique ease and reliability of the world's first true all-in-one ATS. TruONE™. Contact your ABB representative or visit abb.com for more information.



TruONE™ part number key

ABB TruONE® automatic transfer switch, open transition, 1000 amperes, UL, 3 phase + Neutral (3ph, 4 wire), Level 4 controls, 200–480 VAC voltage area, bottom entry (sources on bottom, load on top).



Note: For available configurations, see the ordering information pages.

TruONE™



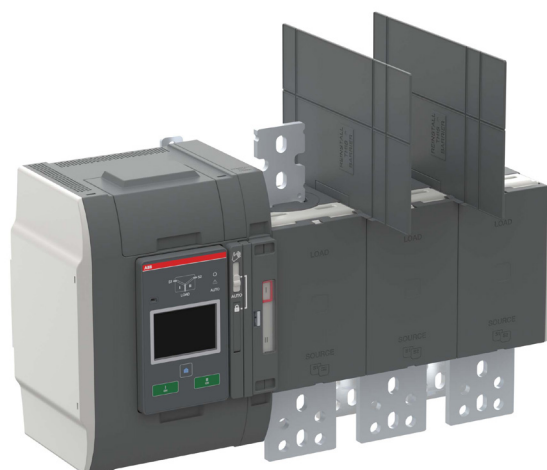
Open style ATS
UL 30-200 A
IEC 200-250 A



Open style ATS
UL 260 A
IEC 315-400 A



Open style ATS
UL 400-600 A
IEC 500-800 A



Open style ATS
UL 800-1200 A
IEC 1000-1600 A

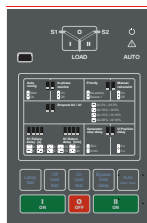
Targeted Product Performance

| ATS Frame Size | | 30-400 A | 260-800 A | 800-1600 A |
|-------------------------------|--|-----------|-----------|-------------|
| Rated operational current | IEC 60947-6-1, GB 14048-11: AC-33B | 200-400 A | 630-800 A | 1000-1250 A |
| | GB 14048-11: AC-33iA | 30-200 A | 260-600 A | 800-1200 A |
| | UL1008: Emergency systems-total system load | 30-200 A | 260-600 A | 800-1200 A |
| Short-circuit characteristics | Iq (rated conditional short-circuit current) | 100 kA | 100 kA | 100 kA |
| | Icw (rated short-time withstand current)/Short-time current ratings, 100ms | 18-30 kA | 42 kA | 50 kA |
| | Icw (rated short-time withstand current)/Short-time current ratings, 500ms | | 30 kA | 50 kA |
| | Withstand and Close-on ratings (any breaker) 480V | 42 kA | 50 kA | 85 kA |
| | Withstand and Close-on ratings, with current limiting fuses | 200 kA | 200 kA | 200 kA |

Note: See the TruONE technical catalog for confirmed ratings

TruONE™ feature comparison

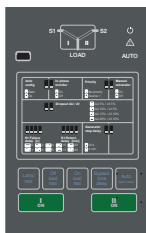
Main features in the table below. Consult ABB for more information.



Feature comparison

| | Level 2 controls | Level 3 controls | Level 4 controls |
|---|--------------------------------------|----------------------------------|----------------------------------|
| Ampere sizes available | IEC: 200-1600 A UL: 30-1200 A | IEC: 200-1600 A UL: 30-1200 A | IEC: 200-1600 A UL: 30-1200 A |
| Rated voltage | 200-480Vac | 200-480Vac | 200-480Vac |
| Rated frequency | 50 / 60 Hz | 50 / 60 Hz | 50 / 60 Hz |
| Phase system | Single and Three | Single and Three | Single and Three |
| Number of poles | 2, 3 and 4 | 2, 3 and 4 | 3 and 4 |
| Neutral configuration | | | |
| Switched | Yes | Yes | Yes |
| Overlapping | No | Yes | Yes |
| Product type | | | |
| Open transition (I-II) | Yes | Yes | Yes |
| Delayed transition (I-O-II) | Yes | Yes | Yes |
| Voltage and frequency settings | | | |
| Pick up Voltage Source 1 | Fixed 2% above drop out | 71-99%, 101-119% | 71-99%, 101-119% |
| Drop out Voltage Source 1 | +/-5, 10, 15, 20% | 70-98%, 102-120% | 70-98%, 102-120% |
| Pick up Voltage Source 2 | Fixed 2% above drop out | 71-99%, 101-119% | 71-99%, 101-119% |
| Drop out Voltage Source 2 | +/-5, 10, 15, 20% | 70-98%, 102-120% | 70-98%, 102-120% |
| Pick up Frequency Source 1 | Fixed 1% above drop out | 80.5-99.5%, 100.5-119.5% | 80.5-99.5%, 100.5-119.5% |
| Drop out Frequency Source 1 | +/-5, 10 % | 80-99%, 101-120% | 80-99%, 101-120% |
| Pick up Frequency Source 2 | Fixed 1% above drop out | 80.5-99.5%, 100.5-119.5% | 80.5-99.5%, 100.5-119.5% |
| Drop out Frequency Source 2 | +/-5, 10 % | 80-99%, 101-120% | 80-99%, 101-120% |
| Time delay settings | | | |
| Override momentary Source 1 Outage, sec | 0, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30 | 0-60 | 0-60 |
| Transfer from Source 1 to Source 2, sec | Fixed 2 seconds | 0-3600 | 0-3600 |
| Override momentary Source 2 Outage, sec | Fixed 1,5 seconds | 0-60 | 0-60 |
| Transfer from Source 2 to Source 1, min | 0, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30 | 0-120 | 0-120 |
| Generator stop delay, min | 30 secs or 4 mins | 0-60 | 0-60 |
| Center-OFF delay, sec | 0 or 4 | 0-300 | 0-300 |
| Pre-transfer delay S1 to S2, sec | No | 0-60 | 0-60 |
| Post-transfer delay S1 to S2, sec | No | 0-60 | 0-60 |
| Pre-transfer delay S2 to S1, sec | No | 0-60 | 0-60 |
| Post-transfer delay S2 to S1, sec | No | 0-60 | 0-60 |
| Elevator Pre-signal delay S1 to S2, sec | No | 0-60 | 0-60 |
| Elevator Post-signal delay S1 to S2, sec | No | 0-60 | 0-60 |
| Elevator Pre-signal delay S2 to S1, sec | No | 0-60 | 0-60 |
| Elevator Post-signal delay S2 to S1, sec | No | 0-60 | 0-60 |
| Load shed delay, sec | No | 0-60 | 0-60 |
| Source failure detections (continues on next page) | | | |
| No voltage | Yes | Yes | Yes |
| Undervoltage | Yes | Yes | Yes |
| Overvoltage | Yes | Yes | Yes |
| Phase missing | Yes | Yes | Yes |
| Voltage unbalance | Yes | Yes | Yes |
| Invalid frequency | Yes | Yes | Yes |
| Incorrect phase sequence | Yes | Yes | Yes |

TruONE™ feature comparison



Feature comparison

| | Level 2 controls | Level 3 controls | Level 4 controls |
|--|-----------------------|-------------------------|-------------------------|
| Features | | | |
| Controls | DIP + keys | LCD + keys | Touch + keys |
| LED indications for ATS, S1 and S2 status | Yes | Yes | Yes |
| Open transition - Standard digital inputs/outputs | 0 / 1 | 1 / 1 | 2 / 1 |
| Delayed transition - Standard digital inputs/outputs | 1 / 1 | 2 / 1 | 3 / 1 |
| Programmable digital inputs/outputs | No | Yes | Yes |
| Auto config (voltage, frequency, phase system) | Yes | Yes | Yes |
| Source priority | Source 1, No priority | Source 1/2, No priority | Source 1/2, No priority |
| Manual re-transfer | Yes | Yes | Yes |
| In-phase monitor (synchro check) | Yes | Yes | Yes |
| Genset exercising: on-load, off-load | Yes | Yes | Yes |
| In-built power meter module | No | No | Yes |
| Load shedding | No | Yes | Yes |
| Real time clock | No | Yes | Yes |
| Event log | No | Yes | Yes |
| Predictive maintenance | No | No | Yes |
| Voltage and current harmonics measuring | No | Voltage | Voltage, current |
| Field-mount accessories | | | |
| Auxiliary contacts for position indication | Yes | Yes | Yes |
| Digital input/output modules | No | Yes | Yes |
| 12-24 Vdc aux supply module for controller | No | Yes | Yes |
| Communication modules | No | Yes | Yes |
| Connectivity | | | |
| Modbus RTU (RS-485) | No | Yes | Yes |
| Modbus/TCP | No | Yes | Yes |
| Profibus DP | No | Yes | Yes |
| ProfiNet | No | Yes | Yes |
| DeviceNet | No | Yes | Yes |
| Ethernet IP | No | Yes | Yes |
| Ekip Com Hub (monitoring via ABB Ability™: EDCS) | No | Yes | Yes |
| For applications | | | |
| Mains - Mains | Yes | Yes | Yes |
| Mains - Generator (minimum size 40kVA) | Yes | Yes | Yes |
| UL short circuit withstand ratings | | | |
| Fused withstand and closing rating (WCR) | Yes | Yes | Yes |
| Coordinated breaker WCR | Yes | Yes | Yes |
| Time-based WCR | No | No | Yes |
| Short-time ratings | No | No | Yes |

Additional information

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