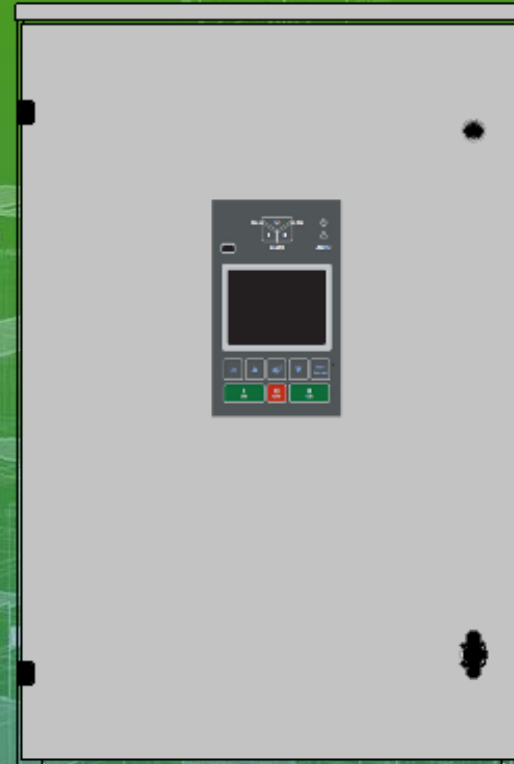




POWER SOLUTIONS



## AUTOMATIC TRANSFER SWITCHES

**March 2024**



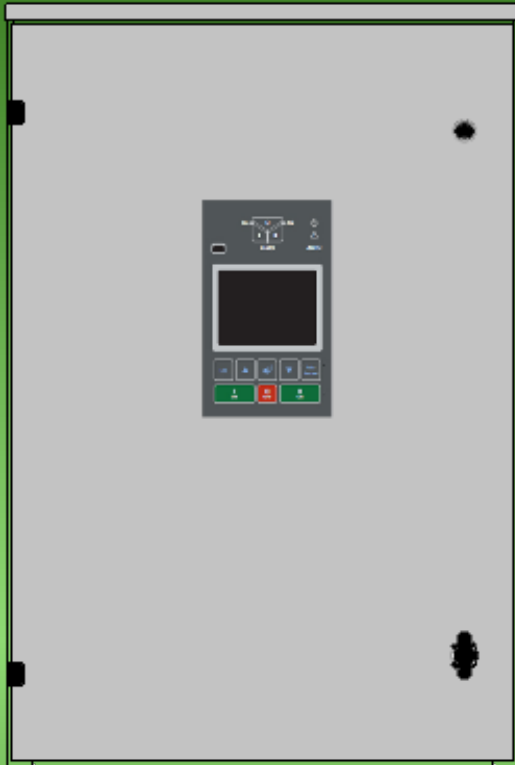
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# ATS Part Number Breakdown

	Product Family (5 digits)	Ampacity (2 digits)		Voltage, Pole/Phase, Ground/Neutral			Enclosure Rating (2 digits)		
<b>ATS 03</b>	<b>Automatic Transfer Switch</b>	<b>01</b>	100 amps	<b>M</b>	200-480 V	<b>3</b>	3 pole	<b>T1</b>	Type 1
	Series 2 Controller <b>02</b>	<b>02</b>	200 amps			<b>4</b>	4 pole	<b>3R</b>	Type 3R painted steel
	Series 3 Controller <b>03</b> (standard)	<b>26</b>	260 amps					<b>3X</b>	Type 3RX 316 Stainless Steel
	Series 4 Controller <b>04</b>	<b>04</b>	400 amps						
		<b>06</b>	600 amps						
		<b>08</b>	800 amps						
		<b>12</b>	1200 amps						

Example P/N: ATS03-04-M4-3X --- Automatic Transfer Switch, Series 3 Controller (standard) Open Transition, 400 amp, multi voltage auto configuring, 4 pole (3 pole with switched neutral), Type 3RX 316 Stainless Steel Enclosure (Stocked units have series 3 controller, in 3 and 4 pole.) (Series 2 and 4 controller, and 2 pole units available by special request and standard lead times apply)

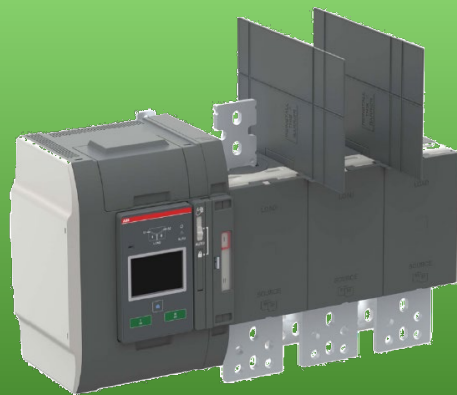
# ATS Series



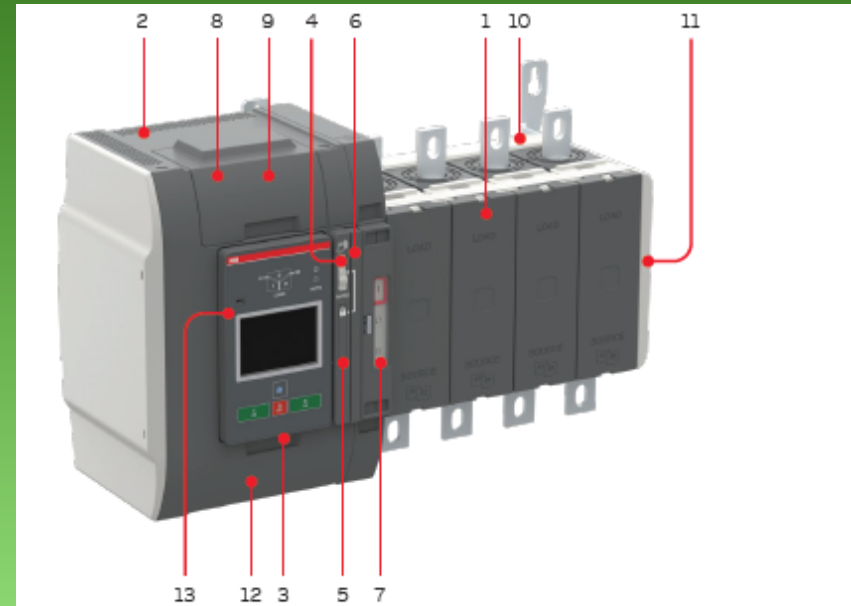
Type 3R Enclosure Standard



Door Mounted, Lockable Cover,  
Type 3 Controller Standard



3 and 4 Pole Standard



1. Automatic transfer switch
2. Embedded ATS control unit and mechanism
3. Detachable HMI unit, three types (Level 2 DIP, Level 3 LCD and Level 4 Touch)
4. Slide switch (Hand - Locking - AUTO) for selection of the operation mode
5. Padlocking the automatic transfer switch to prevent automatic and manual operation
6. Handle for manual operation
7. Position indication
8. Terminals for control circuit connections (behind the cover)
9. Place for connectivity modules (aux power supply, com and signaling)
10. Place for sensor module (with Level 4 controls)
11. Place for auxiliary contact block
12. Location of product identification label
13. Programming port, only for Ekip Programming module and Ekip Connect software



UL 1008 Listed

# Controller Features

## TruONE™ feature comparison



Virtual HMI - Level 2 controls



Virtual HMI - Level 4 controls



	Level 2 controls	Level 3 controls	Level 4 controls
<b>Ampere sizes available</b>	IEC: 200-1600 A UL: 30-1200 A	IEC: 200-1600 A UL: 30-1200 A	IEC: 200-1600 A UL: 30-1200 A
<b>Rated voltage, three phase</b>	200-480Vac	200-480Vac	200-480Vac
<b>Rated voltage, single phase</b>	200-240Vac	200-240Vac	200-240Vac
<b>Rated frequency</b>	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
<b>Phase system</b>	Single and Three	Single and Three	Single and Three
<b>Number of poles</b>	2, 3 and 4	2, 3 and 4	3 and 4
<b>Neutral configuration</b>			
Switched	Yes	Yes	Yes
Overlapping	No	Yes	Yes
<b>Product type</b>			
Open transition (I-II)	Yes	Yes	Yes
Delayed transition (I-O-II)	Yes	Yes	Yes
<b>Voltage and frequency settings</b>			
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%
<b>Time delay settings</b>			
Override momentary Source 1 Outage, sec	0, 1, 2, 3, 4, 5, 10, 15, 20, 30	0-60	0-60
Transfer from Source 1 to Source 2, sec	2 (0-3600 via Ekip Connect)	0-3600	0-3600
Override momentary Source 2 Outage, sec	2 (0-60 via Ekip Connect)	0-60	0-60
Transfer from Source 2 to Source 1, min	0, 1, 2, 3, 4, 5, 10, 15, 20, 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	0-300	0-300
Post-transfer delay S1 to S2, sec	No	0-300	0-300
Pre-transfer delay S2 to S1, sec	No	0-300	0-300
Post-transfer delay S2 to S1, sec	No	0-300	0-300
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

## TruONE™ feature comparison

Consult ABB for more information



Level 2 controls



Level 3 controls



Level 4 controls

	Level 2 controls	Level 3 controls	Level 4 controls
<b>Source failure detections</b>			
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
<b>Features</b>			
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 retransfer	Yes	Yes	Yes
In-phase monitor (synchro check)	Yes	Yes	Yes
Local genset exercising: on-load, off-load	via HMI	via HMI, digital Inputs	via HMI, digital Inputs
Scheduled genset exercising: on-load, off-load	via Ekip Connect	via HMI, Ekip Connect	via HMI, Ekip Connect
In-built power meter module	No	No	Yes
Load shedding	No	Yes	Yes
Real time clock (48h back-up after power outage)	via Ekip Connect	via HMI, Ekip Connect	via HMI, Ekip Connect
Event log	via Ekip Connect	via HMI, Ekip Connect	via HMI, Ekip Connect
Predictive maintenance	No	No	Yes
Harmonics measuring	No	Voltage	Voltage, current
<b>Field-mount accessories</b>			
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
<b>Connectivity</b>			
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™: Energy and Asset Manager)	No	Yes	Yes
<b>For applications</b>			
Mains - Mains	Yes	Yes	Yes
Mains - Generator <sup>1)</sup>	Yes	Yes	Yes

<sup>1)</sup> Contact ABB for applications with smaller than 20 kVA gensets

# ATS Technical Specifications

## 3 and 4 pole construction - Operating performance and short-circuit capability

		Switch size					
Data according to UL1008		OX30	OX60	OX100	OX125	OX160	OX200
Rated operational voltage	Vac	200 - 480					
Operating voltage range	Vac	160 - 576					
Rated frequency	Hz	50-60					
Emergency systems - Motor loads or total system	A	30	60	100	125	160	200
Optional standby systems - Motor loads or total system	A	30	60	100	125	160	200
Minimum enclosure size or equivalent volume	W x H x D	600 x 800 x 300					
Short-circuit withstand/closing and short-time current ratings		kA					
		See table B					
Contact transfer time I-II, II-I	Load interrupting time	ms					
		<50					
Operating transfer time I-II, II-I		ms					
		<500					
ATS current draw during transfer / time duration	A / ms	37 / <110					
Mechanical endurance	No. of operating cycles	6050	6050	6050	6050	6050	6050
Weight without accessories	3-pole switch	kg	14	14	14	14	14
	4-pole switch	kg	15.6	15.6	15.6	15.6	15.6
Suitable for applications		Transformer - Transformer, Transformer - Generator <sup>1)</sup>					
Data according to IEC60947-6-1							
Rated operational current, AC-31B	up to 240 V	A				160	250
Rated operational current, AC-32B	up to 240 V	A				160	250
Rated operational current, AC-33B	up to 240 V	A				160	250
Rated breaking capacity in category AC-33	up to 240 V	A				1600	2500
Rated operational current, AC-31A	up to 415 V	A				160 <sup>2)</sup>	200 <sup>2)</sup>
Rated operational current, AC-33iA <sup>5)</sup>	up to 415 V	A				125	125
Rated operational current, AC-33A	up to 415 V	A				125 <sup>2)</sup>	125 <sup>2)</sup>
Rated conditional short-circuit current I <sub>q</sub> (r.m.s.) and corresponding protective devices (fuse or circuit breaker)	I <sub>q</sub> (r.m.s.) 100 kA, 500 V	$\hat{i}_c$ (peak) <sup>4)</sup>	kA				49
	Max. OFA fuse size	gG/aM	A/A				400 / 400
	I <sub>q</sub> (r.m.s.) 50 kA, 500 V						400 / 400
Rated short-time withstand current	ABB circuit breaker type					T5L630	T5L630
	I <sub>cw</sub> (r.m.s.)	415 V 0.1s	kA				18
	I <sub>cw</sub> (r.m.s.)	415 V 0.3s	kA				18
	I <sub>cw</sub> (r.m.s.)	415 V 0.5s	kA				18
Rated short-time making capacity <sup>3)</sup>	I <sub>cm</sub> peak	415 V	kA				36

- 1) Contact Salient for applications with smaller than 20kVA gensets
- 2) OX\_B bottom entry versions only
- 3) Short circuit duration > 50ms, without fuse protection
- 4) Cut-off current  $\hat{i}_c$  (peak) value. The cut-off current  $\hat{i}_c$  refers to values listed by fuse manufacturers (single phase test acc. to IEC60269).
- 5) AC-33iA according to GB/T 14048.11

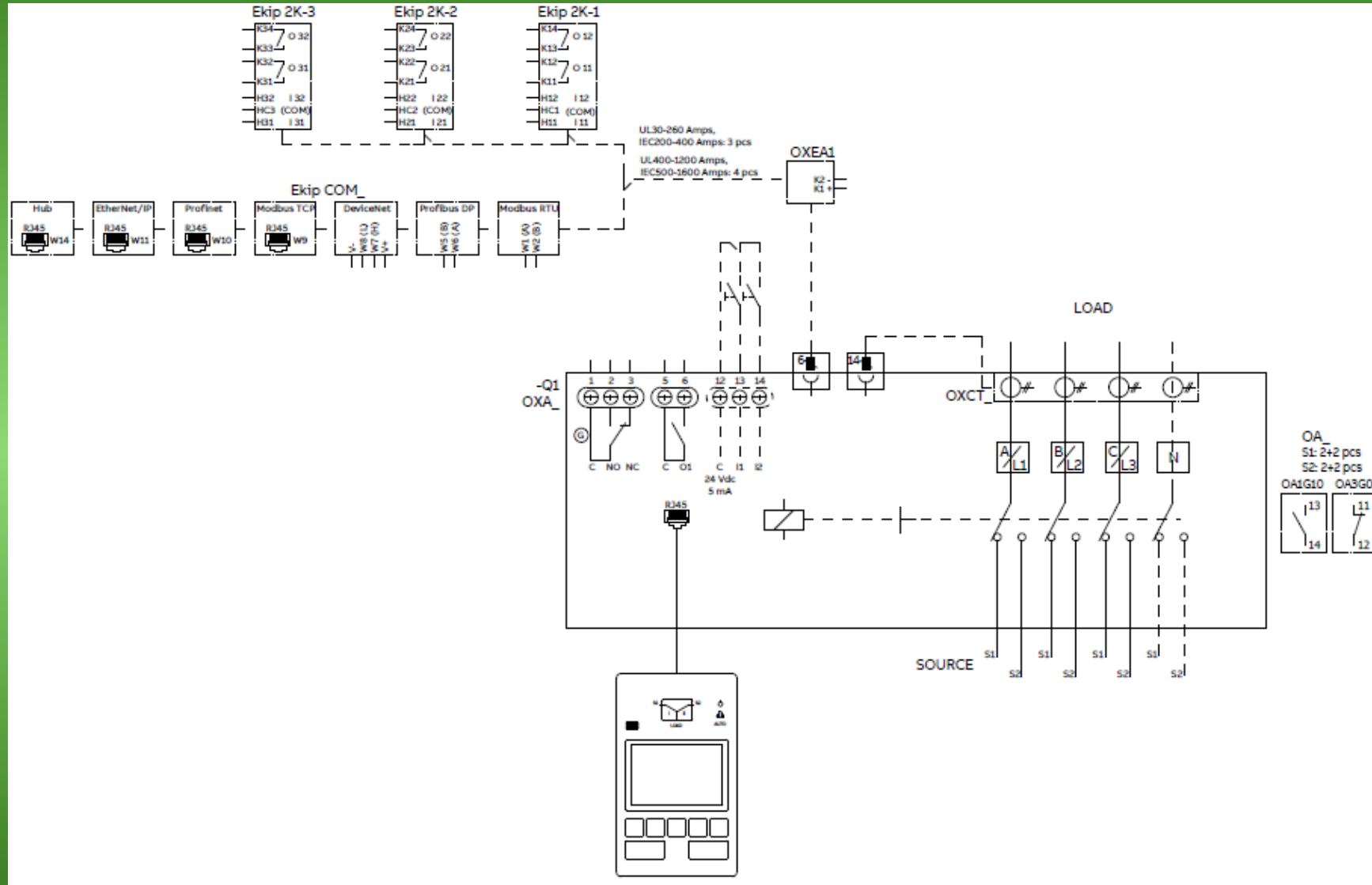
# ATS Technical Specifications Cont'd

## 3 and 4 pole construction - Operating performance and short-circuit capability

				Switch size					
Data according to UL1008				OX260	OX400	OX600	OX800	OX1000	OX1200
Rated operational voltage	Vac	200 - 480							
Operating voltage range	Vac	160 - 576							
Rated frequency	Hz	50-60							
Emergency systems - Motor loads or total system	A	260	400	600	800	1000	1200		
Optional standby systems - Motor loads or total system	A	260	400	600	800	1000	1200		
Minimum enclosure size or equivalent volume	W x H x D	600 x 800 x 300			800 x 1000 x 300				
Short-circuit withstand/closing and short-time current ratings	kA	See table B							
Contact transfer time I-II, II-I	Load interrupting time	ms	<50						
Operating transfer time I-II, II-I		ms	<500						
ATS current draw during transfer / time duration	A / ms	37 / <110	40 / <130						
Mechanical endurance	No. of operating cycles		6050	4050	3050	3050	3050	3050	
	3-pole switch	kg	15.4	19.1	19.1	31.1	31.1	31.1	
	4-pole switch	kg	17.5	21.4	21.4	37.1	37.1	37.1	
Suitable for applications				Transformer - Transformer, Transformer - Generator <sup>3)</sup>					
Data according to IEC60947-6-1									
Rated operational current, AC-31B	up to 415 V	A	400	400	800	1000	1250	1600	
Rated operational current, AC-32B	up to 415 V	A	400	400	800 <sup>2)</sup>	1000 <sup>2)</sup>	1250 <sup>2)</sup>	1600 <sup>2)</sup>	
Rated operational current, AC-33B	up to 415 V	A	400	400	800 <sup>2)</sup>	1000 <sup>2)</sup>	1250 <sup>2)</sup>	1250 <sup>2)</sup>	
Rated breaking capacity in category AC-33	up to 415 V	A	4000	4000	8000 <sup>2)</sup>	10000 <sup>2)</sup>	12500 <sup>2)</sup>	12500 <sup>2)</sup>	
Rated operational current, AC-31A	up to 415 V	A	315 <sup>2)</sup>	315 <sup>2)</sup>	630 <sup>2)</sup>	1000 <sup>2)</sup>	1250 <sup>2)</sup>	1250 <sup>2)</sup>	
Rated operational current, AC-33iA <sup>5)</sup>	up to 415 V	A	250	250 <sup>2)</sup>	630 <sup>2)</sup>	1000 <sup>2)</sup>	1250 <sup>2)</sup>	1250 <sup>2)</sup>	
Rated operational current, AC-33A	up to 415 V	A	160 <sup>2)</sup>	160 <sup>2)</sup>	315 <sup>2)</sup>	630 <sup>2)</sup>	800 <sup>2)</sup>	800 <sup>2)</sup>	
Rated conditional short-circuit current I <sub>q</sub> (r.m.s.) and corresponding protective devices (fuse or circuit breaker)	I <sub>q</sub> (r.m.s.) 100 kA, 500 V	îc (peak) <sup>4)</sup>	kA	69	76	90	95	95	95
	Max. OFA_fuse size	gG/aM	A/A	630 / 630	800/800	1000 / 1000	1600 / 1250	1600 / 1250	1600 / 1250
	I <sub>q</sub> (r.m.s.) 50 kA, 500 V								
	ABB circuit breaker type			T6L630	T6L630	T6L1000			
	I <sub>q</sub> (r.m.s.) 85 kA, 500 V								
	ABB circuit breaker type						T7L1600	T7L1600	T7L1600
Rated short-time withstand current	I <sub>cw</sub> (r.m.s.)	415 V 0.1s	kA	25	30	42	65	65	65
	I <sub>cw</sub> (r.m.s.)	415 V 0.3s	kA	25	30	30	50	50	50
	I <sub>cw</sub> (r.m.s.)	415 V 0.5s	kA			30	50	50	50
Rated short-time making capacity <sup>3)</sup>	I <sub>cm</sub> peak	415 V	kA	52.5	89	89	105	105	105

- 1) Contact Salient for applications with smaller than 20kVA gensets
- 2) OX\_B bottom entry versions only
- 3) Short circuit duration > 50ms, without fuse protection
- 4) Cut-off current îc (peak) value. The cut-off current îc refers to values listed by fuse manufacturers (single phase test acc. to IEC60269).
- 5) AC-33iA according to GB/T 14048.11

# ATS Wiring Diagram





# Withstand and Short Circuit Ratings

Table B: UL1008 Short-circuit withstand/closing and short-time current ratings

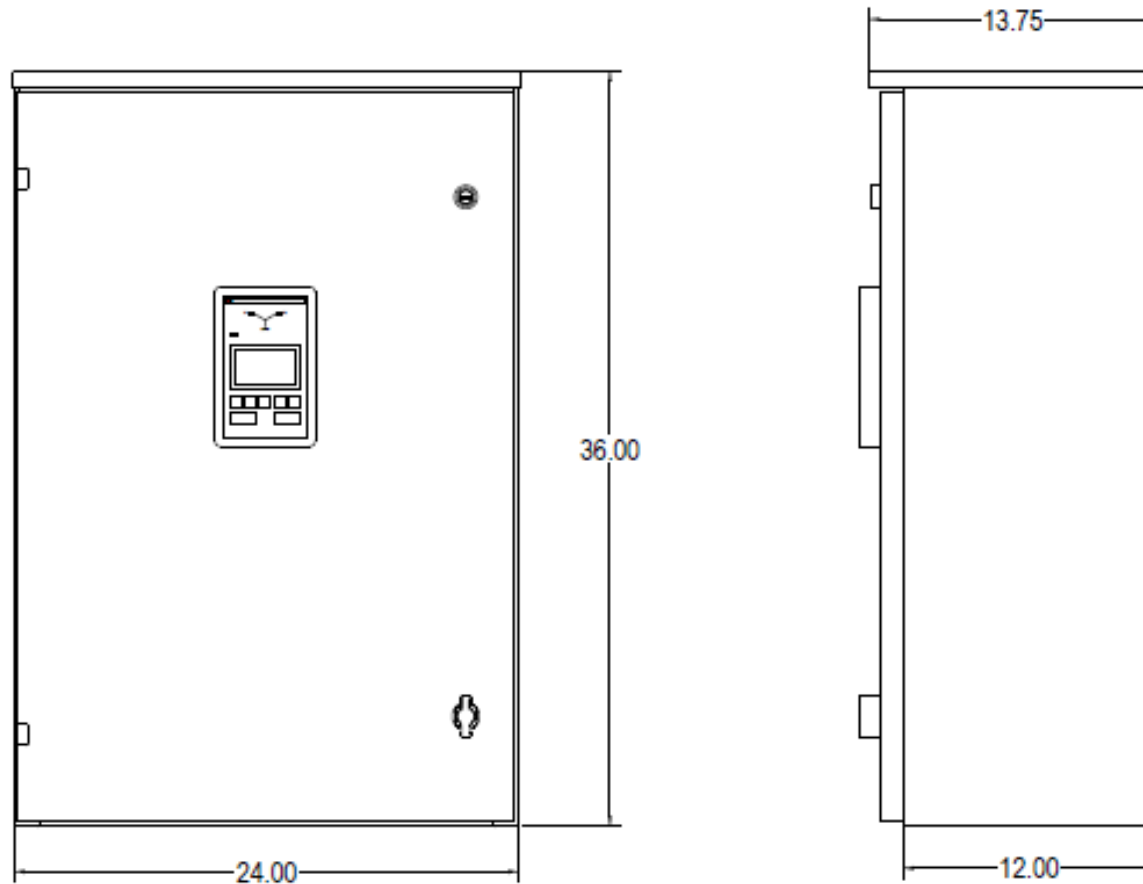
3 and 4 pole construction

Switch rating (A)	UL short-time rating (STR) & time <sup>1)</sup> (s)	Time based WCR rating (A) & Time <sup>1)2)</sup> (s)	Maximum voltage (V)	Maximum coordinated breaker rating (A)	Breaker mfg	Max breaker size (A)	Breaker type	Current limiting fuse rating (A)	Max fuse size (A)
30									
60									
100									
125						125	XT2H125		
160	18	18				250	T4H250	200,000	
200	0.300 sec	0.100 sec	480	50,000	ABB	250	XT4H250	Class J	200
260	25	25	480	50,000	ABB	600	T5H600	200,000	400
	0.300 sec	0.100 sec						Class J	
400	30	30	480	50,000	ABB	600	T5H600	200,000	600
	0.250 sec	0.100 sec						Class J	
600	42								
	0.100 sec								
	30	42							
	0.500 sec	0.100 sec	480	50,000	ABB	800	T6S800	200,000	800
								Class L	
800	65								
	0.100 sec								
1000	50	65							
1200	0.500 sec	0.100 sec	480	85,000	ABB	1200	T7L1200	200,000	1200
								Class L	

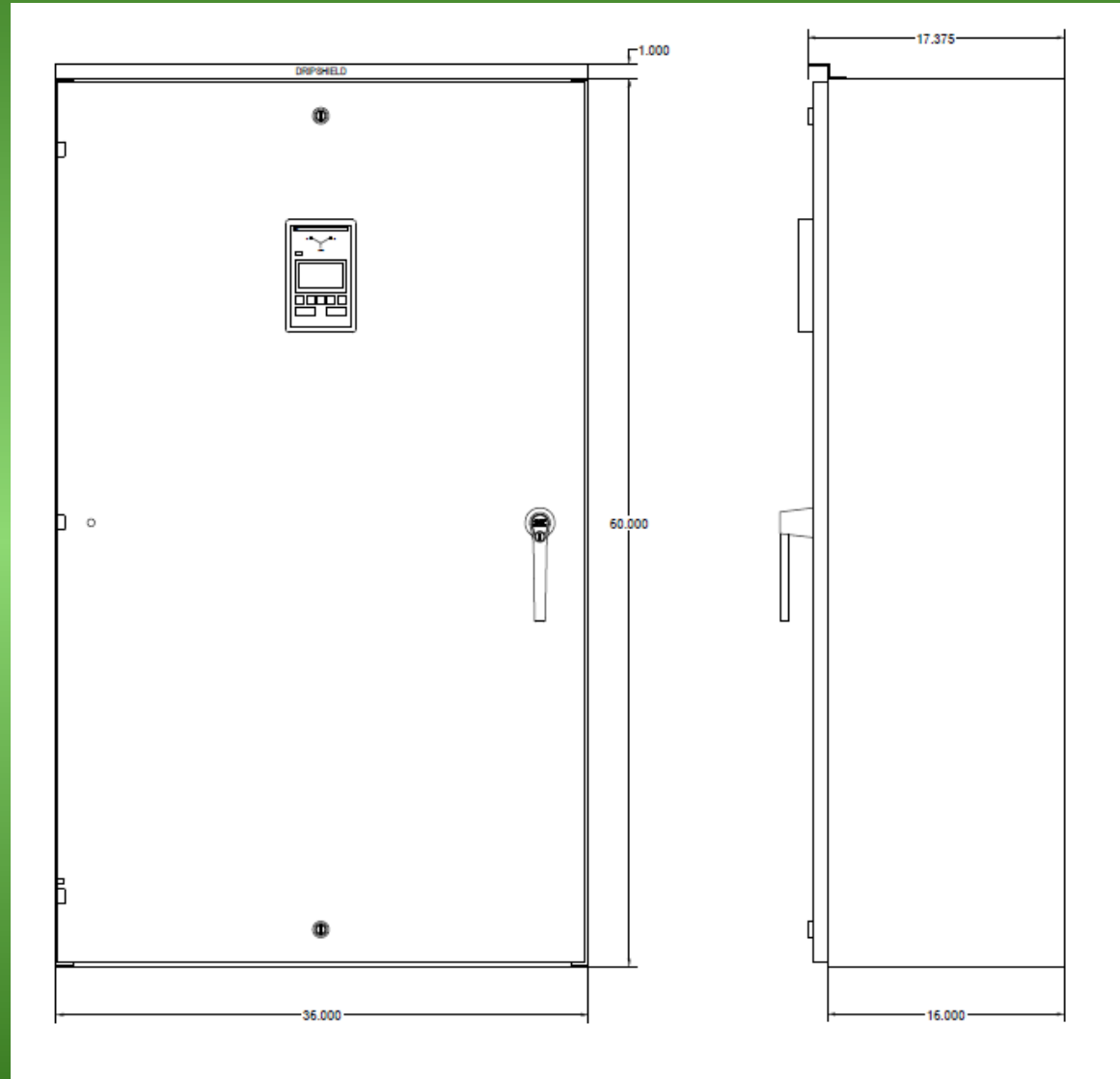
<sup>1)</sup> This rating is available only with the TruONE UL Level 4 versions

<sup>2)</sup> Time-based ratings are also known as any-breaker ratings

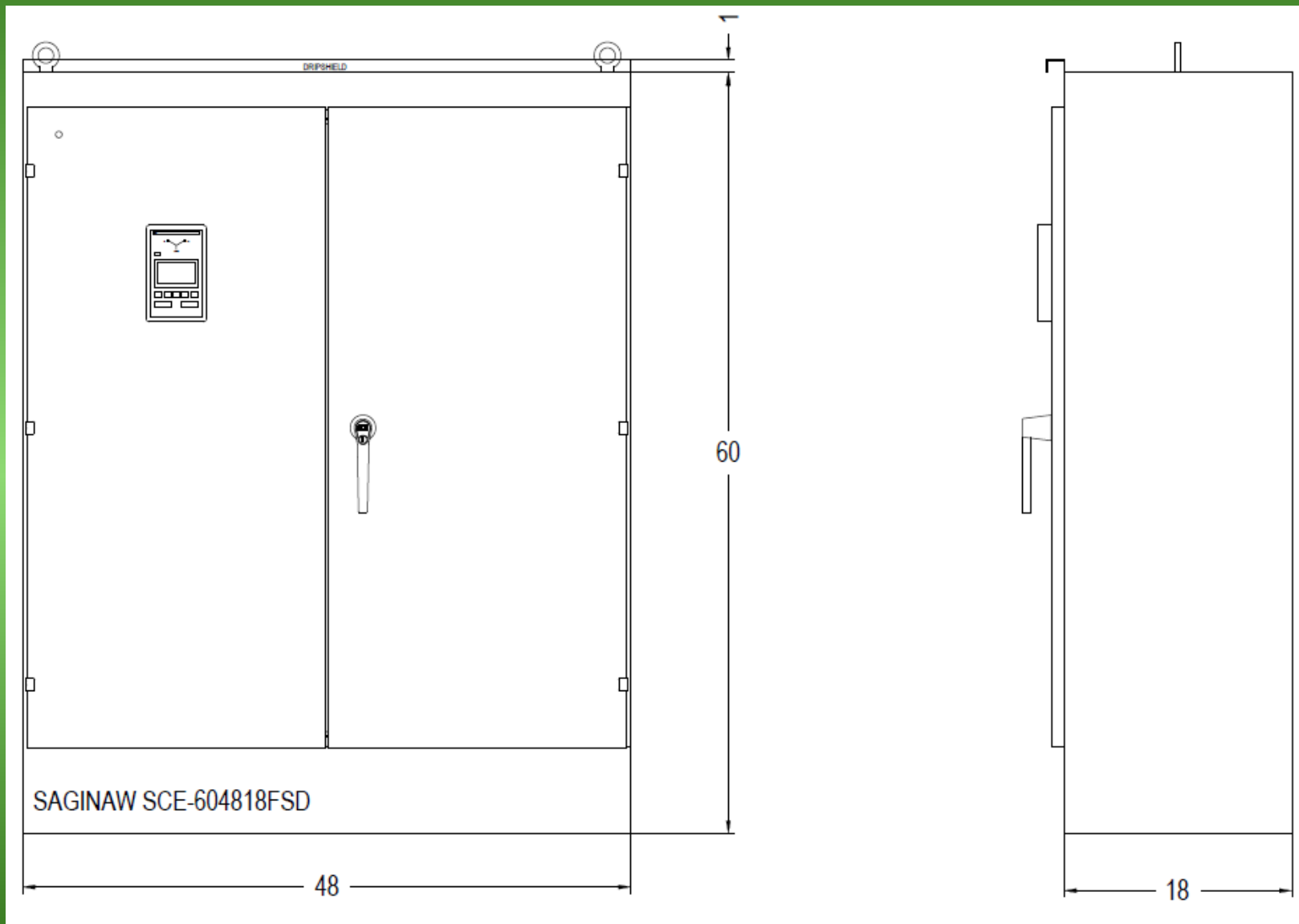
# ATS 200 Amp and below



# ATS 600-260 Amp



# ATS 1200-800 Amp



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# Salient Power Solutions Your Beacon in the Dark

