



CAT[®] ATC CONTACTOR-BASED AUTOMATIC TRANSFER SWITCH

Cat[®] transfer switches are designed for a variety of standby power applications. They provide flexibility, reliability and value in a compact package. The open and delayed transition contactor-based Automatic Transfer Switch (ATS) provides fully functioning transfer in Applications where a momentary loss of power is acceptable during transfer and retransfers between normal and emergency power supply.

The closed transition contactor-based ATS is designed to Meet application requirements where emergency back up power is required with no momentary loss of power by connecting both sources before the transfer occurs. Closed transition also permits periodic testing of the emergency power source without interrupting power to the loads.

FEATURES

- ATC-100, ATC-300+ or ATC-800 microprocessor-based controller
- Voltage and frequency sensing
- High withstand and closing ratings
- Multiple field programmable set points
- Status Display including switch position indication
- Source availability indication
- Source 1 and 2 auxiliary contacts
- True RMS voltage and frequency sensing
- Programmable plant exerciser
- System test pushbutton
- Mimic diagram
- Double-throw, mechanically interlocked transfer mechanism
- Switch position indication
- Status display
- Double-throw UL 1008 3-position contactors

OPTIONS

- 2 or 4-position test switch
- Multi-meter options available
- Delayed Transition and Closed Transition
- Selectable automatic or non-automatic operation
- Space heaters (recommended for use in NEMA 3R enclosures)
- Surge suppression
- Remote communications
- Load shed from emergency
- Controller availability: ATC-100, ATC-300+, and ATC-800
- Field selectable, multi ratio, control voltage transformer 50/60 Hz

OPTIONAL DELAYED TRANSITION INCLUDES:

- Time Delay Neutral
- Pre-Transfer Signal with 1 N.O. and 1 N.C. contacts

RATINGS

- Wall Mount 40-600A 2 or 3 Pole
- Floor Standing 600A 4 Pole and 800-1200A 2, 3, or 4 Pole
- Two-position contactors 40-400A
- Three-position contactors 40-1200A
- Up to 600 Vac, 50/60 Hz
- 100% rated
- UL 1008 listed
- CSA C22.2 No. 178 certified
- IBC 2006, CBC 2007 and OSHPD

CONTACT COMPOSITION

Caterpillar utilizes silver composition contacts designed to meet the stringent requirements of UL 1008. All contactors are designed so that the contacts can be visually inspected without major disassembly and are protected by arcing contacts.

CONTROLS AND WIRING

All control relays and industrial-grade relays are totally encapsulated to minimize exposure to dust and dirt. Lugs are 90°C rated and all control wire is #16 AWG, type XLPE with a 125°C temperature rating.

ENCLOSURE

The ATS is housed in rugged steel NEMA 1, 3R, or 12 enclosure which is Seismic Zone 4 Qualified (BOCA, CBC, IBC, UBC). ATS enclosures have three door hinges to ensure proper support of the door and door mounted devices. The hinges have removable hinge pins to facilitate door removal for easy wall mounting or service and are supplied with pad-lockable latches.



Open Transition ATS

AUTOMATIC TRANSFER SWITCH



TESTING STANDARDS

UL 991 UL standards for safety tests for safety-related controls employing solid-state devices	IEC 1000-5 Surge withstand tests
UL 1008 Dielectric test (endurance, withstand, etc.)	NEMA® ICS 109.21 Impulse withstand test
IEEE® 472 (ANSI C37.90A) Ringing wave immunity/voltage surge test	CSA® conformance C22.2 No. 178-1978 (reaffirmed 1992)
EN55022 (CISPR11): Conducted and radiated emissions	UL 869A Reference Std for Service Equipment
EN61000-4-2 Class B Level 4 ESD immunity test	UL 50/508 Enclosures
EN61000-4-3 (ENV50140) radiated RF, electromagnetic field immunity test	NEMA ICS 1 General standards for industrial control system
EN61000-4-4 Electrical fast transient/burst immunity test	NEMA ICS 2 Standards for industrial control devices, controllers, and assemblies
EN61000-4-5 IEEE C62.41: Surge immunity test	NEMA ICS 6 Enclosures for industrial controls and systems
EN61000-4-6 (ENV50141) Conducted immunity test	NEMA ICS 10-1993 AC automatic transfer switches
EN61000-4-11 Voltage dips and interruption immunity	ANSI C33.76 Enclosures
FCC Part 15 Conducted/radiated emissions (Class A)	NEC® 517, 700, 701, and 702 National Electrical Code
CISPR 11 Conducted/radiated emissions (Class A)	NFPA® 70 National Fire Protection Agency
IEC 1000-2 Electrostatic discharge test	NFPA 99 Health care facilities
IEC 1000-3 Radiated susceptibility tests	NFPA 101 Life safety code
IEC 1000-4 Fast transient tests	NFPA 110 Emergency and standby power systems
	EGSA 100S Standard for transfer switches
	CSA C22.2 No. 178-1978 Canadian Standards Association

UL 1008 WITHSTAND AND CLOSE-RATINGS (kA) 3 Position Contactor Switch

Rating When Used with

UL 1008 Rating	480 V		600 V	
	Any Breaker	Specific Breaker	Any Breaker	Specific Breaker
100	30,000	30,000	22,000	33,000
200	30,000	30,000	22,000	33,000
260	30,000	50,000	50,000	33,000
320	30,000	50,000	50,000	33,000
400	30,000	50,000	50,000	33,000
600	50,000	65,000	50,000	33,000
800	50,000	65,000	50,000	33,000
1000	50,000	65,000	50,000	33,000
1200	50,000	65,000	50,000	33,000

AUTOMATIC TRANSFER SWITCH



OPEN TRANSITION CONTACTOR-BASED TRANSFER SWITCH 40–1200A

Ampere Rating	Number of Poles	NEMA 1 & NEMA 3R Enclosures			Standard Terminals *		
		Height	Width	Depth	Load Side, Normal and Standby Source	Neutral Connection	Shipping Weight Lbs. (kg)
40-100 @ 480V	2	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)	(1) #14–2/0	(1) #14–1/0	156 (70.8)
	3	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)			156 (70.8)
	4	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)			156 (70.8)
40-100 @ 600V	2	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)	(1) #14–2/0	(1) #14–1/0	156 (70.8)
	3	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)			160 (72.6)
	4	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)			164 (74.4)
150-200 @ 480V	2	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)	(1) #6–300	(3) 1/0–250	156 (70.8)
	3	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)	kcmil	kcmil	160 (72.6)
	4	38.68 (982.5)	18.31 (465.1)	13.34 (338.8)			164 (74.4)
225-400 @ 480V	2	48.74 (1238)	18.81 (477.8)	13.84 (351.5)	(2) #3–250	(6) 250–500	240 (108.9)
	3	48.74 (1238)	18.81 (477.8)	13.84 (351.5)	kcmil	kcmil	250 (113.4)
	4	48.74 (1238)	18.81 (477.8)	13.84 (351.5)			260 (117.9)
225-1200 @ 600V	3	79.41 (2017)	29.19 (741.4)	22.46 (570.5)	(4) 1/0–750	(12) 1/0–750	650 (294.8)
	4	79.41 (2017)	29.19 (741.4)	22.46 (570.5)	kcmil	kcmil	650 (294.8)
600-1200 @ 480V	2	79.41 (2017)	29.19 (741.4)	22.46 (570.5)	(4) 1/0–750	(12) 1/0–750	590 (267.6)
	3	79.41 (2017)	29.19 (741.4)	22.46 (570.5)	kcmil	kcmil	600 (272.2)
	4	79.41 (2017)	29.19 (741.4)	22.46 (570.5)			650 (294.8)

All dimensions and weights are approximate and subject to change without notice and are not for construction use.

* Standard Terminals – () indicate the quantity of supplied terminals per pole.

AUTOMATIC TRANSFER SWITCH



DELAYED TRANSITION CONTACTOR-BASED TRANSFER SWITCH 40–1200A

Ampere Rating	Number of Poles	NEMA 1 & NEMA 3R Enclosures			Standard Terminals *		
		Height	Width	Depth	Load Side, Normal and Standby Source	Neutral Connection	Shipping Weight Lbs. (kg)
40-1200 @ 600V	3	79.41 (2017)	29.19 (737)	22.5 (570.5)	(4) 1/0–750	(12) 1/0–750	650 (294.8)
	4	79.41 (2017)	29.19 (737)	22.5 (570.5)	kcmil	kcmil	650 (294.8)
40-1200 @ 480V	2	79.41 (2017)	29.19 (737)	22.5 (570.5)			590 (267.6)
	3	79.41 (2017)	29.19 (737)	22.5 (570.5)	(4) 1/0–750	(12) 1/0–750	600 (272.2)
	4	79.41 (2017)	29.19 (737)	22.5 (570.5)	kcmil	kcmil	650 (294.8)

Dimensions in inches (mm) & approximate shipping lbs (kg)

All dimensions and weights are approximate and subject to change without notice and are not for construction use.

* Standard Terminals – () indicate the quantity of supplied terminals per pole.

AUTOMATIC TRANSFER SWITCH



CLOSED TRANSITION CONTACTOR-BASED TRANSFER SWITCH 40–1200A

Ampere Rating	Number of Poles	NEMA 1 & NEMA 3R Enclosures			Standard Terminals **		
		Height	Width	Depth	Load Side, Normal and Standby Source	Neutral Connection	Shipping Weight Lbs. (kg)
40-100 @ 480V	2	52.74 (1339.6)	25 (635)	17.18 (436.4)	(1) #14–2/0	(1) #14–1/0	180 (81.8)
	3	52.74 (1339.6)	25 (635)	17.18 (436.4)			190 (86.4)
	4	52.74 (1339.6)	25 (635)	17.18 (436.4)			200 (90.9)
40-100 @ 600V	2	52.74 (1339.6)	25 (635)	17.18 (436.4)	(1) #14–2/0	(1) #14–1/0	200 (90.9)
	3	52.74 (1339.6)	25 (635)	17.18 (436.4)			210 (95.5)
	4	52.74 (1339.6)	25 (635)	17.18 (436.4)			220 (100)
150-200 @ 480V	2	52.74 (1339.6)	25 (635)	17.18 (436.4)	(1) #6–300	(3) 1/0–250	200 (90.9)
	3	52.74 (1339.6)	25 (635)	17.18 (436.4)	kcmil	kcmil	210 (95.5)
	4	52.74 (1339.6)	25 (635)	17.18 (436.4)			220 (100.0)
150-200 @ 600V	2	90 (2286)	46 (1168.4)	32 (812.8)	(4) 1/0–750	(12) 1/0–750	750 (340.9)
	3	90 (2286)	46 (1168.4)	32 (812.8)	kcmil	kcmil	800 (363.6)
	4	90 (2286)	46 (1168.4)	32 (812.8)			900 (409.1)
225-400 @ 480V	2	90 (2286)	46 (1168.4)	32 (812.8)	(4) 1/0–750	(12) 1/0–750	750 (340.9)
	3	90 (2286)	46 (1168.4)	32 (812.8)	kcmil	kcmil	800 (363.6)
	4	90 (2286)	46 (1168.4)	32 (812.8)			900 (409.1)
225-1200 @ 600V	2	90 (2286)	46 (1168.4)	32 (812.8)	(4) 1/0–750	(12) 1/0–750	750 (340.9)
	3	90 (2286)	46 (1168.4)	32 (812.8)	kcmil	kcmil	800 (363.6)
	4	90 (2286)	46 (1168.4)	32 (812.8)			900 (409.1)
* 600-1200 @ 480V	2	90 (2286)	46 (1168.4)	32 (812.8)	(4) 1/0–750	(12) 1/0–750	750 (340.9)
	3	90 (2286)	46 (1168.4)	32 (812.8)	kcmil	kcmil	800 (363.6)
	4	90 (2286)	46 (1168.4)	32 (812.8)			900 (409.1)

Dimensions in Inches (mm) & Approximate Shipping lbs (kg)

All Dimensions and weights are approximate and subject to change without notice and are not for construction use

* For 600-1200 Ampere NEMA 3R only, please add 1 inch to the height, 16 inches to the depth and add 50 pounds to the weight

** Standard Terminals – () indicate the quantity of supplied terminals per pole.

Information contained in this publication may be considered confidential. Discretion is recommended when distributing.

Materials and specifications are subject to change without notice.

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