



## CAT<sup>®</sup> ATC MOLDED CASE CIRCUIT BREAKER AND MOLDED CASE SWITCH AUTOMATIC TRANSFER SWITCH

Cat<sup>®</sup> transfer switches are designed for a variety of standby power applications. They provide flexibility, reliability and value in a compact package. The open transition breaker-based Automatic Transfer Switch (ATS) will provide fully functioning transfer in applications where a momentary loss of power is acceptable on re-transfer from emergency to normal power supply. The Cat Open Transition MCCB & MCS types of ATS also permits periodic testing of the emergency source without interrupting power to the loads and are available from 30 to 1000 amperes.

### FEATURES

- ATC-100, ATC-300+ or ATC-800 microprocessor-based controller
- Voltage and frequency sensing
- Multiple field programmable time delays
- Switch position indication
- Source availability indication
- Safe manual transfer under load
- Source 1 and Source 2 auxiliary contacts
- Programmable plant exerciser
- System test pushbutton
- Load Shed from emergency (ATC-800 only)
- Mimic diagram
- Mechanical (cable) and electrical interlocking to prevent paralleling of sources
- Safe manual operation under full load with permanently affixed operating handle
- Ambient temperature range: -40C to 40C (-40F to 104F)
- Operating temperature range: -20C to 70C (-4F to 158F)
- Operating humidity: up to 90%
- Relative humidity (non-condensing)
- Frequency sensing on Source 1 and 2
- True RMS three phase voltage sensing on Source 1, Source 2 and load.

# AUTOMATIC TRANSFER SWITCH

## OPTIONS

- Suitable for service entrance
- Integral overcurrent protection
- 2- or 4-position test switch
- Multi meter options available
- Selectable Automatic or Non-Automatic operation
- Space heaters (recommended for use in NEMA 3R enclosures)
- Load sequencing contacts
- Surge suppression
- Remote communications
- Controller availability: ATC-100, ATC-300+, or ATC-800
- Field selectable, multi ratio, control voltage transformer 50/60 Hz
- Communications for the ATC-300+ Controller via RS-232 or Modbus through an integrated RS-485 port

## OPTIONAL DELAYED TRANSITION INCLUDES:

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

## RATINGS

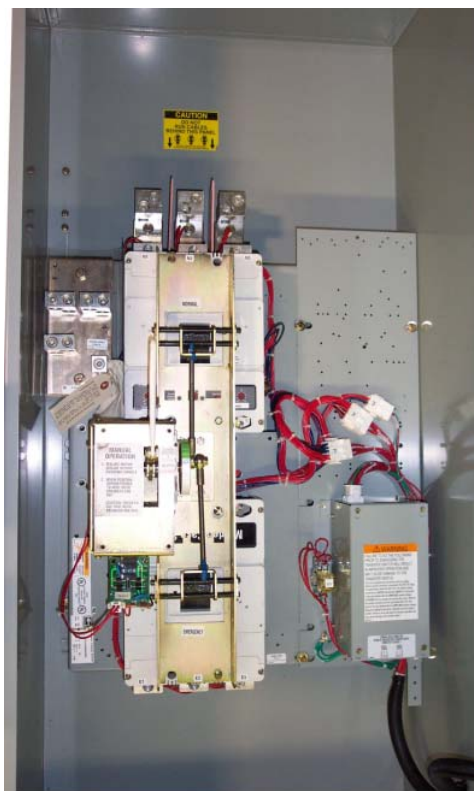
- 30-1000A 2, 3, or 4 Pole
- 120 – 600 Vac 50/60 Hz
- 100,000 amps withstand/closing/ interrupting at 480 Vac
- 100% rated
- UL 1008 listed
- CSA C22.2 No. 178 certified
- IBC 2006, CBC 2007 and OSHPD

## 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

Durable powder-coated steel NEMA 1, NEMA 3R and NEMA 12 are available with ATC-100 and ATC-300+ controllers. NEMA 4 is only available with the ATC-800 controller. The enclosures are Seismic Qualified (BOCA, CBC, IBC, UBC). The hinges have removable hinge pins to facilitate door removal for easy wall mounting or service and are supplied with pad-lockable latches.



## 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-On Ratings (kA)

Switch Rating Ampere	UL 1008 3-Cycle "Any Breaker" Rating			Rating When Used with Upstream Fuse		
	240V (kA)	480V (kA)	600V (kA)	Maximum Fuse Rating	Fuse Type	600V (kA)
30-100	100	65	25	200	J,T	200
150	100	65	25	400	J,T	200
225	100	65	25	400	J,T	200
240	100	65	25	400	J,T	200
300	100	65	25	400	J,T	200
400	100	65	25	600	J,T	200
600	100	65*	25	1200	J,T	200
800	65	50*	25	1600	L	200
1000	65	50*	25	1600	L	200

\*NOTE: 4 pole units rated 35kA

# AUTOMATIC TRANSFER SWITCH



## MOLDED CASE CIRCUIT BREAKER DIMENSIONS AND WEIGHTS 40–1000A

Rating Ampere	Breaker Type	Switch Poles	Switch Type	Height Inches (mm)	Width Inches (mm)	Depth Inches (mm)	Weight Lbs
Distribution Panels (240/120V Single Phase, ATC-300 only) Nema 1, 3R & 12							
225	FD	2	BOTH	53 (1346)	26 (660)	17 (432)	304
300	KD		Non Service Entrance	64 (1626)	26 (660)	17 (432)	405
			Service Entrance	64 (1626)	26 (660)	17 (432)	405
400	LD		Non Service Entrance	77 (1956)	26 (660)	18 (457)	505
			Service Entrance	77 (1956)	26 (660)	18 (457)	505
Automatic Transfer Switches (AG: 240/120 Single Phase, 280/120, ATC-100 & ATC-300) Nema 1, 3R & 12							
30-100	FD	2	Non Service Entrance	36 (914)	20 (509)	11.5 (292)	150
			Non Service Entrance	36 (914)	20 (509)	11.5 (292)	150
			Service Entrance	36 (914)	20 (509)	11.5 (292)	150
			Service Entrance	36 (914)	20 (509)	11.5 (292)	150
			BOTH	36 (914)	20 (509)	11.5 (292)	150
150-225	FD	3	Non Service Entrance	36 (914)	20 (509)	11.5 (292)	150
			Non Service Entrance	36 (914)	20 (509)	11.5 (292)	150
			Service Entrance	36 (914)	20 (509)	11.5 (292)	150
			Service Entrance	36 (914)	20 (509)	11.5 (292)	150
			BOTH	36 (914)	20 (509)	11.5 (292)	150
400-600	LD	2	Non Service Entrance	64 (1626)	26 (660)	17 (432)	445
			Non Service Entrance	64 (1626)	26 (660)	17 (432)	475
			Service Entrance	64 (1626)	26 (660)	17 (432)	445
			Service Entrance	64 (1626)	26 (660)	17 (432)	475
			BOTH	64 (1626)	26 (660)	17 (432)	475
600-800	MD	2	Non Service Entrance	77 (1956)	26 (660)	18 (457)	480
			Non Service Entrance	77 (1956)	26 (660)	18 (457)	510
			Service Entrance	77 (1956)	26 (660)	18 (457)	570
			Service Entrance	77 (1956)	26 (660)	18 (457)	570
			BOTH	77 (1956)	26 (660)	18 (457)	570
Automatic Switches & Non-Automatic Transfer Switches Nema 1, 3R & 12							
30-100	FD	2	Non Service Entrance	48 (1219)	21 (533)	15 (381)	227
			Non Service Entrance	48 (1219)	21 (533)	15 (381)	232
			Service Entrance	48 (1219)	21 (533)	15 (381)	227
			Service Entrance	48 (1219)	21 (533)	15 (381)	232
			BOTH	48 (1219)	21 (533)	15 (381)	240
150	FD	3	Non Service Entrance	48 (1219)	21 (533)	15 (381)	227
			Non Service Entrance	48 (1219)	21 (533)	15 (381)	232
			Service Entrance	48 (1219)	21 (533)	15 (381)	227
			Service Entrance	48 (1219)	21 (533)	15 (381)	232
			BOTH	48 (1219)	21 (533)	15 (381)	240
150-225	KD	2	Non Service Entrance	48 (1219)	21 (533)	17 (432)	305
			Non Service Entrance	48 (1219)	21 (533)	17 (432)	305
			Service Entrance	48 (1219)	21 (533)	17 (432)	305
			Service Entrance	48 (1219)	21 (533)	17 (432)	305
			BOTH	48 (1219)	21 (533)	17 (432)	315
300	KD	2	Non Service Entrance	56 (1422)	21 (533)	17 (432)	295
			Non Service Entrance	56 (1422)	21 (533)	17 (432)	305
			Service Entrance	56 (1422)	21 (533)	17 (432)	295
			Service Entrance	56 (1422)	21 (533)	17 (432)	305
			BOTH	56 (1422)	21 (533)	17 (432)	315
400	LD	2	Non Service Entrance	53 (1346)	26 (660)	17 (432)	395
			Non Service Entrance	53 (1346)	26 (660)	17 (432)	425
			Service Entrance	53 (1346)	26 (660)	17 (432)	395
			Service Entrance	53 (1346)	26 (660)	17 (432)	425
			BOTH	53 (1346)	26 (660)	17 (432)	455
400-600	LD	2	Non Service Entrance	64 (1626)	26 (660)	17 (432)	395
			Non Service Entrance	64 (1626)	26 (660)	17 (432)	425
			Service Entrance	64 (1626)	26 (660)	17 (432)	395
			Service Entrance	64 (1626)	26 (660)	17 (432)	425
			BOTH	64 (1626)	26 (660)	17 (432)	425
600-800	MD	2	Non Service Entrance	77 (1956)	26 (660)	18 (457)	480
			Non Service Entrance	77 (1956)	26 (660)	18 (457)	510
			Service Entrance	77 (1956)	26 (660)	18 (457)	570
			Service Entrance	77 (1956)	26 (660)	18 (457)	570
			BOTH	77 (1956)	26 (660)	18 (457)	570
600-1000	NB	2	Non Service Entrance	77 (1956)	26 (660)	18 (457)	540
			Non Service Entrance	77 (1956)	26 (660)	18 (457)	570
			Service Entrance	77 (1956)	26 (660)	18 (457)	540
			Service Entrance	77 (1956)	26 (660)	18 (457)	570
			BOTH	77 (1956)	26 (660)	18 (457)	600

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

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## MOLDED CASE CIRCUIT BREAKER STANDARD TERMINAL \*\* DATA FOR POWER CABLE CONNECTIONS FOR NEMA 1, 3R AND 12

Ampere Rating	Breaker Frame	Terminals	Line Side (Normal and Standby Source)	Load Connection	Neutral Connection
30-100 150 200	RTHMFDA RTHMFDA RTHMFDA	Default Default Default	(1) #14-1/0 CU/AL (1) #6-300 CU/AL (1) #6-300 CU/AL	(1) #14-1/0 CU/AL (1) #6-300 CU/AL (1) #6-300 CU/AL	(3) #14-1/0 CU/AL (3) #4-300 CU/AL (3) #4-300 CU/AL
30-100 150-225	FD FD	Default Default	(1) #14-1/0 CU/AL (1) #6-300 CU/AL	(1) #14-1/0 CU/AL (1) #6-300 CU/AL	(3) #14-1/0 CU/AL (3) #4-300 CU/AL
30,100,150,225	KD KD	Default Special	(1) #3-350 CU/AL (1) #3-350 CU (2) 3/0-250 CU/AL (2) 3/0-250 CU (1) 250-500 CU/AL (1) 250-500 CU (1) 2/0-250 & (1) 2/0-500 CU/AL Bus Provision	(1) #6-350 CU/AL (1) 3/0-250 & 250-500 CU/AL (2) 3/0-250 CU/AL (2) 3/0-250 CU Bus Provision	(3) #4-350 CU/AL (3) 3/0-250 & 250-500 CU/AL None
400 400	LD LD	Default Special	(1) 4/0-600 CU/AL (2) 3/0-350 CU/AL (2) 250-350 CU (2) 400-500 CU/AL Bus Provision	(2) #1-500 CU/AL (2) 500-750 CU/AL (3) 3/0-300 CU (2) 2/0-500 CU (3) 3/0-400 CU/AL Bus Provision	(6) 250-350 CU/AL (12) 4/0-500 CU/AL (9) 500-750 CU/AL None
600 600	LD LD	Default Special	(2) 3/0-350 CU/AL (1) 4/0-600 CU/AL (2) 250-350 CU (2) 400-500 CU/AL Bus Provision	Bus Provision	
600 600	MD MD	Default Special	(2) #1-500 CU/AL (3) 3/0-400 CU/AL (2) 500-750 CU/AL (3) 3/0-300 CU (2) 2/0-500 CU Bus Provision	(2) #1-500 CU/AL (3) 3/0-400 CU/AL (2) 500-750 CU/AL (3) 3/0-300 CU (2) 2/0-500 CU Bus Provision	(6) 4/0-500 CU/AL (12) 4/0-500 CU/AL (9) 500-750 CU/AL None
800 800	MD MD	Default Special	(3) 3/0-400 CU/AL (2) 500-750 CU/AL (3) 3/0-300 CU (2) 2/0-500 CU (2) #1-500 CU/AL Bus Provision	(3) 3/0-400 CU/AL (2) 500-750 CU/AL (3) 3/0-300 CU (2) 2/0-500 CU (2) #1-500 CU/AL Bus Provision	
600 600	NB NB	Default Special	(3) 3/0-400 CU/AL (4) 4/0-500 CU/AL (3) 3/0-500 CU (2) #1-500 CU/AL (4) 3/0-400 CU (3) 500-750 CU/AL Bus Provision	(3) 3/0-400 CU/AL (4) 4/0-500 CU/AL (3) 3/0-500 CU (2) #1-500 CU/AL (4) 3/0-400 CU (3) 500-750 CU/AL Bus Provision	(12) 4/0-500 CU/AL (9) 500-750 CU/AL None
800-1200 800-1200	NB NB	Default Special	(4) 4/0-500 CU/AL (3) 3/0-400 CU/AL (3) 3/0-500 CU (2) #1-500 CU/AL (4) 3/0-400 CU (3) 500-750 CU/AL Bus Provision	(4) 4/0-500 CU/AL (3) 3/0-400 CU/AL (3) 3/0-500 CU (2) #1-500 CU/AL (4) 3/0-400 CU (3) 500-750 CU/AL Bus Provision	

\*When an open enclosure is ordered an optional bus provision is available as an option on the line side and/or load connection

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

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Materials and specifications are subject to change without notice.

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