

AUTOMATIC TRANSFER SWITCH



CTGSE & CTGDSE SERIES SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH

Cat® CTGSE series automatic transfer switches (ATS) integrates the utility circuit breaker, optional transient voltage surge suppression and power monitoring into one package. The CTGDSE series provides delayed transition operation of the ATS. The MX150 controller displays the status of the transfer switch's position, timers and available sources. A communications network interface is available as an option.

FEATURES

PERFORMANCE FEATURES

- Timer and voltage/frequency settings adjustable without disconnection from the power source
- Processor and digital circuitry isolated from line voltage
- Inputs are opto-isolated for high electrical immunity to transients and noise
- Built-in diagnostics with LCD display and LED/LCD indicators for ease of viewing and long life

DESIGN AND CONSTRUCTION FEATURES

- NEMA 1 standard with NEMA 3R as an option
- Test switch (fast test, load, no load) to simulate normal source failure automatically bypassed should Source 2 fail
- Disconnect link on Neutral and Ground
- MX150 controller with non-volatile memory-clock battery backup not required for standard switch operation
- Ground fault protection (GFP) is standard on 1000-3000A and optional on 40-800A
- Mechanical lugs for cable connections
- Integrated and pre-wired (Normal) Source 1 MCCB (2 or 3 pole) for 40-800 amps, insulated case CB (3 pole)
For 1000-3000 amps
- Double throw, mechanically interlocked ATS contactor mechanism
- Designed for emergency and standby applications
- Electrically operated, mechanically held ATS

ELECTRICAL RATINGS

- Ratings 40 to 3000 amperes
- UL 891, UL 1008, CSA 22.2, IEC 947-6-1
- Ringing wave immunity per IEEE 472 (ANSI C37.90A)
- ESD immunity test per EN61000-4-2 (Level 4)
- Electrical fast transient/burst immunity test per EN61000-4-4
- Voltage Dips and interruption immunity EN61000-4-11
- NFPA 70, 99, 101 & 110

OPTIONAL ATTACHMENTS

- Optional integrated load center for multiple loadside connections available up to 240 volts
- Additional options include integrated battery charger, shunt trip selector, power monitor and and integrated TVSS

CTGSE & CTGDSE UL1008 WITHSTAND & CLOSING RATINGS

Withstand Current Ratings per UL 1008			
CTGSE Switch Ratings (Amps)	Maximum Circuit Amps When Used With		
	Specific Coordinated Breaker Rating	Any Breaker Rating	Current Limiting Fuse
40, 80, 100, 150, 200, 225	30,000	10,000	200,000
260	35,000	10,000	200,000
400	50,000	35,000	200,000
600	50,000	35,000	200,000
800	65,000	50,000	200,000
1000, 1200	85,000	50,000	200,000
1600, 2000	100,000	65,000	200,000
2600, 3000	100,000	100,000	200,000

Withstand Current Ratings per UL 1008			
CTGDSE Switch Ratings (Amps)	Maximum Circuit Amps When Used With		
	Specific Coordinated Breaker Rating	Any Breaker Rating	Current Limiting Fuse
40, 80, 100, 150, 200, 225, 260, 300, 400, 600	50,000	50,000	200,000
800	65,000	50,000	200,000
1000, 1200	85,000	50,000	200,000
1600, 2000	100,000	65,000	200,000
2600, 3000	100,000	100,000	200,000

AUTOMATIC TRANSFER SWITCH



AL/CU UL Listed Solderless Screw Type Terminals for External Power Connections					
Switch Size (Amps)	Source 1 Terminals (MCCB)			Source 2 & Load Terminals (ATS)	
	Cables per Pole	Range of Wire Sizes		Cables per Pole	Range of Wire Sizes
40,80	1	#12- 3/0	3-85 mm ²	1	#8- 3/0 8-85 mm ²
100-150		#8-350 MCM	8-177 mm ²		#6 - 250 MCM 13 - 127 mm ²
200		2/0 - 600 MCM or 8-500 mm ²	(1) 67 - 304 mm ² or 8-253 mm ²		
225					(1) #4 - 600 MCM or (2) 1/0 -250 MCM
260				1 or 2	
400		2			
600	3	3/0 - 500 MCM		#2 - 600 MCM 34 - 304 mm ²	
800	4	250 - 500 MCM	4		
1,000		#2 - 600 MCM			34 - 304 mm ²
1,200					
1,600					
2,000	8		8		
3,000					

CTGSE & CTGDSE Dimensions						
AMP RATING	POLES	NEMA 1 ENCLOSURE				APPLICATION
		HEIGHT	WIDTH	DEPTH	FIGURE	NOTES
40, 260	2,3,4	48.2 (122)	36 (91)	15.9 (40)	A	1-4
400	2,3,4	48.2 (122)	36 (91)	15.9 (40)	A	1-4
600	2,3,4	75 (191)	39 (99)	20 (51)	A	1-4
800	2,3,4	90 (229)	51 (129)	20 (51)	A	1-4
1000, 1200	3,4	90 (229)	39 (99)	51 (130)	B	1-6
1600, 2000	3,4	90 (229)	39 (99)	51 (130)	B	1-6
2600, 3000	3,4	90 (229)	39 (99)	63 (160)	B	1-6
AMP RATING	POLES	NEMA 3R ENCLOSURE				APPLICATION
		HEIGHT	WIDTH	DEPTH	FIGURE	NOTES
40, 260	2,3,4	48.2 (122)	36 (91)	15.9 (40)	A	1-4
400	2,3,4	48.2 (122)	36 (91)	15.9 (40)	A	1-4
600	2,3,4	75 (191)	39 (99)	20 (51)	A	1-4
800	2,3,4	90 (229)	51 (129)	20 (51)	A	1-4
1000, 1200	3,4	90 (229)	40 (101)	57 (145)	C	1-6
1600, 2000	3,4	90 (229)	40 (101)	57 (145)	C	1-6
2600, 3000	3,4	90(229)	40 (101)	69 (175)	C	1-6

Application Notes :

1. Dimensions are listed in inches (cm) and weights in pounds (kg).
2. Allow a minimum of 3" additional dept for projection of handle, lights, switches, pushbuttons etc
3. All dimensions and weights are approximate and subject to change without notice and are not for construction use
4. Packing materials must be added to weights shown. Allow 15% additional weight for cartons, skids, crates, etc.
5. Add 3" in height for lifting eyes.
6. Removable side covers permit mounting against wall.

AUTOMATIC TRANSFER SWITCH

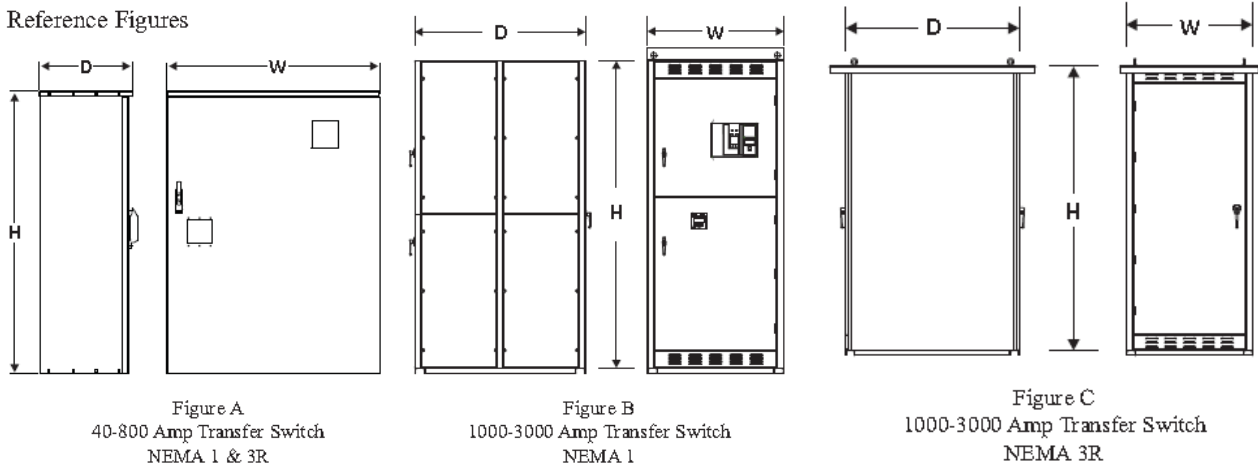


CTGSE & CTGDSE Weights							
AMP RATING	POLES	CTGSE				CTGDSE	
		NEMA 1		NEMA 3R		NEMA 1	NEMA 3R
40, 80, 100 150, 225, 260	2,3	183	(83)	193	(88)	272 (123)	282 (128)
	4	187	(85)	197	(89)	296 (134)	306 (139)
400	2,3	265	(120)	275	(125)	272 (123)	282 (128)
	4	289	(131)	299	(136)	296 (134)	306 (139)
600	2,3	415	(188)	435	(197)	422 (191)	442 (200)
	4	444	(201)	464	(210)	451 (205)	471 (214)
800	2,3	577	(262)	597	(271)	587 (266)	607 (275)
	4	662	(300)	682	(309)	672 (305)	692 (314)
1000, 1200	3	1690	(766)	1890	(857)	1700 (771)	1900 (862)
	4	1710	(775)	1910	(866)	1720 (780)	1920 (871)
1600, 2000	3	2355	(1067)	2555	(1159)	2365 (1073)	2565 (1163)
	4	2455	(1112)	2655	(1204)	2465 (1118)	2665 (1209)
2600, 3000	3	2475	(1121)	2675	(1213)	2485 (1127)	2685 (1218)
	4	2675	(1212)	2875	(1304)	2685 (1218)	2885 (1309)

Application Notes :

1. Dimensions are listed in inches (cm) and weights in pounds (kg).
2. Allow a minimum of 3" additional dept for projection of handle, lights, switches, pushbuttons etc
3. **All dimensions and weights are approximate and subject to change without notice and are not for construction use**
4. Packing materials must be added to weights shown. Allow 15% additional weight for cartons, skids, crates, etc.
5. Add 3" in height for lifting eyes.
6. Removable side covers permit mounting against wall.

Reference Figures



CTG(D)SE Transfer Switch Options

6A	Test Switch, Maintained
6AP	Test Switch, Maintained Programmable
A1	Auxiliary Contact, operates on Source 1 line failure
A1E	Auxiliary Contact, operates on Source 2 line failure
A3	Auxiliary Contacts: Closed when the transfer switch is in Source 2 position
A4	Auxiliary Contacts: Closed when the transfer switch is in Source 1 position
A62	Sequential Universal Motor Load Disconnect Circuit. Normally closed Auxiliary contacts for Motor Loads. Open 0-60 seconds prior to transfer, after transfer, or both in either direction then reclose in timed sequence after transfer.
ATGEW-X	Extended annual parts and labor warranty (1-4 years for a total of 5 years max.)
BB	Auxiliary Contact, circuit breaker position two form C
BC12	Integrated generator battery charger, 12 VDC, 3 Amp output
BC24	Integrated generator battery charger, 24 VDC, 3 Amp output
CTAP	Alarm panel on transfer to emergency w/silence button & light
ECM	Ethernet Converter Module
GFP	Ground fault protection, includes electronic trip, long time, short time and instantaneous trip. (40 - 800 Amps)
HT3	Heater and Thermostat
LCM	Lonworks communications interface card

M90 SERIES POWER MEASUREMENT METERS (Not available in NEMA 4 enclosure)

M90	EPM2000 True RMS Digital Meter with display (Amps, Volts, Power, Energy, Power Factor and Frequency). 3 Line LED Display. 50/60 Hz Universal Operation. 1 or 3 phase. Standard Modbus RTU RS485 communications capability.
M90A	Adds Pre-Wiring for Enervista™ Viewpoint Monitoring of M90 Accessory & ATS Status using Modbus RS485 Serial Communications
M90B	Adds Pre-Wiring for Enervista™ Viewpoint Monitoring of M90 Accessory & ATS Status using Ethernet TCP/IP Communications
MCM	Modbus RTU communications interface card
OCVR-1SG	Lockable see-through microprocessor cover for NEMA 3R or 12
OCVR-1SS	Lockable see-through microprocessor and meters cover for NEMA 3R or 12
STS	Shunt trip selector switch, Source 1 service entrance. Includes position indicating lamps and generator start inhibit circuit. Standard on NEMA 3R enclosures. 800 Amps and below.
T3/W3	Elevator Pre-Signal Auxiliary Contacts: Open 0-60 seconds prior to transfer to either direction, re-closes after transfer.
TVSSN	Integrated Transient Voltage Surge Suppressor, installed on Source 1 side 100kA per mode
TVSSL	Integrated Transient Voltage Surge Suppressor, installed on load side 100kA per mode
TVSSE	Integrated Transient Voltage Surge Suppressor, installed on Source 2 side 100kA per mode
UMD	Universal Motor Load Disconnect Circuit: Auxiliary Contact opens 0-5 minutes prior to transfer in either direction, re-closes after transfer. Can be configured by end user for Pre-transfer, Post-transfer, or both

NOTE:

For additional options or other configurations, contact your Cat dealer.

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