

Manual Transfer Switches

Introduction

The Standard Manual Transfer Switch (MTS) utilizes a manual operator to operate both the normal and emergency units. All Molded Case (MC) MTS are protected by a mechanical interlock located behind the molded case units and all Insulated Case (IC) MTS are protected by a mechanical interlock located to the right side of the insulated case units. The mechanical interlock provides additional safety to the operators by preventing them from paralleling the sources.

These switches are U.L. 1008 Listed (File No. E32008) approved as suitable for use in emergency systems, these transfer switches are rated for applications of 100 thru 4000 amperes, up to 600 Vac with short circuit ratings of 35kAIC@480Vac thru 150kAIC@480Vac available.

Description of Operation

The MTS is a manually operated transfer switch that is used to choose one of two sources of power to connect to the load. Depending on the ampacity and basic features required, there are a couple of styles available. There are the MC MTS, the IC MTS and a Service Entrance equivalent for both styles.

Molded Case

To operate the MC MTS, there are manual operating handles located on the front of each molded case unit. When the handle is in the "UP" position, the load is connected to that unit's power source. When both handles are in the "DOWN" position, the load is disconnected from both power sources and the MTS is in the "Neutral" position.

Remember, the mechanical interlock will prevent both units from being closed at the same time. If the unit being operated does not move, the opposite unit may be in the "UP" position preventing the closure of the unit. Place that unit in the "DOWN" position before continuing.

Insulated Case

To operate the IC MTS, there are charging handles located on each insulated case unit. Pull the handles down repeatedly, (there will be resistance felt here), until you hear a "Click" sound and there is no more resistance felt when pulling the handle down. The unit is now changed to handle a full operation; (one close and open function). Push the "Close" button on the insulated case unit whose power is to be connected to the load.

Remember, the mechanical interlock will prevent both units from being closed at the same time. If the "Close" button does not operate the required unit, push the "Open" button on the other unit to verify it is open first.

Featured Option, 40

Electrical Assist - This option will allow the operator to control the MTS from the door.

It will provide a Control Enable Keyed Switch, Pilot Lights for Switch Position and Source Available and pushbuttons to open and close each unit from the door.

If Service Entrance and Ground Fault are included with this order, the Pilot Light for System Trouble will be included also.

See the Electrical Assist cutsheet for a full description.



Product Features

- UL 1008 Listed
- Molded Case: 100 thru 1200 Ampere, 100% Rated Equipment
- Insulated Case: 800 thru 4000 Ampere, 100% Rated Equipment
- Max Operating Voltage of 600Vac
- Keyed or Padlock Handle Provided
- Wall Mount (W/M) or Free Standing (F/S) Enclosure Available
- NEMA 1, 3R, 4, or 4X Std.; NEMA 3R or 4X Stainless Steel
- MC's are Front Accessible
- IC's are Front and Rear Accessible
- Safe Manual Transfer Under Load
- Space Heaters Included with any Outdoor Equipment

Factory Options

- 18 - Aux Contacts for Switch Position; ACRN
- 19 - Aux Contacts for Switch Position; ACRE
- 22A - Pilot Lights for Switch Position
- 22B - Pilot Lights for Source Available
- 22C - Pilot Light for System Trouble (Overcurrent, Ground Fault, etc.)
- 23A - Circuit Breaker Trip on Normal
- 23B - Circuit Breaker Trip on Emergency
- 24J - Aux Contacts for Source Available
- 25 - Multifunction Metering
- 31 - Service Entrance
- 39 - Ground Fault Protection
- 40 - Electrical Assist (Allows Operator to Manually Control the MTS from the Door)
- 44 - Space Heaters
- External Door Operators Available - Consult Factory for Custom Configurations

MOLDED CASE MTS INFORMATION

AMPS	STYLE	APPROXIMATE DIMENSIONS			CABLE ENTRY AREA		APPROX. SHIPPING WEIGHTS	LUG RANGES AVAILABLE	
		HEIGHT	WIDTH	DEPTH	HEIGHT	WIDTH			
100	W/M	48"	28"	18"	15"	26"	285	STD	(1) #4 - 4/0
	F/S	66"	28"	18"	9"	26"	410	OPT	(1) #14 - 1/0
225	W/M	54"	28"	18"	15"	26"	340	STD	(1) 3/0 - 350
	F/S	66"	28"	18"	9"	26"	410	OPT	(2) 3/0 - 350
400	W/M	54"	28"	18"	15"	26"	340	STD	(1) 2/0 - 500*
	F/S	66"	28"	18"	9"	26"	410	OPT	(1) 500 - 600
600	W/M	60"	37"	18"	15"	35"	415	STD	(2) 400 - 500
	F/S	84"	37"	20"	10"	35"	630	OPT	(2) 3/0 - 350
800 1000 1200	W/M	72"	37"	20"	18"	35"	570	STD	(3) 500 - 750**
	F/S	84"	37"	20"	10"	35"	630	OPT	(4) 4/0 - 500

* This Lug is also capable of accommodating (2) 2/0 - 250 MCM cables.

** Not recommended for 500 MCM Cables.

INSULATED CASE MTS INFORMATION

AMPS	STYLE	APPROXIMATE DIMENSIONS			CABLE ENTRY AREA		APPROX. SHIPPING WEIGHTS (LBS)	LUG RANGES AVAILABLE	
		HEIGHT	WIDTH	DEPTH	WIDTH	DEPTH			
800 1200	Fixed	90"	36"	54"	26"	24"	1450	STD	(4) #2 - 600MCM
	D/O ¹	90"	36"	60"	26"	24"			
1600 2000	Fixed	90"	36"	54"	26"	24"	1450	STD	(6) #2 - 600MCM
	D/O ¹	90"	36"	60"	26"	24"			
2500 3000	Fixed	90"	42"	60"	32"	30"	1950	STD	(10) #2 - 600MCM
	D/O ¹	90"	42"	66"	32"	30"			
3200	Fixed	90"	42"	60"	32"	30"	2250	STD	(12) #2 - 600MCM
	D/O ¹	90"	42"	66"	32"	30"			
4000	Fixed	90"	60"	54"	50"	24"	3200	STD	(12) #2 - 600MCM
	D/O ¹	90"	60"	60"	50"	24"	3500		

¹ Draw Out Style Control Units

Recommendations

The MTS are capable of other configurations outside the standard setup. Please consult the factory for further information on equipment outside the standard packages.



Contact Information

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Manual Transfer Switch Order Guide

MC	-	-	-	----	-	-	-	-	/X	/X	/X	/X	/X	/X	/X	/X	/X	/X	/X	/X	/X
TYPE																					
MC ¹																					
IC ²																					
OPERATOR																					
D = Dual ¹ or D/O ²																					
F = Fixed ²																					
CONTROL BASE																					
M = Manual																					
NUMBER OF POLES																					
2 = Two Poles																					
3 = Three Poles																					
4 = Four Poles																					
AMPACITY																					
0100 = 100 Amps																					
0225 = 225 Amps																					
0400 = 400 Amps																					
0600 = 600 Amps																					
0800 = 800 Amps																					
1000 = 1000 Amps																					
1200 = 1200 Amps																					
1600 = 1600 Amps																					
2000 = 2000 Amps																					
2500 = 2500 Amps																					
3000 = 3000 Amps																					
4000 = 4000 Amps																					
VOLTAGE																					
A = 120/240	1 φ	3 W	60 Hz																		
B = 120/208	3 φ	4 W	60 Hz																		
C = 277/480	3 φ	4 W	60 Hz																		
D = 120	1 φ	2 W	60 Hz																		
E = 127/220	3 φ	4 W	60 Hz																		
F = 240	3 φ	3 W	60 Hz																		
G = 120/240	3 φ	4 W	60 Hz																		
H = 220/380	3 φ	4 W	60 Hz																		
I = 380	3 φ	3 W	60 Hz																		
J = 440	3 φ	3 W	60 Hz																		
K = 480	3 φ	3 W	60 Hz																		
L = 240/415	3 φ	4 W	60 Hz																		
S = Custom Voltage (Please Specify)																					
CONTROLS																					
E = Electromechanical Controls (Use for MTS)																					
INTERRUPTING RATING																					
S ¹ = Standard Rating = 35kAIC @ 480VAC, (100 - 600A)																					
S ¹ = Standard Rating = 50kAIC @ 480VAC (800 - 1200A)																					
H ¹ = High Rating = 65kAIC @ 480Vac (100 - 1200A)																					
V ¹ = Very High Rating = 100kAIC @ 480Vac (100 - 1200A)																					
S ² = Standard Rating = 65kAIC @ 480VAC (800 - 4000A)																					
H ² = High Rating = 100kAIC @ 480Vac (800 - 4000A)																					
V ² = Very High Rating = 150kAIC @ 480Vac (800 - 4000A)																					
** kAIC Ratings Higher @ 240VAC (Consult Factory Rep)**																					
ENCLOSURE																					
A = NEMA 1 Wall Mount																					
B = NEMA 1 Free Standing																					
C = NEMA 12 Wall Mount																					
D = NEMA 12 Free Standing																					
E = NEMA 3R Wall Mount																					
F = NEMA 3R Free Standing																					
G = NEMA 4 Wall Mount																					
H = NEMA 4 Free Standing																					
I = NEMA 4X Wall Mount																					
J = NEMA 4X Free Standing																					
K = NEMA 3R Wall Mount (304 or 316 Stainless Steel)																					
L = NEMA 3R Free Standing (304 or 316 Stainless Steel)																					
O = Open Style (no enclosure)																					
X = Special (by description)																					
USE FOR REQUIRED FACTORY OPTIONS																					

¹ Molded Case Style Unit

² Insulated Case Style Unit and D/O is Draw-Out

Part Number Example: MCDM0400CESE / ELA / SH (Molded Case, Dual Operator, Manual Operation, 400Amps, 277/480 Vac, 35kAIC @ 480Vac, NEMA 3R Wall Mount Enclosure. **Factory Options Requested:** Electrical Assist and Space Heaters)



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