

MC-5A Mini-Controller Quick Start Guide

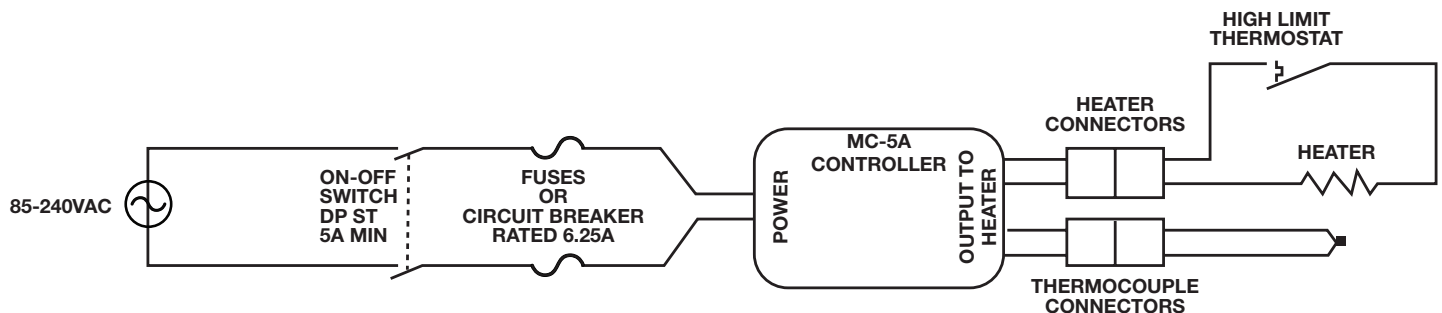


Installation:



1. Use generally accepted safe practices for installation and use of this product.
Note: Only install the MC – 5A mini controller when it is not energized!
2. The MC – 5A mini controller should be installed in an area where the ambient temperature is approximately room temperature. Maximum ambient temperature = 45°C (113°F). Adhesive backed Velcro works well for mounting the MC – 5A mini controller to an appropriate surface.

3. Connect the electrical supply lines (85 – 240VAC) to the leads on the side labeled POWER. Supply lines must be rated for a minimum of 5A continuous. Comply with all local standards when supplying mains power to the MC – 5A mini controller.
4. It is recommended to install based on the drawing below for safety and convenience. A double pole switch and fusing or a circuit breaker in front of the MC – 5A mini controller.
5. Consider use of a high limit thermostat as an additional layer of protection against over temperature conditions to protect personnel and equipment. High limit thermostats can be provided integral with the heater. Separate high limit thermostats are available for mounting in temperature sensitive areas independent of the heater.
6. To attach the heater to the controller, simply connect the power and thermocouple connectors together. If using a separate thermocouple, mount the thermocouple junction where temperature regulation is desired. For forced convection heaters (fan/blower/heater combinations) the thermocouple should be mounted downstream of the heater exhaust to insure there has been thorough mixing of the heated air.

Installation Diagram



Operation:

1. Air sources for forced convection heaters must be energized before or simultaneously with the heater power.
NOTE: Forced convection heaters will burn up without sufficient airflow!
2. Plug the MC – 5AP two button programmer into the RJ11 jack on the side of the MC – 5A mini controller.
3. Energize the heater/controller circuit. To enter the controller Programming Mode, press down both buttons at the same time, and hold for approximately (2) seconds. The display will start to flash to indicate you are now in programming mode, power is also removed from the heater during programming mode. Press the  UP ARROW or  DOWN ARROW buttons to enter the desired regulation temperature (TSet = Set Point Temperature). Set Point Temperature can range from 0° – 200°C maximum.
NOTE: The display temperature units are degrees Celsius, see temperature conversion table to convert degrees Fahrenheit to degrees Celsius.
4. The controller will automatically return to normal operation if the programmer buttons are inactive for approximately (2) seconds. If desired, the two button programmer can be removed to prevent alteration of the desired regulation temperature.
5. The operational state is indicated by the multi-color LED.
When LED is solid blue:
The temperature is at least 5°C below the Set Point Temperature
When LED is solid green:
The temperature has reached the set point indicating normal operation.
When the LED is solid red:
The temperature is at least 5°C above the Set Point Temperature.

Temperature Conversion

Below is a temperature conversion table for your convenience.

°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
34	1	106	41	178	81	250	121	322	161
36	2	108	42	180	82	252	122	324	162
37	3	109	43	181	83	253	123	325	163
39	4	111	44	183	84	255	124	327	164
41	5	113	45	185	85	257	125	329	165
43	6	115	46	187	86	259	126	331	166
45	7	117	47	189	87	261	127	333	167
46	8	118	48	190	88	262	128	334	168
48	9	120	49	192	89	264	129	336	169
50	10	122	50	194	90	266	130	338	170
52	11	124	51	196	91	268	131	340	171
54	12	126	52	198	92	270	132	342	172
55	13	127	53	199	93	271	133	343	173
57	14	129	54	201	94	273	134	345	174
59	15	131	55	203	95	275	135	347	175
61	16	133	56	205	96	277	136	349	176
63	17	135	57	207	97	279	137	351	177
64	18	136	58	208	98	280	138	352	178
66	19	138	59	210	99	282	139	354	179
68	20	140	60	212	100	284	140	356	180
70	21	142	61	214	101	286	141	358	181
72	22	144	62	216	102	288	142	360	182
73	23	145	63	217	103	289	143	361	183
75	24	147	64	219	104	291	144	363	184
77	25	149	65	221	105	293	145	365	185
79	26	151	66	223	106	295	146	367	186
81	27	153	67	225	107	297	147	369	187
82	28	154	68	226	108	298	148	370	188
84	29	156	69	228	109	300	149	372	189
86	30	158	70	230	110	302	150	374	190
88	31	160	71	232	111	304	151	376	191
90	32	162	72	234	112	306	152	378	192
91	33	163	73	235	113	307	153	379	193
93	34	165	74	237	114	309	154	381	194
95	35	167	75	239	115	311	155	383	195
97	36	169	76	241	116	313	156	385	196
99	37	171	77	243	117	315	157	387	197
100	38	172	78	244	118	316	158	388	198
102	39	174	79	246	119	318	159	390	199
104	40	176	80	248	120	320	160	392	200