

Replacing an MSTC keypad with a EclypX keypad

IMPORTANT! -

Take pictures of the inside of the keypads BEFORE you disassemble any of it.
Take pictures of the Communicator wiring BEFORE unplugging it.
Take pictures of ALL power supplies BEFORE disconnecting them.

The keypads generally come PRE-ADDRESSED for you. Odd number keypads (1,3,5 etc) are for ENTRY, even are for exit.

MSTC Keypad communication (DATA) was NOT polarity sensitive. The NEW keypads ARE. While replacing the keypads check that the DATA wire colors are the same for each keypad.

WARNING!

Never plug in, unplug, remove PCB modules when the unit is powered on. You may unplug only the power connector while power is turned on.

WARNING!-

DO NOT REMOVE WIRES FROM THE 4 PIN POWER & DATA CONNECTOR

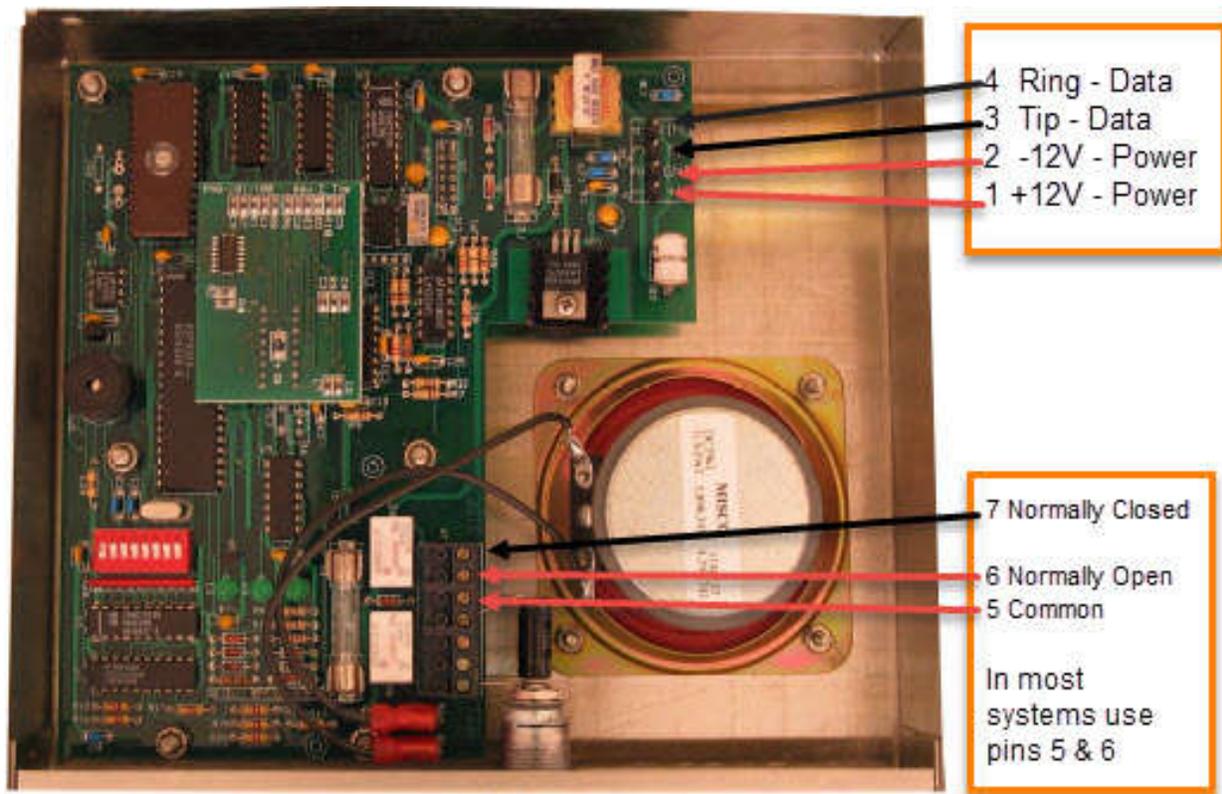
It is NOT necessary to remove the wires from the 4 pin Power & Data Connector. Doing so may complicate the conversion since Global has NO WAY TO KNOW WHAT EACH COLOR WIRE MEANS IN YOUR APPLICATION!

Polarity -

MSTC Keypad communication was NOT polarity sensitive. The NEW keypads ARE. There is a 50/50 chance that the new keypads will just work. If they do not, the polarity of the DATA wires must be reversed (see the pictures below to identify the DATA wires). If you are using a Phone Jack to connect to a Communicator, it is generally easier to swap the DATA wires at each keypad. If you are using the single green connector to plug into the Communicator or Controller, then it is generally easier to swap that pair of wires.

Step 1. Remove the 4 pin black connector from the MSTC keypad by pulling the black connector directly up from the board.

Step 2. Remove the 7 position connector from the bottom of the MSTC board. Pins 5 and 6 as shown below in the MSTC picture, are generally attached to the gate. Note the change necessary on the EclypX Keypad. These wires do NOT have polarity, therefore it makes no difference which wire is on the COM pin and which wire is on the N/O pin (see picture of NEW keypad below). This is additionally discussed in Step 4 below.



See the picture below for reference

Step 3. Rotate the 4 position black connect as shown (180 degrees from what it was before) then and insert into the pins. Power should now be on. There IS polarity for Power Wire and Data wires.

MSTC	EclypX
TIP	+ Data
RING	- Data

Step 4. Connect one of the wires from the 7 position connector on the MSTC keypad to the position marked 'C' and the other wire to the position marked with a "N/O". There is no polarity to these wires.

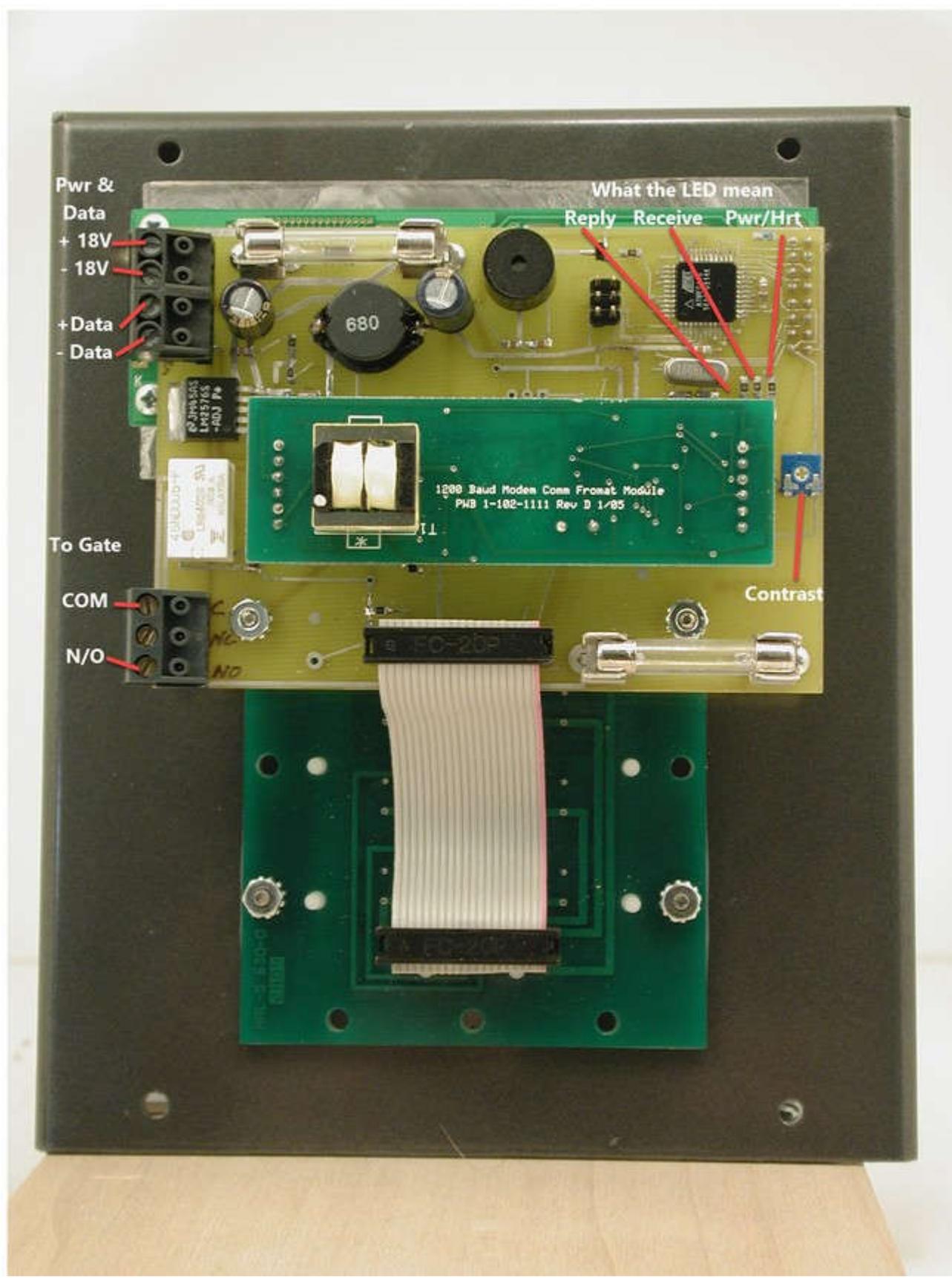
Pwr &
Data
+ 18V
- 18V
+ Data
- Data

What the LED mean
Reply Receive Pwr/Hrt

To Gate

COM
N/O

Contrast



Step 5. Make sure the GREEN ground wire attached to the front housing at the factory, is also attached to the GROUND stud in the rear of the case. The ground stud should also be attached to a proper EARTH ground rod as shown below.

****WARNING** failure to provide a proper Earth ground can lead to damage caused by lightning or static discharges.**

Proper Earth Grounding:

A ground lug is provided on the inside rear enclosure. Additionally, a ground wire should be attached from any available screw in the front enclosure housing to the rear enclosure lug. Then a ground wire from the rear enclosure lug to earth ground. This will provide a path for lightning and static electricity. A proper Earth Ground Rod must be installed to ensure proper grounding and prevent damage to keypads. You should use 1 ground rod for each keypad.

EARTH GROUND ROD INSTALLATION

Proper grounding gives an electrical charge, such as from an electrical static discharge or a near lightning strike, a path from which to dissipate its energy safely into the earth.

Without this path, the intense energy generated by lightning could be directed towards the gate operator. Although nothing can absorb the tremendous power of a direct lightning strike, proper grounding can protect the gate operator in most cases.

The earth ground rod must be located within 3 feet from the gate operator. Use the proper type earth ground rod for your local area.

The ground wire must be a single, whole piece of wire. Never splice two wires for the ground wire. If you should cut the ground wire too short, break it, or destroy its integrity, replace it with a single wire length.

⚠ WARNING

To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging more than 18" (46 cm) deep.

