# Introduction
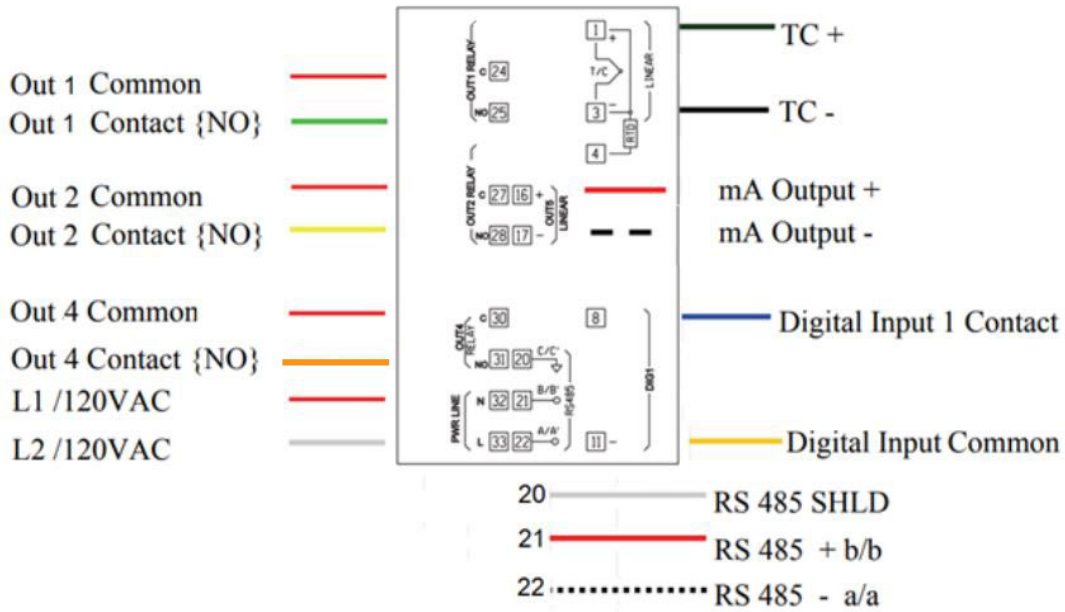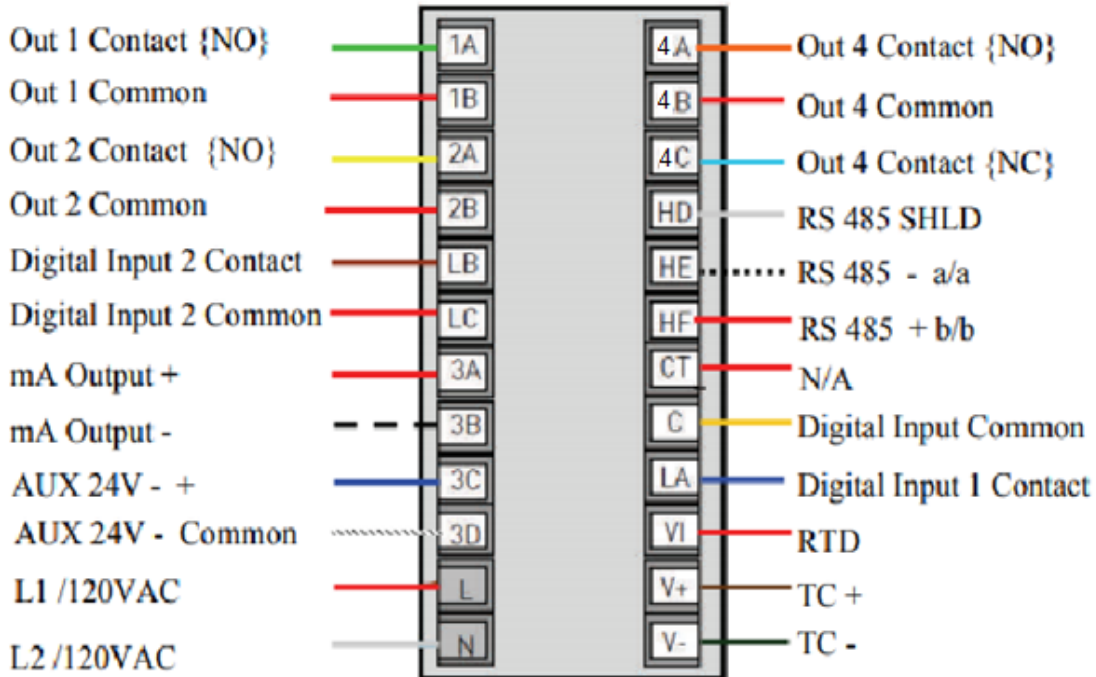
This manual will guide you through the process of wiring an 804 Series controller with a previously installed series 20Q controller. Note: the colors depicted in the images have no other meaning than to provide a quick visual reference for transferring wires from one controller to the next in a replacement scenario.

## 20Q

| Left labels | | Right labels |
|---|---|---|
| Out 1 Common | | TC + |
| Out 1 Contact {NO} | | TC - |
| Out 2 Common | | mA Output + |
| Out 2 Contact {NO} | | mA Output - |
| Out 4 Common | | Digital Input 1 Contact |
| Out 4 Contact {NO} | | |
| L1 /120VAC | | Digital Input Common |
| L2 /120VAC | | |

Terminal block labels: OUT1 RELAY c 24, NO 25, T/C, LINEAR, 1 +, 3 -, RTD, 4, OUT2 RELAY c 27, NO 28, OUT3 LINEAR 16 +, 17 -, 8, OUT4 RELAY c 30, NO 31, 20 C/C, DIGI, PWR LINE N 32, 21 B/B', RS485, L 33, 22 A/A', 11 -

20 ——— RS 485 SHLD
21 ——— RS 485 + b/b
22 ············ RS 485 - a/a

## 804

| Left labels | Term | Term | Right labels |
|---|---|---|---|
| Out 1 Contact {NO} | 1A | 4A | Out 4 Contact {NO} |
| Out 1 Common | 1B | 4B | Out 4 Common |
| Out 2 Contact {NO} | 2A | 4C | Out 4 Contact {NC} |
| Out 2 Common | 2B | HD | RS 485 SHLD |
| Digital Input 2 Contact | LB | HE | RS 485 - a/a |
| Digital Input 2 Common | LC | HF | RS 485 + b/b |
| mA Output + | 3A | CT | N/A |
| mA Output - | 3B | C | Digital Input Common |
| AUX 24V - + | 3C | LA | Digital Input 1 Contact |
| AUX 24V - Common | 3D | VI | RTD |
| L1 /120VAC | L | V+ | TC + |
| L2 /120VAC | N | V- | TC - |

## Procedure

When replacing the **20Q** with an **804 controller** it is important to note that the terminal layout has changed. Below is the text description of the wiring conversion process.

1. Transfer Analog Input from 20Q to 804 as follows:

    Terminal 1 to (V+) Terminal 3 to (V-) Terminal 4 to (VI)

2. Transfer from 20Q to 804 as follows:

    Terminal 11 to (C ) Terminal 8 to (LA)

3. Transfer RS-485 communication from 20Q to 804 as follows:

    Terminal 20 to (HD) Terminal 21 to (HF) Terminal 22 to (HE)

4. Transfer Analog Output (linear) from 20Q to 804 as follows:

    Terminal 16 to (3A) Terminal 17 to (3B)

5. Transfer Relay Outputs from 20Q to 804 as follows:

    Terminal 25 to (1A)

    Terminal 28 to (2A)

    Terminal 31 to (4A)

6. Finally, Transfer Line and Relay Commons

    L1 (Terminal 33) to (Terminal L)

    L2 (Terminal 32) to (Terminal N)

    Terminate the relay commons accordingly

    Terminal 27 to (2B)

    Terminal 24 to (1B)

    (L) can be jumpered to (4B) on the 804 if used.

| Rev. | Description | Date | MCO # |
|---|---|---|---|
| New | Initial release | 11/6/19 | 2274 |
| A | Adjusted colors for consistency | 11/7/19 | 2275 |