

Quick Guide

Step 1)

Before you configure the level transmitter you need to know the format and dimensions from the tank, as well as the exact distance between the bottom of the tank and the face of the sensor when it is installed at the top of the tank.

If your tank is up to 1 meter of height, please configure the TL400 in SHORT mode.

If your tank has between 1 and 3 meters configure as MEDIUM.

And if your tank has between 3 and 4 meters configure as LONG.

The maximum distance that the TL400 can measure is 4 meters of height.

In summary:

SHORT < 1 meter

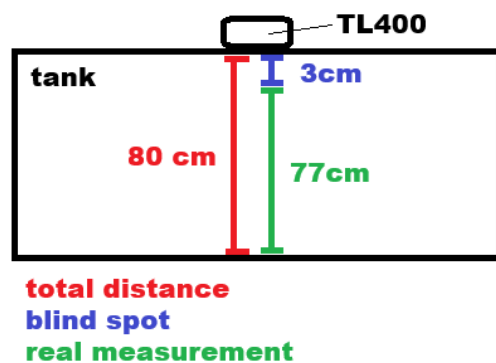
1 meter < MEDIUM < 3 meters

3 meters < LONG < 4 meters

In this quick guide we will simulate the configuration of a tank 80 centimeters of height (< 1 meter), and because of that we will use SHORT mode as configuration.

Respect the distance of blind spot of 3 centimeters in the configuration. You need to subtract 3 cm from the total distance of measurement (80 cm) to get the real measurement of 77 cm.

Diagram of the tank:



Step 2)

Electrical wiring for TL400-I:

TL400-I has two accessory cables, which can be purchased separately:

- 1 m PVC sensor cable 4-pin | M12 female connector (Order code: 8806065000)
- 3 m PVC sensor cable 4-pin | M12 female connector (Order code: 8806065100)

The connection to the M12 female connector must be made in accordance with the following wiring connections:



Figure 5

4.1.2.1 ANALOG INPUT CONNECTION

Below is an example of how to connect the output to an analog input:

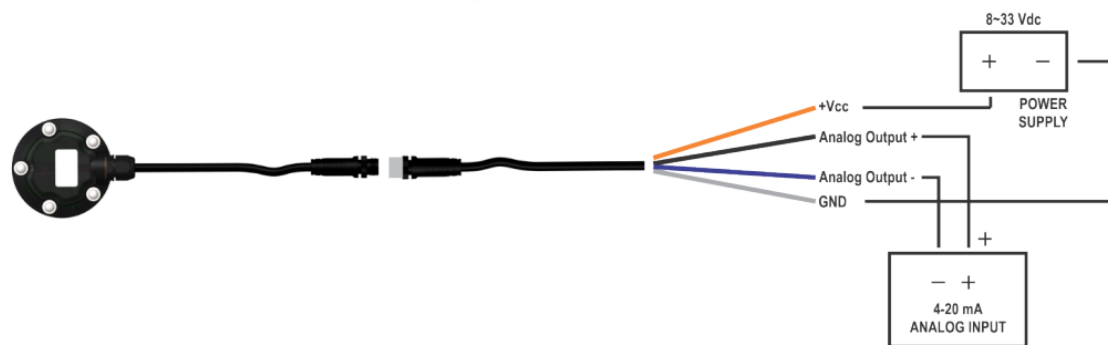


Figure 6

https://cdn.novusautomation.com/downloads/level_transmitter_manual_tl400-i_v31x_a_en.pdf (page 6)

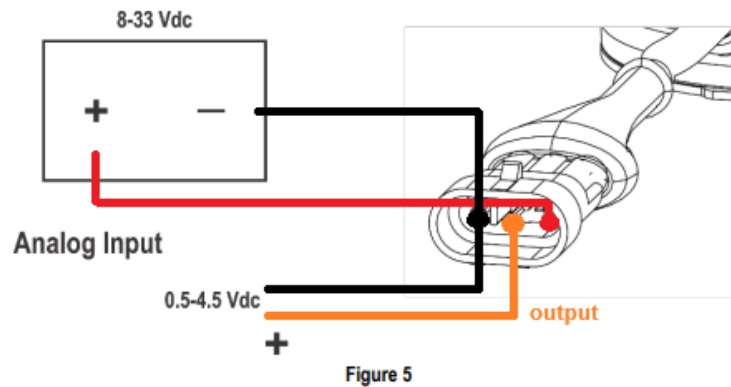
If you are using our other M12 cable with different colors, these are the respective connections:

Color described on the manual		Respective color of the cable
ORANGE	->	RED
BLACK	->	BLACK
WHITE	->	GREEN
BLUE	->	YELLOW

Electrical wiring for TL400-V:

4.1.2.1 ANALOG INPUT CONNECTION

Below is an example of how to connect the output to an analog input:

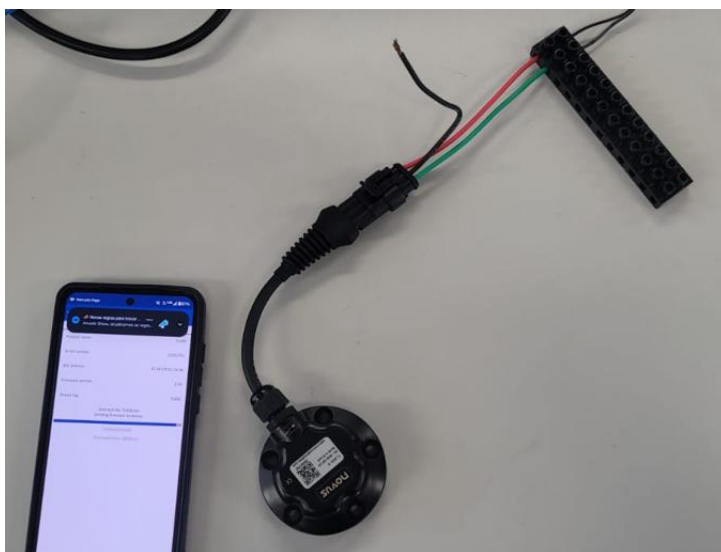


https://cdn.novusautomation.com/downloads/level_transmitter_manual_tl400-v_v31x_a_en.pdf (page 6)

You will need to manufacture a female cable to connect to the male connector from the TL400-V. The model you need to look for to manufacture is the "[Superseal 3-Way Female](#)". We do not have this female connector for sale in our portfolio, but you can find it in online market on internet.



You need to weld 3 wires on the female connector. Picture of a female cable manufactured:



Step 3)

Go to the Play Store or Apple Store on your smartphone and download the free "Signow Mobile" app. Then activate Bluetooth communication on your smartphone.

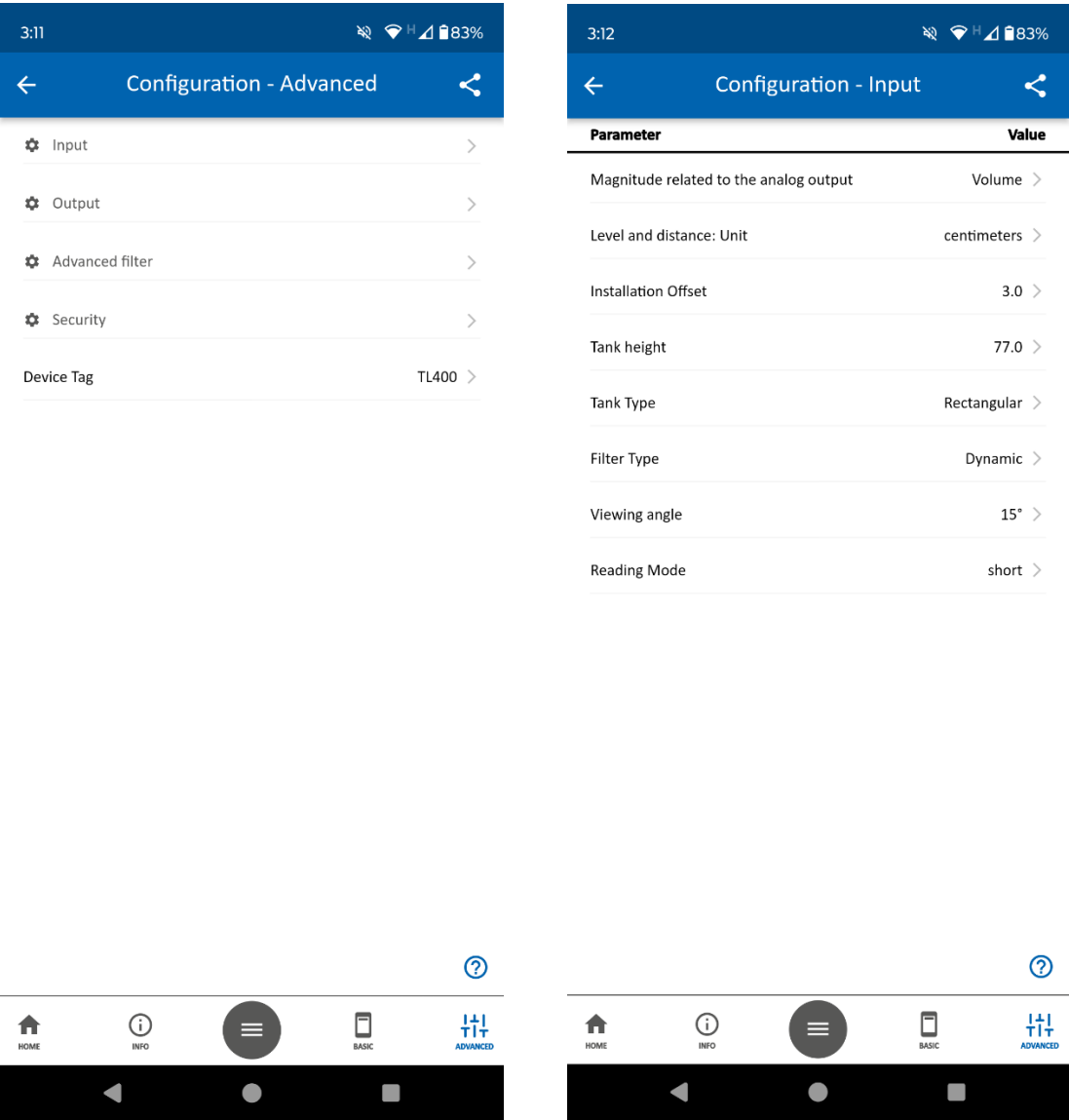
Open the app and search for the TL400 to access its settings.

Click on "Configuration" to read the device.

Example of configuration in the Signow app accessing ADVANCED option:

*The configuration for the TL400-I and TL400-V in this example are the same, the only difference will be the field "Configuration - Output > Output Type" which will show 0.5 to 4.5Vdc for the TL400-V, instead of 4 to 20mA for TL400-I.

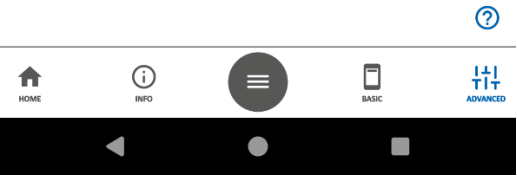
*The print screens below are from the TL400-I configuration. The configuration for the TL400-V is the same.



3:30 82%

Configuration - Output

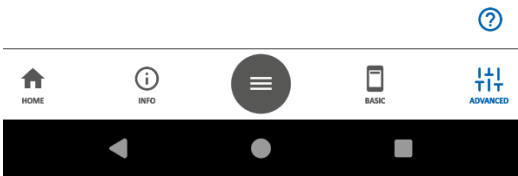
Parameter	Value
Output Type	4 to 20 mA
Error action on the analog output	None >
Reverse output polarity	No >
Output minimum value	0.00 >
Output maximum value	100.00 >



3:13 83%

Configuration - Advanced filter

Parameter	Value
Size of the main vector	100 >
Size of the distance vector	80 >
Median index	0 >
Show blocking filter parameters	Yes >
Acceptance percentage	0.10 >
Percentage increase	0.05 >
Acceptance counts	8 >
Acceptance ratio	2 >



Step 4)

After sending the configuration to the level transmitter, return to the Home screen and access the “Diagnostics” option.

On the “Diagnostics” screen, you can read the instantaneous level measurement from the level sensor.