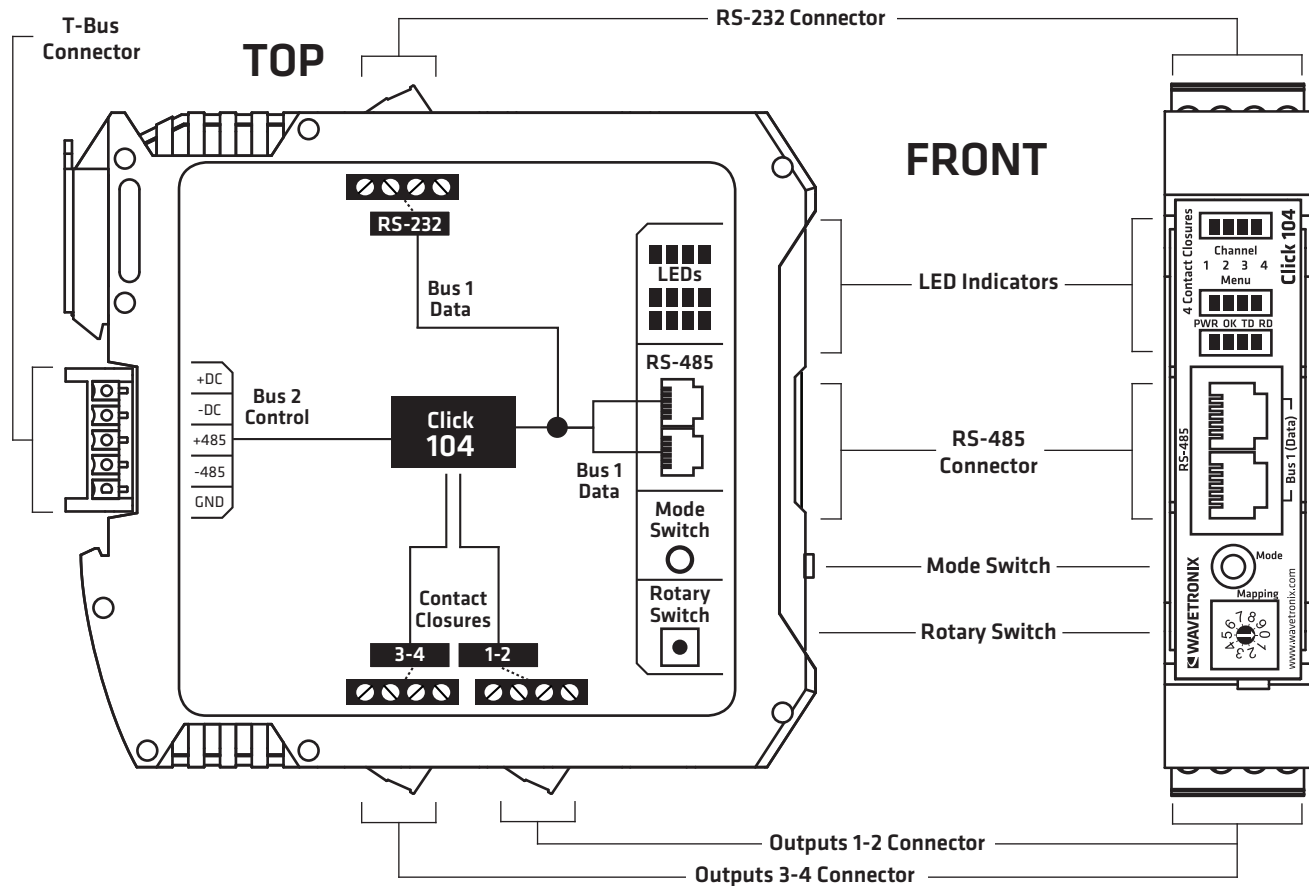# 4-channel DIN Rail Contact Closure Module

The Click 104 is a 4-channel contact output device that mounts onto a DIN rail, allowing it to be mounted on a hot-swappable power and communication bus for easy installation. The device receives serial messages from SmartSensor™ sensors and sends them on as contact closure outputs.

Features

- Compatible with NEMA TS1 and TS2, 170, and 2070 traffic controllers
- Mounts on a DIN rail for easy connection to power and communication bus
- Fail-safe mode in case of interruption of data flow
- Dual communications ports for separate data and configuration communication
- Uses industry-standard RS-485 communications
- Automatically sets baud rate

- Displays detection via LEDs on faceplate
- Solid state outputs
- Configurable via hardware front panel interface or Click Supervisor
- Keyed removable screw terminals for ease of wiring
- Conformal coated

Technical Specifications

Physical

- Weight: 0.3 lbs. (0.14 kg)
- Physical dimensions: 4.5 in. × 4 in. × 0.9 in. (11.4 cm x 10.2 cm x 2.3 cm)
- Ambient operating temp: -29°F to 165°F (-34°C to 74°C)
- Humidity: up to 95% RH

Mounting

- DIN rail–mountable
- Hot-swappable

Power

- Power supply voltage: 9 to 28 VDC
- Power consumption: 1 W

Connections

- Connections for bus 1:
    - Two RJ-11 jacks for RS-485
    - 1 pluggable screw terminal for RS-232
- Connections for bus 2:
    - 5-position connector for power and RS-485 to and from the T-bus
    - 2 pluggable screw terminals for contact closure outputs

Communication

- Has two independent communication buses, so that the device can be configured without interrupting data flow
- Vehicle information to traffic controller via contact closures

Baud Rates

- Supports the following baud rates:
    - 9600 bps
    - 19200 bps
    - 38400 bps
    - 57600 bps

Faceplate Configuration Features

- Mode switch controls menu operation
- Rotary switch aids in channel configuration
- Detection LEDs (red) display the current detection state
- Menu LEDs (Level 2) (red) let you view and set menu options
- Menu LEDs (Level 1) display menu item selected, as well as the following status indications:
    - Red LED (PWR) indicates the device has power
    - Blue LED (PU) indicates proper system operation; extinguishes during fail-safe mode
    - Green LED (TD) indicates device is transmitting data

Ordering Information

Click 104 4-channel DIN rail contact closure module
CLK-104

Wavetronix

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www.wavetronix.com

- Yellow LED (RD) indicates device is receiving data
- Supports configuration of baud rate and channel mapping settings

Software Configuration Features

- Comes with Click Supervisor, configuration software with the following features:
    - Runs on Pocket PC or Windows desktop or laptop PC (Windows 2000 and newer)
    - Configures serial communication settings including serial baud rates
    - Configures channel mapping settings
    - Can remotely and directly upgrade the device firmware to add new features to the device
    - Can save/open a configuration to/from a file, allowing a common configuration to be easily programmed into many devices
    - Has customizable drivers that are stored in an XML file that describes the settings for a device as well the graphical user interface for that driver in the configuration software

Data Conversion

- Outputs traffic data as contact closures specified by a Wavetronix SmartSensor

Fail-safe Mode

- Enters a fail-safe mode if it has lost communications with a sensor for more than 10 seconds (or as configured)
- In fail-safe mode, all channel outputs are asserted
- Fail-safe mode will be exited when communication with sensor is restored

Class 4 Compliance

■ Complies with the EN 61000-4-5 Class 4 lightning surge protection on the DC input

Contact Closure Outputs

■ Dissipates up to a 600 W power surge received on any contact closure output terminal

■ Contact closure output terminals can withstand 50 V continuously

■ Contact closure outputs are less than 8 ohms in conduction state

■ Contact closure outputs in non-conducting state leak less than 1uA

■ Contact closure outputs can switch up to 150 mA

Remote Upgradeability

■ Flash memory can be remotely upgraded to add functionality to the firmware when new features have been developed to improve the performance of the installation

Testing

■ Passes manufacturer's test before shipping

Extended Support

■ Extended support options are available from Wavetronix; contact a Wavetronix representative for more information

Warranty

■ One-year warranty against material and workmanship defect (see Click Warranty datasheet for complete details)