NFC Programming

Made Easy for Inventronics LED Drivers

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NFC Programming Made Easy for Inventronics LED Drivers:

Near-Field Communication (NFC) is not a new technology and odds are you have experienced it in a variety of applications. For LED drivers and luminaires, NFC provides flexibility during production, labor cost savings, the ability to easily change the configuration after installation and requires no mains-voltage to set the desired settings.

What exactly is NFC?

NFC is a wireless technology globally available in the 13.56MHz unlicensed radio frequency range and is designed for short range data transfer. It is currently used in a variety of applications such as "point-of-sale" devices, parking meters, turnstiles, garage doors and mobile devices. NFC communication requires two devices, an NFC reader and an NFC tag. The NFC tag is typically embedded in a device, such as a turnstile or LED driver. The NFC reader is designed to read and write information to the NFC tag and is often embedded in a smartphone, or a standalone unit that connects to a PC. In Figure 1, you can see the reader is connected to a host PC that uses software to transmit programming data between the reader (or programmer in this case) and the tag embedded in the LED driver.

LED Driver with embedded Tag   Programmers or "Readers"   USB   PC

Figure 1: NFC Programming System

Standardization of NFC in the Lighting Industry:

As NFC grows in popularity, the Zhaga Consortium has been working to standardize driver programming methods, power interface definitions and develop specifications for lighting components. These specifications are based on the ISO/IEC 15693 standard for NFC that was approved by MD-SIG in March 2018. MD-SIG merged with ZHAGA in late 2019 and the specifications are now available as ZHAGA Book 24. These specifications will allow for the user to program their device with any qualified NFC reader while also still allowing for vendor differentiation. To read more on these standardizations, you can visit [Zhaga Consortium Book 24: NFC Programming of Drivers Made Easy](#)

Advantages of Using NFC to Program LED Drivers:

NFC provides a way to set the LED drivers operating current, lumen output and dimming levels wirelessly and without the need to connect to mains-voltage. This provides increased safety, simplifies the programming process, and reduces labor costs of assembly. Since there is no need to power the drivers for programming, the driver can be configured in the manufacturing line to match the user's specific application needs. It also allows for easy reconfiguration before the product ships from the warehouse, after the driver has been installed into a fixture or even after the fixture has been installed in the field.

Programming Inventronics NFC LED Drivers:

Programming your Inventronics NFC LED driver is fast and efficient. Each NFC LED driver has a radio location indicator on the driver (Figure 2). Simply line up the NFC reader with the radio location indicator and read/write as normal using the Inventronics Multi-Programmer software.   Inventronics does offer a handheld (Figure 3) and desktop programmer (Figure 4) for added convenience, but any NFC programmer that adheres to the Zhaga Book 24 specifications is supported.

Figure 2: Radio Location Indicator for LUN-042 and LUN-095 Series
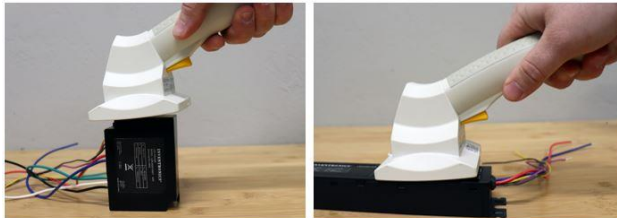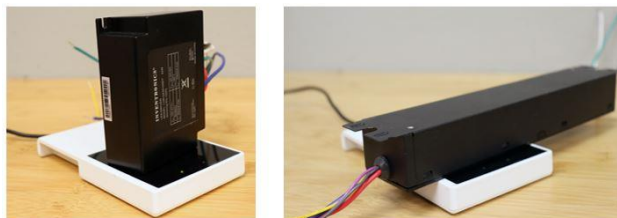

Figure 3: Handheld NFC Programming Device

Figure 4: Desktop NFC Programming Device

Summary:

Inventronics currently offers customers the option to utilize NFC programming on select drivers so OEMs can easily adapt their existing luminaires to different individual requirements, providing design versatility and streamlining production.   Inventronics user-friendly software allows customers to set various functions such as output current and dimming levels specifically for each unique application. As NFC continues to be a topic of interest in the lighting industry, Inventronics is continuously working to provide a wide portfolio of LED drivers designed for indoor, outdoor, and industrial applications.   To learn more about Inventronics NFC LED drivers, please visit www.inventronics-co.com or contact your local sales representative.

Author: Bobbie Grider

Bobbie Grider is the marketing communications manager for Inventronics and is responsible for developing the company's marketing, advertising and public relations strategies for their broad portfolio of LED drivers and Lighting Controls. Based in Oklahoma City, OK Grider manages the branding and messaging for Inventronics, a leading manufacturer of LED drivers for the solid-state lighting market. She has a bachelor's degree in journalism and business marketing. She has four years' experience in the power and lighting industry.

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