



Located in Van Nuys, California since 1979, Louroe Electronics™ is the World Leader in Audio Monitoring Technology. Louroe products are used in over forty countries and are utilized in both the private sector and government applications. Louroe serves the needs of law enforcement, security, health care, entertainment, hospitality and retail industries and many more. At Louroe Electronics we maintain rigorous standards to ensure our products provide reliability, durability and excellent performance for our customers' needs.

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**IP SPEAKER MICROPHONE – WALL MOUNT****DIVISION 27 – COMMUNICATIONS****27 50 00      Distributed Communications and Monitoring Systems****27 51 00      Distributed Audio-Video Communications Systems**

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**Notes to Specifier:**

1. Specifiers may alternately wish to include this specification in the following section:

**28 47 17      Notification Devices and Methods**

2. Where several alternative parameters or specifications exist, or where, the specifier has the option of inserting text, such choices are presented in **<bold text>**.

3. Explanatory notes and comments are presented in **colored** text.

**BI-DIRECTIONAL IP SPEAKER MICROPHONE – Wall MOUNT****PART 1 GENERAL****1.01 SUMMARY**

- A. Section includes a wall-mounted full duplex IP audio microphone and speaker combination, where the microphone produces a line level output and speaker produces a 2.5 or 8 Watt output, depending on size.
- B. Related Requirements
  - 1. 10 00 00 Specialties (Division 10)
    - a. 10 17 00 Telephone Specialties
  - 2. 27 00 00 Communications (Division 27)
    - a. 27 15 00 Communications Horizontal Cabling
    - b. 27 30 00 Voice Communications
      - 1) 27 32 00 Telephone Sets
  - 3. 28 00 00 Electronic Safety and Security (Division 28)
    - a. 28 05 33 Safety and Security Network Communications Equipment
    - b. 28 13 19 Access Control Systems Infrastructure
    - c. 28 23 00 Video Surveillance

**1.02 SUBMITTALS**

- A. Informational Submittals
  - 1. Product Data - Manufacturer's printed or electronic data sheets
  - 2. Manufacturer's instructions
- B. Closeout Submittals
  - 1. Warranty documentation
  - 2. Manufacturer's installation, configuration, and operation manuals
  - 3. As-built wiring diagrams
  - 4. Recommended spare parts list

**1.03 QUALIFICATIONS**

- A. Manufacturer shall have a minimum of five years' experience in providing commercial speaker microphone systems.
- B. Manufacturer's products shall be manufactured in the United States of America.
- C. Installers shall meet Manufacturer's requirements for equipment installation.

**1.04 WARRANTY**

- A. Manufacturer shall provide a limited 24 month warranty for the product to be free of defects in material and workmanship.

END OF SECTION

**PART 2 PRODUCTS****2.01 EQUIPMENT**

- A. Manufacturer: Louroe Electronics  
6955 Valjean Ave.  
Van Nuys, CA 91406  
Phone: (818) 994-6498  
Fax: 818) 994-6458  
Web: www.louroe.com  
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- B. Model: DigiFact 880 (LE-880), DigiFact 890 (LE-890), DigiFact 885 (LE-885),  
DigiFact 895 (LE-895)
- C. Alternates: None

**2.02 DESCRIPTION**

- A. The bi-directional IP speaker microphone shall be a full duplex audio microphone and speaker combination, designed for interface to third party audio and video equipment and including the following significant characteristics:
1. built-in muting and half-duplex functionality
  2. PoE power
  3. output alarms and pre and post-alarm recording, based on audio analytics and decibel threshold
  4. ONVIF Profile T compliance
  5. Browser-based software interface
- B. The microphone shall produce a line level output and connect to the audio input of a receiving device.
- C. The speaker shall produce a 2.5 Watt output from a line level input transmitted by an audio driver device.
- D. The speaker microphone shall incorporate echo cancellation, attenuation, and noise filtering.
- E. **<The speaker microphone shall have an illuminated pushbutton which, upon activation shall present a contact closure to a third party audio receiving device.>**  
**The Louroe DigiFact 880 and DigiFact 890 provide a pushbutton.**
- F. Mounting: Ceiling - **<flush> <surface>** mount configuration.

<u>Model</u>	<u>Speaker Dia.</u>	<u>Mounting</u>
<b>DigiFact 880/890</b>	<b>2"</b>	<b>Wall Surface</b>
<b>DigiFact 885/895</b>	<b>4"</b>	<b>Recessed (flush) or Surface Mount Box</b>

**2.03 SPECIFICATIONS**

- A. Microphone
1. Type: Electret condenser
  2. Output: Line level (0 dB)
  3. Sensitivity: -45 dBV/Pa 1 Pa + 94 dB SPL
  4. Pick-up pattern: Omnidirectional within **<30>** feet

**DigiFact 880/890/895/885 have 30' range..**

- a. Frequency response: 40 Hz to 15 kHz +/- 1 dB
- b. Output Impedance: 600  $\Omega$  @ 1 KHz unbalanced
- 5. Speaker
  - a. Power output: 2.5 Watts
  - b. Impedance: 8  $\Omega$
  - c. Frequency Response: 300 Hz – 400 KHz
  - d. Magnet: Neodymium
  - e. Size: <2"> <4"> diameter round
- See table in commentary following Section 2.02 F above.**
- 6. Memory: 512 MB RAM
- 7. Network
  - a. Supported protocols: ONVIF profile T, IPv4, HTTPS, RTSP, RTP, TCP, SSH
  - b. Security: HTTPS, password protection, user level access (3 levels)
  - c. Application Prog Interface: Open API for software integration
  - d. Audio:
    - 1) Streaming: Two way (half and full duplex)
    - 2) Compression: PCM, G.711 a-Law, G.711 mu-Law, G.726-40, AAC
  - e. Connectivity: RJ45
- 8. Events and Actions
  - a. Event Triggers:
    - 1) Audio analytics (embedded)
      - a) Gunshot
      - b) Aggression
      - c) Car Alarm
      - d) Broken Glass
    - 2) Decibel threshold
    - 3) External inputs (2)
  - b. Event actions:
    - 1) HTTP POST notification
    - 2) TCP notification
    - 3) external output activation (4 outputs)
    - 4) pre and post-alarm audio recording
- 9. Electrical
  - a. Voltage: PoE IEEE 802.3af or 5 VDC, 2 A maximum  
**5 VDC is optional via external power supply via 2-pin header – used in lieu of PoE.**
  - b. Connectors:
    - 1) Network: RJ45 for 10BASE-T/100BASE-TX PoE
    - 2) 10-pin terminal block for x2 Input ports, x4 Output ports, external 5VDC input
    - 3) X2 1W and x1 5W auxiliary speaker outputs

4) X1 auxiliary electret condenser microphone input

10. Housing:

- a. Material: **<Stainless steel> <Painted Steel>**
- b. Operating Temperature: 0°C to 70° C
- c. Compatibility: ONVIF Profile "T"
- d. Weight: **<1.4> <1.6> pounds**

**Weights and Material pertain to DigiFact 880/890 and DigiFact 885/895, respectively.**

- e. Dimensions (H x W): **<6.5" x 4.8">**

**< 6 1/4"H x 8"W x 2 3/4"D backbox, 8.0"H dia. x 6 1/4" W faceplate>**

**Dimensions pertain to DigiFact 880/890 and DigiFact 885/895, respectively.**

11. Backing:

The DigiFact 880 is designed to fit into a three-gang electrical box with a minimum interior volume of 55 cubic inches. For a list of recommended boxes, please contact Louroe Electronics.

## 2.04 SOFTWARE

- A. The speaker-microphone shall be discoverable and configurable via web-browser.
- B. Manufacturer-supplied software shall have the ability to configure the following parameters:
  - 1. Audio stream settings
  - 2. ONVIF settings
  - 3. Input ports
  - 4. Output ports
  - 5. Passwords and user settings
  - 6. Network settings
  - 7. Reboot and reset
  - 8. Device firmware update
- C. The Manufacturer shall provide an open Applications Programming Interface (API) for the device.

**END OF SECTION**

## **PART 3 EXECUTION**

### **3.01 INSTALLERS**

- A. Contractor personnel shall comply with all applicable state and local licensing requirements.

### **3.02 INSTALLATION**

- A. Contractor shall follow Manufacturer's written installation instructions in their entirety.
- B. Where applicable, the product shall be installed with a listed Limited Power Source (LPS) or Class 2 power supply.

**When the speaker microphone is part of an audio monitoring system, it is recommended that Contractor post notice of audio monitoring on the premises in accordance with Federal and State regulations.**

**END OF SECTION**