



# EM-181Mu

## User Guide

Rev: 3.0.2438.0

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# Description

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The EM-181Mu master controller serves as the core component for your emergency elevator communication system and engineered to comply with the EN-81-28 standard. Providing robust and reliable voice communication to connected intercom stations, making it the ideal solution for emergency voice communication in single elevator installs. Featuring a wide array of configurable options, compatible with Pixel's eLioT Cloud monitoring solution and the P100 Protocol.

## Features:

- EN-81-28 compliant
- Built in Battery Backup
- RGB LED System Status Indication
- Local Intercom Paging
- Programmable I/O Interface
- Remote (DTMF) & Local (SD Card) Programmable
- Robust 4-wire Lift Intercom Station Bus Connectivity
- Eight Programmable Emergency Help Numbers
- FXO Analogue Phone Line interface
- Advanced System and Telephone Programming Options
- 16 Second Voice Storage for Location Identification Message
- eLioT Cloud Monitoring & P100 Protocol Support
- emPOWER Station Bus Interface Support

# Installation & Setup

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- 1 Mount the EM-181Mu using the DIN Rail mounting clip
- 2 Referencing the Installation Diagram (back page), connect the:
  - Telephone line to Phone Line input
  - Power supply to the DC IN input

*Once powered the status LED will blink BLUE indicating both power and a telephone line is connected.*

- 3 Dial into the phone line number connected to the unit.
- 4 Program the emergency help number by entering;

# PIN 9 # 0 HELP NUMBER \*

i Default System PIN: 123

To verify, enter \* 0

- 5 Record a Voice Location ID message by entering;  
# PIN # 9 after 2 beeps, begin recording

To end recording press 0

To playback recorded message, enter \* 9

i Alternatively you can program a voice location ID message via an EM-181/SK. Please scan the QR code on the back page and refer to the Advanced programming Guide for further details.

- 6 Finalize the connections for your intercom stations. Refer to the EM-181/S and EM-181/SK Installation Diagrams to determine each station ID, set up the wiring, and complete the system installation.

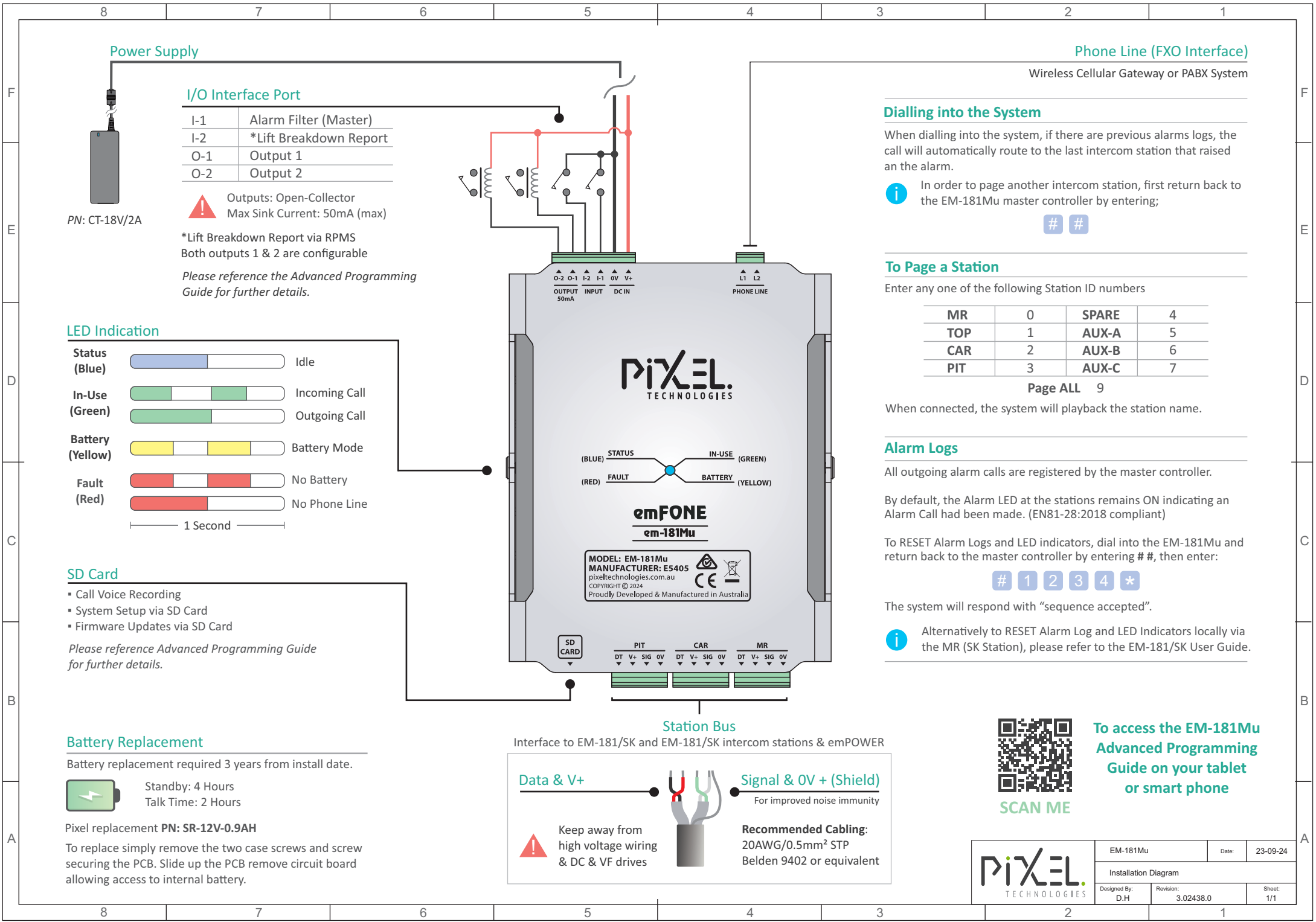
 Check station wiring before connecting to EM-181Mu

Once all stations are connected back to the EM-181Mu, incoming & outgoing test calls can be made to ensure all devices are setup and operational.

# Specifications

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Operating Voltage	18 - 24V DC (max)
Operating Current	Idle: 50mA, Charging: 200mA (max)
Inputs	Dry Contact, Active Low (ON)
Output	Open Collector, 24V @ 50mA (max)
Station Bus	4-wire, up to 400m (max)
Status Indication	Status (RGB LED)
Voice ID Message	16 seconds (max)
Battery Type	12V 0.9Ah Ni-MH
Battery Runtime	4 Hours (Standby)
(4 Station Install)	2 Hours (Talk Time)
FXO Interface	24 - 50V DC, 3kV Isolated, Analogue Line
Operating Temperature	0 - 50°C
Operating Humidity	90% max relative humidity, noncondensing
Mounting	DIN Rail
Dimensions (mm)	88(W) x 118.8(H) x 42.5(D) (with DIN Rail)



Power Supply

PN: CT-18V/2A

I/O Interface Port

I-1	Alarm Filter (Master)
I-2	*Lift Breakdown Report
O-1	Output 1
O-2	Output 2

Outputs: Open-Collector  
Max Sink Current: 50mA (max)

\*Lift Breakdown Report via RPMS  
Both outputs 1 & 2 are configurable

Please reference the Advanced Programming Guide for further details.

LED Indication

Status (Blue)

In-Use (Green)

Battery (Yellow)

Fault (Red)

Idle

Incoming Call

Outgoing Call

Battery Mode

No Battery

No Phone Line

1 Second

SD Card

- Call Voice Recording
- System Setup via SD Card
- Firmware Updates via SD Card

Please reference Advanced Programming Guide for further details.

Battery Replacement

Battery replacement required 3 years from install date.

Standby: 4 Hours  
Talk Time: 2 Hours

Pixel replacement PN: SR-12V-0.9AH

To replace simply remove the two case screws and screw securing the PCB. Slide up the PCB remove circuit board allowing access to internal battery.

Phone Line (FXO Interface)

Wireless Cellular Gateway or PABX System

Dialling into the System

When dialling into the system, if there are previous alarms logs, the call will automatically route to the last intercom station that raised an the alarm.

In order to page another intercom station, first return back to the EM-181Mu master controller by entering;

# #

To Page a Station

Enter any one of the following Station ID numbers

MR	0	SPARE	4
TOP	1	AUX-A	5
CAR	2	AUX-B	6
PIT	3	AUX-C	7

Page ALL 9

When connected, the system will playback the station name.

Alarm Logs

All outgoing alarm calls are registered by the master controller.

By default, the Alarm LED at the stations remains ON indicating an Alarm Call had been made. (EN81-28:2018 compliant)

To RESET Alarm Logs and LED indicators, dial into the EM-181Mu and return back to the master controller by entering # #, then enter:

# 1 2 3 4 \*

The system will respond with "sequence accepted".

Alternatively to RESET Alarm Log and LED Indicators locally via the MR (SK Station), please refer to the EM-181/SK User Guide.

Station Bus  
Interface to EM-181/SK and EM-181/SK intercom stations & emPOWER

Data & V+

Signal & 0V + (Shield)

Keep away from high voltage wiring & DC & VF drives

Recommended Cabling: 20AWG/0.5mm<sup>2</sup> STP Belden 9402 or equivalent



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To access the EM-181Mu Advanced Programming Guide on your tablet or smart phone