

# Security and Fire Alarm System Installers Labor Market Analysis: San Diego-Imperial Region

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March 2018

## Summary

This report was produced for Imperial County, however, due to insufficient data in the labor market, the greater San Diego-Imperial Region was used for analysis. The following list summarizes findings from the labor market analysis below for *Security and Fire Alarm System Installers*:

- There is insufficient data for Imperial County to determine labor market demand for *Security and Fire Alarm System Installers*; however, when analyzing data in the greater San Diego-Imperial Region between 2017 and 2022, *Security and Fire Alarm System Installers* are projected to increase by 62 jobs or eight percent.
- Employers in San Diego-Imperial Region will need to hire 95 workers annually to fill new jobs and backfill jobs due to attrition such as retirement or turnover.
- Between 2010 and 2017, there was an average of 79 online job postings per year for *Security and Fire Alarm System Installers* in the San Diego-Imperial Region.
- There is insufficient data for Imperial County, however, when analyzing data in the greater San Diego-Imperial Region, *Security and Fire Alarm System Installers* earn median hourly earnings of \$21.35, more than the Self-Sufficiency Standard for two adults and two children (school-age) in Imperial County, which is \$11.32 per hour.
- According to the California Community Colleges Chancellor's Office Management Information System (MIS) Data Mart, there is one Taxonomy of Programs (TOP) code associated with this occupation: TOP 095220 Electrical.
- Comparing labor demand (annual openings) with labor supply suggests that there is an oversupply for this occupation in the San Diego-Imperial Region, with 95 annual openings and 107 awards. Comparatively, there are 1,060 annual openings in California and 457 completions. There are zero awards in Imperial County, however, there is insufficient labor market data to determine if there is a supply gap in Imperial County.
- Between January 1, 2015 and December 31, 2017, the top five employers in the San Diego-Imperial Region for this occupation were Tyco, Cintas, Grossmont Union High School District, Ies and Johnson Controls Incorporated.

- The typical on-the-job training for this profession is moderate-term on-the-job training. The typical entry-level education is a high school diploma or equivalent.

## Introduction

This report provides labor market information in the San Diego-Imperial Region for the following occupational code in the Standard Occupational Classification (SOC)<sup>1</sup> system:

**Security and Fire Alarm System Installers (SOC 49-2098):** Install, program, maintain and repair security and fire alarm wiring and equipment. Ensure that work is in accordance with relevant codes. Excludes "Electricians" (47-2111) who do a broad range of electrical wiring. Sample reported job titles include:

- Security Technician
- Home Security Alarm Installer
- Service Technician
- Security Installation Technician
- Installation Technician
- Alarm Technician
- Fire Alarm Technician
- Security Installer
- Installer
- Install Technician

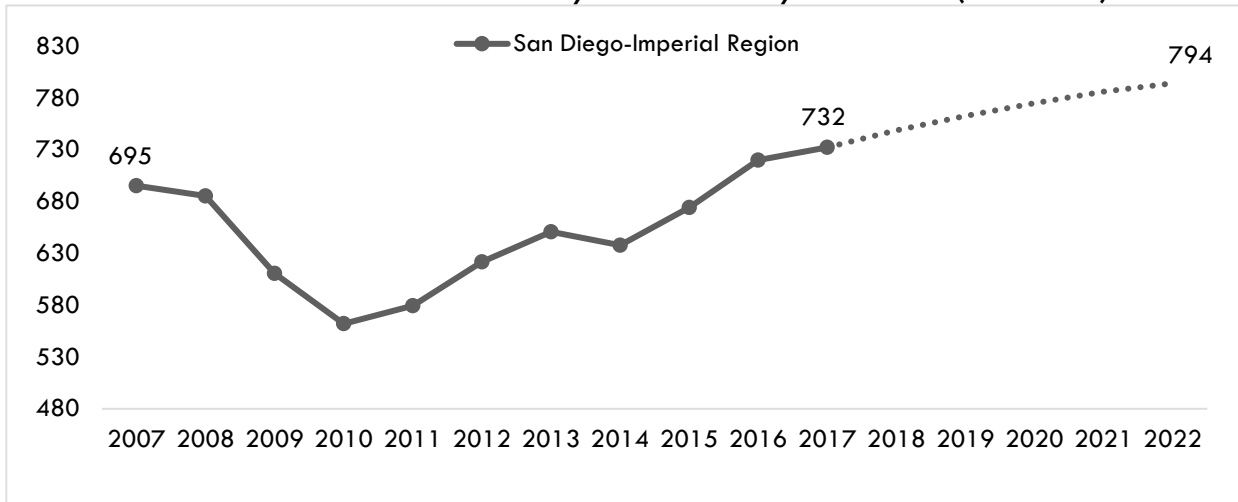
## Projected Occupational Demand

There is insufficient data for Imperial County to determine labor market demand for *Security and Fire Alarm System Installers*, however, when analyzing data in the greater San Diego-Imperial Region between 2017 and 2022, *Security and Fire Alarm System Installers* are projected to increase by 62 jobs or eight percent (Exhibit 1). Employers in San Diego-Imperial Region will need to hire 95 workers annually to fill new jobs and backfill jobs due to attrition such as retirement or turnover.

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<sup>1</sup> The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc).

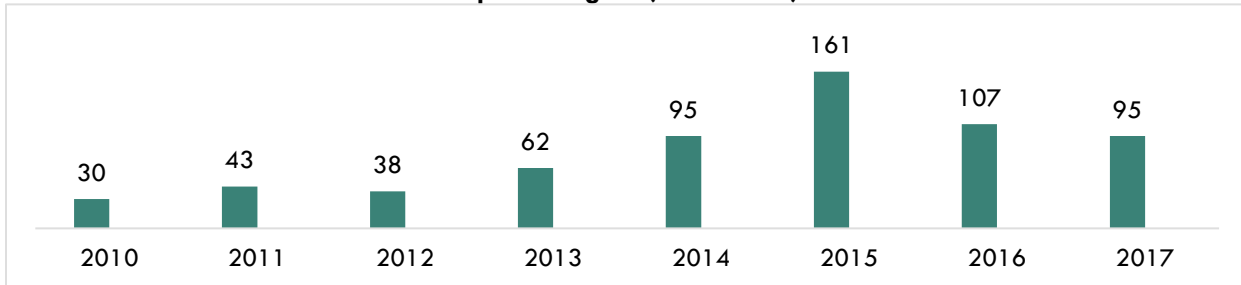
**Exhibit 1: Number of Jobs for Security and Fire Alarm System Installers (2007-2022)<sup>2</sup>**



## Online Job Postings

Between 2010 and 2017, there was an average of **79** online job postings per year for *Security and Fire Alarm System Installers* in the San Diego-Imperial Region (Exhibit 3).

**Exhibit 3: Number of Online Job Postings for Security and Fire Alarm System Installers in the San Diego-Imperial Region (2010-2017)<sup>3</sup>**



## Earnings

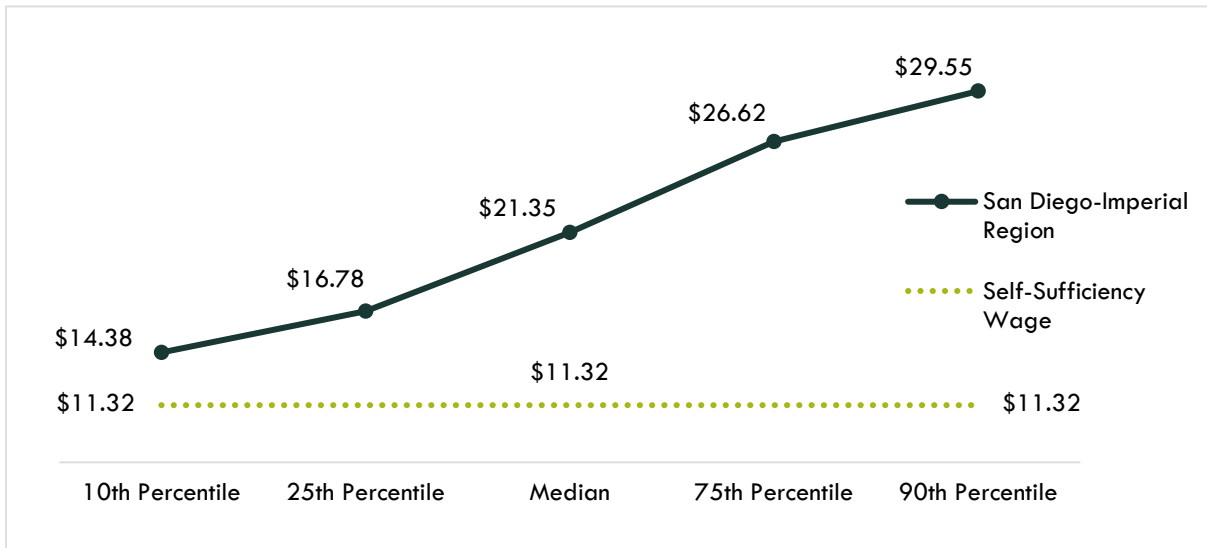
There is insufficient data for Imperial County, however, when analyzing data in the greater San Diego-Imperial Region, *Security and Fire Alarm System Installers* earn median hourly earnings of **\$21.35**, more than the Self-Sufficiency Standard for two adults and two children (school-age) in Imperial County, which is **\$11.32** per hour (Exhibit 4).<sup>4</sup>

<sup>2</sup> Economic Modeling Specialists, Int'l. (EMSI). San Diego County (6073); Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW+ Self-Employed. 2007-2022.

<sup>3</sup> Labor Insight Jobs. Burning Glass Technologies. Imperial, CA. San Diego, CA. Full years 2010-2017.

<sup>4</sup> The standard for two adults and two children was chosen due to the 3.68 persons per household (2012-2016) as determined by the U.S. Census for Imperial County.

**Exhibit 4: Hourly Earnings for Security and Fire Alarm System Installers in the San Diego-Imperial Region<sup>5</sup>**



## Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of related program completers/graduates/awards in Imperial County. According to the California Community Colleges Chancellor’s Office Management Information System (MIS) Data Mart, there is **one** Taxonomy of Programs (TOP) code associated with this occupation: TOP 095220 Electrical (Exhibit 5).

**Exhibit 5: Related TOP Code in the San Diego-Imperial Region**

### SOC 49-2098: Security and Fire Alarm System Installers

TOP 095220 Electrical

According to the TOP data, **two** colleges supply the region with awards for this occupation: **San Diego City College and Palomar College** (Exhibit 6)<sup>6</sup>.

**Please note:** An award is not equivalent to a single person in search of a job opening because a student may earn more than one award such as an associate degree in addition to a certificate.

<sup>5</sup> EMSI. San Diego County (6073); Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW + Self-Employed. 2017-2022.

<sup>6</sup> EMSI. San Diego County (6073); Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW + Self-Employed. 2017-2022.

**Exhibit 6: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions  
(Program Year 2013-14 through PY2016-17 Average)**

TOP06	TOP06 Title	3-Yr Annual Average CC Awards (PY14-15 to PY16-17)	Other Educational Institutions 3-Yr Annual Average Awards (PY13-14 to PY15-16)	3-Yr Total Average Supply (PY13-14 to PY16-17)
095220	Electrical	<b>107</b>	<b>0</b>	<b>107</b>
	<ul style="list-style-type: none"> <li>• San Diego City College</li> </ul>	51	0	<b>51</b>
	<ul style="list-style-type: none"> <li>• Palomar College</li> </ul>	56	0	<b>56</b>

### Demand vs. Supply

Comparing labor demand (annual openings) with labor supply<sup>7</sup> suggests that there is an **oversupply** for this occupation in the San Diego-Imperial Region, with **95** annual openings and **107** awards.

Comparatively, there are **1,060** annual openings in California and **457** completions.<sup>8</sup> There are zero awards in Imperial County; however, there is insufficient labor market data to determine if there is a supply gap in Imperial County (Exhibit 7).

**Exhibit 7: Labor Demand (Annual Openings) Compared to Labor Supply (Average Annual Awards)**

	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or <b>Oversupply</b>
Imperial County	Insufficient Data	0	-
San Diego-Imperial Region	95	107	<b>12</b>
California	1,060	457	<b>603</b>

**Please note:** This is a basic analysis of supply and demand of labor for these occupations. This data should be used to discuss the potential gaps or oversupply of workers for these occupations; however, it should not be the only basis for determining whether or not a program should be developed. Additionally, the data does not include workers who are currently in the labor force who could fill these positions or workers who are not captured by publicly available data.

<sup>7</sup> Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

<sup>8</sup> EMSI. San Diego County (6073); Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW + Self-Employed. 2017-2022.

## Student Outcomes

Based on the information available in the CTE LaunchBoard, students who took courses in the related TOP codes exhibited the following outcomes (Exhibit 8).

**Exhibit 8: Strong Workforce Program Metrics for  
TOP 095220 Electrical in the San Diego-Imperial Region (PY2015-16)**

Metric	San Diego-Imperial	California
Number of course enrollments <sup>9</sup>	2,066	16,189
Number of students who got a degree or certificate <sup>10</sup>	119	400
Number of students who transferred <sup>11</sup>	11	58
Employed in the second fiscal quarter after exit <sup>12</sup>	85%	79%
Employed in the fourth fiscal quarter after exit <sup>13</sup>	80%	79%
Job closely related to field of study <sup>14</sup>	N/A	N/A
Median earnings in the second fiscal quarter after exit <sup>15</sup>	\$13,831	\$12,026
Median change in earnings <sup>16</sup>	73%	59%
Attained a living wage <sup>17</sup>	84%	75%

## Top Employers and Work Locations

Between January 1, 2015 and December 31, 2017, the top five employers in the San Diego-Imperial Region for this occupation were **Tyco**, **Cintas**, **Grossmont Union High School District**, **les** and **Johnson Controls Incorporated** (Exhibit 9).

### Exhibit 9: Top Employers in the San Diego-Imperial Region for Security and Fire Alarm System Installers

<sup>9</sup> The number of enrollments in courses assigned to the TOP code in the selected year.

<sup>10</sup> The number of unduplicated students who earned a locally-issued certificate, Chancellor's Office approved certificate, associate degree, and/or California Community Colleges bachelor's degree in the selected TOP code

<sup>11</sup> Students who took non-introductory courses or completed a California Community Colleges Chancellor's Office award in the selected TOP code in selected year who subsequently enrolled for the first time in a four-year institution the following year.

<sup>12</sup> Among all exiters with a valid SSN, the percentage who were employed two quarters after exiting the Community college system.

<sup>13</sup> Among exiting students with a valid SSN, the percentage who were employed four quarters after exiting California Community Colleges.

<sup>14</sup> Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study

<sup>15</sup> Among exiting students, the median second-quarter earnings one year after the year in which they exited California Community Colleges.

<sup>16</sup> Among exiting students with a valid SSN, the percentage change in earnings one year before and one year after exiting California Community Colleges.

<sup>17</sup> Among completers and skills-builders who exited, the proportion of students who attained a living wage.

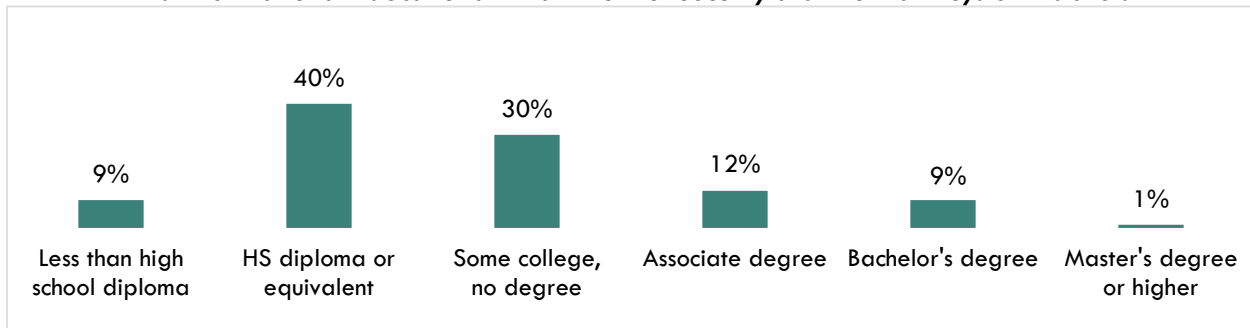
## Top Employers

- Tyco
- Cintas
- Grossmont Union High School District
- les
- Johnson Controls Incorporated
- Cgh Technologies Incorporated
- Bergelectric Corporation
- Engility Corporation
- San Diego Zoo
- Siemens

## Skills, Education and Certifications

Exhibit 10 indicates the educational attainment for the occupation found currently in the national labor force. The typical on-the-job training for this profession is **moderate-term on-the-job training**. The typical entry-level education is a **high school diploma or equivalent**.<sup>18</sup>

**Exhibit 10: National Educational Attainment of Security and Fire Alarm System Installers<sup>19</sup>**



\*May not add to 100% due to rounding.

Exhibit 11 lists the top specialized and soft skills that appeared in online job postings between January 1, 2015 and December 31, 2017.

**Exhibit 11: Top Skills for Security and Fire Alarm System Installers in the San Diego-Imperial Region<sup>20</sup>**

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> <li>• Repair</li> <li>• Hand Tools</li> <li>• Inspection</li> <li>• Customer Service</li> <li>• Wiring</li> <li>• Test Equipment</li> <li>• Photography</li> </ul>	<ul style="list-style-type: none"> <li>• Troubleshooting</li> <li>• Communication Skills</li> <li>• Physical Demand</li> <li>• Organizational Skills</li> <li>• Writing</li> <li>• Problem Solving</li> <li>• Detail-Oriented</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Excel</li> <li>• Microsoft Office</li> <li>• Microsoft Word</li> <li>• Microsoft SharePoint</li> <li>• Microsoft Vista</li> <li>• Microsoft Operating Systems</li> <li>• Visual Basic</li> </ul>

<sup>18</sup> EMSI. San Diego County (6073) Imperial County (6025). 2018.01 Class of Worker. QCEW + Non-QCEW + Self-Employed. 2017-2022.

<sup>19</sup> Bureau of Labor Statistics, Educational attainment for workers 25 years and older by detailed occupation. [bls.gov/emp/ep\\_table\\_111.htm](https://www.bls.gov/emp/ep_table_111.htm).

<sup>20</sup> Labor Insight Jobs. Burning Glass Technologies. Imperial, CA. San Diego, CA. Full years 2015-2017.

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