

## **AGREEMENT FOR REPLACEMENT OF SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM (SCADA) PANELS**

**THIS AGREEMENT** ("Agreement") is made and entered into by and between Lee County, a political subdivision of the State of Florida, hereinafter referred to as the "County" and Blackburn Controls, Inc. dba BCI Technologies, whose address is 1619 E. Vine Street Kissimmee, FL 34744, and whose federal tax identification number is 59-3018508, hereinafter referred to as "Vendor."

### **WITNESSETH**

**WHEREAS**, the County intends to purchase replacement services for Supervisory Control and Data Acquisition System (SCADA) panels from the Vendor in connection with the project, "Replacement of Supervisory Control and Data Acquisition System (SCADA) Panels" (the "Purchase"); and,

**WHEREAS**, the County issued Solicitation No. B180364BAW on October 30, 2018 (the "Solicitation"); and,

**WHEREAS**, the County evaluated the responses received and found the Vendor qualified to provide the necessary products and services; and,

**WHEREAS**, the County posted a Notice of Intended Decision Bid Action on January 24, 2019; and,

**WHEREAS**, the Vendor has reviewed the products and services to be supplied pursuant to this Agreement and is qualified, willing and able to provide all such products and services in accordance with its terms.

**NOW, THEREFORE**, the County and the Vendor, in consideration of the mutual covenants contained herein, do agree as follows:

### **I. PRODUCTS AND SERVICES**

The Vendor agrees to diligently provide all products and services for the Purchase. A more specific description of the project scope of services is set forth in the Scope of Work of solicitation No. B180364BAW, a photocopy of said section(s) being attached hereto and incorporated by reference as Exhibit A. Vendor shall comply strictly with all of the terms and conditions of Solicitation No. B180364BAW, as modified by its addenda, copies of which are on file with the County's Department of Procurement Management and are deemed incorporated into this Agreement.

### **II. TERM AND DELIVERY**

- A. This Agreement shall commence immediately upon the effective date and shall continue on an as needed basis for a two-year (2) period with an option to renew, upon the written approval of both the County and the Vendor at the time of extension or renewal, for three (3) additional one (1) year periods. The effective date shall be the date the Lee County Board of County Commissioners awarded the Solicitation to the Vendor.
- B. A purchase order must be issued by the County before commencement of any work or purchase of any goods related to this Agreement.

### **III. COMPENSATION AND PAYMENT**

- A. The County shall pay the Vendor in accordance with the terms and conditions of this Agreement for providing all products and services as set forth in Exhibit A, and further described in Exhibit B, Fee Schedule, attached hereto and incorporated herein. Said total amount to be all inclusive of costs necessary to provide all products and services as outlined in this Agreement, and as supported by the Vendor's submittal in response to the Solicitation, a copy of which is on file with the County's Department of Procurement Management and is deemed incorporated into this Agreement.
- B. Notwithstanding the preceding, Vendor shall not make any deliveries or perform any work under this Agreement until receipt of a purchase order from the County. Vendor acknowledges and agrees that no minimum order or amount of product or work is guaranteed under this Agreement and County may elect to issue no purchase orders. If a purchase order is issued, the County reserves the right to amend, reduce, or cancel the purchase order in its sole discretion.
- C. All funds for payment by the County under this Agreement are subject to the availability of an annual appropriation for this purpose by the County. In the event of non-appropriation of funds by the County for the services provided under this Agreement, the County will terminate the contract, without termination charge or other liability, on the last day of the then current fiscal year or when the appropriation made for the then-current year for the services covered by this Agreement is spent, whichever event occurs first. If at any time funds are not appropriated for the continuance of this Agreement, cancellation shall be accepted by the Vendor on thirty (30) days' prior written notice, but failure to give such notice shall be of no effect and the County shall not be obligated under this Agreement beyond the date of termination.

### **IV. METHOD OF PAYMENT**

- A. The County shall pay the Vendor in accordance with the Local Government Prompt Payment Act, Section 218.70, Florida Statutes, upon receipt of the Vendor's invoice and written approval of same by the County indicating that the products and services have been provided in conformity with this Agreement.
- B. The Vendor shall submit an invoice for payment to the County on a monthly basis for those specific products and services as described in Exhibit A (and the corresponding fees as described in Exhibit B that were provided during that invoicing period.
- C. For partial shipments or deliveries, progress payments shall be paid monthly in proportion to the percentage of products and services delivered on those specific line items as approved in writing by the County.

#### **V. ADDITIONAL PURCHASES**

- A. No changes to this Agreement or the performance contemplated hereunder shall be made unless the same are in writing and signed by both the Vendor and the County.
- B. If the County requires the Vendor to perform additional services or provide additional product(s) related to this Agreement, then the Vendor shall be entitled to additional compensation based on the Fee Schedule as amended to the extent necessary to accommodate such additional work or product(s). The additional compensation shall be agreed upon before commencement of any additional services or provision of additional product(s) and shall be incorporated into this Agreement by written amendment. The County shall not pay for any additional service, work performed or product provided before a written amendment to this Agreement.

Notwithstanding the preceding, in the event additional services are required as a result of error, omission or negligence of the Vendor, the Vendor shall not be entitled to additional compensation.

#### **VI. LIABILITY OF VENDOR**

- A. The Vendor shall save, defend, indemnify and hold harmless the County from and against any and all claims, actions, damages, fees, fines, penalties, defense costs, suits or liabilities which may arise out of any act, neglect, error, omission or default of the Vendor arising out of or in any way connected with the Vendor or subcontractor's performance or failure to perform under the terms of this Agreement.
- B. This section shall survive the termination or expiration of this Agreement.



## **VII. VENDOR'S INSURANCE**

- A. Vendor shall procure and maintain insurance as specified in Exhibit C Insurance Requirements, attached hereto and made a part of this Agreement.
- B. Vendor shall, on a primary basis and at its sole expense, maintain in full force and effect, at all times during the life of this Agreement, insurance coverage (including endorsements) and limits as described in Exhibit C. These requirements, as well as the County's review or acceptance of insurance maintained by Vendor, are not intended to and shall not in any manner limit or qualify the liabilities or obligations assumed by Vendor under this Agreement. Insurance carriers providing coverage required herein must be licensed to conduct business in the State of Florida and must possess a current A.M. Best's Financial Strength Rating of B Class VII or better. No changes are to be made to these specifications without prior written specific approval by County Risk Management. To the extent multiple insurance coverages and/or County's self-insured retention may apply, any and all insurance coverage purchased by Vendor and its subcontractors identifying the County as an additional named insured shall be primary.

## **VIII. RESPONSIBILITIES OF THE VENDOR**

- A. The Vendor shall be responsible for the quality and functionality of all products supplied and services performed by or at the behest of the Vendor under this Agreement. The Vendor shall, without additional compensation, correct any errors or deficiencies in its products, or if directed by County, supply a comparable replacement product or service.
- B. The Vendor warrants that it has not employed or retained any company or person (other than a bona fide employee working solely for the Vendor), to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual, or firm other than a bona fide employee working solely for the Vendor, any fee, commission, percentage, gift, or any other consideration, contingent upon or resulting from the award of this Agreement.
- C. The Vendor shall comply with all federal, state, and local laws, regulations and ordinances applicable to the work or payment for work thereof, and shall not discriminate on the grounds of race, color, religion, sex, or national origin in the performance of work under this Agreement.
- D. Vendor specifically acknowledges its obligations to comply with Section 119.0701, Florida Statutes, with regard to public records, and shall:
  - 1) keep and maintain public records that ordinarily and necessarily would be required by the County in order to perform the services required under this Agreement;



- 2) upon request from the County, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law;
- 3) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed, except as authorized by law; and
- 4) meet all requirements for retaining public records and transfer, at no cost to the County, all public records in possession of Vendor upon termination of this Agreement and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the County in a format that is compatible with the information technology system of the County.

**IF THE VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 239-533-2221, 2115 SECOND STREET, FORT MYERS, FL 33901, [publicrecords@leegov.com](mailto:publicrecords@leegov.com); <http://www.leegov.com/publicrecords>.**

- E. The Vendor is, and shall be, in the performance of all work, services and activities under this Agreement, an independent contractor. Vendor is not an employee, agent or servant of the County and shall not represent itself as such. All persons engaged in any work or services performed pursuant to this Agreement shall at all times, and in all places, be subject to the Vendor's sole direction, supervision and control. The Vendor shall exercise control over the means and manner in which it and its employees perform the work, and in all respects the Vendor's relationship and the relationship of its employees to the County shall be that of an independent contractor and not as employees of the County. The Vendor shall be solely responsible for providing benefits and insurance to its employees.

#### **IX. OWNERSHIP OF PRODUCTS**

It is understood and agreed that all products provided under this Agreement shall become the property of the County upon acceptance by the County.

#### **X. TIMELY DELIVERY OF PRODUCTS AND PERFORMANCE OF SERVICES**

- A. The Vendor shall ensure that all of its staff, contractors and suppliers involved in the production or delivery of the products are fully qualified and capable to perform their assigned tasks.
- B. The personnel assigned by the Vendor to perform the services pursuant to this Agreement shall comply with the terms set forth in this Agreement.
- C. The Vendor specifically agrees that all products shall be delivered within the time limits as set forth in this Agreement, subject only to delays caused by force majeure, or as otherwise defined herein. "Force majeure" shall be deemed to be any unforeseeable and unavoidable cause affecting the performance of this Agreement arising from or attributable to acts, events, omissions or accidents beyond the control of the parties.

#### **XI. COMPLIANCE WITH APPLICABLE LAW**

This Agreement shall be governed by the laws of the State of Florida. Vendor shall promptly comply with all applicable federal, state, county and municipal laws, ordinances, regulations, and rules relating to the services to be performed hereunder and in effect at the time of performance. Vendor shall conduct no activity or provide any service that is unlawful or offensive.

#### **XII. TERMINATION**

- A. The County shall have the right at any time upon thirty (30) days' written notice to the Vendor to terminate this Agreement in whole or in part for any reason whatsoever. In the event of such termination, the County shall be responsible to Vendor only for fees and compensation earned by the Vendor, in accordance with Section III, prior to the effective date of said termination. In no event shall the County be responsible for lost profits of Vendor or any other elements of breach of contract.
- B. After receipt of a notice of termination, except as otherwise directed, the Vendor shall stop work on the date of receipt of the notice of termination or other date specified in the notice; place no further orders or subcontracts for materials, services, or facilities except as necessary for completion of such portion of the work not terminated; terminate all vendors and subcontracts; and settle all outstanding liabilities and claims.
- C. The County's rights under this Agreement shall survive the termination or expiration of this Agreement and are not waived by final payment or acceptance and are in addition to the Vendor's obligations under this Agreement.

#### **XIII. DISPUTE RESOLUTION**

- A. In the event of a dispute or claim arising out of this Agreement, the parties agree first to try in good faith to settle the dispute by direct discussion. If this is unsuccessful, the parties may enter into mediation in Lee County, Florida, with the parties sharing equally in the cost of such mediation.
- B. In the event mediation, if attempted, is unsuccessful in resolving a dispute, the parties may proceed to litigation as set forth below.
- C. Any dispute, action or proceeding arising out of or related to this Agreement will be exclusively commenced in the state courts of Lee County, Florida, or where proper subject matter jurisdiction exists, in the United States District Court for the Middle District of Florida. Each party irrevocably submits and waives any objections to the exclusive personal jurisdiction and venue of such courts, including any objection based on forum non conveniens.
- D. This Agreement and the rights and obligations of the parties shall be governed by the laws of the State of Florida without regard to its conflict of laws principles.
- E. Unless otherwise agreed in writing, the Vendor shall be required to continue all obligations under this Agreement during the pendency of a claim or dispute including, but not limited to, actual periods of mediation or judicial proceedings.

#### **XIV. STOP WORK ORDER**

The County may, at any time, by written order to the Vendor, require the Vendor to stop all or any part of the work called for by this Agreement. Any order shall be identified specifically as a stop work order issued pursuant to this clause. This order shall be effective as of the date the order is delivered to the Vendor. Upon receipt of such an order, the Vendor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. The Vendor shall not resume work unless specifically so directed in writing by the County. The County may take one of the following actions:

- 1. Cancel the stop work order; or
- 2. Terminate the work covered by the order; or
- 3. Terminate the Agreement in accordance with provisions contained in Section XI.

In the event the County does not direct the Vendor to resume work, the stop work order may be converted into a notice of termination for convenience pursuant to Section XII. The notice period for such termination shall be deemed to commence on the date of issuance of the stop work order. In the



event the County does not direct the Vendor to resume work within ninety (90) days, the Vendor may terminate this Agreement.

#### **XV. VENDOR WARRANTY**

- A. All products provided under this Agreement shall be new (unless specifically identified otherwise in Exhibit B and of the most suitable grade for the purpose intended.
- B. If any product delivered does not meet performance representations or other quality assurance representations as published by manufacturers, producers or distributors of the products or the specifications listed in this Agreement, the Vendor shall pick up the product from the County at no expense to the County. The County reserves the right to reject any or all materials if, in its judgment, the item reflects unsatisfactory workmanship or manufacturing or shipping damage. In such case, the Vendor shall refund to the County any money which has been paid for same.
- C. Vendor shall secure from the applicable third party manufacturers, and assign and pass through to the County, at no additional cost to the County, such warranties as may be available with respect to the equipment, parts and systems provided through the Purchase.
- D. For 1 year from the date of County's receipt of products provided hereunder, Vendor warrants that the products under normal use and service will be free from material defects in materials and workmanship. In the event Vendor's standard product warranty is for a period of time longer than 1 year, this warranty shall be extended to that longer duration.

#### **XVI. MISCELLANEOUS**

- A. This Agreement constitutes the sole and complete understanding between the parties and supersedes all other contracts between them, whether oral or written, with respect to the subject matter. No amendment, change or addendum to this Agreement is enforceable unless agreed to in writing by both parties and incorporated into this Agreement.
- B. The provisions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assignees of the parties hereto. A party to this Agreement shall not sell, transfer, assign, license, franchise, restructure, alter, or change its corporate structure or otherwise part with possession or mortgage, charge or encumber any right or obligation under this Agreement without the proposed assignee and/or party restructuring, altering or changing its corporate structure agreeing in writing with the non-assigning party to observe and perform the terms, conditions and restrictions on the part of the assigning party to this Agreement, whether express or implied, as if the proposed assignee and/or party restructuring, altering or changing its corporate structure was an original contracting

party to this Agreement. Notwithstanding the foregoing provision, the Vendor may assign its rights if given written authorization by the County and claims for the money due or to become due to the Vendor from the County under this Agreement may be assigned to a financial institution or to a trustee in bankruptcy without such approval from the County. Notice of any such transfer or assignment due to bankruptcy shall be promptly given to the County.

- C. The exercise by either party of any rights or remedies provided herein shall not constitute a waiver of any other rights or remedies available under this Agreement or any applicable law.
- D. The failure of the County to enforce one or more of the provisions of the Agreement shall not be construed to be and shall not be a waiver of any such provision or provisions or of its right thereafter to enforce each and every such provision.
- E. The parties covenant and agree that each is duly authorized to enter into and perform this Agreement and those executing this Agreement have all requisite power and authority to bind the parties.
- F. Neither the County's review, approval or acceptance of, nor payment for, the products and services required under this Agreement shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.
- G. If the Vendor is comprised of more than one legal entity, each entity shall be jointly and severally liable hereunder.
- H. Any notices of default or termination shall be sufficient if sent by the parties via United States certified mail, postage paid, or via a nationally recognized delivery service, to the addresses listed below:

Vendor's Representative:

Name: Dan Blocker  
 Title: Division Manager  
 Address: 1619 E. Vine Street  
Kissimmee, FL  
34744  
 Telephone: 239-433-9600  
 Facsimile: 239-433-2700  
 E-mail: Danb@bcitech.com

County's Representatives:

Names:	<u>Roger Desjarlais</u>	<u>Mary Tucker</u>
Titles:	<u>County Manager</u>	<u>Director of Procurement Management</u>
Address:	<u>P.O. Box 398</u>	
	<u>Fort Myers, FL 33902</u>	
Telephone:	<u>239-533-2221</u>	<u>239-533-8881</u>
Facsimile:	<u>239-485-2262</u>	<u>239-485-8383</u>
E-Mail:	<u><a href="mailto:rdesjarlais@leegov.com">rdesjarlais@leegov.com</a></u>	<u><a href="mailto:mtucker@leegov.com">mtucker@leegov.com</a></u>

- I. Any change in the County's or the Vendor's Representative will be promptly communicated by the party making the change.
- J. Paragraph headings are for the convenience of the parties and for reference purposes only and shall be given no legal effect.
- K. In the event of conflicts or inconsistencies, the documents shall be given precedence in the following order:
  - 1. Agreement
  - 2. County's Purchase Order
  - 3. Solicitation
  - 4. Vendor's Submittal in Response to the Solicitation

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**IN WITNESS WHEREOF**, the parties have executed this Agreement as of the date last below written.

WITNESS:

**BLACKBURN CONTROLS, INC.**  
**dba BCI TECHNOLOGIES**

Signed By: James Sheffick

Signed By: John G. Blackburn

Print Name: JAMES SHEFFICK

Print Name: JOHN G. BLACKBURN

Title: President

Date: 3-18-2019

**LEE COUNTY**

BOARD OF COUNTY COMMISSIONERS  
OF LEE COUNTY, FLORIDA

BY: Brian Hammon  
Vice CHAIR

DATE: 5/13/19

ATTEST:  
CLERK OF THE CIRCUIT COURT  
Linda Doggett, Clerk

BY: Melissa Butler  
DEPUTY CLERK



APPROVED AS TO FORM FOR THE  
RELIANCE OF LEE COUNTY ONLY:

BY: Chenack Sid  
OFFICE OF THE COUNTY ATTORNEY

## EXHIBIT A SCOPE OF WORK

Ver 01/03/2013.8

### SCOPE OF WORK FOR B180364BAW, REPLACEMENT OF SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM (SCADA) PANELS

#### 1. SCOPE

- 1.1 The Lee County Board of County Commissioners (BOCC) desires to obtain a qualified, professional, and licensed Vendor to provide installation services for replacement of Motorola Remote Supervisory Control and Data Acquisition System (SCADA) panels with new remote Schneider SCADA pack panels USPS 13060.
- 1.2 Lee County Utilities (LCU) will supply the remote Schneider SCADA pack panels USPS 13060 and associated cell modems.
- 1.3 This Contract is expected to be a multi-year project awarded to one Vendor.

#### 2. AWARD

- 2.1 The basis of award for this Solicitation shall be determined by the lowest *Project Total (Section I)* of the most responsive, responsible, and qualified Bidder meeting all bid specifications.
- 2.2 Bidder must bid all line items of the provided Bid/Proposal Form. This includes lines items pertaining to *Section I, Option I, and Option II*. Failure to provide pricing for all items will deem the Bidder as Non-Responsive and, therefore, ineligible for award.
- 2.3 The County reserves the right to award to the Vendor(s) whose prices, in its sole judgement, are the most realistic in terms of provision of the best services and in the best interest of the County.
- 2.4 The County reserves the right to reject any and all bids at any time unconditionally, and without cause.
- 2.5 Pricing provided for *Option I* and *Option II*, although not utilized for evaluation purposes, will be contracted with the lowest Bidder and shall remain in effect for the duration of the contract, inclusive of any renewals.

#### 3. EQUIPMENT AND TOOLS

- 3.1 Any and all equipment (rental or Vendor owned), tools, vehicles, etc. shall be supplied by the Vendor. Additionally, all such aforementioned items may be subject to approval or disapproval for use at the sole discretion of Lee County.
- 3.2 Project sponsoring Department may request a list of equipment and tools to be utilized prior to commencement of work where approval is expected to be necessary. Disapproval of any equipment or tools will be provided to the Vendor in writing from the project sponsoring Department.

**4. SUB-CONTRACTOR USAGE**

- 4.1 All work provided under this Contract shall be performed in whole by the Prime Contractor. No Sub-Contractors may be utilized under this Contract. Should at any time the Prime Contractor anticipate future use of a sub-contractor due to unforeseen circumstances, such request shall be provided in writing to the County project sponsoring Department and further approved in writing.

**5. PERMITS AND ENGINEERING**

- 5.1 It shall be the responsibility of the selected Vendor to obtain and pay for any permits, impact fees, license, governmental charges, and/or inspection fees applicable and necessary in order to complete the work contracted through this solicitation.
- 5.2 Permits and licenses of regulatory agencies, which are necessary to be maintained after completion of the guarantee period, shall be secured and paid for by the County.
- 5.3 The Vendor is responsible for engineering in order to begin or complete replacement structures when and as necessary. Such cost shall be included in pricing provided within proposal.

**6. MATERIALS**

- 6.1 Every effort has been giving to adequately describe the scope necessary to replace the current Motorola SCADA panel to their original/intended condition. Lee County Utilities (LCU) will supply the remote Schneider SCADA pack panels USPS 13060 and associated cell modems for each installation. It is the Vendor's responsibility to furnish and install any ancillary components required to complete a successful panel installation.

**7. NEGLECTED WORK BY VENDOR**

- 7.1 If the Vendor should neglect to prosecute the work in accordance with the Contract Documents, including any requirements of the progress schedule, the County may, after three (3) calendar days written notice to the Vendor and without prejudice to any other remedy it may have, make good such deficiency and the cost thereof shall be charged against the Vendor.
- 7.2 A change order shall be issued incorporating the appropriate revision to the Contract Documents including an appropriate to the Contract Price. If the payments then or thereafter due the Vendor are not sufficient to cover such amount, the Vendor shall pay the difference to the County.

**8. PROJECT DETAILS**

- 8.1 The Vendor shall follow the project details as specified in this solicitation.
- 8.1.1. The Vendor shall remove the existing Motorola unit, including any existing wiring and conduit. The unit shall be returned to Lee County Utilities for spare parts.
- 8.1.2. The Vendor shall install the new SCADA Pack panels, including any wiring, conduit and support structure necessary to complete proper installation.
- 8.1.3. The Vendor shall modify the control panels to accommodate the control features of the SCADA Pack remote terminal unit (RTU).
- 8.1.4. The Vendor shall provide "As-Built" drawings in latest AutoCAD of all sites following installation.
- 8.1.5. Lee County Utilities will make the modifications to the Central Interface.



- 8.1.6. Lee County Utilities will provide the preprogrammed cell modem.
- 8.1.7. Lee County will install the program and setting to commission the SCADA Pack.
- 8.1.8. The County anticipates installation of approximately 30-50 panels per year. Grouping of panels will be at the discretion of the County project sponsoring department. No work is guaranteed.
- 8.1.9. The Contractor shall provide written notice of any NEMA enclosures requiring replacement, at the earliest availability, to the County Project Manager. NEMA enclosure replacements shall require written approval and authorization by the County Project Manager. NEMA enclosure replacements shall be the responsibility of the County. The Contractor shall work closely with the authorized Project Manager to facilitate and coordinate any approve NEMA enclosures.

## 9. SPECIFICATIONS

- 9.1 Lee County will provide a set of reference drawings for the installation wiring. These will serve as a reference for the Vendor; they are not a true representation of each site and it shall remain the Vendor's responsibility to complete wiring to all applicable codes and regulations.
- 9.2 Lee County will provide drawings of previous years lift station control design at Vendor's request.
  - 9.2.1. There are many other older designs out in the field, the Vendor will be responsible for making any needed modifications.
- 9.3 The County will prioritize the order of installation based on the greatest need. This list my change at any time during the project due to other upgrades in the system.
- 9.4 The Vendor shall provide a set of "As-Built" drawings for each site following installation and the terms of this agreement.
- 9.5 The Vendor is required to make any structural modifications to each site to accommodate the new panel. The structural modifications will follow the specification guidelines.
- 9.6 The Vendor shall be responsible for maintaining the functionality of the lift station during and after construction.
- 9.7 The Vendor shall meet all National Electrical Code (NEC), and local codes, Lee County Utilities personnel will be inspecting each site.
- 9.8 The Vendor shall provide a consistent team of installers; this will ensure cohesiveness in the installation across all facility locations.
- 9.9 The Vendor shall remove existing wiring and such shall be replaced with new wiring.
  - 9.9.1. Wiring shall meet the following specifications:
    - 9.9.1.1. 26 05 19
    - 9.9.1.2. 40 95 13A
    - 9.9.1.3. 40 95 13B

- 9.10 Wiring within the existing lift station control panel shall be installed in properly sized wire way.
- 9.11 Wiring shall be numbered and color-coded as per drawings and specifications.
- 9.12 Conduit shall be Polyvinyl Chloride (PVC) conduit where possible; PVC flex conduit will be permitted with an approval letter from Lee County Utilities.
- 9.13 Existing components removed from the site shall be properly disposed of.
- 9.14 New components shall be installed on backplane that fits in the existing lift station control panel.
- 9.15 The Vendor shall be responsible for adding any components necessary to the lift station control panel for a complete operating installation.
- 9.16 The Vendor shall supply Square D or Allen Bradley necessary to complete full and successful installation of SCADA panels. Vendor shall follow approved alternate process as described herein for non-Square D or Allen Bradley components.
  - 9.16.1 If another manufacturer is proposed, the Vendor shall be responsible for paying additional engineering and redesign fees.
- 9.17 The backup floats system shall be independent of the SCADA Pack remote panel and control the pumps.
  - 9.17.1 The off delay shall be RE17RCMU by Schneider electric.
- 9.18 The Vendor shall provide a phase monitor where necessary to send a failure input to the SCADA Pack RTU.
  - 9.18.1 The phase monitor shall be built by ATC (Automatic Timing Corporation) diversified rated at the available lift station voltage.
- 9.19 Vendor shall ensure system remains fully functional at all times. Should a system shut-down be necessary at any moment the Vendor shall coordinate such shut-down in advance with the associated County Project Manager and receive written authorization for shut-down.
- 9.20 The Contractor shall respond to all emergency requested work within 4 hours from request of service via fax, mobile, email or similar by County project sponsoring department. The County project sponsoring department shall declare work as Emergency in nature at its sole discretion in accordance with County Administration Emergency policies. Should the Contractor not be able to provide such services in the allotted time or fail to provide timely services the County may perform required services utilizing their in-house personnel or may procure comparable services from other Contractors outside of this contract. The Contractor shall reimburse the County for all costs above the contracted price when services are purchased in the open market.
- 9.21 The County reserves the right to self-perform any of the services contained within this contract as deemed necessary at the sole discretion of the County.



### SPECIAL CONDITIONS

These are conditions that are in relation to this solicitation only and have not been included in the County's standard Terms and Conditions or the Scope of Work.

#### 1. TERM

1.1 The successful bidder shall be responsible for furnishing and delivering to the Lee County requesting Department(s) the commodity or services on an "as needed basis" for a two-year (2) period. There may be an option to extend this contract as specified in the Scope of Work or specifications upon the approval of both the County and the successful bidder at the time of extension or renewal for three (3), additional one (1) year periods.

#### 2. LIQUIDATED DAMAGES

2.1 The Vendor shall be liable to the County for per diem liquidated damages where applicable and as described in the associated Agreement. Liquidated Damages shall be established in the Notice to Proceed or Purchase Order (PO), whichever applies, in accordance with the terms set forth in the Agreement, for each consecutive calendar day of delay in achieving Substantial Completion.

2.2 Liquidated Damages shall be negotiated between the County and the awarded Contractor resulting in the mutually agreed upon liquidated damages table being added to the contract, CPA, PO or equivalent. The following Liquidated damages table shall serve as a guideline for negotiations. Liquidated damages will be based on the entire project amount per calendar day for example as shown in the table below:

Estimated Project Cost Over	Estimated Project Cost But Less than	Daily Charge Per Calendar Day
\$0.00	\$50,000.00	\$645.00
\$50,000.00	\$250,000.00	\$760.00
\$250,000.00	\$500,000.00	\$970.00
\$500,000.00	\$2,500,000.00	\$1,500.00
\$2,500,000.00	\$5,000,000.00	\$2,400.00
\$5,000,000.00	\$10,000,000.00	\$3,300.00
\$10,000,000.00	\$15,000,000.00	\$4,600.00
\$15,000,000.00	\$20,000,000.00	\$4,300.00
\$20,000,000.00 over		\$5,700.00 plus .00005

#### 3. MASTER CONTRACT NOTICE

3.1 This is a "Master" contract, which is not for any specific project. Work to be performed under this contract will be authorized, scheduled, funded, and accounted for by the issuance of County Purchase Order (PO), by the requesting department.

3.2 The General Conditions contained herein are applicable to each Purchase Order issued and shall be the responsibility of the Contractor to meet and follow all conditions.

3.3 The requesting County department reserves the right to provide additional project clarification details with the issuance of and within or attached to each Purchase Order. Such items shall be minor in nature such as providing for substantial and final completion dates, delivery location, working hours, number of units, liquidated damages amounts, etc.



**4. BONDING REQUIREMENTS**

The bonding requirements as stated within the above Terms and Conditions are revised as follows:

- 33 **BOND/SURETY (CONSTRUCTION)**
- 33.1 Bonding/Surety is required for construction projects over \$100,000.00 ~~unless otherwise noted. Thresholds following the Lee County, Florida Procurement Ordinance 18-22.~~
- 33.2 ~~Bid Bond/Security: The bidder/vendor shall submit not less than 5% of proposed dollar amount (including applicable alternates) as bid security. One ORIGINAL Bid Bond/Security is to be submitted to the County with Bid Submission. The Bid Security of the bidder/vendor will be retained until the bidder/vendor has executed the contract, whereupon the Bid security may be returned. The bid Security of the bidder/vendor whom the County believes to have a reasonable chance of receiving the award may be retained by the County until the effective date of the Agreement/Contract, whereupon Bid Securities furnished by the bidder/vendor may be returned. The following types of Bid Security are acceptable:~~
- 33.2.1 ~~A Certified Check or a Cashier's Check in the stated dollar amount of not less than 5% of proposed dollar amount. Any Certified Check or Cashier Check submitted in lieu of a Bid Bond Shall be drawn on a solvent bank or trust company, made payable to Lee County Board of County Commissioners and shall have all necessary documentary revenue stamps attached (if required by law); or~~
- 33.2.2 ~~A Bid Bond may be submitted on a Lee County paper Bid Bond Form. Must be signed by all required parties, of not less than 5% of proposed dollar amount (including Alternate(s) as applicable) shall accompany each submission. The Bid Bond shall be issued by a duly authorized surety authorized to do business and in good standing with the Florida Department of state.~~
- 33.3 **Payment and Performance Bond:** In accordance with F.S. 255.05 and Lee County Ordinance 95-2-102, and Lee County, Florida Procurement Ordinance 18-22, a Public Payment and Performance Bond is to be issued in a sum equal to one-hundred (100%) percent of the total awarded contract amount by a surety company considered satisfactory by Lee County and otherwise authorized to transact business in the State of Florida shall be required from the successful bidder/vendor. This shall insure the faithful performance of the obligations imposed by the resulting contract and protect the County from lawsuits for non-payment of debts incurred during the successful bidder/vendor performance under such Contract.
- 33.3.1 A public Payment and Performance bond must be properly executed, by the Surety Company and successful bidder/vendor, and recorded with the Lee County Clerk of Court, within seven calendar days after notification by Lee County of the approval to award the Contract.
- 33.3.2 A Clean Irrevocable Letter of Credit or Cash Bond may be accepted by the County in lieu of the Public Payment and Performance Bond.
- 33.4 Only Lee County form(s) may be accepted. Forms are available at <https://www.leegov.com/procurement/forms>.
- 33.5 **Personal Checks are not acceptable to Lee County as a Bid Security.**
- 33.6 **Surety:** In order to be acceptable to the County, a Surety Company issuing Evidence of Bondability, Bid Guaranty Bonds or 100% Public Payment and Performance Bonds or Letters of Credit called for herein shall meet and comply with the minimum standards set forth in as part of the Contract Documents.
- The surety company shall be authorized to do business and in good standing with the Florida Department of State. All such bonds shall be issued or countersigned by a local producing agent who is a Florida resident with satisfactory evidence of its authority to execute the bond being submitted.

End of Special Conditions Section



Procurement Management Department  
1500 Monroe Street 4<sup>th</sup> Floor  
Fort Myers, FL 33901  
Main Line: (239) 533-8881  
Fax Line: (239) 485-8383  
[www.leegov.com/procurement](http://www.leegov.com/procurement)

**Posted Date:** November 28, 2018

**Solicitation No.:** B180364BAW

**Solicitation Name:** Replacement of Supervisory Control and Data Acquisition System Panels

**Subject:** Addendum Number 1

The following represents clarification, additions, deletions, and/or modifications to the above referenced bid. This addendum shall hereafter be regarded as part of the solicitation. Items not referenced herein remain unchanged, including the response date. Words, phrases or sentences with a strikethrough represent deletions to the original solicitation. Underlined words and bolded, phrases or sentences represent additions to the original solicitation.

**1. OPEN DATE/BIDS DUE EXTENSION:**

**FROM:** November 30, 2018 at 2:30PM

**TO:** December 14, 2018 at 2:30PM

The opening date has been extended to accommodate issuance of upcoming addendum(s). Bidders must ensure they continue to monitor the Lee County Procurement website for all follow-up information regarding this solicitation.

**ATTACHMENT:** NONE

**BIDDER/PROPOSER IS ADVISED, YOU ARE REQUIRED TO ACKNOWLEDGE RECEIPT OF THIS ADDENDUM WHEN SUBMITTING A BID/PROPOSAL. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN THE BIDDER/PROPOSER BEING CONSIDERED NON-RESPONSIVE.**

**ALL OTHER TERMS AND CONDITIONS OF THE SOLICITATION DOCUMENTS ARE AND SHALL REMAIN THE SAME.**

  
Procurement Analyst  
Lee County Procurement Management





Procurement Management Department  
1500 Monroe Street 4<sup>th</sup> Floor  
Fort Myers, FL 33901  
Main Line: (239) 533-8881  
Fax Line: (239) 485-8383  
[www.leegov.com/procurement](http://www.leegov.com/procurement)

Posted Date: November 29, 2018

Solicitation No.: B180364BAW

Solicitation Name: Replacement of SCADA Panels

Subject: Addendum Number 2

The following represents clarification, additions, deletions, and/or modifications to the above referenced bid. This addendum shall hereafter be regarded as part of the solicitation. Items not referenced herein remain unchanged, including the response date. Words, phrases or sentences with a strikethrough represent deletions to the original solicitation. Underlined words and bolded, phrases or sentences represent additions to the original solicitation.

**1. BID SCHEDULE:**

The Bid Schedule has been updated and a new Bid Schedule has been provided through this addendum

**Bidders MUST use the new Bid Schedule Excel form when submitting their bid. Failure to do so will result in Bidder being deemed non-responsive and therefore ineligible for award.**

**2. Attachments:**

- a. Revised Bid/Proposal form
- b. Approved alternate specification sheets
- c. USPS 13060 panel drawings

1.	Will the vendor utilize the existing control panels?
Answer	The existing lift station control panels will remain and be utilized by the Vendor. Only the SCADA panels and integration of the new SCADA panels to the lift station controls panels will receive modification or replacement through the services rendered under this contract.
2.	The bid proposal form shows that the County wants to utilize only Allen Bradley and Schneider components as the proposed supplier?
Answer	The revised Bid Schedule/Proposal Form references all acceptable component packages/relays.
3.	Can we propose another supplier to supply relays?
Answer	Please refer to page 6, Section 10. SUBSTITUTION(S)/APPROVED ALTERNATE(S) of the solicitation.



4.	Are the relay components intended for the SCADA pack panels?
Answer	The SCADA panels have relays that tie into the lift station control panels. Alternate suppliers of component packages / relays must be submitted following the terms of the solicitation package. Please see page 6 Section 10 SUBSTITUTION(S)/APPROVED ALTERNATE(S).
5.	Does the County currently have a backup controller in the SCADA panel?
Answer	The backup controller will be provided by the Vendor and installed in the lift station control panel. The SCADA Pack panel does not have the backup relay. The Square D Relay will be supplied by the Vendor as well.
6.	Is the County expecting an electrical contractor to do the work?
Answer	See page 74 for the minimum qualifications of submitting vendors. The work to be provided under this contract is low voltage and expected to be handled by the control contractor.
7.	What's going to happen with the existing panels once the Vendor installs replacement panels?
Answer	The Motorola Panels removed by the Vendor shall be returned to the County as they will be utilized for spare parts. Removed panels do not become Vendor property.
8.	Will there be any permitting required?
Answer	Per the bid document on page 56 section 5 "It shall be the responsibility of the selected Vendor to obtain and pay for any permits, impact fees, license, governmental charges, and/or inspection fees applicable and necessary in order to complete the work contracted through this solicitation. Please review section 56 in its entirety." The County does not expect any County permit be required as part of the services provided under this contract.
9.	Will a bucket truck be required?
Answer	No, the panels are all ground level.
10.	On the bid proposal form, it states Option I as Square D and Option II as Allen Bradley, you want the price submitted for both?
Answer	Per the bid document on page 55 section 2.2, Bidder must bid all line items of the provided Bid/Proposal Form. This includes lines items pertaining to Section I, Option I and Option II. Failure to provide pricing for all items will deem the Bidder as Non-Responsive and therefore ineligible for award.
11.	Will the County supply the SCADA pack panels?
Answer	Yes. Please see page 56 article 6 – Materials for further details.

12.	Once the Vendor is tasked to the project, what would be the projected deadline to complete one station?
Answer	Details such as substantial and final completion dates for work will be coordinated closely with the County and provided on each Purchase Order issued.
13	Will the transducers be supplied?
Answer	The County will not supply transducers.
14.	Are the control panels on a bubbler system?
Answer	There will be a float for backup and then the transducer will monitor the levels. There may be some in current system that may need to be modified. The SCADA pack control panel will take place of any existing system.
15.	What is the main controller in the SCADA Panel right now?
Answer	In the lift stations, the main controllers currently are relay logic, floats and transducers.
16.	There are no MPES? I assume the relays are going to go directly to the SCADA pack and the PLC will decide what to do, if the PLC fails then float will serve at the backup?
Answer	This backup relay will be added by the Vendor in the lift station panel utilizing the Square D relay listed.
17.	Is a bid bond required?
Answer	This bid does not require a Bid Bond, however the Bidder must submit with their bid a Letter of Bondability from their Surety Company (not the surety agent) showing their bonding capacity which shall not be less than \$1,000,000.00. Any issuer of a Letter of Bondability must be licensed to transact a fidelity and surety business in the State of Florida, with an A.M. Best rating of B+ (Very Good) or better.
18.	What happens if a Vendor does not require a performance bond?
Answer	The County shall require payment and performance for project(s) in accordance with Florida Statute 255.05 and Lee County Ordinance 95-2-102, and Lee county, Florida Procurement Ordinance 18-22. See special conditions Article 5 on page 17 for further details.



19.	When submitting alternate components for approval, will the submitted list be shared with other bidding vendors?
Answer	Alternates submitted and approved following page 6 – Section 10 SUBSTITUTION(S)/APPROVED ALTERNATE(S) will be added to the Bid Schedule therefore notifying Vendors of their approved status.

20.	Can these suppliers serve as Approved alternates?		
	Manufacturer	Description	Part Number
	Omron	Relay, 120vac, 2P	G2R-2SN-AC120(s)
	Omron	Relay, 24vdc, 2P	G2R-2-SND-DC24(s)
	Magnecraft	Relay Timer, M-Function, 120vac, 2P	822TD10H-UNI
	Phoenix Contact	Terminal Block, 2-Tier, Gray	3044814
Answer	Approved Alternates have been added to the revised Bid Schedule. Please see Bid Schedule notice provided as part of this addendums Specifications associated with the approved alternates are attached hereto.		

21.	Form 3 Reference Survey, can this form be substituted from a recent previous Vendor Reference Survey and modify the Solicitation Number and Project description?
Answer	The awarded Vendor is allowed to submit a previously used reference survey. The reference surveys may be submitted under two conditions, 1.) The reference survey is less than a year old & 2.) The reference survey is a Lee County Form. Modifications need not be applied, it would be fine to submit as is.

22.	Will USPS 13060 panel drawings be provided for bid proposal purposes?
Answer	Please see attachment

23.	Will Lee County Utilities supply the specific HOA's when applicable?
Answer	The HOA switches will be provided by the Vendor

23.	Will Lee County Utilities Collections dispose of any floats being removed?
Answer	These can be put in a box or bag and Lee County Utilities will dispose of them.



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ALL OTHER TERMS AND CONDITIONS OF THE SOLICITATION DOCUMENTS ARE AND SHALL REMAIN THE SAME.



Procurement Analyst  
Lee County Procurement Management

Form 1a - Bid/Proposal Form (not applicable for CCNA solicitations)


 Lee County Procurement Management  
**BID/PROPOSAL FORM**
**ADDENDUM 2**

Company Name: \_\_\_\_\_

Solicitation# B180364BAW Solicitation Name REPLACEMENT OF SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM (SCADA) PANELS

Having carefully examined the "Terms and Conditions", and the "Detailed Scope of Work", all of which are contained herein, propose to furnish the following which meet these specifications.

Bidder must bid **all line items** of the provided Bid/Proposal Form. This includes lines items pertaining to Section I, and additionally includes the installation of component package referred to herein as Option. Failure to provide pricing for all items will deem the Bidder as Non-Responsive and, therefore, ineligible for award.

Please include this page with your submission package.					
Item #	Section I	Unit of Measure	Quantity	Unit Cost	Total Cost
USPS 13060	Cost of removal of the existing Motorola unit, including any existing wiring and conduit; to include the installation of the new SCADA Pack panel, any wiring, conduit and support structure necessary to complete proper installation. To also include the modification of the control plans to accommodate the control features of the SCADA Pack remote terminal unit, and provide drawing of site. Additionally includes the installation of component package referred to herein as Option.	EA	1	\$	\$
<b>SUBTOTAL SECTION I:</b>					\$
<b>TOTAL AMOUNT</b>					\$

Item	Option I	Unit of Measure	Quantity	Unit Cost	Total Cost
Square D	Supply of full Square D components package for one unit installation. Material Only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
<b>OPTION I AMOUNT:</b>					\$

Item	Option II	Unit of Measure	Quantity	Unit Cost	Total Cost
Allen Bradley	Supply of full Allen Bradley components package for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
<b>OPTION II AMOUNT:</b>					\$

**ADDENDUM 2**

*Form 1a – Bid/Proposal Form (not applicable for CCNA solicitations)*

Item	Option III	Unit of Measure	Quantity	Unit Cost	Total Cost
OMRON PN: G2R-2SN-AC120(S)	Supply of full Omron relay, 120vac, 2P components package for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
OPTION III AMOUNT:					\$

Item	Option IV	Unit of Measure	Quantity	Unit Cost	Total Cost
OMRON PN: G2R-2SND-DC24(S)	Supply of full Omron relay, 24vdc, 2P components package for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
OPTION IV AMOUNT:					\$

Item	Option V	Unit of Measure	Quantity	Unit Cost	Total Cost
Magnecraft PN: 822TD10H-UNI	Supply of full Magnecraft relay timer, M-Function, 120vac, 2P components package for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
OPTION V AMOUNT:					\$

Item	Option VI	Unit of Measure	Quantity	Unit Cost	Total Cost
Phoenix Contact PN: 3044814	Supply of full Phoenix Terminal Block, 2-Tier, Gray components package for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
OPTION VI AMOUNT:					\$

**ADDENDUM 2**



<u>Manufacturer</u>	<u>Description</u>	<u>Part Number</u>
Omron	Relay, 120vac, 2P	G2R-2SN-AC120(s)
Omron	Relay, 24vdc, 2P	G2R-2-SND-DC24(s)
Magnecraft	Relay Timer, M-Function, 120vac, 2P	822TD10H-UNI
Phoenix Contact	Terminal Block, 2-Tier, Gray	3044814

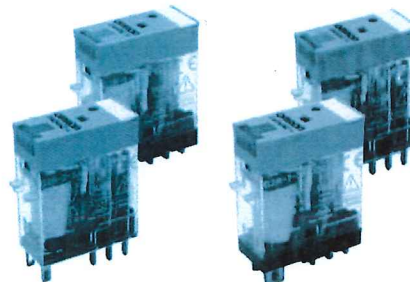
# General-purpose Relay G2R-□-S (S)

CSM\_G2R-□-S\_(S)\_DS\_E\_1\_4

## Slim and Space-saving Power Plug-in Relay

- Reduces wiring work by 60% when combined with the P2RF-□-PU Push-In Plus Socket (according to actual OMRON measurements).
- Lockable test button models available.
- Built-in mechanical operation indicator.
- Provided with nameplate.
- AC type is equipped with a coil-disconnection self-diagnostic function (LED type).
- High switching power (1-pole: 10 A).

UL ENEC CE LR



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

## Model Number Structure

### Model Number Legend

G2R - □ - S □ □ (S)  
1 2 3 4 5

#### 1. Number of Poles

- 1: 1 pole
- 2: 2 poles

#### 2. Terminals

- S: Plug-In

#### 3. Classification

- Blank: General-purpose
- N: LED indicator
- D: Diode
- ND: LED indicator and diode
- NI: LED indicator with test button
- NDI: LED indicator and diode with test button

#### 4. Rated Coil Voltage

#### 5. Mechanical operation Indicator and Nameplate

- (S): Models with mechanical operation Indicator and Nameplate

Note: Contact your OMRON representative for Relays with gold-plated contacts.

## Ordering Information

When your order, specify the rated voltage.

### List of Models

Classification	Coil ratings	Contact form	
		SPDT	DPDT
General-purpose	AC 24, 110, 120, 230, 240 DC 6, 12, 24, 48	G2R-1-S (S)	G2R-2-S (S)
LED indicator		G2R-1-SN (S)	G2R-2-SN (S)
LED indicator with test button		G2R-1-SNI (S)	G2R-2-SNI (S)
Diode	DC 6, 12, 24, 48	G2R-1-SD (S)	G2R-2-SD (S)
LED indicator and diode		G2R-1-SND (S)	G2R-2-SND (S)
LED indicator and diode with test button		G2R-1-SNDI (S)	G2R-2-SNDI (S)

Note: 1. The standard models are compliant with UL/CSA and VDE standards. Also, an EC compliance declaration has been made for combinations with the P2RF-□-E, P2RF-□-S and P2RF-□-PU. The Relays bear the CE Marking.

2. Refer to *Connecting Sockets*, below, for applicable Socket models.

3. When ordering, add the rated coil voltage and "(S)" to the model number. Rated coil voltages are given in the coil ratings table.

Example: G2R-1-S 12 VDC (S)

— Rated coil voltage

OMRON

1

## G2R-□-S (S)

### Accessories (Order Separately)

#### Connecting Sockets

Applicable Relay model		Track/surface-mounting Socket		Back-mounting Socket	
		Push-In Plus Terminal Blocks	Screw terminals *	PCB terminals	Solder terminals
No. of poles		Model	Models	Models	Model
1 pole	G2R-1-S (S)	P2RF-05-PU	P2RF-05 P2RF-05-E	P2R-05P P2R-057P	P2R-05A
2 poles	G2R-2-S (S)	P2RF-08-PU	P2RF-08 P2RF-08-E	P2R-08P P2R-087P	P2R-08A

\* The structure of P2RF-□-E models provides finger protection. Round terminals cannot be used. Use forked crimp terminals.

#### Accessories for Push-In Plus Terminal Block Sockets (P2RF-□-PU)

##### Short Bars

Pitch	No. of poles	Colors	Model #	Minimum order (quantity)
7.75 mm	2	Red (R) Blue (S) Yellow (Y)	PYDN-7.75-020□	10
	3		PYDN-7.75-030□	
	4		PYDN-7.75-040□	
	20		PYDN-7.75-200□	
15.5 mm	6		PYDN-15.5-060□	

Note: Use the Short Bars for crossover wiring within one Socket or between Sockets.

\* Replace the box (□) in the model number with the code for the covering color.

##### Labels

Model	Minimum order (sheet) (quantity per sheet)
XWSZ-P4.0LB1	5 1 sheet (60 pieces)

#### Mounting Tracks

Applicable Socket	Description	Model	Minimum order (quantity)
Track-connecting Socket	Mounting track	50 cm (I) × 7.3 mm (I): PFP-50N	—
		1 m (I) × 7.3 mm (I): PFP-100N	
		1 m (I) × 16 mm (I): PFP-100N2	
	End plate *1	PFP-M	10
	Spacer	PFP-S	
Back-connecting Socket	Mounting plate *2	P2R-P	1

\*1. When mounting DIN rail, please use End Plate (PFP-M).

\*2. Used to mount several P2R-05A and P2R-08A Connecting Sockets side by side.



## Specifications

### Coil Ratings

Rated voltage		Rated current*		Coil resistance	Coil inductance (H) (ref. value)		Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
		50 Hz	60 Hz		Armature OFF	Armature ON				
AC	24 V	43.5 mA	37.4 mA	253 Ω	0.81	1.55	80% max.	30% max.	110%	0.9 VA at 60 Hz
	110 V	9.5 mA	8.2 mA	5,566 Ω	13.33	26.83				
	120 V	8.6 mA	7.5 mA	7,286 Ω	16.13	32.46				
	230 V	4.4 mA	3.8 mA	27,172 Ω	72.68	143.90				
	240 V	4.2 mA	3.7 mA	27,800 Ω	90.58	182.34				
Rated voltage		Rated current*		Coil resistance	Coil inductance (H) (ref. value)		Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
					Armature OFF	Armature ON				
DC	6 V	87.0 mA	69 Ω	0.25	0.48	70% max.	15% min.	110%	0.53 W	
	12 V	43.2 mA	278 Ω	0.98	2.35					
	24 V	21.6 mA	1,113 Ω	3.60	8.25					
	48 V	11.4 mA	4,220 Ω	15.2	29.82					

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/-20% for the AC rated current and ±10% for the DC coil resistance.

2. The AC coil resistance and inductance values are reference values only (at 60 Hz).

3. Operating characteristics were measured at a coil temperature of 23°C.

4. The maximum voltage is the maximum possible value of the voltage that can be applied to the relay coil.  
It is not the maximum voltage that can be applied continuously.

### Contact Ratings

Number of poles	1 pole		2 poles	
Load	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)
Rated load	10 A at 250 VAC; 10 A at 30 VDC	7.5 A at 250 VAC; 5 A at 30 VDC	5 A at 250 VAC; 5 A at 30 VDC	2 A at 250 VAC; 3 A at 30 VDC
Rated carry current	10 A		5 A	
Max. switching voltage	440 VAC, 125 VDC		380 VAC, 125 VDC	
Max. switching current	10 A		5 A	
Max. switching power	2,500 VA, 300 W	1,875 VA, 150 W	1,250 VA, 150 W	500 VA, 90 W
Failure rate (reference value) *)	100 mA at 5 VDC		10 mA at 5 VDC	

Note: P level:  $\lambda_{100} = 0.1 \times 10^{-6}/\text{operation}$

\*) This value was measured at a switching frequency of 120 operations per minute.

### Characteristics

Item	1 pole	2 poles
Contact configuration	SPDT	
Contact structure	Single	
Contact resistance	100 mΩ max.	
Operate (set) time	15 ms max.	
Release (reset) time	AC: 10 ms max.; DC: 5 ms max. (w/built-in diode: 20 ms max.)	AC: 15 ms max.; DC: 10 ms max. (w/built-in diode: 20 ms max.)
Max. operating frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated load)	
Insulation resistance	1,000 MΩ min. (at 500 VDC)	
Dielectric strength *	5,000 VAC, 50/60 Hz for 1 min between coil and contacts; 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity	5,000 VAC, 50/60 Hz for 1 min between coil and contacts; 3,000 VAC, 50/60 Hz for 1 min between contacts of different polarity 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity
Vibration resistance	Destruction: 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude) Malfunction: 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
Shock resistance	Destruction: 1,000 m/s <sup>2</sup> Malfunction: 200 m/s <sup>2</sup> when energized; 100 m/s <sup>2</sup> when not energized	
Endurance	Mechanical: AC coil: 10,000,000 operations min.; DC coil: 20,000,000 operations min. (at 18,000 operations/hr) Electrical: 100,000 operations min. (at 1,800 operations/hr under rated load)	
Ambient temperature	Operating: -40°C to 70°C (with no icing or condensation)	
Ambient humidity	Operating: 5% to 85%	
Weight	Approx. 20 g	

Note: Values in the above table are the initial values.

\* These values are relay only. Please refer to the "Products Related to Common Sockets and DIN Tracks Data Sheet" for connecting sockets.

### Approved Standards

#### UL 508 (File No. E41643)

Model	Contact form	Coil ratings	Contact ratings	Operations
G2R-1-S (S)	SPDT	5 to 110 VDC 6 to 240 VAC	10 A, 30 VDC (resistive) 10 A, 250 VAC (general use)	100 × 10 <sup>3</sup>
			TV-3 (NO contact only)	25 × 10 <sup>3</sup>
G2R-2-S (S)	DPDT	5 to 110 VDC 6 to 240 VAC	5 A, 30 VDC (resistive) 5 A, 250 VAC (general use)	100 × 10 <sup>3</sup>
			TV-3 (NO contact only)	25 × 10 <sup>3</sup>

#### CSA 22.2 No.0, No.14 (File No. LR31928)

Model	Contact form	Coil ratings	Contact ratings	Operations
G2R-1-S (S)	SPDT	5 to 110 VDC 6 to 240 VAC	10 A, 30 VDC (resistive) 10 A, 250 VAC (general use)	100 × 10 <sup>3</sup>
			TV-3 (NO contact only)	25 × 10 <sup>3</sup>
G2R-2-S (S)	DPDT	5 to 110 VDC 6 to 240 VAC	5 A, 30 VDC (resistive) 5 A, 250 VAC (general use)	100 × 10 <sup>3</sup>
			TV-3 (NO contact only)	25 × 10 <sup>3</sup>

#### IEC/VDE (Certificate No. 40015012 EN 61810-1)

Contact form	Coil ratings	Contact ratings	Operations
1 pole	6, 12, 24, 48 VDC 24, 110, 120, 230, 240 VAC	5 A, 440 VAC (cosφ = 1.0) 10 A, 250 VAC (cosφ = 1.0) 10 A, 30 VDC (0 ms)	100 × 10 <sup>3</sup>
2 poles	6, 12, 24, 48 VDC 24, 110, 120, 230, 240 VAC	5 A, 250 VAC (cosφ = 1.0) 5 A, 30 VDC (0 ms)	100 × 10 <sup>3</sup>

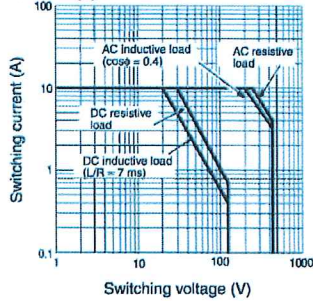
#### LR

Number of poles	Coil ratings	Contact ratings	Operations
1 pole	5 to 110 VDC 6 to 240 VDC	10 A, 250 VAC (general use) 7.5 A, 250 VAC (PFO.4) 10 A, 30 VDC (resistive) 5A, 30VDC (L/R=7ms)	100 × 10 <sup>3</sup>
2 poles	5 to 110 VDC 6 to 240 VDC	5 A, 250 VAC (general use) 2 A, 250 VAC (PFO.4) 5 A, 30 VDC (resistive) 3A, 30VDC (L/R=7ms)	100 × 10 <sup>3</sup>

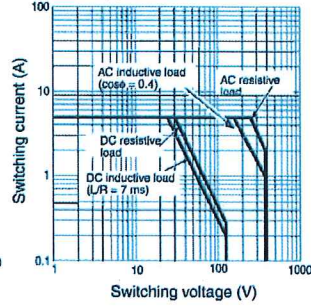
## Engineering Data

### Maximum Switching Power

G2R-1-S (S)

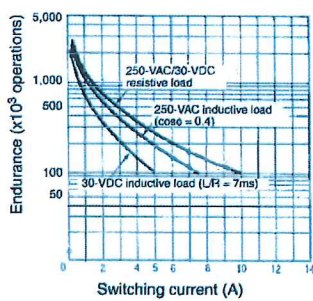


G2R-2-S (S)

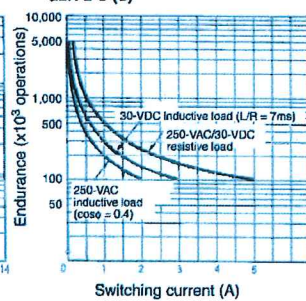


### Endurance

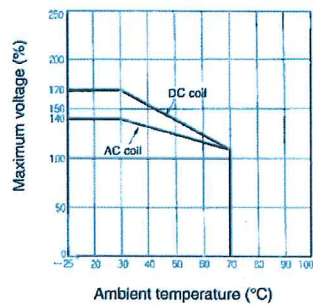
G2R-1-S (S)



G2R-2-S (S)



### Ambient Temperature vs Maximum Coil Voltage





## G2R-□-S (S)

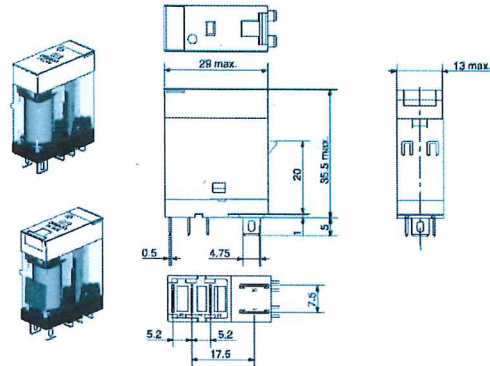
(Unit: mm)

### Dimensions

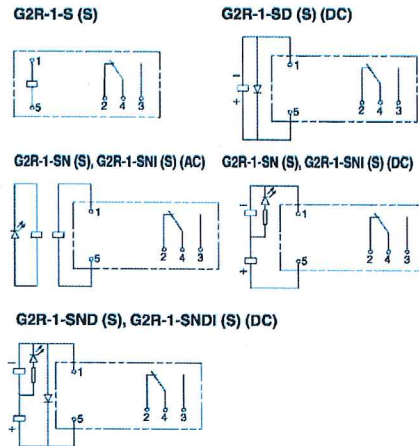
Note: All units are in millimeters unless otherwise indicated.

#### SPDT Relays

G2R-1-S (S), G2R-1-SN (S), G2R-1-SNI (S)  
G2R-1-SD (S), G2R-1-SND (S), G2R-1-SNDI (S)

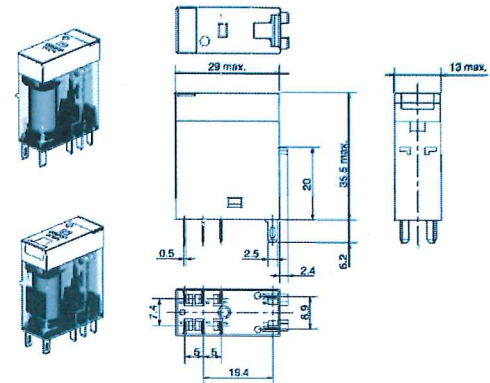


#### Terminal Arrangement/Internal Connections (Bottom View)

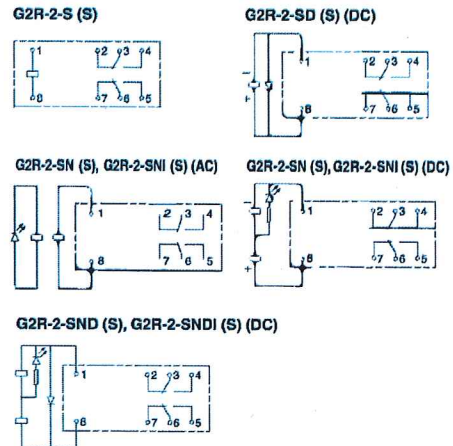


#### DPDT Relays

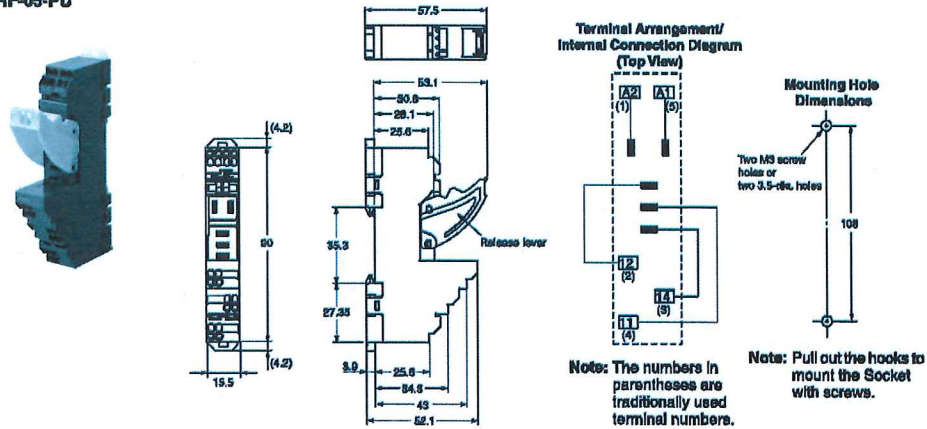
G2R-2-S (S), G2R-2-SN (S), G2R-2-SNI (S)  
G2R-2-SD (S), G2R-2-SND (S), G2R-2-SNDI (S)



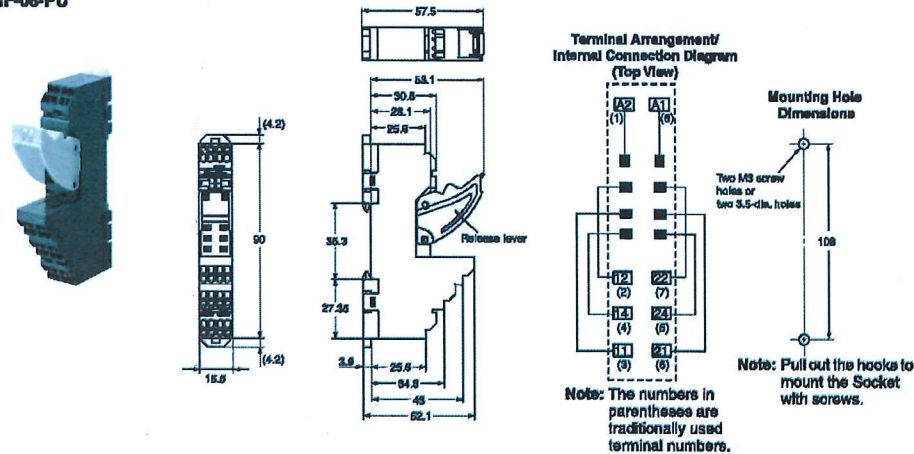
#### Terminal Arrangement/Internal Connections (Bottom View)



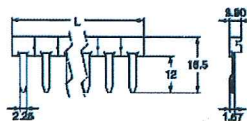
**Track/Surface Mounting Sockets**  
**P2RF-05-PU**



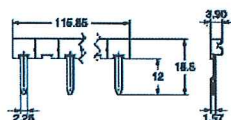
**P2RF-06-PU**



**Accessories for P2RF-□-PU**  
**Short Bars**  
**PYDN-7.75-□□ (7.75 mm)**



**PYDN-15.5-080□ (15.5 mm)**



Application	Pitch	No. of poles	L (Length)	Colors	Model *	Maximum carry current
For Contact terminals (common)	7.75 mm	2	15.1	Red (R) Blue (S) Yellow (Y)	PYDN-7.75-020□	20 A
		3	22.85		PYDN-7.75-030□	
		4	30.6		PYDN-7.75-040□	
		20	154.6		PYDN-7.75-200□	
For Coil terminals	15.5 mm	8	115.85		PYDN-15.5-080□	

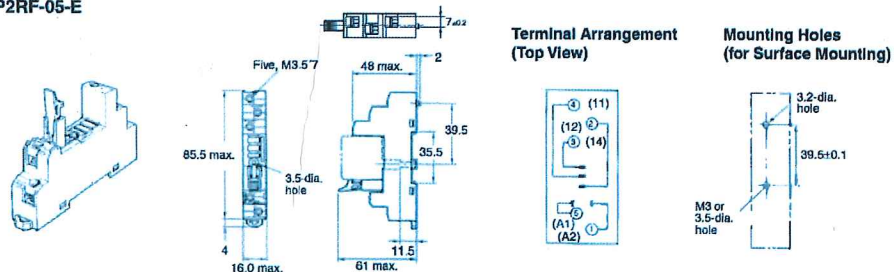
\* Replace the box (□) in the model number with the code for the covering color.

**Note:** 1. Use the Short Bars for crossover wiring within one Socket or between Sockets.  
2. When using short bar to coil terminals of P2RF-□□-PU, A1 terminal cannot be used. In case crossover wiring of A1 terminal side is needed, crossover wiring using A1 terminals by wire is possible.

Short bar correspondence table

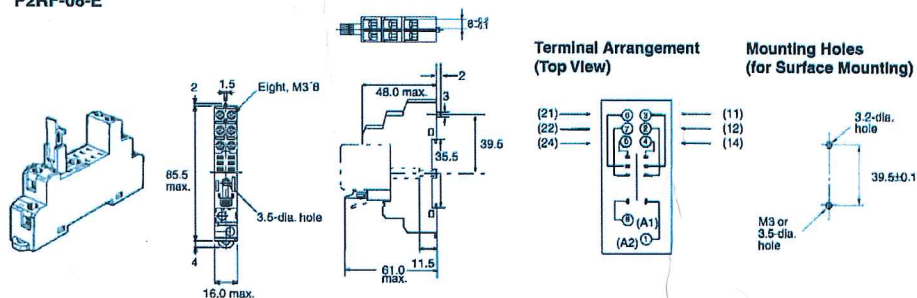
	Contact terminal (Common)	Coil terminal	
		A1	A2
P2RF-□□-PU	Available	—	○

**P2RF-05-E**

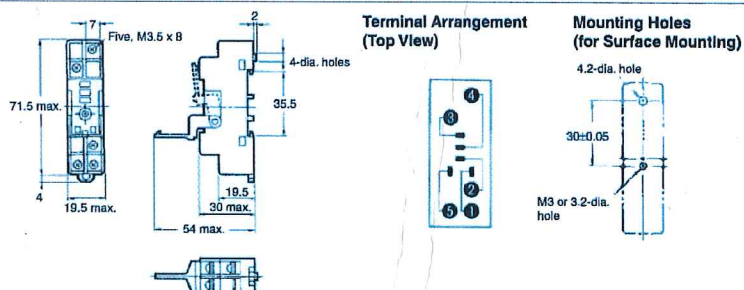


**Note:** Pin numbers in parentheses apply to DIN standard.

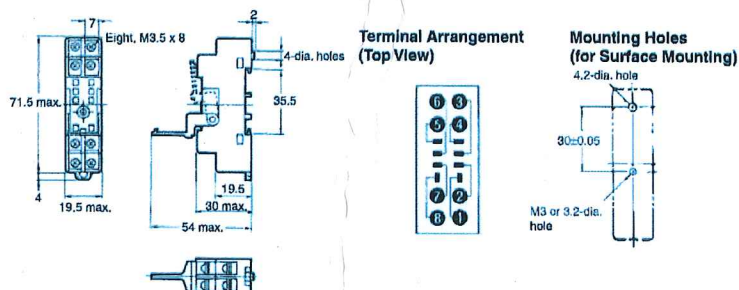
## P2RF-08-E



**P2RF-05**



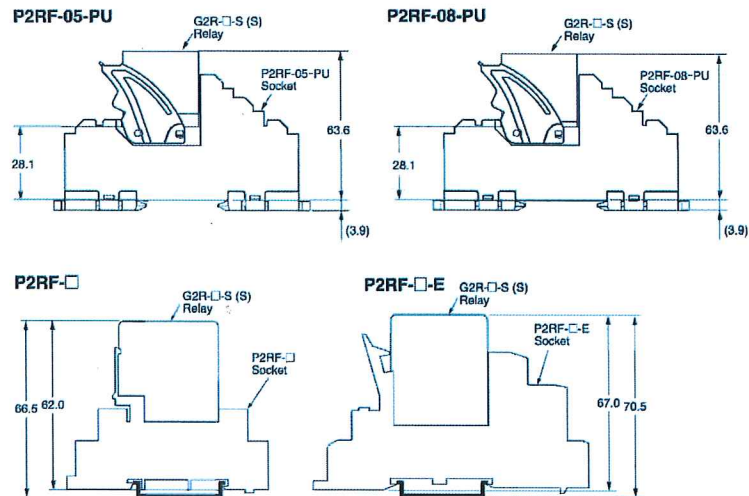
**P2RF-08**



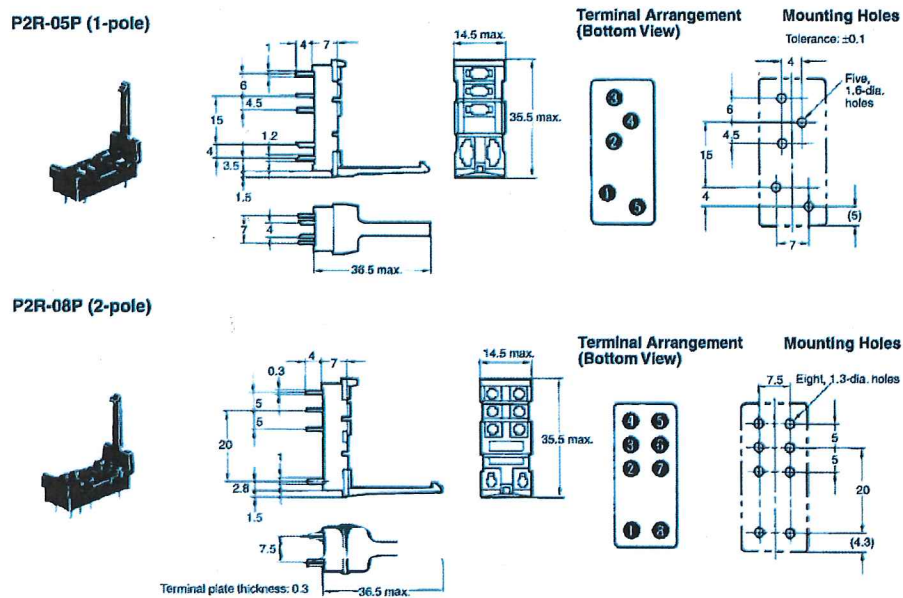


**G2R-□-S (S)**

### Mounting Height of Relay with Track/Surface Mounting Sockets

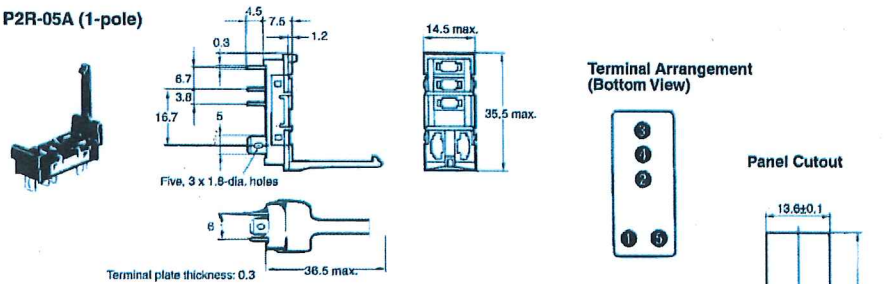


## Back-connecting Sockets

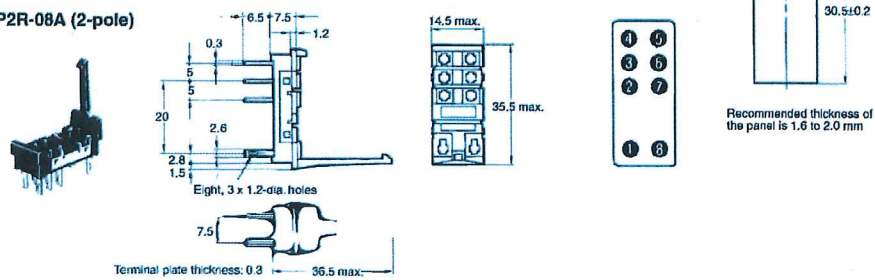


## G2R-□-S (S)

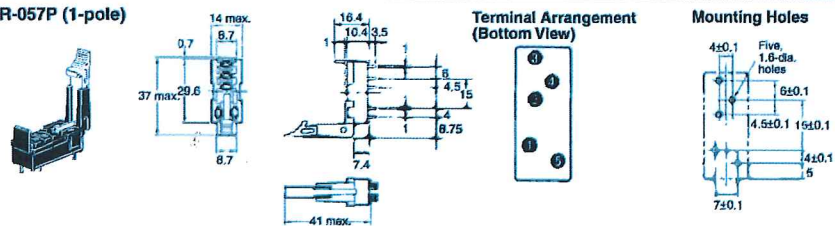
### P2R-05A (1-pole)



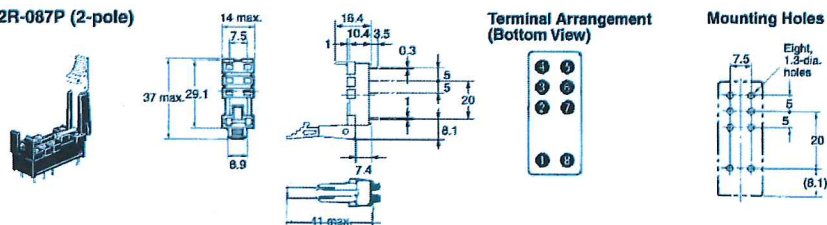
### P2R-08A (2-pole)



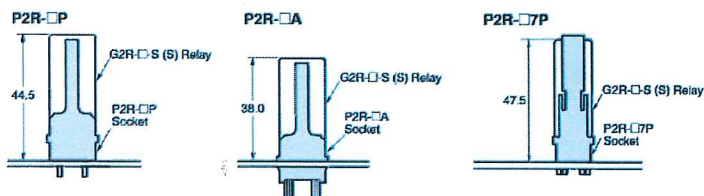
### P2R-057P (1-pole)



### P2R-087P (2-pole)

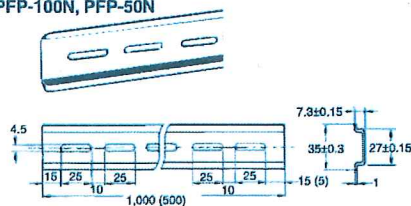


### Mounting Height of Relay with Back-connecting Sockets

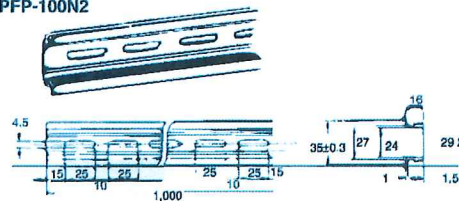


### Mounting Tracks

PFP-100N, PFP-50N



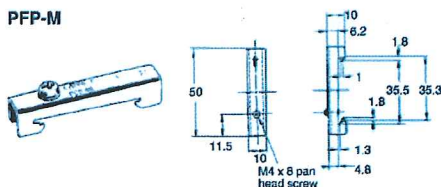
PFP-100N2



It is recommended to use a panel 1.6 to 2.0 mm thick.

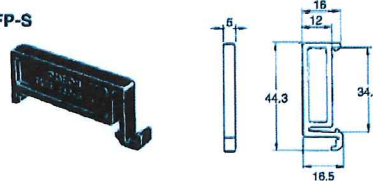
### End Plate

PFP-M



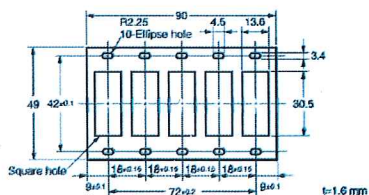
### Spacer

PFP-S



### Mounting Plate

P2R-P



### Safety Precautions

Be sure to read the *Common Precautions for All Relay* in the website at the following URL:  
<http://www.is.omron.com/>.

Refer to *Products Related to Common Sockets and DIN Tracks* for precautions on the applicable Sockets.  
 Refer to *PYF-□-PU/P2RF-□-PU* for precautions on Push-In Plus Terminal Block Sockets.

#### Warning Indications



**CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.



**Caution**

- Do not use the test button for any purpose other than testing. Be sure not to touch the test button accidentally as this will turn the contacts ON. Before using the test button, confirm that circuits, the load, and any other connected item will operate safely.
- Check that the test button is released before turning ON relay circuits.
- If the test button is pulled out too forcefully, it may bypass the momentary testing position and go straight into the locked position.
- Use an insulated tool when you operate the test button.



## Time Delay Relays – Application Data

### Definition:

Time Delay is defined as the controlled period between the functioning of two events. A Time Delay relay is a combination of an electromechanical output relay and a control circuit. The control circuit is comprised of solid state components and timing circuits that control operation of the relay and timing range. Typical time delay functions include On-Delay, Repeat cycle (starting off), Interval, Off-Delay, Retriggerable One Shot, Repeat cycle (starting on), Pulse Generator, One Shot, On/Off Delay, and Memory Latch. Each function is explained in the table below. Time delay relays have a broad choice of timing ranges from less than one second to many days. There are many choices of timing adjustments from calibrated external knobs, DIP switches, thumbwheel switches, or recessed potentiometer. The output contacts on the electromechanical output relay are direct wired to the output terminals. The contact load ratings are specified for each specific type of time delay relay.

Understanding the differences between all the functions available in time delay relays can sometimes be a daunting task. When designing circuits using time delay relays questions such as:

"What initiates a time delay relay?"

"Does the timing start with the application or release of voltage?"

"When does the output relay come on?"

must be asked.

Time delay relays are simply control relays with a time delay built in. Their purpose is to control an event based on time. The difference between relays and time delay relays is when the output contacts open & close: on a control relay, it happens when voltage is applied and removed from the coil; on time delay relays, the contacts will open or close before or after a pre-selected, timed interval.

Typically, time delay relays are initiated or triggered by one of two methods:

- application of input voltage (On Delay, Interval On, Flasher, Repeat Cycle, Delayed Interval & Interval/Flasher).
- opening or closing of a trigger signal (Off Delay, Single Shot & Watchdog).

These trigger signals can be one of two designs:

- a control switch (dry contact), i.e., limit switch, push button, float switch, etc.
- voltage (commonly known as a power trigger).

To help understand, some definitions are important:

**Input Voltage:** Control voltage applied to the input terminals (see wiring diagrams below). Depending on the function, input voltage will either initiate the unit or make it ready to initiate when a trigger signal is applied.

**Trigger Signal:** On certain timing functions, a trigger signal is used to initiate the unit after input voltage has been applied. As noted above, this trigger signal can either be a control switch (dry contact switch) or a power trigger (voltage).

**Output (Load):** Every time delay relay has an internal relay (usually mechanical) with contacts that open & close to control the load. They are represented by the dotted lines in the wiring diagrams. Note that the user must provide the voltage to power the load being switched by the output contacts of the time delay relay.

The following tables contain both written and visual descriptions on how the common timing functions operate. A Timing Chart shows the relationship between Input Voltage, Trigger Signal (if present) and Output Contacts.

## FUNCTION DEFINITION TABLE

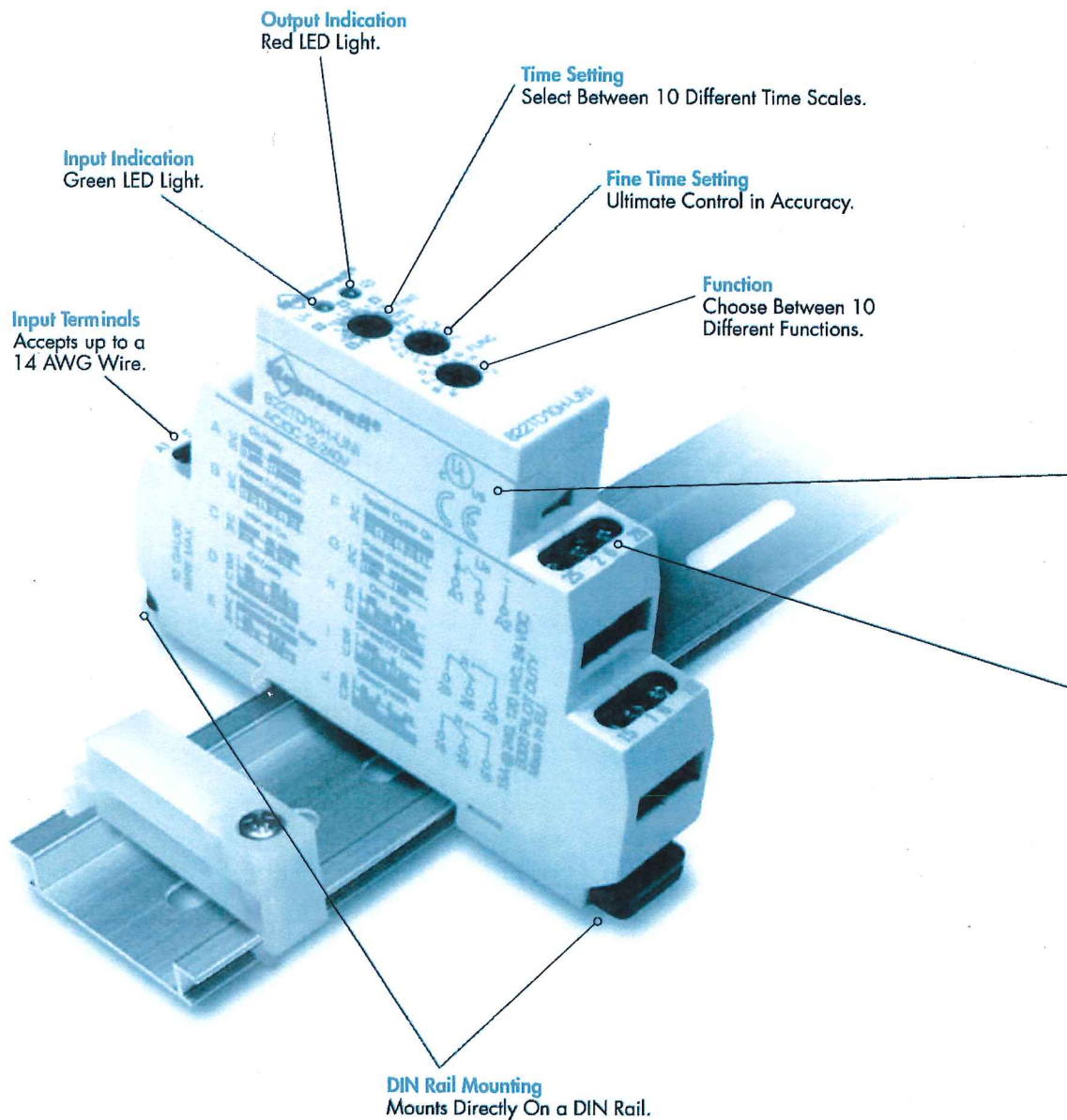
Function	Operation	Timing Chart
<b>A. ON DELAY</b> Power On	When the input voltage <b>U</b> is applied, timing delay <b>t</b> begins. Relay contacts <b>R</b> change state after time delay is complete. Contacts <b>R</b> return to their shelf state when input voltage <b>U</b> is removed. Trigger switch is not used in this function.	
<b>B. REPEAT CYCLE</b> Starting Off	When input voltage <b>U</b> is applied, time delay <b>t</b> begins. When time delay <b>t</b> is complete, relay contacts <b>R</b> change state for time delay <b>t</b> . This cycle will repeat until input voltage <b>U</b> is removed. Trigger switch is not used in this function.	
<b>C. INTERVAL</b> Power On	When input voltage <b>U</b> is applied, relay contacts <b>R</b> change state immediately and timing cycle begins. When time delay is complete, contacts return to shelf state. When input voltage <b>U</b> is removed, contacts will also return to their shelf state. Trigger switch is not used in this function.	
<b>D. OFF DELAY</b> S Break	Input voltage <b>U</b> must be applied continuously. When trigger switch <b>S</b> is closed, relay contacts <b>R</b> change state. When trigger switch <b>S</b> is opened, delay <b>t</b> begins. When delay <b>t</b> is complete, contacts <b>R</b> return to their shelf state. If trigger switch <b>S</b> is closed before time delay <b>t</b> is complete, then time is reset. When trigger switch <b>S</b> is opened, the delay begins again, and relay contacts <b>R</b> remain in their energized state. If input voltage <b>U</b> is removed, relay contacts <b>R</b> return to their shelf state.	
<b>E. RETRIGGERABLE ONE SHOT</b>	Upon application of input voltage <b>U</b> , the relay is ready to accept trigger signal <b>S</b> . Upon application of the trigger signal <b>S</b> , the relay contacts <b>R</b> transfer and the preset time <b>t</b> begins. At the end of the preset time <b>t</b> , the relay contacts <b>R</b> return to their normal condition unless the trigger switch <b>S</b> is opened and closed prior to time out <b>t</b> (before preset time elapses). Continuous cycling of the trigger switch <b>S</b> at a rate faster than the preset time will cause the relay contacts <b>R</b> to remain closed. If input voltage <b>U</b> is removed, relay contacts <b>R</b> return to their shelf state.	
<b>F. REPEAT CYCLE</b> Starting On	When input voltage <b>U</b> is applied, relay contacts <b>R</b> change state immediately and time delay <b>t</b> begins. When time delay <b>t</b> is complete, contacts return to their shelf state for time delay <b>t</b> . This cycle will repeat until input voltage <b>U</b> is removed. Trigger switch is not used in this function.	
<b>G. PULSE GENERATOR</b>	Upon application of input voltage <b>U</b> , a single output pulse of 0.5 seconds is delivered to relay after time delay <b>t</b> . Power must be removed and reapplied to repeat pulse. Trigger switch is not used in this function.	
<b>H. ONE SHOT</b>	Upon application of input voltage <b>U</b> , the relay is ready to accept trigger signal <b>S</b> . Upon application of the trigger signal <b>S</b> , the relay contacts <b>R</b> transfer and the preset time <b>t</b> begins. During time-out, the trigger signal <b>S</b> is ignored. The relay resets by applying the trigger switch <b>S</b> when the relay is not energized.	
<b>I. ON/OFF DELAY</b> S Make/Break	Input voltage <b>U</b> must be applied continuously. When trigger switch <b>S</b> is closed, time delay <b>t</b> begins. When time delay <b>t</b> is complete, relay contacts <b>R</b> change state and remain transferred until trigger switch <b>S</b> is opened. If input voltage <b>U</b> is removed, relay contacts <b>R</b> return to their shelf state.	
<b>J. MEMORY LATCH</b> S Make	Input voltage <b>U</b> must be applied continuously. Output changes state with every trigger switch <b>S</b> closure. If input voltage <b>U</b> is removed, relay contacts <b>R</b> return to their shelf state.	

U = Input Voltage S = Trigger Switch R = Relay Contacts t = Time Delay

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## Advantages of the 820 Series Time Delay Relays



SECTION 5

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The new 820 Series Time Delay Relays are DIN rail mountable products offering 10 different timing functions, 2 status LEDs, ultra-wide timing range (0.1 sec to 10 days) and a universal voltage input (12-240 VAC/VDC) all in one modular package.

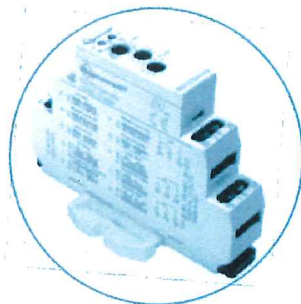
The 821 is available as a 15 amp SPDT timer while its counterpart 822 is available as a DPDT timer also capable of switching up to 15 amps per pole.

The 821 is available as a 15 amp SPDT timer while its counterpart 822 is available as a DPDT timer also capable of switching up to 15 amps per pole.

**Solid State Circuitry**  
Used for Time and  
function Control.

**Output Terminals**  
Accepts up to a  
14 AWG Wire.

- Available in both SPDT and DPDT contact configuration.
- The two LED status indicators indicate status at a glance.
- The Green LED is on when power is applied to the input terminals. The Red LED blinks during time-out, and is ON when the output is energized.
- Color and appearance designed for high visibility in all environments.
- Only 17.5 mm wide making it ideal for tight spaces.
- Engineering availability allows for customized relay solutions.



Optional Panel Adapter  
(16-788C1)  
See Section 3 p.18

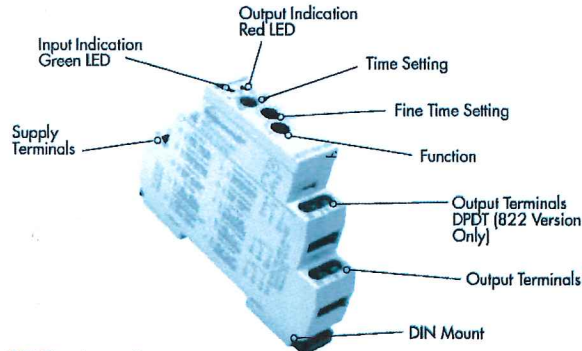
[www.magnecraft.com](http://www.magnecraft.com) 847-441-2540

Magnecraft Solution Guide 105A

SECTION 5

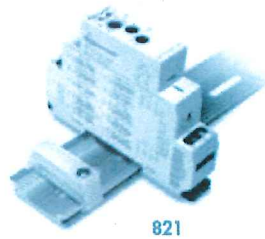
5/5

## 820 Series Time Delay Relays/SPDT, DPDT 15 Amp Rating

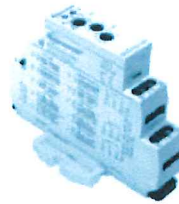


### General Specifications (@ 25°C) (UL 508)

		Units	821TD10H-UNI	822TD10H-UNI
<b>Output Characteristics</b>			SPDT	DPDT
Number and type of Contacts			Silver Alloy	Silver Alloy
Contact Material		A	15	15
Current rating	@ 240 VAC, 24 VDC	V	240 AC, 50/60 Hz	240 AC, 50/60 Hz
Switching voltage		V	24 DC	24 DC
		HP	1/2 @ 120VAC	1/2 @ 120VAC
		HP	1 @ 240 VAC	1 @ 240 VAC
Minimum Switching Requirement		Pilot Duty	B300	B300
Indication	LED	mA	100	100
		Blinks = Timing	Red	Red
		On = Energized		
<b>Input Characteristics</b>				
Voltage Range		VAC / VDC	12...240	12...240
Operating Range	% of Nominal		85% to 110%	85% to 110%
Maximum consumption		VA	3	3
		W	1.7	1.7
Indication	LED		Green	Green
<b>Timing Characteristics</b>				
Functions Available	(See page 5/3)		A,B,C,D,E,F,G,H,I,J	A,B,C,D,E,F,G,H,I,J
Time Scales			10	10
Time Ranges Available		sec	0.1...1 1...10	0.1...1 1...10
		min	0.1...1 1...10	0.1...1 1...10
		hr	0.1...1 1...10	0.1...1 1...10
		day	0.1...1 1...10	0.1...1 1...10
Tolerance	Mechanical Setting	%	5	5
Repeatability	Constant Voltage and Temperature	%	0.2	0.2
Reset Time	Maximum	ms	150	150
Trigger Pulse Length	Minimum	ms	50	50
<b>Performance Characteristics</b>				
Electrical Life	Operations @ Rated Current (Resistive)		100,000	100,000
Mechanical Life	Unpowered		10,000,000	10,000,000
Dielectric strength	Input to Contacts	V	2500 AC	2500 AC
	Between Open Contacts	V	1000 AC	1000 AC
Terminal Wire Capacity		AWG (mm <sup>2</sup> )	14 (2.1)	14 (2.1)
Terminal Torque (maximum)		in lb (Nm)	7.1 (0.8)	7.1 (0.8)
<b>Environment</b>				
Product certifications	Standard version		UL, CE	UL, CE
Ambient air temperature around the device	Storage	°C	-30...+70	-30...+70
Degree of protection	Operation	°C	-20...+55	-20...+55
Weight		grams	IP 20 65	IP 20 65



821



822

Optional Panel Adapter  
(16-788C1)  
See Section 3 p.18

### Standard Part Numbers

**BOLD-FACED PART NUMBERS ARE NORMALLY STOCKED**

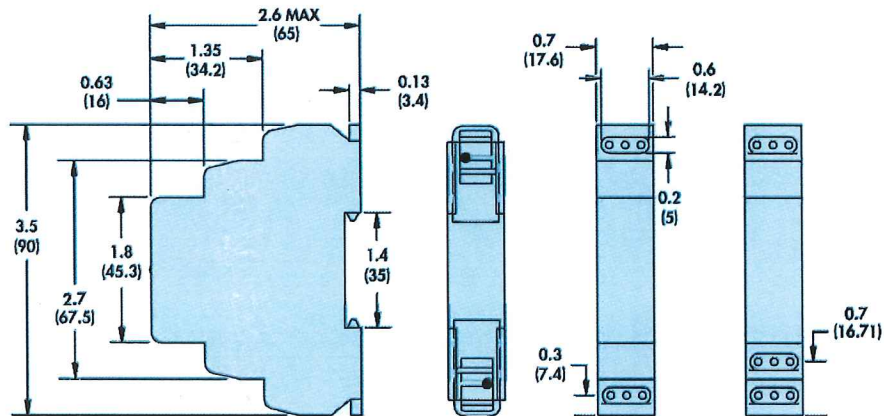
Part Number	Input Voltage	Timing Range	Functions Available	Contact Configuration	Rated Load Current
<b>821TD10H-UNI</b>	12...240 VAC/VDC	0.1s...10d	A,B,C,D,E,F,G,H,I,J	SPDT	15 Amps
<b>822TD10H-UNI</b>	12...240 VAC/VDC	0.1s...10d	A,B,C,D,E,F,G,H,I,J	DPDT	15 Amps

### FUNCTION DEFINITIONS

See Section 5 p.3

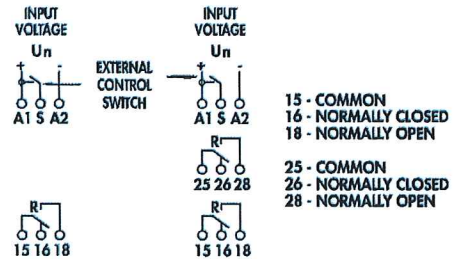
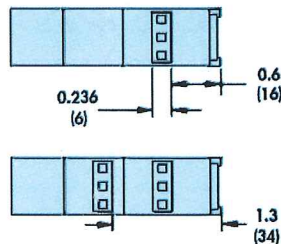
### Part Number Builder

Series	Relay Style	Number of Functions	Input Voltage
821 = SPDT	TD - Time Delay	10H = 10 Functions	UNI = 12...240 VAC/VDC
822 = DPDT			



SECTION 5

### WIRING DIAGRAMS



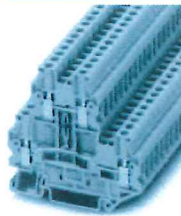
821TD10H-UNI

822TD10H-UNI



## Double-level terminal block - UTTB 4 - 3044814

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Double-level terminal block, connection method: Screw connection, cross section: 0.14 mm<sup>2</sup> - 6 mm<sup>2</sup>, AWG: 26 - 10, width: 6.2 mm, color: gray, mounting type: NS 35/7,5, NS 35/15

### Your advantages

- ☒ Since there are two function shafts per level, all potential distribution tasks can be implemented quickly
- ☒ As an option, the levels can be connected using the FBS-PV UT vertical bridge
- ☒ For a clear overview, each terminal point supports large-surface labeling
- ☒ Tested for railway applications
- ☒ For example, two separate potentials can be routed side by side with the help of bridging between non-adjacent terminal blocks



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 055512
GTIN	4046356055512
Weight per Piece (excluding packing)	19.600 g
Custom tariff number	85369010
Country of origin	Germany

### Technical data

#### General

Number of levels	2
Number of connections	4
Nominal cross section	4 mm <sup>2</sup>
Color	gray

## Double-level terminal block - UTTB 4 - 3044814

### Technical data

#### General

Insulating material	PA
Flammability rating according to UL 94	V0
Area of application	Railway industry
	Machine building
	Plant engineering
	Process industry
Rated surge voltage	8 kV
Degree of pollution	3
Overvoltage category	III
Insulating material group	I
Maximum power dissipation for nominal condition	1.02 W (the value is multiplied when connecting multiple levels)
Connection in acc. with standard	IEC 60947-7-1
Nominal current $I_N$	30 A
Maximum load current	36 A (with 6 mm <sup>2</sup> conductor cross section)
Nominal voltage $U_N$	800 V
Open side panel	Yes
Shock protection test specification	IEC 60529:2001-02
Back of the hand protection	guaranteed
Finger protection	guaranteed
Result of surge voltage test	Test passed
Surge voltage test setpoint	9.8 kV
Result of power-frequency withstand voltage test	Test passed
Power frequency withstand voltage setpoint	2 kV
Checking the mechanical stability of terminal points (5 x conductor connection)	Test passed
Result of bending test	Test passed
Bending test rotation speed	10 rpm
Bending test turns	135
Bending test conductor cross section/weight	0.14 mm <sup>2</sup> / 0.2 kg
	4 mm <sup>2</sup> / 0.9 kg
	6 mm <sup>2</sup> / 1.4 kg
Tensile test result	Test passed
Conductor cross section tensile test	0.14 mm <sup>2</sup>
Tractive force setpoint	10 N
Conductor cross section tensile test	4 mm <sup>2</sup>
Tractive force setpoint	120 N
Conductor cross section tensile test	6 mm <sup>2</sup>

## Double-level terminal block - UTTB 4 - 3044814

### Technical data

#### General

Tractive force setpoint	80 N
Result of tight fit on support	Test passed
Tight fit on carrier	NS 35
Setpoint	5 N
Result of voltage-drop test	Test passed
Requirements, voltage drop	≤ 3.2 mV
Result of temperature-rise test	Test passed
Short circuit stability result	Test passed
Conductor cross section short circuit testing	4 mm²
Short-time current	0.48 kA
Conductor cross section short circuit testing	6 mm²
Short-time current	0.72 kA
Result of thermal test	Test passed
Proof of thermal characteristics (needle flame) effective duration	30 s
Oscillation, broadband noise test result	Test passed
Test specification, oscillation, broadband noise	DIN EN 50155 (VDE 0115-200):2008-03
Test spectrum	Service life test category 1, class B, body mounted
Test frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	1.857 (m/s²)/Hz
Acceleration	0.8 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Shock test result	Test passed
Test specification, shock test	DIN EN 50155 (VDE 0115-200):2008-03
Shock form	Half-sine
Acceleration	5 g
Shock duration	30 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Relative insulation material temperature index (Elec.; UL 746 B)	130 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	125 °C
Static insulating material application in cold	-60 °C
Behavior in fire for rail vehicles (DIN 5510-2)	Test passed
Flame test method (DIN EN 60695-11-10)	V0
Oxygen index (DIN EN ISO 4589-2)	>32 %
NF F16-101, NF F10-102 Class I	2
NF F16-101, NF F10-102 Class F	2



## Double-level terminal block - UTTB 4 - 3044814

### Technical data

#### General

Surface flammability NFPA 130 (ASTM E 162)	passed
Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Smoke gas toxicity NFPA 130 (SMP 800C)	passed
Calorimetric heat release NFPA 130 (ASTM E 1354)	27,5 MJ/kg
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 3

#### Dimensions

Width	6.2 mm
Length	69.9 mm
Height NS 35/7,5	65 mm
Height NS 35/15	72.5 mm

#### Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section flexible min.	0.14 mm <sup>2</sup>
Conductor cross section flexible max.	6 mm <sup>2</sup>
Conductor cross section AWG min.	26
Conductor cross section AWG max.	10
Conductor cross section flexible, with ferrule without plastic sleeve min.	0.14 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	4 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve min.	0.14 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve max.	4 mm <sup>2</sup>
2 conductors with same cross section, solid min.	0.14 mm <sup>2</sup>
2 conductors with same cross section, solid max.	1.5 mm <sup>2</sup>
2 conductors with same cross section, stranded min.	0.14 mm <sup>2</sup>
2 conductors with same cross section, stranded max.	1.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, ferrules without plastic sleeve, min.	0.14 mm <sup>2</sup>
2 conductors with same cross section, stranded, ferrules without plastic sleeve, max.	1.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, min.	0.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, max.	2.5 mm <sup>2</sup>
Stripping length	9 mm

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## Double-level terminal block - UTTB 4 - 3044814

### Technical data

#### Connection data

Internal cylindrical gage	A4
Screw thread	M3
Tightening torque, min	0.6 Nm
Tightening torque max	0.8 Nm

#### Standards and Regulations

Connection in acc. with standard	CSA
	IEC 60947-7-1
Flammability rating according to UL 94	V0
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 3

#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

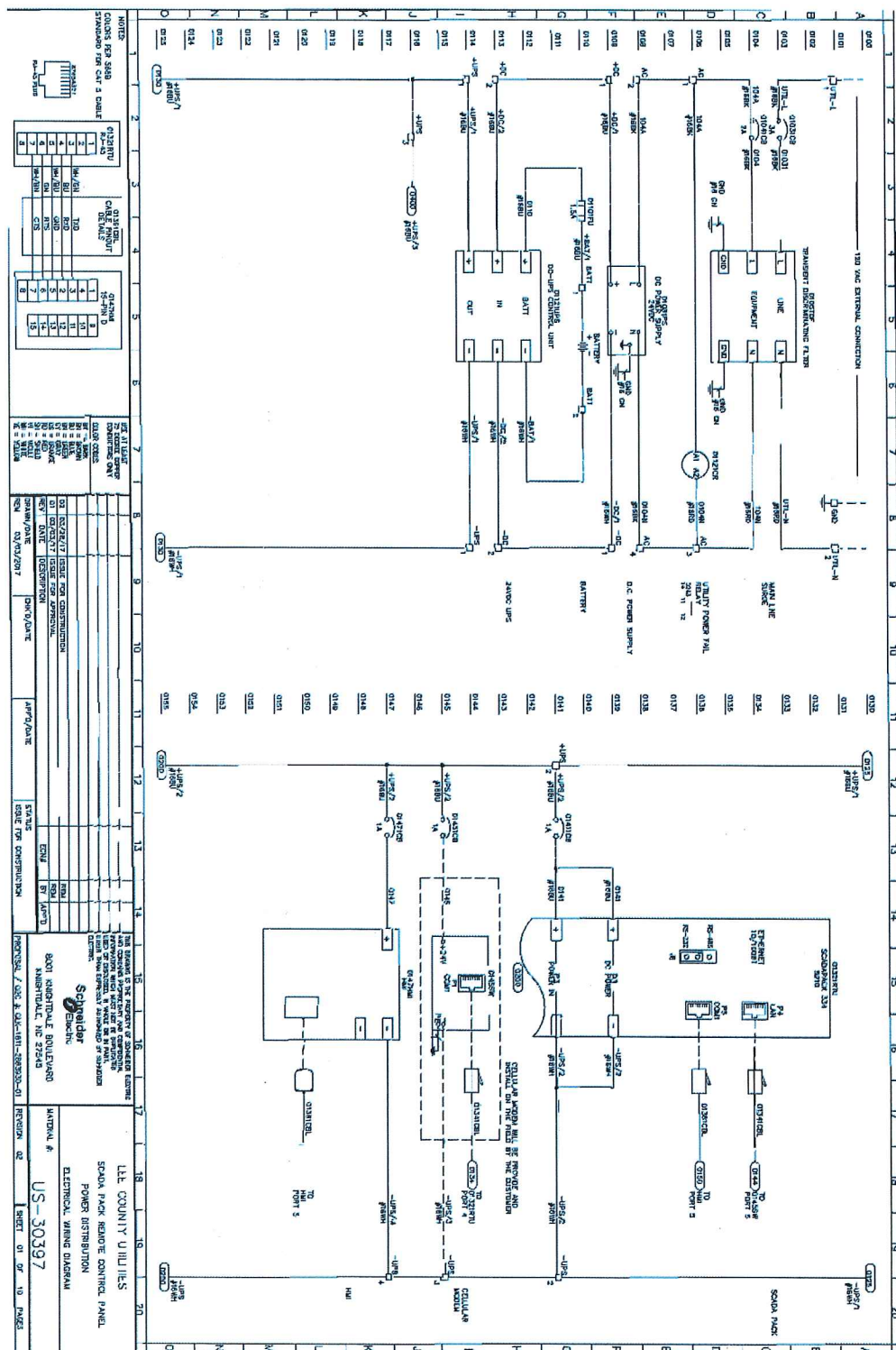
SCADA PACK REMOTE CONTROL PANEL  
| SPRO PANEL

SHEET	DESCRIPTION
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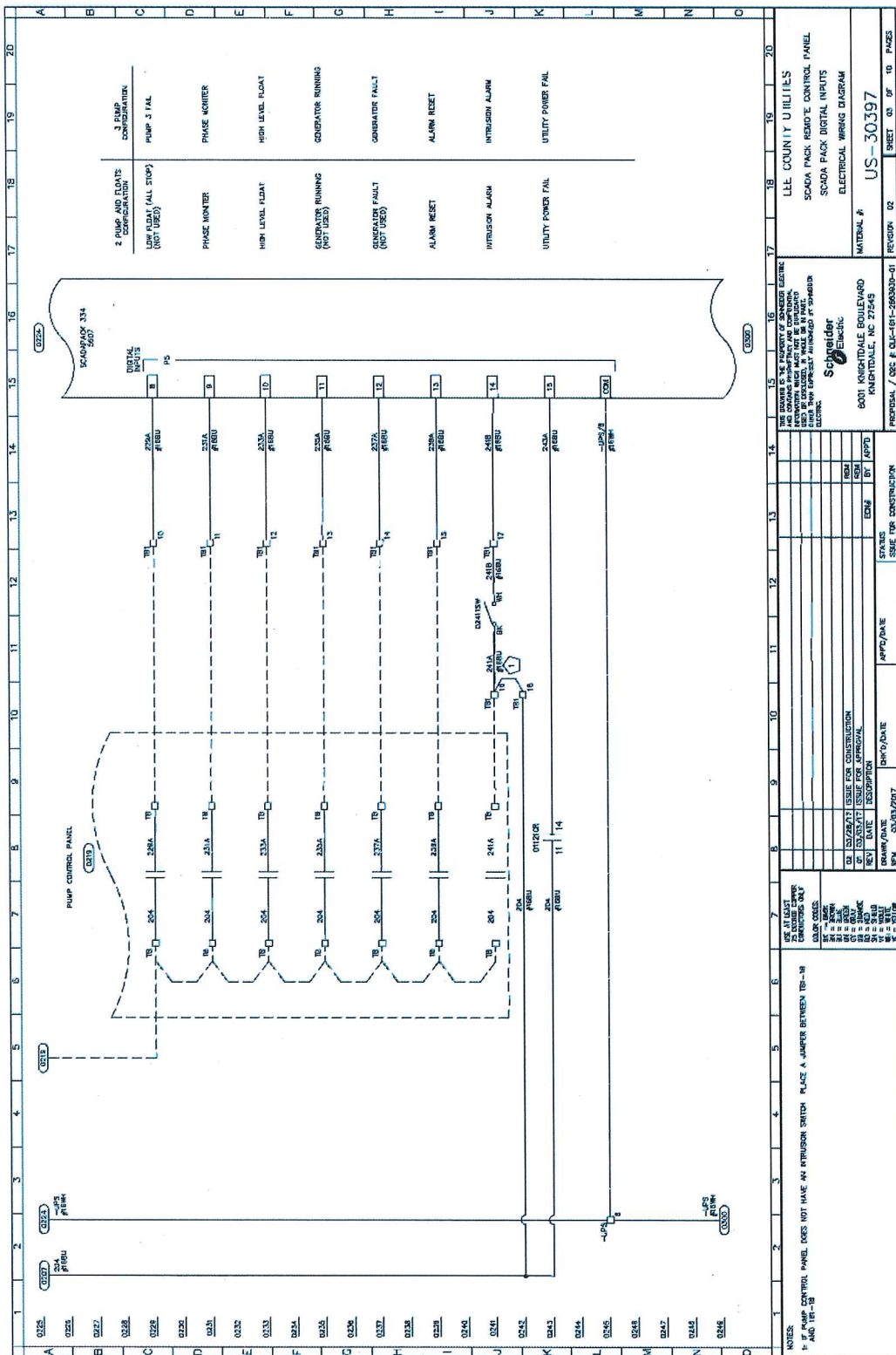
00	TITLE PAGE
01	ELECTRICAL WIRING DIAGRAM POWER DISTRIBUTION
02	ELECTRICAL WIRING DIAGRAM SCADAPACK DIGITAL INPUTS
03	ELECTRICAL WIRING DIAGRAM SCADAPACK DIGITAL INPUTS
04	ELECTRICAL WIRING DIAGRAM SCADAPACK DIGITAL OUTPUTS
05	ELECTRICAL WIRING DIAGRAM SCADAPACK ANALOG INPUTS
06	PANEL LAYOUT
07	PANEL LAYOUT
08	BATTERY TRAY LAYOUT
09	TERMINAL BLOCK LAYOUT
10	BILL OF MATERIALS

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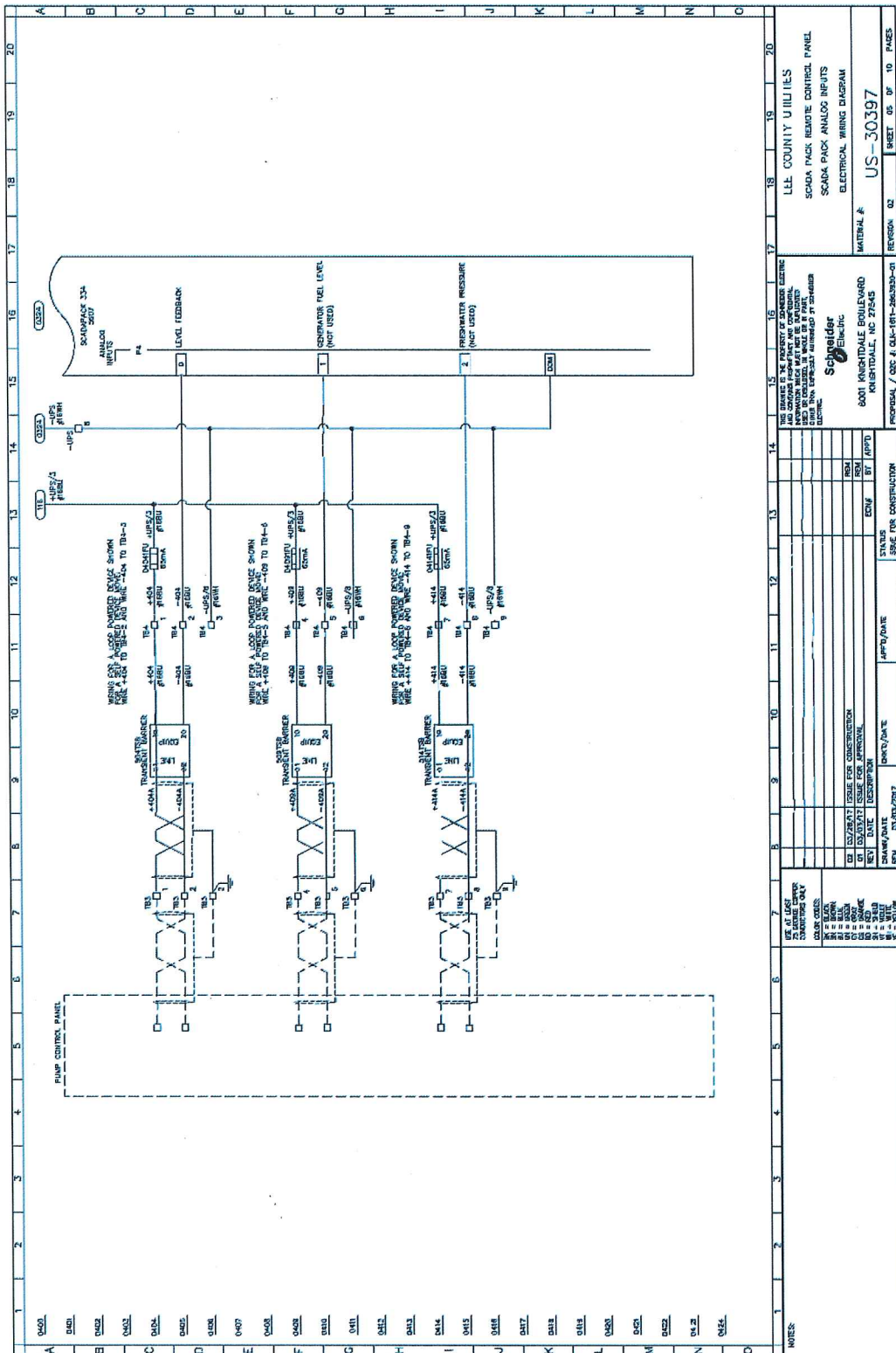








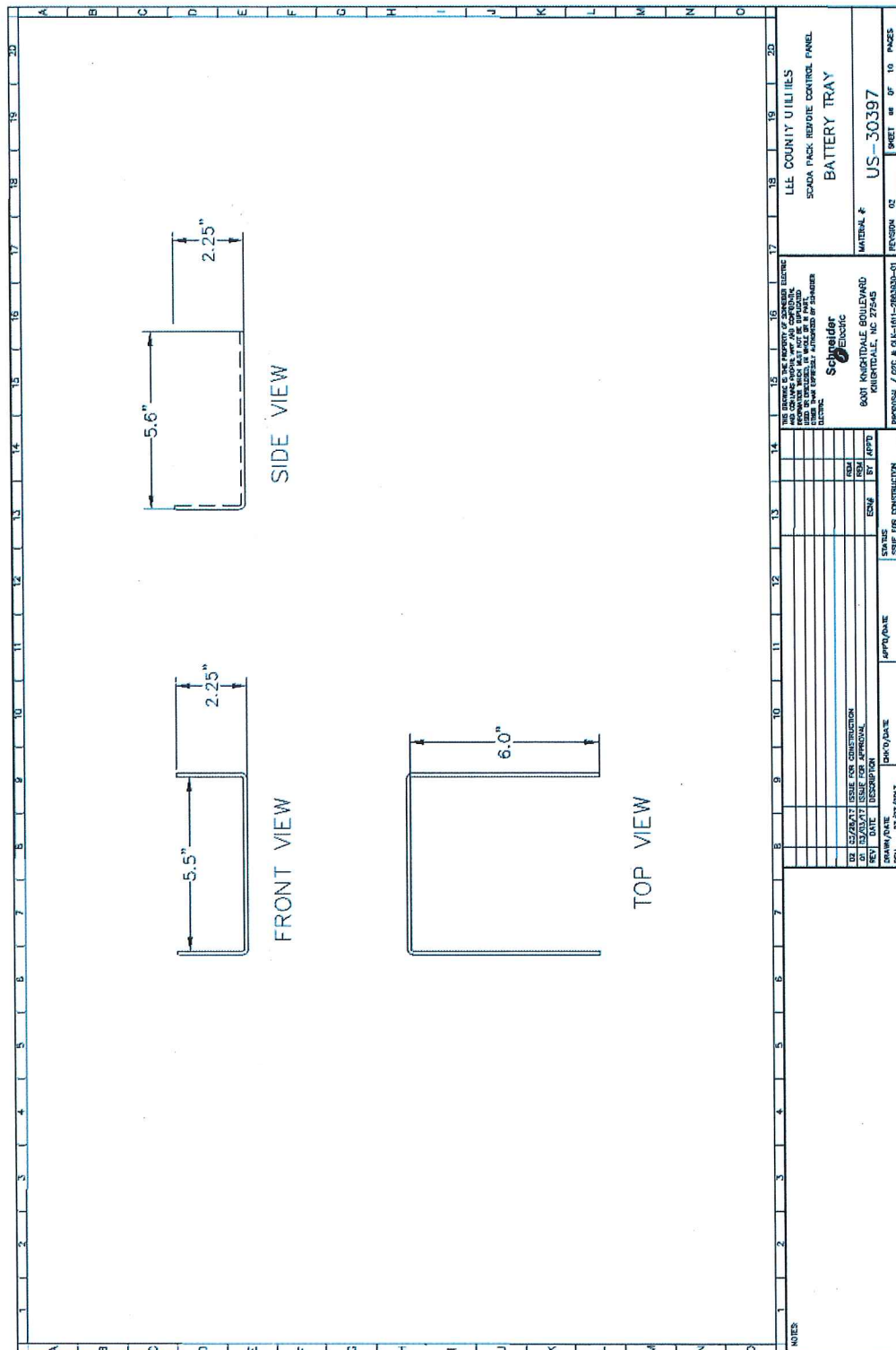
















ITEM	PART NUMBER	QTY	DESCRIPTION	MANUFACTURER	TAG
1	SPM55-30241C-555	1	NEMA 4X SS SINGLE POOR WALL MOUNT ENCLOSURE POWDER COATED WHITE, 3 PT LATCH, SLIM ADJUSTABLE ALUMINUM SWING PANEL	SCHAEFFERS	ENCLOSURE
2	SPE-3024	1	SUBPANEL 30" X 24" W. STEEL WHITE	SCHAEFFERS	ENCLOSURE
3	FTX-2046	2	WIRE DUCT 1/2" X 24" W. STEEL WHITE	PANDUIT	ENCLOSURE
4	C1VH8	2	DUCT COILER 1" WHITE, 6FT	PANDUIT	ENCLOSURE
5	GGM1716	3	FUSE 170A 500V 1/2" 1/2" 1/2"	FERRAZ SHAWMUT	04041FU, 04081FU, 0414FU
6	GGM1712	1	FUSE 170A 500V 1/2" 1/2" 1/2"	FERRAZ SHAWMUT	01010FU
7	NSYTRV45SF5	4	FUSE DISCONNECT TERMINAL 5/20MM FUSE	SCHNEIDER ELECTRIC	04041FU, 04081FU, 0414FU, 01010FU
8	9080GCB05	1	CIRCUIT PROTECTOR 250V 0.5AMP TYPE NEMA	SCHNEIDER ELECTRIC	0034TCB
9	9080GCB05	1	CIRCUIT PROTECTOR 1A 1P 250VAC 55VDC	SCHNEIDER ELECTRIC	0141TCB, 0145TCB, 0147TCB, 0302TCB
10	9080GCB05	1	CIRCUIT PROTECTOR 250V 2A TYPE NEMA	SCHNEIDER ELECTRIC	0141TCB
11	9080GCB05	1	CIRCUIT PROTECTOR 250V 3A TYPE NEMA	SCHNEIDER ELECTRIC	0141TCB
12	NSYTRV42	58	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
13	NSYTRV42	10	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
14	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
15	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
16	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
17	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
18	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
19	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
20	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
21	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
22	NSYTRV440	1	TERMINAL BLOCK 6 2MM #20-#10 30A GRAY SCREW	SCHNEIDER ELECTRIC	ENCLOSURE
23	PK12GTA	1	GROUND BAR 1/2" (#14-4#)	SCHNEIDER ELECTRIC	ENCLOSURE
24	9007MS150200	1	LIMIT SWITCH 240VAC 10AMP MS +OPTIONS	SCHNEIDER ELECTRIC	0241TSW
25	RKG12BD	8	RELAY 1CO 10A@250VAC 24VDC COIL LED-LTB	SCHNEIDER ELECTRIC	0304TOR, 0306TOR, 0308TOR, 0310TOR, 0312TOR, 0314TOR, 0316TOR, 0318TOR
26	RKZE1835M	8	SOCKET 250VAC 10A FOR PKGT RELAY	SCHNEIDER ELECTRIC	0304TOR, 0306TOR, 0308TOR, 0310TOR, 0312TOR, 0314TOR, 0316TOR, 0318TOR
27	RKZ21F7	1	RELAY 2CO 10A@250VAC 120VDC COIL LED-LTB	SCHNEIDER ELECTRIC	0112TOR
28	RKZE1845M	1	SOCKET 250VAC 10A FOR PKGT RELAY	SCHNEIDER ELECTRIC	0112TOR
29	TBLP334E-A56AB00	1	SCADA-PACK 334E REMOTE TELEMETRY UNIT	SCHNEIDER ELECTRIC	01321RTU
30	UB10.241	1	UPS, DC 24VDC@10A DC UPS CONTROL UNIT	PULS	01121UPS
31	ML30.100	1	POWER SUPPLY 24VDC 1.3A 1PH 10W SWITCHING	PULS	01081PS
32	TDFA120V	1	TRANSIENT DISCRIMINATING FILTER 3 A 110-120 V	ERTECH	0105TDF
33	UTB50SP	3	UTB 1PAIR PLUGGABLE 30V 2A 20KA	ERICO	504TSB, 509TSB, 509TSB
34	E41-SSM	1	OPERATOR INTERFACE SINCH GRAYSCALE 320MHz 24VDC	BLACKBOX	0417HMI
35	EVSLOT12G10003	1	ETHERNET CABLE CAT5E GRAY 4 PAIR STRANDED BOOT SHIELDED 3FT	BLACKBOX	ENCLOSURE
36	EVSLOT12G10006	1	ETHERNET CABLE CAT5E GRAY 4 PAIR STRANDED BOOT SHIELDED 6FT	BLACKBOX	ENCLOSURE
37	319520	1	ANTENNA 800-2200 MPE STUD MOUNT WHITE SMA	MOBILE MARK INC.	ANTENNA
38	CUSTOM	1	BATTERY BRACKET	CUSTOM	ENCLOSURE

THE SIGNATURE IS THE PROPERTY OF SCHNEIDER ELECTRIC. IT IS TO BE USED ONLY FOR THE PROJECT AND NOT BE REPRODUCED OR COPIED FOR ANY OTHER PROJECT. IT IS TO BE DESTROYED WHEN THE PROJECT IS COMPLETED.

US-30397

8001 KNOXDALE BOULEVARD  
KNOXDALE, NC 27545

PROPOSAL / SPEC # 03-181-20030-01 PERSON 02 SHEET 10 OF 10 PAGES



Procurement Management Department  
1500 Monroe Street 4<sup>th</sup> Floor  
Fort Myers, FL 33901  
Main Line: (239) 533-8881  
Fax Line: (239) 485-8383  
[www.lee.gov.com/procurement](http://www.lee.gov.com/procurement)

**Posted Date:** December 10, 2018

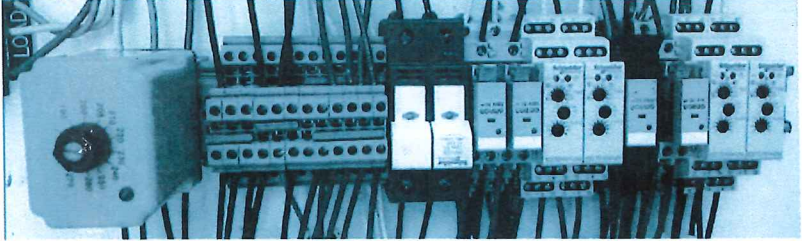
**Solicitation No.:** B180364BAW

**Solicitation Name:** Replacement of SCADA Panels

**Subject:** Addendum Number 3

The following represents clarification, additions, deletions, and/or modifications to the above referenced bid. This addendum shall hereafter be regarded as part of the solicitation. Items not referenced herein remain unchanged, including the response date. Words, phrases or sentences with a strikethrough represent deletions to the original solicitation. Underlined words and bolded, phrases or sentences represent additions to the original solicitation.

1.	We have not understood the new Bid Proposal form as more Options have been added only mentioning one element per package. For example Option V is for Timer Magnecraft what about the rest of the package can it have any brand relay? Be Omron, Schneider? Eaton? What terminal blocks. Etc.
Answer	<b>It shall be the Vendor's responsibility to provide for such components necessary to ensure complete operating installation. Please refer to the specifications section 9 for additional details.</b>
2.	Option VI is for Phoenix Contact Terminal Blocks what relays or timers to use under this option?
Answer	<b>Installation and material used shall be in accordance with the specifications provided within the solicitation package and associated addenda where applicable. Wiring terminals and connections not explicitly specified shall be provided by the Vendor to meet the specifications.</b>

3.	<p>If you see the picture attached there is a Phase monitor as part of the possible packages, this existing component is Diversified can that same brand be used?</p> 
Answer	<p>Yes, Diversified brand phase monitors may be used where necessary. It is the Vendor's responsibility to provide a phase monitor where necessary that meets the contract specifications. Please see the specifications of the solicitation package and article 9.18 specifically for additional details related to Phase Monitors.</p>

4.	<p>Can EATON timers be used per attachment (part numbers highlighted in yellow Relays D1RF1T D1RF1A and timer TR127) or Siemens Similar?</p>
Answer	<p>It shall be the Vendor's responsibility to provide for such components necessary to ensure complete operating installation. Please refer to the specifications section 9 for additional details.</p>

**BIDDER/PROPOSER IS ADVISED, YOU ARE REQUIRED TO ACKNOWLEDGE RECEIPT OF THIS ADDENDUM WHEN SUBMITTING A BID/PROPOSAL. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN THE BIDDER/PROPOSER BEING CONSIDERED NON-RESPONSIVE.**

**ALL OTHER TERMS AND CONDITIONS OF THE SOLICITATION DOCUMENTS ARE AND SHALL REMAIN THE SAME.**

  
 Procurement Analyst  
 Lee County Procurement Management





Procurement Management Department  
1500 Monroe Street 4<sup>th</sup> Floor  
Fort Myers, FL 33901  
Main Line: (239) 533-8881  
Fax Line: (239) 485-8383  
[www.leegov.com/procurement](http://www.leegov.com/procurement)

Posted Date: December 13, 2018

Solicitation No.: B180364BAW

Solicitation Name: Replacement of Supervisory Control and Data Acquisition System Panels

Subject: Addendum Number 4

The following represents clarification, additions, deletions, and/or modifications to the above referenced bid. This addendum shall hereafter be regarded as part of the solicitation. Items not referenced herein remain unchanged, including the response date. Words, phrases or sentences with a strikethrough represent deletions to the original solicitation. Underlined words and bolded, phrases or sentences represent additions to the original solicitation.

**1. OPEN DATE/BIDS DUE EXTENSION**

**FROM: December 14, 2018 at 2:30PM**

**TO: January 4, 2019 at 2:30PM**

**2. BID SCHEDULE:**

The Bid Schedule has been updated and a new Bid Schedule has been provided through this addendum.

**3. ATTACHMENTS:**

- a. Revised Bid/Proposal form
- b. Submersible Level Transducer Specification Sheet

1.	The Revised Bid/Proposal from on addendum 2 options III - VI calls for a manufacturer's part number, in which case the wording "complete package" should not apply. We assume just the part number should be quoted, please confirm.
Answer	Correct, options III - VI should not include the verbiage "complete package". Adjustments has been made in the Revised Bid/Proposal form below.
2.	We would also like to confirm the part number and manufacturer for the pressure transducer required.
Answer	The specifications for the Submersible Level Transducer can be reviewed below, specific features highlighted in yellow shall be quoted. Please review the Revised Bid/Proposal form for option VII.

BIDDER/PROPOSER IS ADVISED, YOU ARE REQUIRED TO ACKNOWLEDGE RECEIPT OF THIS ADDENDUM WHEN SUBMITTING A BID/PROPOSAL. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN THE BIDDER/PROPOSER BEING CONSIDERED NON-RESPONSIVE.

ALL OTHER TERMS AND CONDITIONS OF THE SOLICITATION DOCUMENTS ARE AND SHALL REMAIN THE SAME.

  
Procurement Analyst  
Lee County Procurement Management



Lee County Procurement Management  
**BID/PROPOSAL FORM**

**ADDENDUM 4**

Company Name: \_\_\_\_\_  
 Solicitation# B180364BAW Solicitation Name REPLACEMENT OF SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM (SCADA) PANELS

Having carefully examined the "Terms and Conditions", and the "Detailed Scope of Work", all of which are contained herein, propose to furnish the following which meet these specifications.

Bidder must bid **all line items** of the provided Bid/Proposal Form. This includes lines items pertaining to Section I, and additionally includes the installation of component package referred to herein as Option. Failure to provide pricing for all items will deem the Bidder as Non-Responsive and, therefore, ineligible for award.

Please include this page with your submission package.					
Item #	Section I	Unit of Measure	Quantity	Unit Cost	Total Cost
USPS 13060	Cost of removal of the existing Motorola unit, including any existing wiring and conduit; to include the installation of the new SCADA Pack panel, any wiring, conduit and support structure necessary to complete proper installation. To also include the modification of the control plans to accommodate the control features of the SCADA Pack remote terminal unit, and provide drawing of site. Additionally includes the installation of component package referred to herein as Option.	EA	1	\$	\$
SUBTOTAL SECTION I:					\$
TOTAL AMOUNT					\$

Item	Option I	Unit of Measure	Quantity	Unit Cost	Total Cost
Square D	Supply of full Square D components package for one unit installation. Material Only. Installation shall be included in Section I Item USPS 13060.	EA	1	\$	\$
OPTION I AMOUNT:					\$

Item	Option II	Unit of Measure	Quantity	Unit Cost	Total Cost
Allen Bradley	Supply of full Allen Bradley components package for one unit installation. Material only. Installation shall be included in Section I Item USPS 13060.	EA	1	\$	\$
OPTION II AMOUNT:					\$



Item	Option III	Unit of Measure	Quantity	Unit Cost	Total Cost
OMRON PN: G2R-2SN-AC120(S)	Supply of full Omron relay, 120vac, 2P for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
OPTION III AMOUNT:					\$

Item	Option IV	Unit of Measure	Quantity	Unit Cost	Total Cost
OMRON PN: G2R-2SND-DC24(S)	Supply of full Omron relay, 24vdc, 2P for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
OPTION IV AMOUNT:					\$

Item	Option V	Unit of Measure	Quantity	Unit Cost	Total Cost
Magnecraft PN: 822TD10H-UNI	Supply of full Magnecraft relay timer, M-Function, 120vac, 2P for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
OPTION V AMOUNT:					\$

Item	Option VI	Unit of Measure	Quantity	Unit Cost	Total Cost
Phoenix Contact PN: 3044814	Supply of full Phoenix Terminal Block, 2-Tier, Gray for one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060.	EA	1	\$	\$
OPTION VI AMOUNT:					\$

Item	Option VII	Unit of Measure	Quantity	Unit Cost	Total Cost
Contegra SLX 130	Supply of full Contegra Model SLX 130 Submersible Level Transducer, Output M = 4-20 mAADC, Sensor Options: IS = UL 913, Pressure Sensor: 5, with 30ft of Teflon cable, and B = Breather system only. For one unit installation. Material only. Installation shall be included in Section 1 Item USPS 13060	EA	1	\$	\$
OPTION VII AMOUNT:					\$

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## SUBMERSIBLE LEVEL TRANSDUCER

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Addendum 4

### MODEL SLX 130

#### FEATURES

- Choice of outputs:
  - Loop powered 4-20 mADC
  - 0.5 - 4.5 VDC
  - Intrinsic Safety
- Choice of ranges:
  - 5, 10, 15, 30 PSI
- Choice of cable jacket:
  - ♦ Teflon
  - ♦ TPE - Thermoplastic Elastomer
- High Chemical resistance
- Large 2.5" Teflon diaphragm
- Sealed breather system

#### APPLICATIONS

- Sewage Wet Wells
- Sludge Sumps
- Water Tanks and Reservoirs

CONTEGRA's SLX 130 submersible level transducers reliably measure the level of water, wastewater, or other liquids based upon the hydrostatic pressure of the liquid above the submerged sensor's diaphragm. The transducer provides an output signal directly proportional to the sensed level over the calibrated range of the sensing element.

These sensors provide superior service in adverse environments. Their wide diaphragm provides clog-free sensing. Their PVC, PVDF, and Viton® wetted parts provide strong chemical resistance and electrical isolation.

The SLX 130's signal cable jacket is available in Teflon®, which offers excellent chemical resistance, or TPE (thermosplastic elastomer). The TPE jacketed cable is available on two variations. The 'natural' TPE is used in wastewater or potable water applications. Alternatively, the Ropellant™ jacketed cable contains a rodent repellent. Ropellant™ is typically applied in wastewater applications.

The SLX 130 is available with a 0.5-4.5 VDC or a 2-wire, loop-powered 4-20 mADC output (i.e. the SLX 130-E or SLX 130-M respectively). The SLX 130-MIS is a UL 913 Listed loop-powered transducer used in hazardous locations when applied in conjunction with a UL Listed barrier such as Contegra's ISB-M1d.

Contegra Inc. 14033 Commerce Ave NE, Suite 300-405, Prior Lake, MN 55372 651-905-0900

Contegra



# MODEL SLX 130

Addendum 4

## Specifications

**Pressure Ranges (PSI):**  
 5 (0 - 11.5 ft.)  
 10 (0 - 23.1 ft.)  
 15 (0 - 34.6 ft.)  
 30 (0 - 69.3 ft.)  
*Consult factory for other ranges.  
 Range availability based on Output  
 Version and Sensor Options.*

**Accuracy:** 0.25% over the full-scale pressure range including nonlinearity, hysteresis, and repeatability.  
*Consult factory for 0.1% accuracy option.*

**Overpressure:** 4X @ 5 PSI, all others 3X

**Compensated Temperature:**  
 +32° to +180° F (0° to +82°C) non-freezing.

**Wetted parts:** PVC body, Teflon® signal cable and diaphragm, Viton® and PVDF sealing components.

**Signal Cable:** Available jacket material: Teflon® or TPE. The signal cable is shielded and contains both a Kevlar® support/strengthening member and a breather tube for connection to the factory-supplied sealed breather system.

**Input/Output:**  
**E Versions:** 5 VDC Class 2 supply / 0.5-4.5 VDC output. (The SLX 130-E is compatible for use with the T425.)  
**M Versions:** Loop powered 10-30 VDC Class 2 supply, 4-20 mA output, with Lead Reversal Protection.  
**MIS Versions:** Loop powered 10-28 VDC, 4-20 mA Output, with Lead Reversal Protection

**Mechanical:** Height - 9", Diameter - 3.8", Cable Diameter - 0.26"

**Approvals:** UL Listed 508.  
 MIS sensors are UL Listed, Intrinsically Safe for Class I Groups A,B,C,D Class II Groups E,F,G; when installed with a listed barrier and appropriate control drawing.

## Engineering Specifications

A submersible level transmitter shall be provided to sense the liquid level of the \_\_\_\_\_ at the location as shown on the plan drawings and in accordance with the manufacturer's recommendations.

The transducer housing shall be fabricated of PVC with a 2.5" diameter Teflon diaphragm. Silicone oil shall be used as a hydraulic fill. The sensor shall be mounted using its signal cable and have 3/4" NPT pipe threading for pipe mounting.

The internal air pressure of the sensor assembly shall be relieved to atmospheric pressure through a sealed breather system.

The sensor's signal cable shall be Teflon® or TPE [ < Choose one]. The signal cable shall contain an integral breather tube which shall be connected to the factory supplied sealed breather system and in accordance with the manufacturer's mounting instructions.

### E version (0.5-4.5 VDC output)

The transmitter shall be a 3 wire, 5 VDC powered type with an output of 0.5-4.5 V directly proportional to the measured level excursion. The transducer shall be UL 508 Listed. The transducer shall be a CONTEGRA Model SLX 130-E.

### M version (4-20 mA output)

The transmitter shall be a 4-20 mADC, 2 wire, 10-30 VDC loop-powered type, with its output signal directly proportional to the measured level excursion. The transducer shall be UL 508 listed. The transducer shall be a CONTEGRA Model SLX 130-M.

### MIS version (4-20 mA output,

Intrinsically safe version  
 (Substitute the following for the underlined text immediately above.) The sensor shall be Listed to UL 913 as intrinsically safe. The transducer shall be a CONTEGRA Model SLX 130-MIS.

Refer to [www.Contegra.com](http://www.Contegra.com) for further specifications and updates including: range availability, accuracy option, entity parameters and barrier information.

## Ordering Information (SEE EXAMPLE BELOW\*\*)

Model	Output Version	Sensor Options	Pressure Sensor	Feet of cable	Options (not part of UL Listed product)
SLX 130	E = 0.5-4.5 VDC M = 4-20 mADC	IS = UL 913 Listed	XX	XXX T, R or W	ENCLOSURE A = Nema 4X Junction box B = Breather system only OTHER T = Transient protector M = Meter (digital)
			5	30 ft. included/min.	
			10	10 ft. increments	
			15	T = Teflon®	
			30	R = TPE w/Ropellant™ W = TPE w/o Ropellant ^ Choose T, R or W	

Consult your Contegra representative, the factory, or [www.Contegra.com](http://www.Contegra.com) for additional options

### \*\* A typical model number is SLX 130-MIS-10-40T-B

This includes a submersible level transducer with a 10 PSI sensor (UL approved intrinsically safe), 4-20 mADC output, 40 feet of Teflon® jacketed cable and a sealed breather system.

Teflon, Viton, and Kevlar are registered trademarks of DuPont. CONTEGRA and Station Master are registered trademarks and Ropellant is a trademark of Contegra Inc. Specifications are subject to change without notice.

**Contegra**

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**EXHIBIT B  
FEE SCHEDULE**

<b>ITEM#</b>	<b>OPTION</b>	<b>Unit Cost</b>
<b>USPS 13060</b>	<b>N/A</b>	<b>\$2,027.43</b>
<b>Square D</b>	<b>I</b>	<b>\$1,438.48</b>
<b>Allen Bradley</b>	<b>II</b>	<b>\$1,706.58</b>
<b>OMRON PN: G2R-2SN-AC120(S)</b>	<b>III</b>	<b>\$1,394.44</b>
<b>OMRON PN: G2R-2-SND-DC24(S)</b>	<b>IV</b>	<b>\$1,394.44</b>
<b>Magnecraft PN: 822TD10H-UNI</b>	<b>V</b>	<b>\$1,394.44</b>
<b>Phoenix Contact PN: 3044814</b>	<b>VI</b>	<b>\$1,394.44</b>
<b>Contegra SXL 130</b>	<b>VII</b>	<b>\$1,336.66</b>

## EXHIBIT C INSURANCE REQUIREMENT

Ver 01/03/2017-6

### INSURANCE GUIDE



LEE COUNTY  
SOUTHWEST FLORIDA

#### Lee County Insurance Requirements

Minimum Insurance Requirements: *Risk Management in no way represents that the insurance required is sufficient or adequate to protect the vendors' interest or liabilities. The following are the required minimums the vendor must maintain throughout the duration of this contract. The County reserves the right to request additional documentation regarding insurance provided*

- a. Commercial General Liability - Coverage shall apply to premises and/or operations, products and completed operations, independent contractors, contractual liability exposures with minimum limits of:

\$1,000,000 per occurrence  
\$2,000,000 general aggregate  
\$1,000,000 products and completed operations  
\$1,000,000 personal and advertising injury

- b. Business Auto Liability - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:

\$1,000,000 combined single limit (CSL)  
\$500,000 bodily injury per person  
\$1,000,000 bodily injury per accident  
\$500,000 property damage per accident

- c. Workers' Compensation - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Workers Compensation exemptions may be accepted with written proof of the State of Florida's approval of such exemption. Employers' liability will have minimum limits of:

\$500,000 per accident  
\$500,000 disease limit  
\$500,000 disease - policy limit

*"The required minimum limit of liability shown in a. and b. may be provided in the form of "Excess Insurance" or "Commercial Umbrella Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."*



**LEE COUNTY**  
SOUTHWEST FLORIDA

**Verification of Coverage:**

1. Coverage shall be in place prior to the commencement of any work and throughout the duration of the contract. A certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:
  - a. The certificate holder shall read as follows:

Lee County Board of County Commissioners  
P.O. Box 398  
Fort Myers, Florida 33902
  - b. *"Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials" will be named as an "Additional Insured" on the General Liability policy, including Products and Completed Operations coverage.*

**Special Requirements:**

1. An appropriate "Indemnification" clause shall be made a provision of the Contract.
2. If applicable, it is the responsibility of the general contractor to ensure that all subcontractors comply with all insurance requirements.
3. Place the project name and number in the Description of Operations box.
4. Insurance carriers providing coverage required herein shall be licensed to conduct business in the State of Florida and shall possess a current A.M. Best's Financial Strength Rating of B+ Class VII or better.

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End of Insurance Guide Section

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B180364BAW - REPLACEMENT OF SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM (SCADA) PANELS