REQUEST FOR PROPOSALS BY SYRACUSE REGIONAL AIRPORT AUTHORITY

SRE Building Addition

RFP REFERENCE # 2023-09

Issued: 06/30/23

Submission Deadline: July 21th

IMPORTANT NOTICE: A restricted period under the Procurement Lobbying Law is currently in effect for this Procurement and it will remain in effect until the Authority executes the contract. Proposers are prohibited from contact related to this procurement with any Syracuse Regional Airport Authority member, officer, staff or employee other than the designated contact person (if any) and/or the designated email address for contact. Please refer to Sections 2.2 and 2.3 below.

All contacts/inquiries shall be made by email **only** to the following address: bids@syrairport.org

ALL PROPOSALS MUST BE RECEIVED VIA EMAIL PRIOR TO 4:00PM on Wednesday, July 21th.

PROPOSALS ARE ONLY ACCEPTED ELECTRONICALLY AND MUST BE ADDRESSED TO:

bids@syrairport.org

PLEASE PRINT THE WORDS "RFP REFERENCE # 2023-09" IN THE SUBJECT LINE OF THE PROPOSAL EMAIL.

1. GENERAL INFORMATION

1.1. Background

The Syracuse Regional Airport Authority (the "Authority") was created by the New York State Legislature on August 17, 2011 by Chapter 463 of the Laws of 2011. The Authority is the operator of the Syracuse Hancock International Airport in Syracuse, New York. The Authority is a New York State public benefit corporation established for the purpose of (i) stimulating economic growth, (ii) increasing trade and tourism, (iii) promoting safe and secure air travel in the region, (iv) providing citizens with efficient and economical air transportation options, and (v) to protect and enhance the natural resources and quality of the environment.

1.2. Intent and Purpose of this RFP

The intent and purpose of this Request for Proposals (the "RFP") is to solicit responses for the selection of a firm to provide General Contracting services to furnish and install all items shown on the Hyperspace Vending Drawings, specifications and Exhibits.

A comprehensive description of the Project can be found at **Exhibit A** to this RFP.

1.3 Key Dates in the RFP Schedule

It is anticipated that a Project award will be made in connection with this Request for Proposals (RFP) based on the following schedule:

Friday, June 30 – Issuance of Request for Proposals
Friday, July14 – Mandatory Walkthrough
Friday, July 18, 4:00PM – Questions/Clarification Submission Deadline
Friday, July 21, 4:00PM – Proposal Submission Deadline
July 21th– July 28th – Proposal Evaluation Period and Proposer Interviews (if applicable)
Anticipated by July 28th – Notice of Award by the Authority
Anticipated by August 4th – Execution of Contract

Please note: *The Authority reserves the right to change any of the dates stated in this RFP. If such change occurs, the Authority will notify all entities who received the RFP directly from the Authority and post the change(s) on the Syracuse Regional Airport Authority's website, which is part of the Syracuse Hancock International Airport website (http://www.syrsraa.com/bids-rfp-rfq/).* Interested parties that receive this RFP or access it from a source other than the Authority should contact the Authority at bids@syrairport.org to advise the Authority of their interest and to confirm that their correct contact information, including email address, is placed on file with the Authority.

1.4 Amendment or Termination of RFP

RFP Amendment, Cancellation/Postponement: The Syracuse Regional Airport Authority reserves the right to amend, cancel or postpone this RFP at any time without penalty. The Syracuse Regional Airport Authority reserves the right to terminate or cancel any contract awarded pursuant to this RFP, either pre or post execution, or any part of said contract, immediately upon notice mailed or delivered by the Authority to the selected proposer.

1.5 Unbalanced Proposals

The Syracuse Regional Airport Authority reserves the right to reject any and all proposals at any time not deemed in the best interest of the Authority and to reject as informal such proposals, as in the Authority's opinion, are incomplete, conditional, obscure, or which contain irregularities of any kind.

1.6 Questions or Requests for Information or Clarification

Any questions, requests for information or clarification regarding this RFP should be submitted via email, citing the relevant RFP page(s) and section(s), no later than **Friday, July 18st, 4:00PM** to bids@syrairport.org.

Questions will not be accepted other than by email, and any question received after the deadline may not be answered. The list of questions/requests for information or clarification and the official responses will be emailed to all Proposers who obtained this material directly from the Authority and posted on the Syracuse Regional Airport Authority's website, http://www.syrsraa.com/bids-rfp-rfq/.

Proposers that receive this RFP or access it from a source other than the Authority should contact the Authority at bids@syrairport.org to confirm that and/or add their correct contact information, including email address, is on file with the Authority **for purposes of this RFP**. This will ensure that the proposer receives the list of questions/requests for information, amendments or clarifications and the official responses. The Authority is not responsible for a proposer's failure to receive the list of questions/requests for information, amendments or clarifications and the official responses, due to the proposer's failure to provide the Authority its contact information, including email address, and no allowance will be made for a proposer that submitted a proposal that is not in compliance with the RFP requirements due to the proposer's aforementioned failure to receive the list of questions/requests for information or clarification/amendments and addenda, and the official responses to such inquires and/or changes.

By submitting a proposal to the Authority in response to this RFP, each proposer agrees and represents and warrants that the proposer: a) has all information necessary for the proposer to complete and submit a fully responsive proposal to the Authority; b) that if awarded the contract, that the proposer has all the necessary skills and resources to complete the contract for the amount stated in the proposal; and c) that the proposer is waiving any and all claims against the Authority and its members, officers, staff and employees relating to the submission of the proposer's proposal to the Authority. Proposer will bear any, and all travel and other costs and expenses related to its attendance at the pre-submittal meeting and facility tour (if any). Verbal

responses provided by Authority representatives at such meeting/tour are informal and are not binding on the Authority.

1.7 Amendments and Addenda

In the event that it becomes necessary to revise this RFP, such revision will be by an addendum to this RFP. Any addendum to this RFP will become part of this RFP and part of any contract awarded as a result of this RFP. Further, if a proposer discovers any conflict, discrepancy, omission or other error in this RFP, the proposer shall immediately notify the Authority at bids@syrairport.org, of such error and request modification to the document to address such alleged error. The Authority shall make any RFP modifications necessary by addenda, provided that any such modifications would not materially benefit or disadvantage any one proposer over another. If a proposer fails, prior to the submission deadline, to notify the Authority of a known error or an error that reasonably should have been known or discovered by proposer, the proposer shall assume the risk of such failure to notify. If awarded the contract, the proposer shall not be entitled to additional compensation, change order or time allowance by reason of the error or its late correction. All RFP addenda will be communicated via email to the recipients of the original RFP.

The Authority is not responsible for a proposer's failure to receive amendments or addenda pertaining to this RFP. It is incumbent on proposers to routinely check for amendments and addenda at *(http://www.syrsraa.com/bids-rfp-rfq/* and no allowance will be made for a proposer's failure to receive addenda. As of the date of issuance, there are no designated dates for release of addenda. However, proposers should check the Authority's website frequently beginning at the time of RFP issuance through the deadline for submission of proposals. It is the sole responsibility of the proposer to be knowledgeable of all amendments, addenda, questions and answers related to this RFP.

1.8 Submission Requirements

Proposer's proposal, including all required forms attached at Exhibits to this RFP, shall be submitted via email to bids@syrairport.org in response to this RFP. The email with attached proposal and all required forms in PDF format shall be submitted. Each copy shall be clearly labeled with the name of the proposer and the date. Each copy must contain the required information for the proposer. Proposers are to ensure that their proposals are in compliance with all of the requirements of this RFP. Failure to do so may result in disqualification. Proposers should also be willing and able to provide additional information that may be required. In addition, interviews may be requested at the discretion of any RFP review or ad hoc Committee appointed by the Authority. All information and materials submitted to the Authority in response to this RFP will become the property of the Authority. Proposers shall not submit proprietary or confidential business information unless they believe such information is critical to their submittals or presentations. If any such information is included, it shall be clearly identified as such. The Authority shall endeavor to protect the identified information only to the extent allowed under applicable law.

1.9 Submission Due Date

Proposals must be received via email no later than **Friday, July 21, 4:00PM** at:

Proposals received after the specified date and time will not be considered.

2.0 Proposals and Qualifications Review

Upon receipt of proposals, the Authority's shall internally review each proposal and make a recommendation to the Board of the Authority. Proposals will be reviewed on the basis of competency, experience and ability to perform the services required. Proposers should be willing and able to provide additional information that may be required by the Authority. The Syracuse Regional Airport Authority reserves the right to waive any formalities and to reject or negotiate any and all proposals for any reason.

2.1 Award

The Syracuse Regional Airport Authority may award the project(s), following the required approvals, if it determines such project(s) is/are in the best interest of the Syracuse Regional Airport Authority.

2.2 Restriction of Communications

Proposers are prohibited from contact related to this RFP with any Authority Board member, officer, staff, employee or representative other than designated personnel from the date this RFP is issued until the contract(s) have been executed by the Authority. Violation of this provision is grounds for immediate disqualification. All inquiries concerning this RFP must be done via email at: bids@syrairport.org Please indicate RFP Reference # **2023-09** in the subject line of the email.

2.3 New York State Finance Law Sections 139-j and 139-k

Pursuant to State Finance Law §§ 139-j and 139-k (collectively, the "Statute"), certain restrictions are placed on contact with State agencies, including public entities such as the Authority, during the procurement process. The term "contact" is defined in the Statute as "any oral, written or electronic communication with a governmental entity under circumstances where a reasonable person would infer that the communication was intended to influence the governmental entities conduct or decision regarding the governmental procurement." Upon receiving any contact, the Authority must inquire and record whether the person or organization that made the contact was the offeror (defined below), or was retained, employed or designated on behalf of the offeror to appear before or contact the Authority. The term "offeror" is defined in the Statute as "the individual or entity, or any employee, agent or consultant or person acting on behalf of such individual or entity, that contacts a governmental entity about a governmental procurement during the restricted period of such governmental procurement whether or not the caller has a financial interest in the outcome of the procurement; provided, however, that a

governmental agency or its employees that communicates with the procuring agency regarding a governmental procurement in the exercise of its oversight duties shall not be considered an offeror." The "restricted period" is defined in the Statute as "the period of time commencing with the earliest written notice, advertisement or solicitation of a request for proposal, invitation for bids, or solicitation of proposals, or any other method for soliciting a response from offerors intending to result in a procurement contract with a governmental entity and ending with the final contract award and approval by the governmental entity and, where applicable, the state comptroller." Authority members, officers, staff and employees are also required to obtain certain information when contacted during the restricted period and make a determination of the responsibility of the offeror pursuant to the Statute. Certain findings of non-responsibility can result in rejection for contract award and, in the event of two findings within a four-year period; the offeror is debarred from submitting a proposal on or being awarded any procurement contract for a period of four years from the date of the second final determination. Any Proposer responding to this RFP must complete the Non-Collusive Proposal Certification attached hereto at **Exhibit B** and submit it to the Authority with its proposal. Questions regarding this form may be directed to the Designated Contact email for this solicitation and/or visit the following website for information: https://online.ogs.ny.gov/legal/lobbyinglawfaq/

VIOLATIONS OF THE FOREGOING SECTIONS 2.2 and 2.3 SHALL BE STRICTLY ENFORCED AND MAY RESULT IN DISQUALIFICATION OF THE PROPOSAL TO WHICH IT PERTAINS.

2.4 Exceptions

Any and all exceptions to this RFP must be clearly and completely indicated in proposals submitted. Please be advised that any exceptions to the requirements in this RFP may be cause for a proposer's proposal to be disqualified.

2.5 Proposal Costs

The proposers' costs for the proposers entire submittal effort shall be borne by the proposer. The Authority will not reimburse any proposer or other firm for any costs associated with its submittal effort.

2.6 Whistleblower Policy and Procedures

The selected Proposer will be required to comply with and perform its services under the contract in accordance with any and all Whistleblower Policy and Procedures adopted by the Authority and available on its website at: https://syrsraa.com/

2.7 M/WBE-SDVOB Program

As advised above, the Authority is a New York public benefit Corporation. As such it must comply with Articles 15-A and 17-B of the New York State Executive Law pertaining to Minority/Women Business Enterprises (M/WBE) and Service-Disabled Veteran Owned Businesses (SDVOB) respectively. These statutes require the Authority to promote contracting opportunities for M/WBE's and SDVOB's. In turn, proposers utilization of M/WBE's and

SDVOB's is a factor in awarding projects and imposes obligations on a selected proposer to utilize M/WBE's and SDVOB's in performance of contracts with the Authority. By submitting a proposal, the Proposer represents that it has reviewed and familiarized itself with the New York State M/WBE and SDVOB regulations which are incorporated herein by this reference. Any conflicts between this solicitation and those regulations shall be resolved in favor of the regulations. Each proposer shall, in accordance with the regulations, make good faith efforts and, in a manner that can be established in documentary form, solicit active participation by certified M/WBE's and SDVOB's in connection with any contract resulting from this RFP. These regulations, and any contract to be entered into between the Authority and the successful proposer, will impose reporting obligations on the awarded contractor to periodically report various M/WBE and SDVOB information to the Authority. Annexed hereto at **Exhibits C and D** respectively are various M/WBE-SDVOB forms and information which the Authority requires all proposers to complete and submit with each proposal. Failure to do so will result in a finding of non-responsiveness and rejection of that proposal.

For purposes of this solicitation, the Authority has established an overall combined goal of THIRTY percent **(30%) for** Minority/Women Business Enterprises (M/WBE) and SIX percent (6%) for Service-Disabled Veteran Owned Businesses (SDVOB)participation.

2.8 Conditions, Terms and Limitations

This RFP is subject to the specific conditions, terms and limitations stated below:

1. The services to be performed shall conform to and be subject to the provisions of the New York Public Authorities Law, Generally Accepted Auditing Standards, Generally Accepted Accounting Principles, and Standards promulgated by the NYS Comptroller and Authorities Budget Office and all other applicable laws and regulations of all Federal and State agencies having jurisdiction.

2. Valid licenses and registrations as required by the Authority and any State, and Federal agencies shall be obtained by the successful proposer prior to commencing work.

3. Final designation of a proposer will depend on satisfaction of all additional RFP documentation and review requirements of the Authority and will be subject to the subsequent approval by the Authority.

4. No transaction will be consummated if any selected proposer or principal of a selected proposer or any member of the proposer's development team is in arrears or in default upon any debt, lease, contract or obligation regarding the Authority or Syracuse Hancock International Airport. The Authority reserves the right to reject any response to this RFP by any such proposer.

5. The Authority reserves the right to:

    a. Negotiate with one or more proposers, and/or negotiate on terms other than those set forth herein.

b. At any time, waive compliance with, or change any of the terms and conditions of this RFP, to entertain modifications or additions to selected proposals.

6. This RFP does not represent any obligation or agreement whatsoever on the part of the Authority. Any such obligation or agreement may only be incurred or entered into by written agreement authorized by the Board of the Authority, approved as to form by the Authority's counsel and executed by the Executive Director of the Authority.

7. Mere selection of a proposer will not create any rights on the proposer's part, including, without limitation, rights of enforcement, equity or reimbursement, until after all required government approvals are received and the insurance, agreement and all related documents are fully approved and executed.

8. This RFP and any agreement or other documents resulting therefrom is subject to Federal, State, or local law or regulation having jurisdiction over the subject matter thereof, as the same may be amended from time to time.

9. Title VI Solicitation Notice: The Authority, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d-2000d-4) and its related Regulations, hereby notifies all proposers that it will affirmatively ensure that any contract entered into pursuant to this RFP, will provide disadvantaged business enterprises a full and fair opportunity to submit proposals in response to this RFP and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

2.9 EVALUATION PROCESS

2.9.1 General Information

Upon receipt of proposals, the Authority and/or any Ad Hoc Committee it shall appoint for reviewing proposals ("Committee") will review each Proposal and may recommend a Proposer(s) to the Board of the Authority to be awarded a contract to provide the required services at the Airport.

Proposers should be willing and able to provide additional information that may be required by the Authority or its Committee. Also, interviews and office visits may be requested at the discretion of the Authority/Committee.

Upon review of proposals submitted by Proposers, the Authority/Committee may, at its discretion, submit to Proposers written questions and requests for clarification relating to their Proposals. Proposers will be provided the period of time in which the written responses to the Authority's requests for clarification must be completed.

Other than to provide clarifying information as may be requested by the Authority, including the Committee, no Proposer will be allowed to alter its proposal or add information.

2.9.2 Submission Review

The Authority/Committee will examine all proposals that are received in a proper and timely manner to determine if they meet the proposal submission requirements, as described in this RFP. Proposals that are materially deficient in meeting the submission requirements or have omitted material documents, in the sole opinion of the Committee, may be rejected. Proposals failing to pass the Submission Review will be considered non-responsive and will not be evaluated any further.

2.9.3 Proposal Review Criteria

Proposals will be reviewed based on a variety of criteria, including but not limited to:

1. Project understanding and approach as demonstrated, (described further in Exhibit A)
2. The Proposer's specific experience, stability and history of performance providing the requested services similar to those under consideration.
3. The availability of adequate personnel to provide the requested services safely and efficiently.
4. The Proposer's approach to the planning, organization, supervision, and management of the requested services at the Airport, including communications procedures, problem-solving approaches, costing and other level-of-service factors.
5. The Proposer's proposed fee for the services requested herein with a breakdown of those fees as they relate to discrete tasks or phases of the work to be performed as outlined further in Exhibit D
6. Commitment to consistently maintain the highest standards of performance and the expeditious resolution of problems and complaints.
7. The financial stability of Proposer's organization.
8. The recommendations and opinions of each Proposer's previous customers or clients.
9. Information provided in response to specific questions and requirements contained in the RFP and all attachments/exhibits.
10. The proposer's past experience at the Syracuse Hancock International Airport.
11. Information provided at interview (if required).

As stated above, the selection criteria include the fee the Proposer will charge the Authority for the services described in this RFP. The Proposer must certify in the proposal that its fee covers all services proposed and meets the requirements of this RFP. The total estimated contract value for the services provided will be derived from the successful proposer's proposed fee.

The Committee will evaluate each proposal based on a "Best Value" concept which is a basis for awarding contracts for purchases of goods, equipment, services, concessions and leases of land which prioritizes cost, quality, and efficiency in obtaining various goods and services from responsive and responsible providers. In determining Best Value, non-cost factors may be considered, including, but not limited to, reliability of a product; efficiency of operation; difficulty/ease of maintenance; useful life of a good; ability of a provider to provide timely performance; and experience of a provider.

The Authority and its review committee will determine which proposal(s) best satisfies its requirements. The Authority reserves all rights with respect to the award. All proposals deemed to be responsive to the requirements of this procurement will be evaluated. Proposals failing to meet the requirements of this RFP may be eliminated from consideration. Qualified staff/individuals will evaluate all submitted proposals. The Authority may request clarification of a proposal.

2.9.4 Reservation of Rights

The Authority reserves the right to:

(i) withdraw or cancel the RFP at any time and at its sole discretion;

(ii) reject any or all proposals received in response to this RFP;

(iii) accept a proposal and any subsequent proposal for the contract from someone other than the lowest cost Proposer consistent with the criteria for the evaluation of proposals;

(iv) make an award under the RFP in whole or in part;

(v) disqualify any proposer whose conduct and/or proposal fails to conform to the requirements of the RFP;

(vi) seek clarifications and revisions of proposals;

(vii) use proposal information obtained through site visits, management interviews and the Authority's investigation of a proposer's qualifications, experience, ability or financial standing, and any material or information submitted by the proposer in response to the agency's request for clarifying information in the course of evaluation and/or selection under the RFP;

(viii) prior to the bid opening, amend the RFP specifications to correct errors or oversights, or to supply additional information, as it becomes available;

(ix) prior to the bid opening, direct proposers to submit proposal modifications addressing subsequent RFP amendments;

(x) change any of the scheduled dates;

(xi) eliminate any mandatory, non-material specifications that cannot be complied with by all of the prospective proposers;

(xii) waive any requirements that are not material;

(xiii) negotiate with the successful proposer within the scope of the RFP in the best interests of the Authority;

(xiv) conduct contract negotiations with the next responsible proposer, should the Authority be unsuccessful in negotiating with the selected proposer;

(xv) utilize any and all ideas submitted in the proposals received;

(xvi) unless otherwise specified in the solicitation, every submission is a firm offer and not revocable for a period of 60 days from the bid opening; and,

(xvii) require clarification at any time during the procurement process and/or require correction of arithmetic or other apparent errors for the purpose of assuring a full and complete understanding of an offerer's proposal and/or to determine an offerer's compliance with the requirements of the solicitation.

(xviii) waive or modify minor deviations in the proposals received after prior notification to the Proposers;

(xix) request best and final offers; and

(xx) Should the Authority be unsuccessful in negotiating a contract with a selected Proposer, the Authority may begin contract negotiations with the next highest-rated qualified Proposer. In addition, if it is subsequently determined by the Authority that the selected Proposer is non-responsible, the Authority may then invite the next highest rated, qualified Proposer(s) to enter negotiations for purposes of executing a contract. The Authority may do all of the foregoing without the need to recommence the RFP process.

The foregoing is a non-exhaustive list of the Authority's rights and remedies, all of which are hereby expressly reserved whether or not specifically listed.

2.9.5 CONFLICTS OF INTEREST

Members, officers, staff, and employees of the Syracuse Regional Airport Authority may respond to this RFP only in accordance with the Authority's Code of Ethics.

2.9.6 INSURANCE REQUIREMENTS

The selected Contractor shall be required to purchase at its own cost and expense and maintain at all times for the duration of the contract with the Authority, insurance coverage as specified below. Additional coverage may apply as necessary.

The Contractor shall obtain and for the duration of the contract, maintain a Commercial General Liability insurance policy including contractual liability coverage, with minimum limits of:

- Bodily Injury and Property Damage (per occurrence) $ 2,000,000
- Combined Single Limit.
- Products / Completed Operations Aggregate $4,000,000
- General Aggregate $4,000,000
- The General Liability policy shall name the Authority and the City of Syracuse and their respective members, officers, staff, and employees as additional insureds for both ongoing and completed operations.

The Contractor shall obtain and maintain workers' compensation and employer's liability insurance policy or policies covering its obligations in accordance with the provisions of New

York Workers' Compensation Law, including Article 9 of New York Workers' Compensation Law, known as the Disability Benefits Law, and any and all rules, regulations and procedures promulgated pursuant to the New York Workers' Compensation Law.

The Contractor shall obtain and maintain a commercial umbrella/excess insurance policy with annual aggregate coverage of at least one million Dollars ($1,000,000) for the commercial general liability. The schedule of underlying insurance, additional insured follow form or its equivalent and endorsements must be provided to the Authority.

2.9.7 CONTRACT PREPARATION/NEGOTIATION

After a proposer(s) is recommended by the Authority's review committee, and if necessary approved by the Authority's Board, an agreement incorporating the agreed upon compensation and scope of services and other relevant terms will be drafted by the Authority's counsel and submitted to the successful proposer.

Exhibit A

PROJECT BACKGROUND AND SCOPE OF WORK

SRAA has procured additional Multi Function Snow Removal Machines that will be housed within the existing SRE building with this addition, as the new machines are larger than their predecessors.

The scope of services for the Project includes the following:

- Furnish all materials, equipment, testing, and labor as shown on the RFP documents and drawings. RFP will be posted on SRAA's website https://syrsraa.com/. Or https://syrairport.org/, as well as Syracuse Builders Exchange.
- **Stamped Drawings will be included within Addendum #1.**

-
    - Obtain all required permits (fee paid by Contractors) before work commences.
    - Complete all necessary preparation work to include at a minimum: Notice of Award, Signed Contract, Insurance Certificate, Permit (all scopes), construction schedule, schedule of values, pre-construction meeting attendance, MWBE/SDVOB Goals, submittals, etc. prior to any construction activities.
    - Installation of work shall be City of Syracuse Code Compliant and per Construction Industry Standards.
    - Furnish and install: layout, light gauge metal framing, waterproofing, PT lumber and Simpson fasteners (or equal) insulation, metal panel roofing siding and interior panels, lighting, switching, piping and wiring, overhead door, door frame and all controls,etc. as shown on Bid Documents, with all systems to be complete and functional. Colors to match existing.
    - Maintain temporary barriers to ensure customer comfort throughout demolition and construction. Includes furnish, installation and removal. Includes a Construction Safety Plan CSPP.
    - Removal and disposal of all packaging/construction debris from site.
    - All construction testing and 3rd party inspections.
    - Certificate of Occupancy and Closeout

MANDATORY Pre-Submission Meeting

All interested bidders must participate in a mandatory walkthrough of the site with Authority staff. The walkthrough will take place on July 14th at Syracuse Hancock International Airport. RSVP is required to stokesj@syrairport.org by July 13th.

Project Execution Schedule

The Proposer shall prepare a project execution schedule including each task and subtasks, milestones, and a schedule for progress meetings.

Schedule shall show the following milestones: contract date, submittals, material lead times and deliveries, temp wall construction, Construction, Turnover. Date of Substantial Completion to be No Later than 9/28/23.

- All Submittals Submitted or Approvals (includes but not limited to certificate of insurance, permit application, SOV) 7/21/23- 8/4/23
- Long Lead Items released for fabrication and delivery no later than 8/4/23
- Receipt of Project materials to project site 8/4/239/28/23
- Installation of Electrical and Plumbing (Back of House Rough In) Badging/Escort
- Installation of Construction Materials 8/4/239/28/23
- Substantial Completion 9/28/23
- Punchlist 9/15/23-9/28/23
- Turnover 9/28/23

Project Phasing

SRE Buildout will be a single phase project with work starting at SouthWest Corner of existing building.

Exhibit B

SYRACUSE REGIONAL AIRPORT AUTHORITY
NON-COLLUSIVE PROPOSAL CERTIFICATION

By submission of this proposal, each Respondent and each person signing on behalf of any Respondent certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

1. The prices in this proposal have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Respondent, or with any competitor;

2. Unless otherwise required by law, the prices which have been quoted in this proposal have not been knowingly disclosed by the Respondent and will not knowingly be disclosed by the Respondent prior to opening, directly or indirectly, to any other respondent or to any competitor; and

3. No attempt has been made or will be made by the Respondent to induce any other person, partnership or corporation to submit or not to submit a proposal for purpose of restricting competition.

I hereby affirm under the penalties of perjury that the foregoing statement is true.

I also acknowledge notice that a false statement made in the foregoing is punishable under Article 20 of the Penal Law.

SIGN HERE _____. _____

Signature of Respondent's Authorized Person Date

_____.

Name of Respondent

_____.

Name of Respondent's Authorized Person

_____.

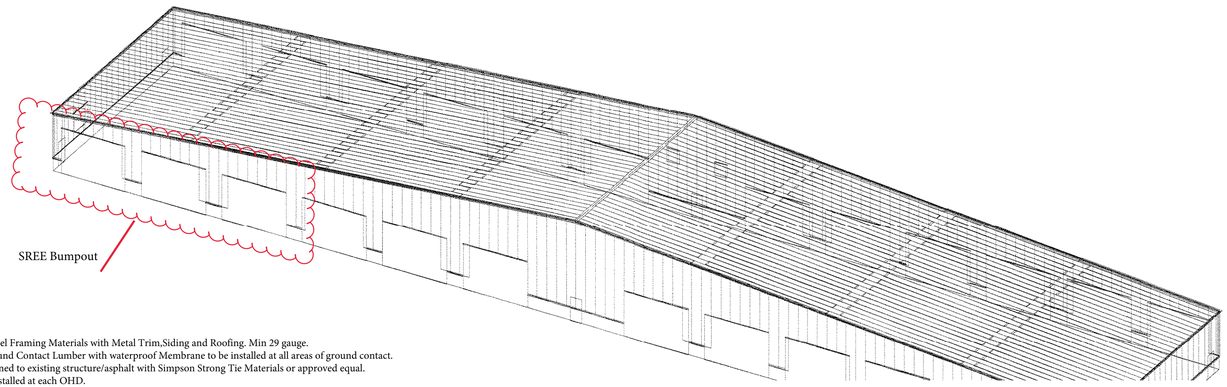
Title of Respondent's Authorized Person

Exhibit C

Pricing Proposal Form

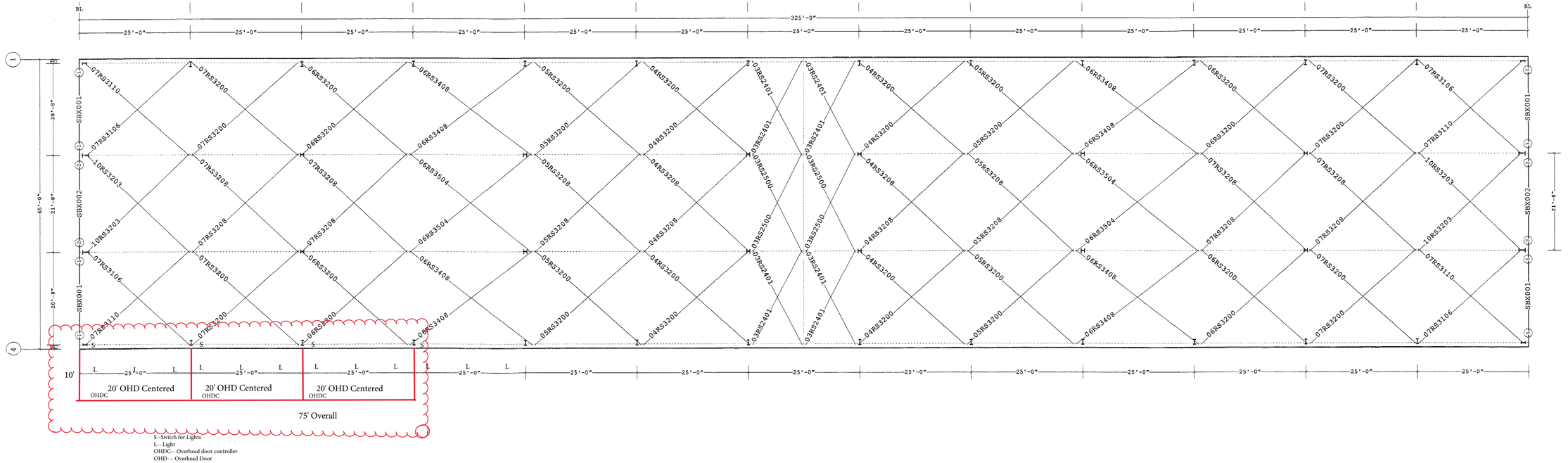
Provide pricing information as follows:

Task	Lump Sum Price
SRE Building Addition	

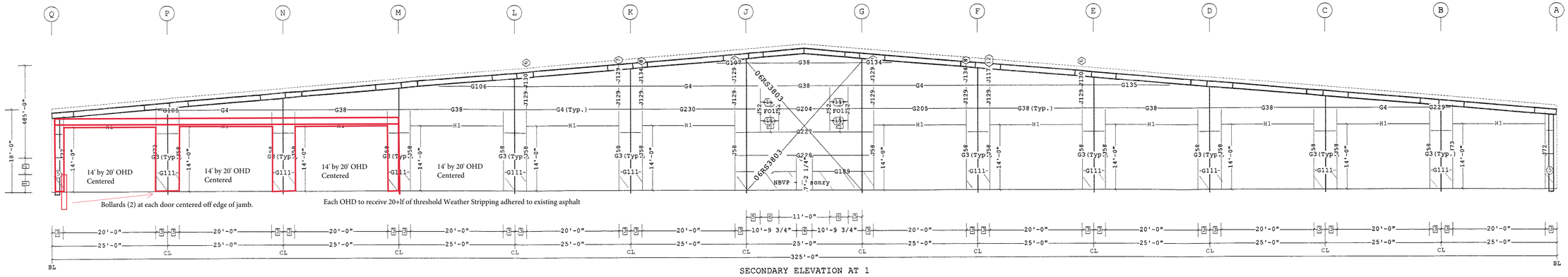


Notes:

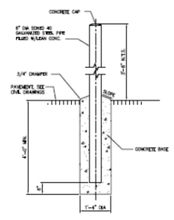
1. Light Gauge Metal Steel Framing Materials with Metal Trim,Siding and Roofing. Min 29 gauge.
2. Pressure Treated Ground Contact Lumber with waterproof Membrane to be installed at all areas of ground contact. All walls shall be fastened to existing structure/asphalt with Simpson Strong Tie Materials or approved equal.
3. OHD Seals shall be installed at each OHD.
4. Bollards to be Schedule 80 6" diameter with 4'embedment and 4' above ground filled with concrete and painted Yellow.
5. All Metal products shall match existing for color.
6. Overhead Doors to be. .....
7. New bumpout framing shall be connected to structural members of the existing building. (Z/C girtz, VP framing members with acceptable fasteners, anchors by Simpson Strong Tie or approved equal.
8. All wall and ceiling cavities shall be insulated.
9. All walls and ceilings shall be framed with 6" light gauge metal framing.
10. All framed surfaces will receive metal panels. Interior ceilings and walls will be white, exterior to match existing.
11.



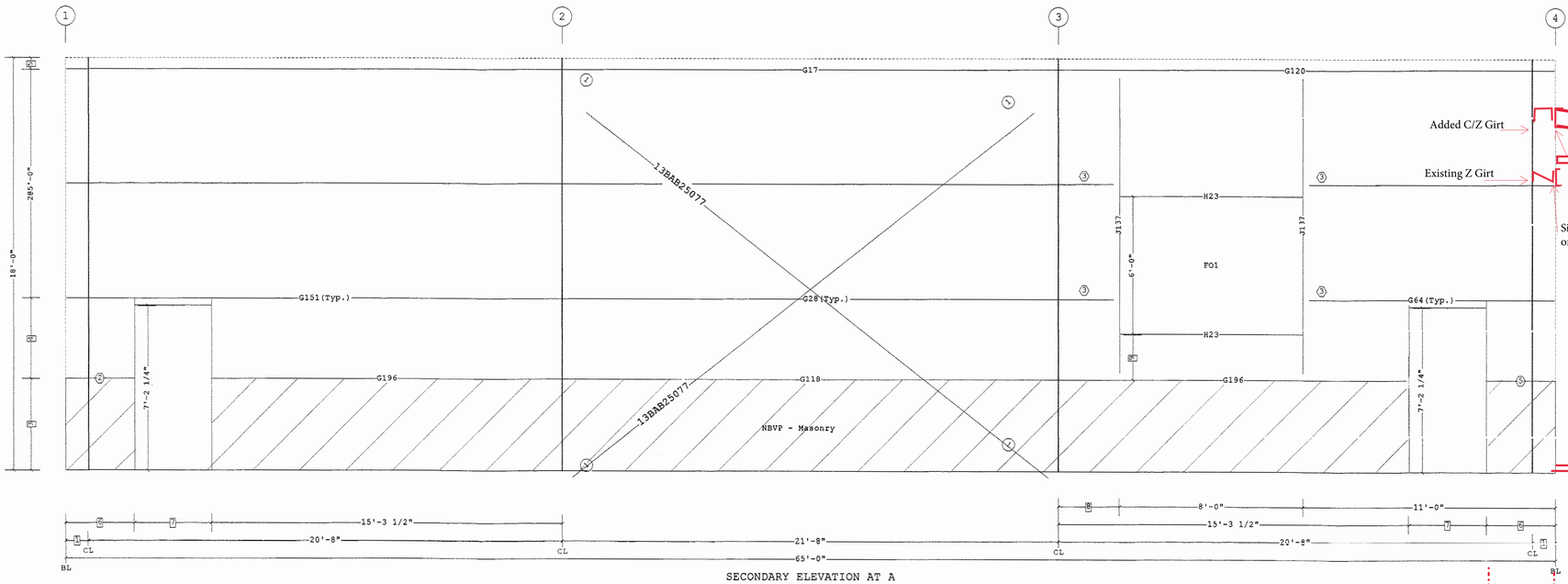
Location of SRE Building Bumpout to be at the SouthWest Corner of the Building



SECONDARY ELEVATION AT 1



TYP. BOLLARD OUTSIDE OF BLDG. DETAIL
SCALE: 3/4" = 1'-0"



SECONDARY ELEVATION AT A

New building addition to be fastened to existing structure at each existing Z girt/structural framing member using Simpson Strong Tie materials or equal. Addition of 1 Cee Girt/C channel within building may be necessary to fasten upper roof deck assembly to.
All fasteners to be rated

Roof Joist/purlin/roofing

Added C/Z Girt

Existing Z Girt

Lintel/Roof/Column Assembies to be structurally rated to meet all code requirements, submitted and approved shop drawings will be required with engineers stamp.

Simpson Stong Tie Material or approved equal

All walls and ceilings to be 6" thick with insulation. S

14'

A

A

Schedule 40 Galv 6" Pipe Bollard fill w/ concrete and paint yellow.

4"

Concrete encased pipe bollard minimum 6" of concrete all sides. 12" stone base.

5'

18"

Wall base to be Ground Contact Pressure Treated Material. Encased in a waterproof membrane, fastened to existing with Strong Tie materials or approved equal.

Waterproof Membrane

2 by 6 Ground Contact Pressure Treated

Section A--A

BL

P N M L K J G F E D C B A BL

0" 325'

1

65'-0"

43'-9 3/8" 42'-4" 42'-4" 39'-1"

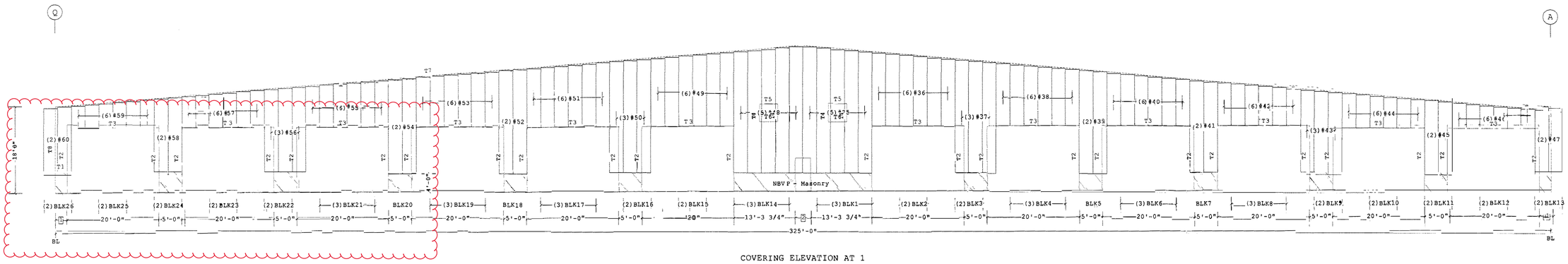
40'-3 3/4" 42'-4" 42'-4" 39'-1"

(33) #10 (11) BLK1 (33) #1 (33) #1 (11) BLK2 (33) #2

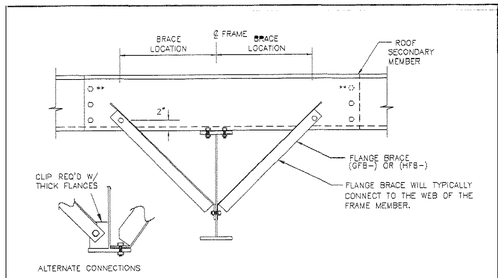
39'-1" 42'-4" 42'-4" 42'-4" 40'-3 3/4"

(33) #5 (11) BLK4 (33) #4 (33) #4 (11) BLK3 (33) #3

A



COVERING ELEVATION AT 1



FLANGE BRACE REQUIREMENTS:

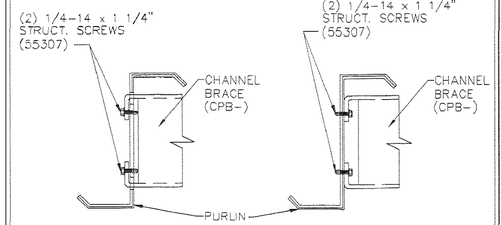
RULE#1- ALL FLANGE BRACES ON CROSS SECTIONS MUST BE INSTALLED.
RULE#2- SINGLE FLANGE BRACES ARE REQUIRED WHEN PART MARK ON CROSS SECTION IS NOT ACCOMPANIED BY (2).
RULE#3- FLANGE BRACES ARE REQUIRED BOTH SIDES OF THE FRAME WEB WHEN PART MARK IS ACCOMPANIED BY (2).
RULE#4- WHENEVER POSSIBLE, PLACE SINGLE BRACES TOWARD THE CENTER OF THE BUILDING.
RULE#5- WHENEVER POSSIBLE, PLACE ALL SINGLE BRACES ON THE SAME SIDE OF THE FRAME WEB.

** 10" & 11 1/2" PURLINS REQUIRE 3 BOLTS AT EACH END OF PURLIN LAP.

REV. DATE:07/01/09 | REV. NO. 00 | BR06AE | TYPICAL FLANGE BRACE CONNECTIONS — CONT. PURLIN LAP SHOWN, CONT. GIRT & SIMPLE PURLIN

ERECTION NOTE:

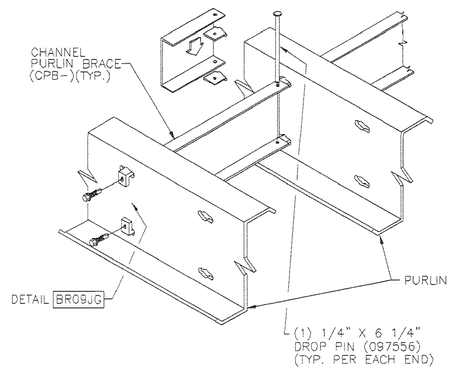
WHEN A CHANNEL BRACE DOES NOT LINE UP WITH ANOTHER CHANNEL BRACE OR THE SLOTS IN THE PURLIN WEB FOR A DROP PIN CONNECTION BEND THE CHANNEL TABS TOWARD THE PURLIN WEB AND USE A SELF-DRILLER (55307) TO ATTACH.



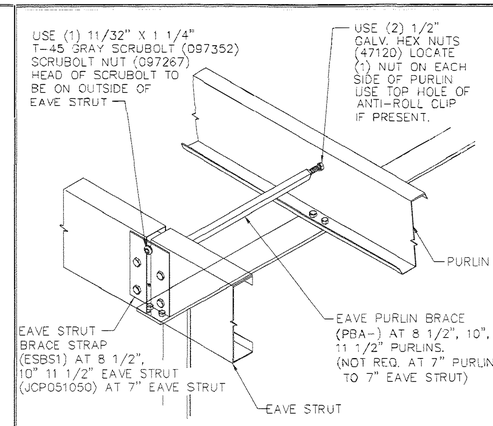
USE WHEN CHANNEL BRACE DOES LINE UP WITH THE SLOTS IN THE PURLIN WEB.

USE WHEN CHANNEL BRACE DOES NOT LINE UP WITH THE SLOTS IN THE PURLIN WEB.

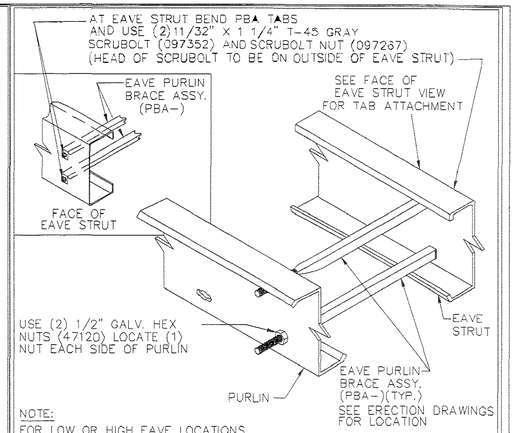
REV. DATE:04/01/11 | REV. NO. 01 | BR09JG | CHANNEL BRACE ENDING AT PURLIN WEB — SELF-DRILLER WITH BENT TABS



REV. DATE:07/01/09 | REV. NO. 00 | BR09JH | SINGLE CHANNEL PURLIN BRACE — ENDING AT PURLIN WEB LOCATION



REV. DATE:01/07/13 | REV. NO. 04 | BR09K2 | EAVE BRACE STRAP AND EAVE PURLIN BRACE — LOCATED AT EAVE – CENTERLINE OF FRAME

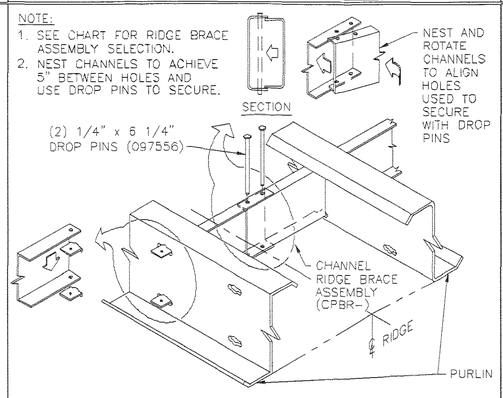


NOTE:
FOR LOW OR HIGH EAVE LOCATIONS.

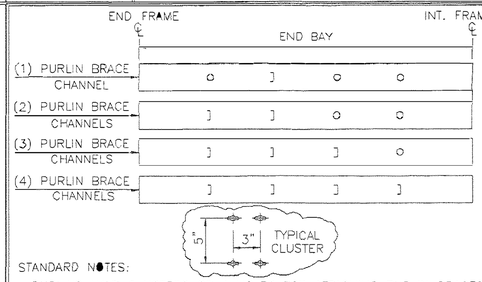
REV. DATE:11/26/12 | REV. NO. 04 | BR09K5 | EAVE STRUT BRACE

REV. DATE:07/01/09 | REV. NO. 00 | BR09PH | SINGLE CHANNEL PURLIN BRACE — INTERMEDIATE LOCATION

NOTE:
1. SEE CHART FOR RIDGE BRACE ASSEMBLY SELECTION.
2. NEST CHANNELS TO ACHIEVE 5" BETWEEN HOLES AND USE DROP PINS TO SECURE.

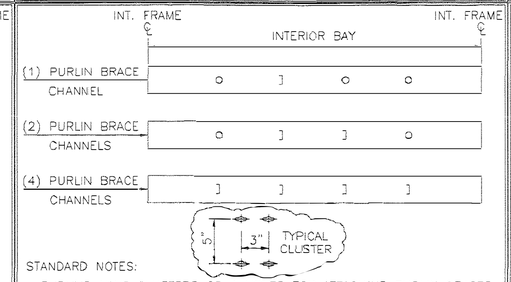


REV. DATE:07/01/09 | REV. NO. 00 | BR09PK | CHANNEL RIDGE BRACE ASSEMBLY — SINGLE BRACE AT SYMMETRICAL RIDGE



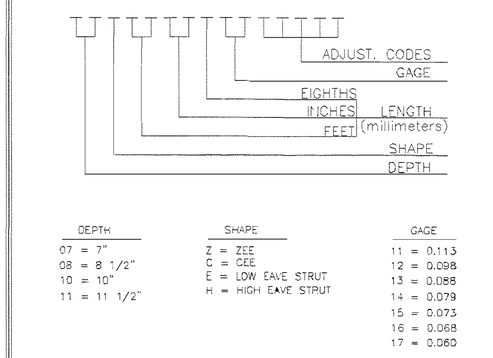
STANDARD NOTES:
- PURLINS HAVE CLUSTERS OF 4 HOLES FOR ATTACHING PURLIN BRACES. THESE CLUSTERS ARE REPRESENTED BY ONE OF THE SYMBOLS BELOW:
  O – DO NOT INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION.
  ] – INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION. SEE SECONDARY ROOF DRAWING FOR BRACE REQUIREMENTS.
- INSTALL PURLIN BRACES AT THE RIDGE AND WORK TOWARD THE EAVE.
- CHANNEL BRACE MAY BE LOCATED IN EITHER SET OF SLOTS IN CLUSTER PROVIDED THEY ARE ALIGNED FROM EAVE TO EAVE IN A GIVEN BAY.

REV. DATE:07/01/09 | REV. NO. 00 | BR09RY | PURLIN BRACE CLUSTER LOCATION — END BAY CHANNEL LOCATION



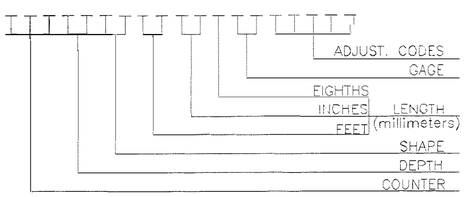
STANDARD NOTES:
- PURLINS HAVE CLUSTERS OF 4 HOLES FOR ATTACHING PURLIN BRACES. THESE CLUSTERS ARE REPRESENTED BY ONE OF THE SYMBOLS BELOW:
  O – DO NOT INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION.
  ] – INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION. SEE SECONDARY ROOF DRAWING FOR BRACE REQUIREMENTS.
- INSTALL PURLIN BRACES AT THE RIDGE AND WORK TOWARD THE EAVE.
- CHANNEL BRACE MAY BE LOCATED IN EITHER SET OF SLOTS IN CLUSTER PROVIDED THEY ARE ALIGNED FROM EAVE TO EAVE IN A GIVEN BAY.

REV. DATE:07/01/09 | REV. NO. 00 | BR09RZ | PURLIN BRACE CLUSTER LOCATION — INTERIOR BAY CHANNEL LOCATION



DEPTH	SHAPE	GAGE
07 = 7"	Z = ZEE	11 = 0.113
08 = 8 1/2"	C = CEE	12 = 0.098
10 = 10"	E = LOW EAVE STRUT	13 = 0.088
11 = 11 1/2"	H = HIGH EAVE STRUT	14 = 0.079
		15 = 0.073
		16 = 0.068
		17 = 0.060

REV. DATE:07/01/09 | REV. NO. 00 | EN51B1 | SECONDARY PART MARK NUMBER — COMMON GENERATED MARK NUMBERS



DEPTH	SHAPE	GAGE
07 = 7"	ZS = ZEE	11 = 0.113
08 = 8 1/2"	CS = CEE	12 = 0.098
10 = 10"	ES = LOW EAVE STRUT	13 = 0.088
11 = 11 1/2"	HS = HIGH EAVE STRUT	14 = 0.079
	BB = BACK TO BACK CEE	15 = 0.073
	FB = FACE TO BACK CEE	16 = 0.068
	FF = FACE TO FACE CEE	17 = 0.060

REV. DATE:07/01/09 | REV. NO. 00 | EN51B2 | SPECIAL SECONDARY PART MARK KEY — COMMON GENERATED MARK NUMBERS

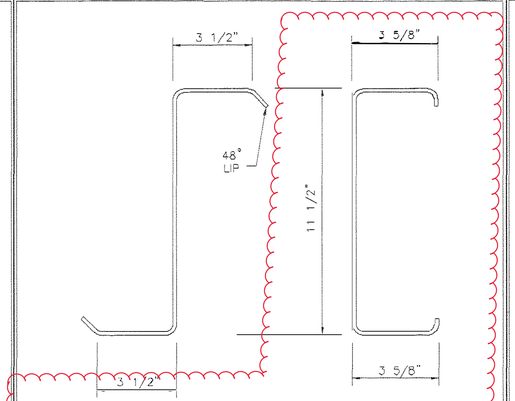
ERECTION DRAWING PART MARK

C P R 1 W 1 B 3

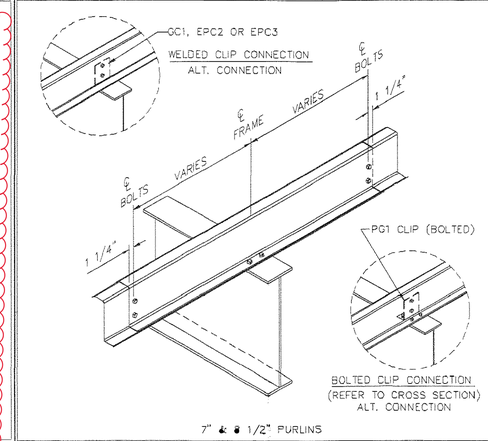
- 3 = BAY NUMBER
- B = CANOPY (C)/PARTITION(P)/ ROOF(R)/WALL(W) NUMBER
- 1 = BUILDING SHAPE

THE BAY/BUNDLE CODE IDENTIFIES THE BUILDING CANOPY/PARTITION/ ROOF/WALL PLANE AND BAY

REV. DATE:01/31/13 | REV. NO. 01 | EN51B3 | SECONDARY BUNDLE LOCATION KEY — ALL SECONDARY DEPTHS



REV. DATE:07/01/09 | REV. NO. 00 | EN53H1 | PURLIN / GIRT — 11 1/2" 292mm



7" & 8 1/2" PURLINS

REV. DATE:01/27/14 | REV. NO. 01 | RS01T1 | PURLIN CONNECTION AT INTERIOR FRAME — CONTINUOUS PURLINS

FOR APPROVAL- NOT FOR CONSTRUCTION

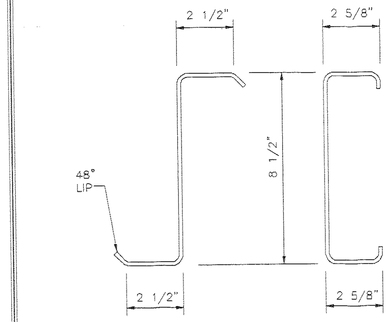
ERECTION DRAWING PART MARK

C
P
R
1 W 1 B 3

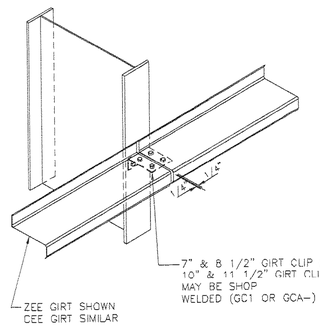
- BAY NUMBER
- CANOPY (C)/PARTITION(P)/ ROOF(R)/WALL(W) NUMBER
- BUILDING SHAPE

THE BAY/BUNDLE CODE IDENTIFIES THE BUILDING CANOPY/PARTITION/ ROOF/WALL PLANE AND BAY

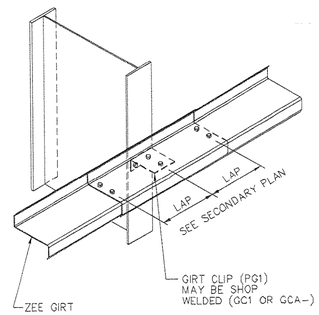
REV. DATE:01/31/13 | REV. NO. 01
EN51B3
SECONDARY BUNDLE LOCATION KEY
ALL SECONDARY DEPTHS



REV. DATE:07/01/08 | REV. NO. 00
EN53F1
PURLIN AND GIRT SIZES
8 1/2" 216mm

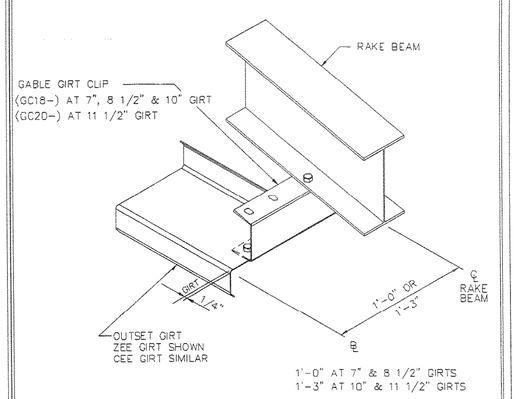


REV. DATE:01/01/09 | REV. NO. 00
WS01G2
GIRT CONN. AT COLUMN
OUTSET SIMPLE GIRTS

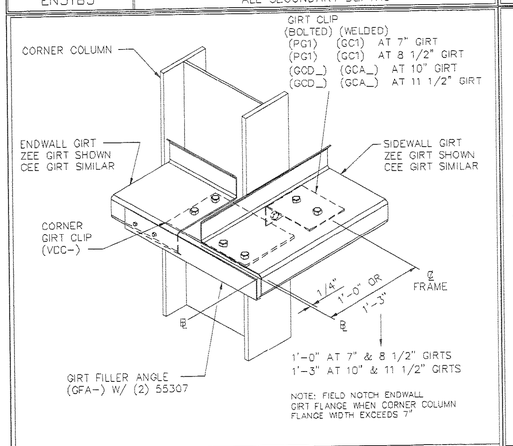


7" & 8 1/2" GIRT

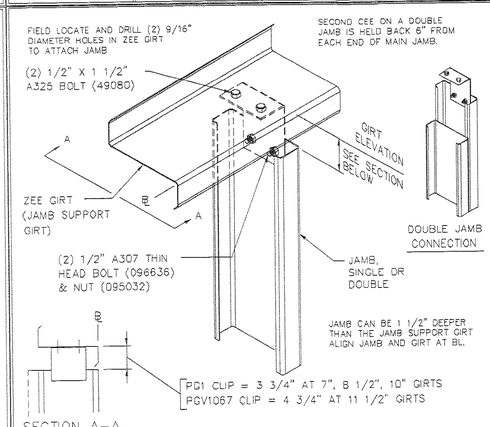
REV. DATE:01/20/11 | REV. NO. 01
WS01G3
GIRT CONN. AT COLUMN
OUTSET CONTINUOUS GIRT



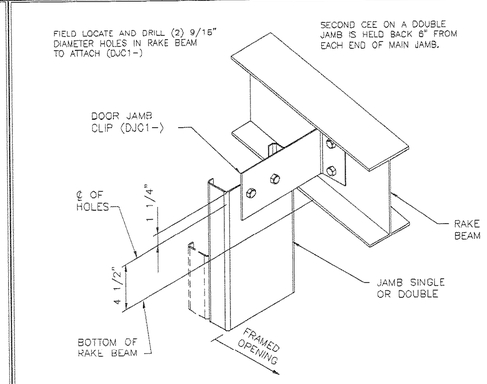
REV. DATE:07/23/13 | REV. NO. 01
WS04C2
GABLE GIRT CONN. TO RAKE BEAM
OUTSET GIRTS



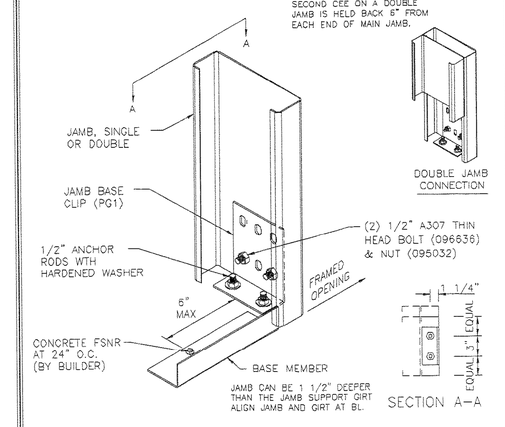
REV. DATE:11/05/11 | REV. NO. 01
WS12A2
GIRT CONN. AT CORNER COLUMN
ANY OUTSET GIRT AT EW, ANY GIRT AT SW



REV. DATE:10/29/13 | REV. NO. 01
WS20B2
JAMB TO GIRT
SINGLE OR DOUBLE JAMB, ANY ZEE GIRT

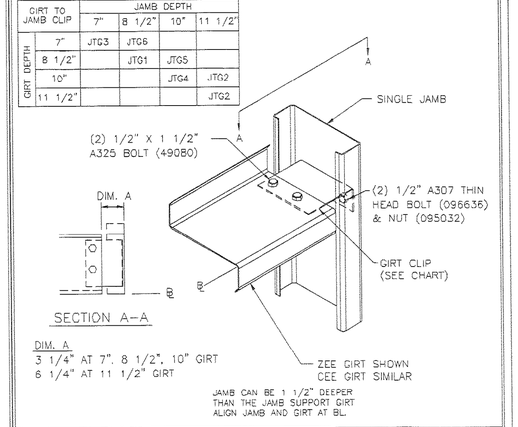


REV. DATE:07/01/09 | REV. NO. 00
WS20B5
JAMB TO RAKE BEAM
ANY JAMB, OUTSET ENDWALL

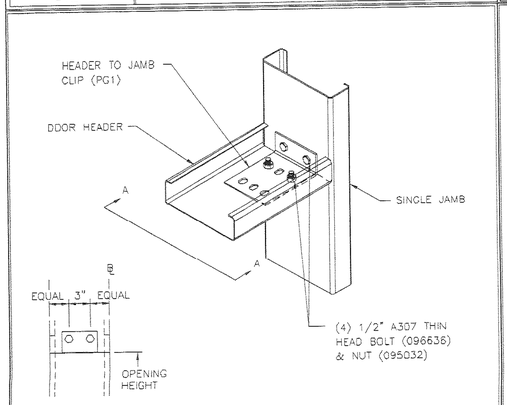


REV. DATE:07/01/09 | REV. NO. 00
WS20B8
JAMB BASE ATTACHMENT
SINGLE OR DOUBLE JAMB

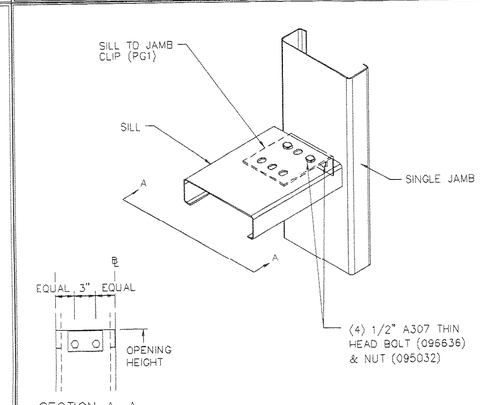
GIRT TO JAMB CLIP	JAMB DEPTH 7"	8 1/2"	10"	11 1/2"
7"	JTG3	JTG6		
8 1/2"		JTG1	JTG5	
10"			JTG4	JTG2
11 1/2"				JTG2



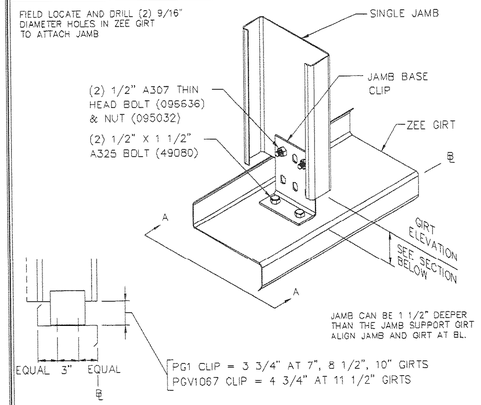
REV. DATE:06/29/10 | REV. NO. 01
WS20F2
GIRT TO JAMB
SINGLE JAMB



REV. DATE:07/01/09 | REV. NO. 00
WS20F9
HEADER TO JAMB
ANY HEADER, ANY SINGLE JAMB



REV. DATE:07/01/11 | REV. NO. 00
WS20FB
SILL TO JAMB
ANY SILL, ANY SINGLE JAMB

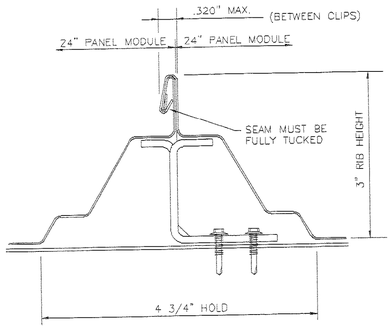


REV. DATE:02/11/14 | REV. NO. 02
WS20H2
JAMB BASE TO GIRT
ALL JAMB AND GIRT DEPTHS

FOR APPROVAL- NOT FOR CONSTRUCTION

VP Buildings

IT IS THE RESPONSIBILITY OF THE ERECTOR TO INSURE PROPER SEAM TIGHTNESS. FAILURE TO PROPERLY SEAM THE JOINT MAY RESULT IN PREMATURE FAILURE OF PANELS AND/OR SECONDARY MEMBERS UNDER UPLIFT OR DOWNWARD LOADING CONDITIONS.



REV. DATE:07/01/09 | REV. NO. 00
EN01B2
SSR SEAMING GUIDELINES
RIB AND SEAM PROFILE

F = FEET G = GAGE
I = INCHES O = OPERATION
E = EIGHTHS C = FIN/COLOR

PANEL/COVERING
W 1 3 1 1 7 2 6 1 K T D
* F F I I E G G O C C C
LENGTH CODE

INSULATION
I B 1 3 0 1 0 3 6 0 3 0 W V
* * F F F I I I I I I E C C
LENGTH WIDTH THK CODE

SECONDARY (STANDARD)
O B Z 1 9 1 1 4 1 7 – – – – –
* * * F F I I E G G * * * * *
DEPTH LENGTH SHAPE GAGE ADJUST.CODES

SECONDARY (SPECIAL)
O O 1 0 8 Z 1 9 1 1 4 1 7 – – –
* * * * * * F F I I E G G * * *
COUNTER DEPTH& SHAPE LENGTH GAGE ADJUST.CODES

CX*** = COLUMN (PLATE)
CGX*** = COLUMN (GAGE)
WCX*** = COLUMN (HOTROLL)

RBX*** = RAFTER (PLATE)
BGX*** = RAFTER (GAGE)
WRX*** = RAFTER (HOTROLL)
TRX*** = TRUSS RAFTER

ICX*** = INTERIOR COLUMN
PCX*** = PIPE COLUMN
TCX*** = TUBE COLUMN

EPX*** = ENDPOST (PLATE)
EGX*** = ENDPOST (GAGE)

CBX*** = CANOPY (PLATE)
CBX*** = PIGGYBACK CANOPY

DCC*** = 8 1/2" GAGE POST
DCE*** = 10" GAGE POST

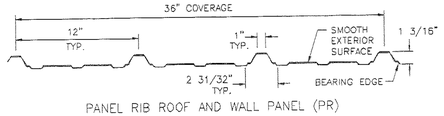
ROD BRACING
0 3 R S 2 5 1 0
I E * * F F I I
DIA LENGTH

RS = THREADS BOTH ENDS
RT = THREADS ONE END – CLEVIS ONE END
RU = CLEVIS BOTH ENDS
RP = THREAD BOTH ENDS – NO HILLSIDES

REV. DATE:08/25/12 | REV. NO. 01
EN50B1
MARK NUMBER KEY
COMMON GENERATED MARK NUMBERS

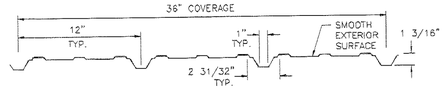
PR WALL PANEL MARK NO.: W F F I I E G G O C C C
LENGTH CODE
PR ROOF PANEL MARK NO.: R F F I I E G G O C C C
LENGTH CODE
PR RIDGE PANEL MARK NO.: P F F I I E G G O C C C
LENGTH CODE

F = FEET
I = INCHES
E = EIGHTHS
G = GAGE
O = OPERATION
C = FIN/COLOR



PANEL RIB ROOF AND WALL PANEL (PR)

RPR WALL PANEL MARK NO.: R R F F I I E G G O C C C
LENGTH CODE

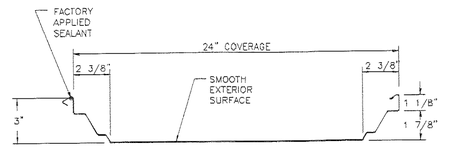


RPR WALL PANEL

REV. DATE:07/01/09 | REV. NO. 00
EN52A1
PR ROOF & PR/RPR WALL PANELS

F = FEET
I = INCHES
E = EIGHTHS
G = GAGE
O = OPERATION
C = FIN/COLOR

SSR ROOF PANEL MARK NO.: S F F I I E G G O C C C
LENGTH CODE



REV. DATE:07/01/09 | REV. NO. 00
EN52D1
STANDING SEAM ROOF PANELS (SSR)

ROOF PANEL INSTALLATION GUIDE REQUIRED FOR THIS PROJECT:

REFER TO:

VARCO PRUDEN BUILDINGS

SSR ROOF INSTALLATION

The Field Guide for correctly storing and installing a VP Buildings Standing Seam Roof System

BACK COVER: 4005 SSR INSTALLATION

REV. DATE:01/30/14 | REV. NO. 00
ENV001
ROOF INSTALLATION GUIDE – SSR

PANEL ERECTION GUIDE REQUIRED FOR THIS PROJECT:

REFER TO:

VARCO PRUDEN BUILDINGS

BASIC PANELS & ACCESSORIES

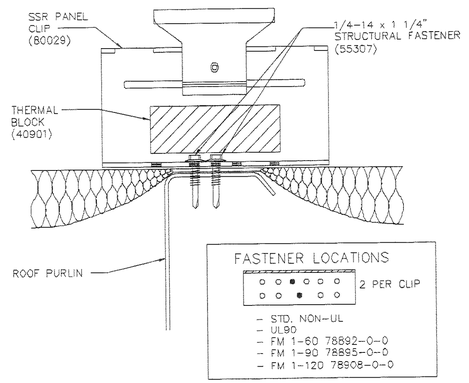
The field guide for correct installation of Varco Pruden's Wall and Roof Systems, Tuff-Lites, Wallites, Doors, Windows, Gutters and Trim.

BACK COVER: 4003 BASIC PANELS AND ACCESSORIES

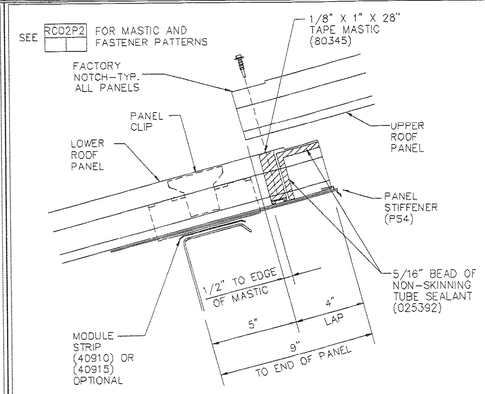
REV. DATE:01/30/14 | REV. NO. 00
ENV003
BASIC PANEL AND ACCESSORIES
CONTAINS: PR ROOF – WALLS: PR, RPR, VR

1. STANDARD ERECTION DETAILS (SED) SUPERSEDE SIMILAR DETAILS FOUND IN THE ERECTION GUIDES. REFER TO THE ERECTION GUIDES FOR OTHER DETAILS, INSTALLATION PROCEDURES AND ACCESSORIES NOT DESCRIBED IN THE SED'S.
2. ALL PANEL AND TRIM SURFACES MUST BE FREE OF DIRT AND OIL AT MASTIC AND SEALANT LOCATIONS.

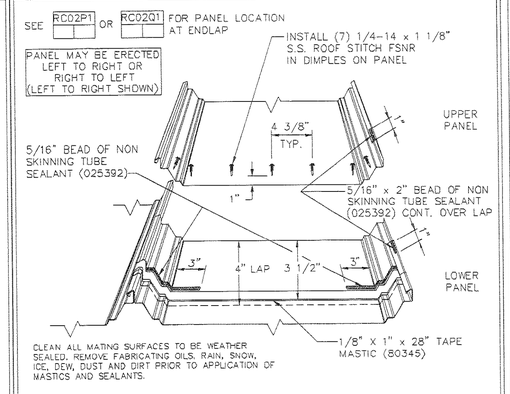
REV. DATE:07/01/09 | REV. NO. 00
RC00A1
NOTES



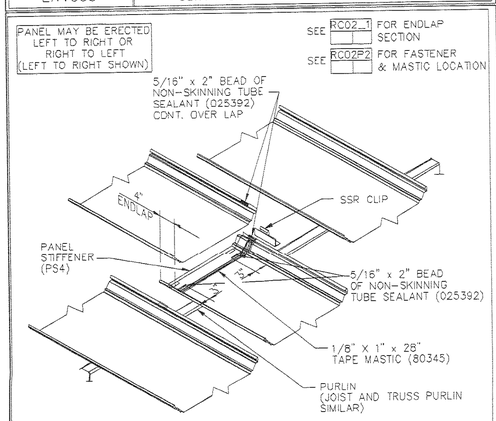
REV. DATE:02/21/14 | REV. NO. 03
RC01A2
SSR PANEL CLIP ATTACHMENT
THERMAL BLOCK INSULATION ON PURLINS



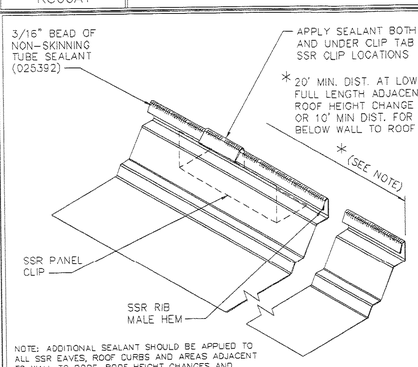
REV. DATE:10/22/12 | REV. NO. 01
RC02P1
SSR PANEL STAGGERED ENDLAP
ON PURLINS



REV. DATE:10/22/12 | REV. NO. 01
RC02P2
SSR PANEL STAGGERED ENDLAP
FASTENER AND MASTIC PATTERN

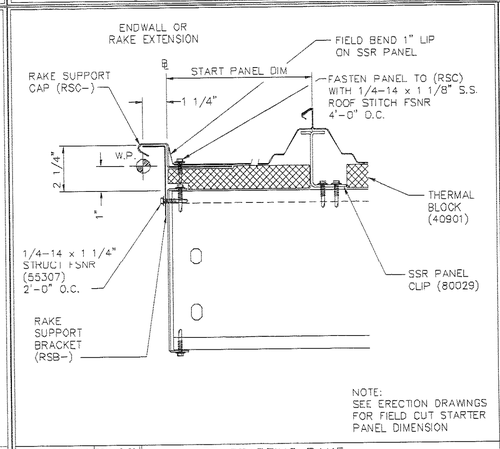


REV. DATE:05/31/13 | REV. NO. 03
RC02P3
SSR STAGGERED PANEL ENDLAP
PLAN VIEW



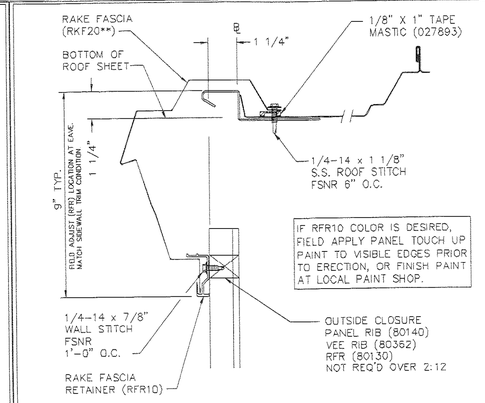
NOTE: ADDITIONAL SEALANT SHOULD BE APPLIED TO ALL SSR EAVES, ROOF CURBS AND AREAS ADJACENT TO WALL TO ROOF, ROOF HEIGHT CHANGES AND STEPPED ROOF EXPANSION JOINTS. IT IS RECOMMENDED THAT AREAS ADJACENT TO ROOF HEIGHT CHANGES COVER AT LEAST 3 SIDELAPS WITH THE SEALANT.

REV. DATE:10/22/12 | REV. NO. 01
RC03A2
SSR PANEL SIDELAP
ADDITIONAL WEATHERSEAL AT ICE DAMMING COND.



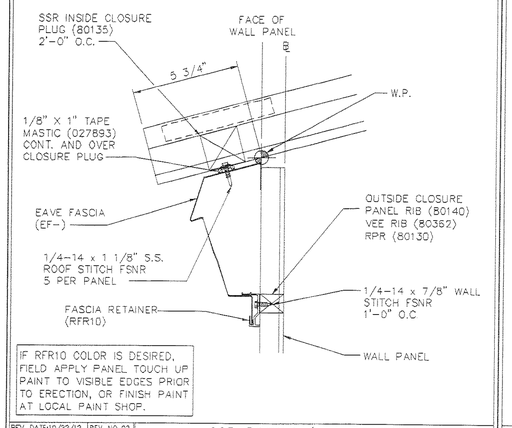
NOTE:
SEE ERECTION DRAWINGS FOR FIELD CUT STARTER PANEL DIMENSION

REV. DATE:05/02/13 | REV. NO. 02
RC10A2
SSR STARTING RAKE
PR, VR OR RPR WALL THERMAL BLOCK



REV. DATE:10/22/12 | REV. NO. 02
RC30A1
SSR RAKE TRIM
PR, VR OR RPR WALL

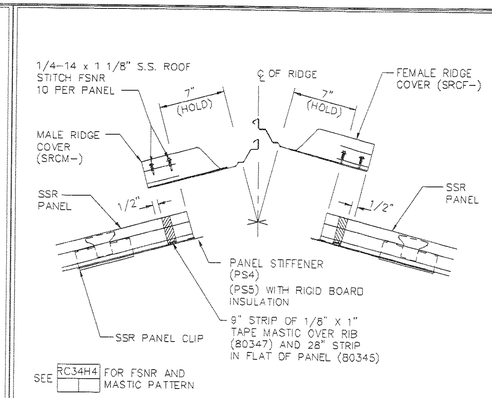
FOR APPROVAL- NOT FOR CONSTRUCTION



REV. DATE:10/22/12 | REV. NO. 02

RC31A1

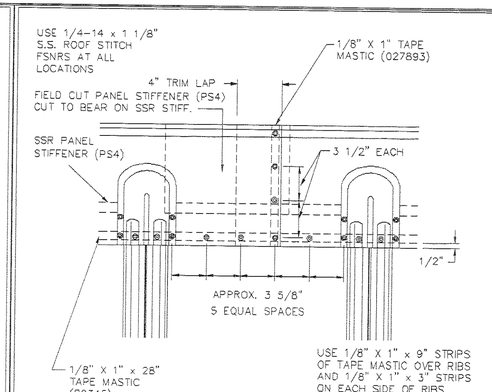
SSR ROOF W/ EAVE FASCIA
PR, VR OR RPR WALL



REV. DATE:10/22/12 | REV. NO. 01

RC34H1

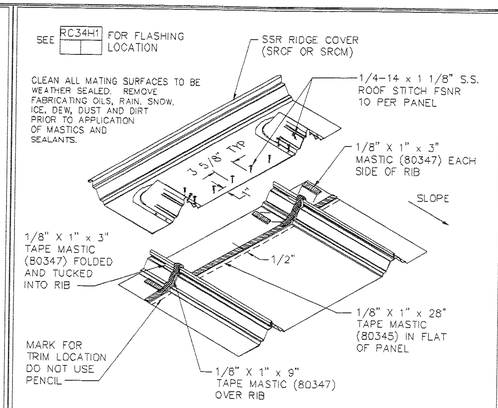
SSR RIDGE COVER ATTACHMENT



REV. DATE:10/22/12 | REV. NO. 01

RC34H3

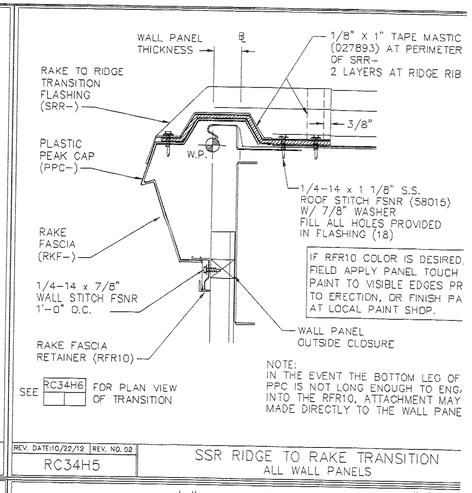
SSR SEAM CAP AT HIGH RIB
SSR AT RIDGE PANEL SPLICE



REV. DATE:10/22/12 | REV. NO. 02

RC34H4

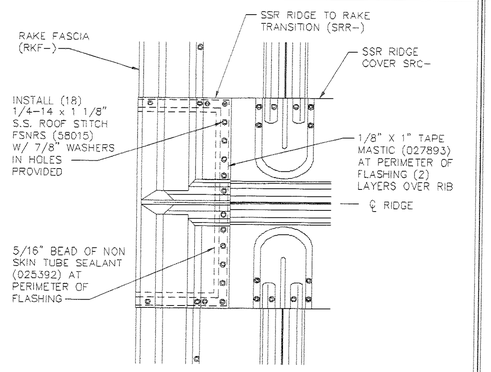
SSR RIDGE FLASHING
FASTENER AND MASTIC PATTERN



REV. DATE:10/22/12 | REV. NO. 02

RC34H5

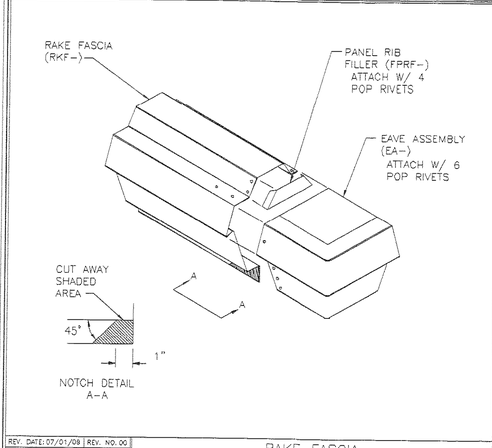
SSR RIDGE TO RAKE TRANSITION
ALL WALL PANELS



REV. DATE:10/22/12 | REV. NO. 01

RC34H6

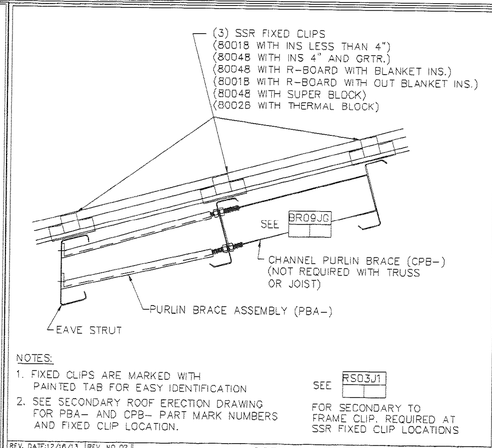
SSR RIDGE TO RAKE TRANSITION
PLAN VIEW



REV. DATE:07/01/09 | REV. NO. 00

RC38N2

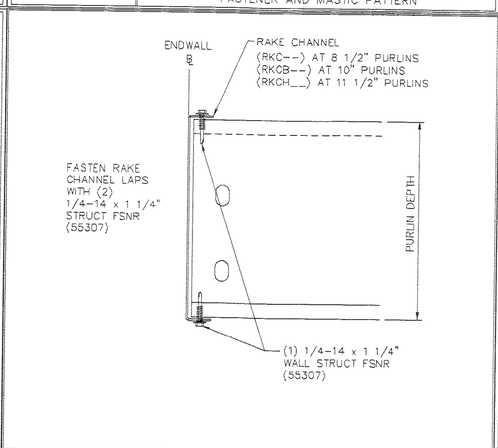
RAKE FASCIA
EAVE ASSEMBLY



REV. DATE:12/16/13 | REV. NO. 02

RC62C1

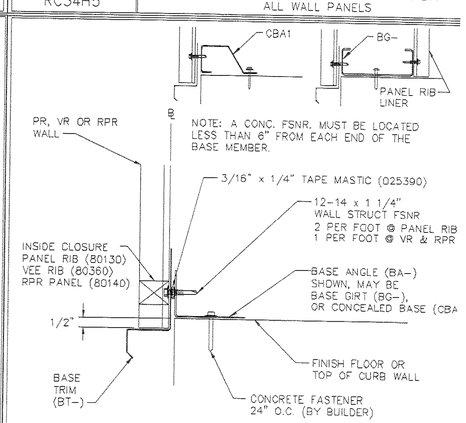
SSR FIXED CLIP
BLANKET, S-BLOCK, T-BLOCK AND R-BOARD



REV. DATE:04/12/11 | REV. NO. 01

RS10L5

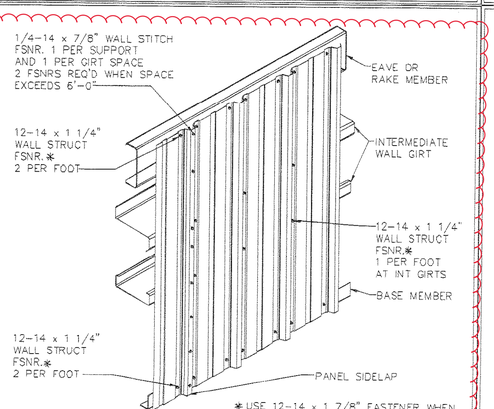
RAKE CHANNEL TO PURLIN
SSR, HWR, SLR II – PURLIN (PR/VR WALLS)



REV. DATE:10/23/12 | REV. NO. 01

WC01AB

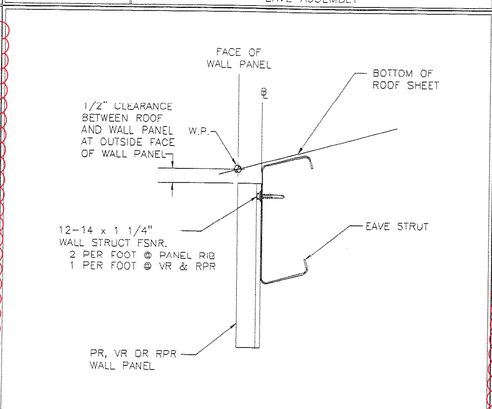
BASE OF WALL ATTACHMENT
PR, VR OR RPR W/ BASE TRIM



REV. DATE:10/15/13 | REV. NO. 02

WC04G1

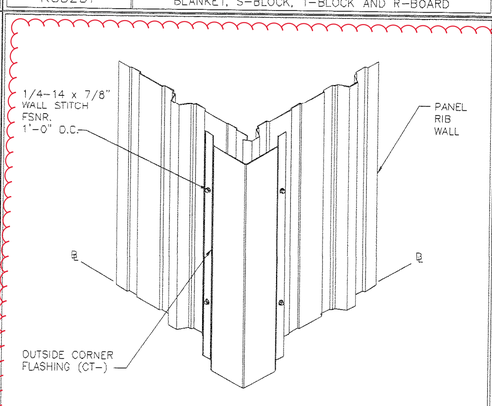
PANEL RIB WALL
FASTENER PATTERNS



REV. DATE:07/01/09 | REV. NO. 00

WC11F1

PR, VR & RPR WALL AT EAVE
STANDARD EAVE PURLIN

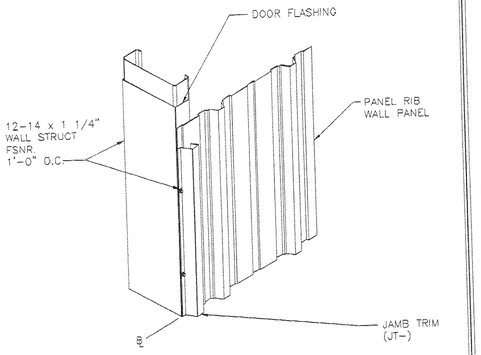


REV. DATE:07/01/09 | REV. NO. 00

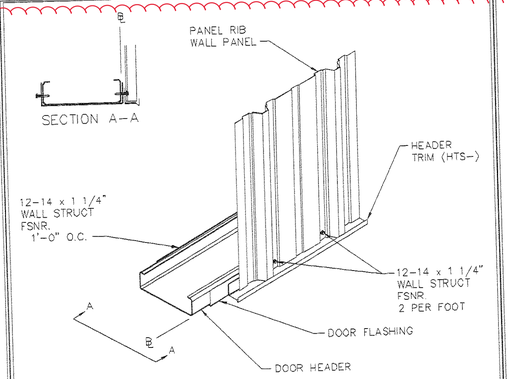
WC20A1

OUTSIDE CORNER TRIM
PANEL RIB WALL

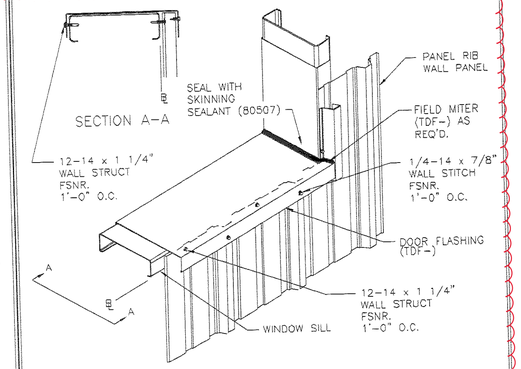
FOR APPROVAL - NOT FOR CONSTRUCTION



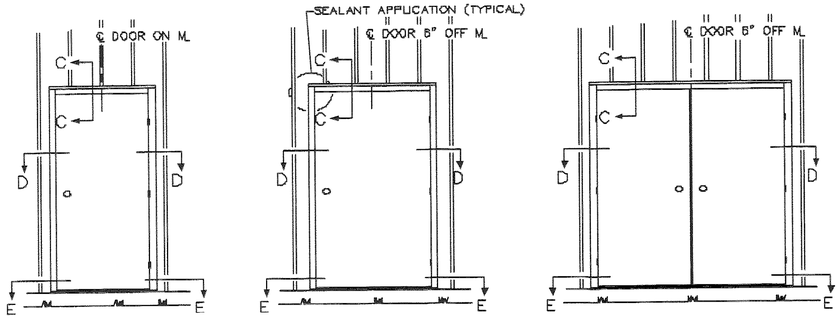
REV. DATE: 07/01/09	REV. NO. 00
WC24A1	JAMB TRIM AT OVERHEAD DOOR PANEL RIB WALL



REV. DATE: 03/15/12	REV. NO. 01
WC24A2	WALL TRIM AT DOOR HEAD OVERHEAD DOOR OPENING

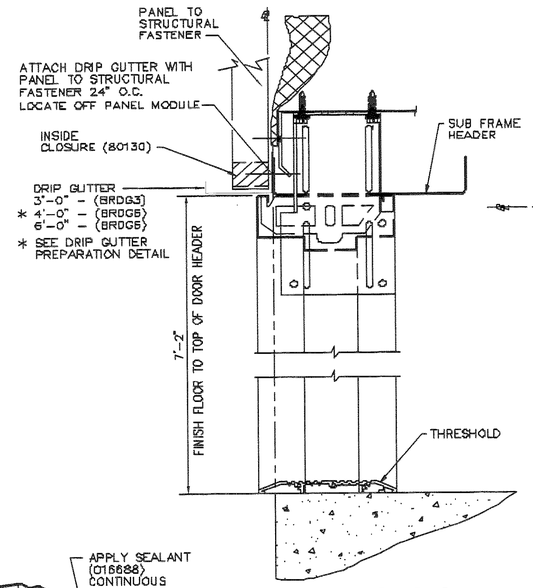


REV. DATE: 07/01/09	REV. NO. 02
WC24A4	SILL TRIM FRAMED OPENING (PANEL RIB)

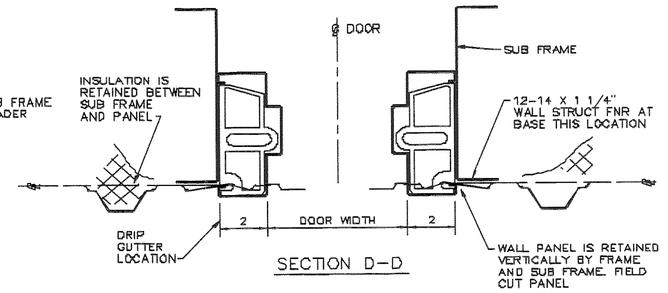


3'-0" DOOR | 4'-0" DOOR | 6'-0" DOUBLE DOOR

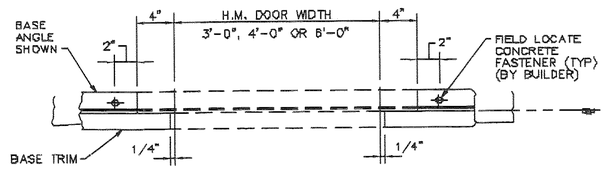
ELEVATIONS



SECTION C-C

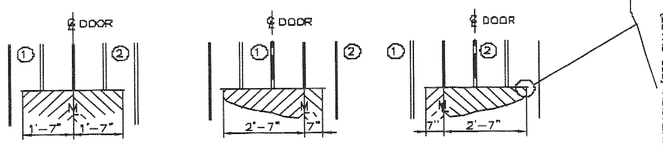


SECTION D-D

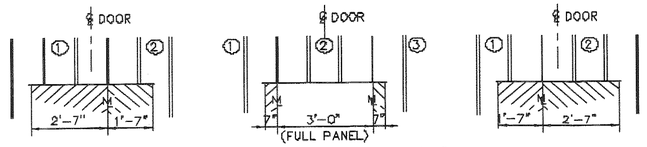


SECTION E-E

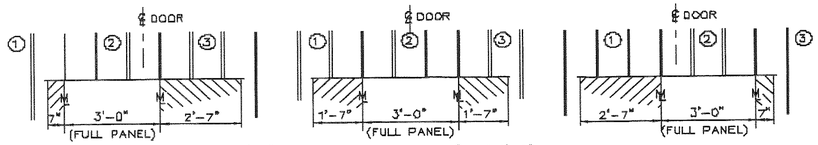
BASE ANGLE AND BASE TRIM CUTOUT DETAIL



3'-0" WIDE DOORS - LOCATED ON 1'-0" MODULE

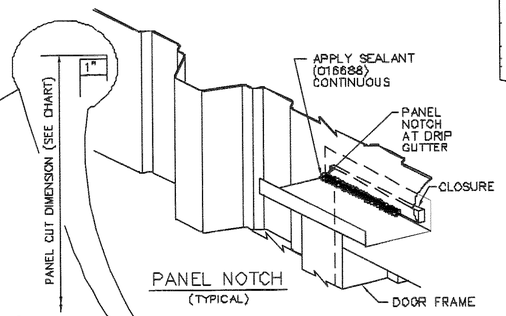


4'-0" WIDE DOORS - LOCATED 8" OFF 1'-0" MODULE



6'-0" WIDE DOORS - LOCATED 6" OFF 1'-0" MODULE

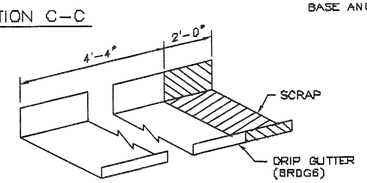
PANEL PREPARATION DETAILS



PANEL NOTCH (TYPICAL)

SEALANT APPLICATION (TYPICAL)

PANEL CUT FOR DRIP GUTTER	
PANEL CONDITION	CUTTING DIMENSION
FINISHED FLOOR	7'-2 1/8"
BOTTOM OF PANEL WITH BASE TRIM	7'-2 5/8"
BOTTOM OF PANEL WITH NO TRIM	7'-2 5/8"
BOTTOM OF PANEL WITH 1 1/2" CONCRETE NOTCH	7' 3 5/8"
BOTTOM OF PANEL WITH CRIMP BASE	7' 4 1/8"



DRIP GUTTER PREPARATION

FOR 4'-0" WIDE DOOR (ONLY)

NOTES:

1. FIELD CUT DOOR OPENINGS AS INDICATED. SHADED CORRUGATION INDICATES SIDELAP.
2. SEE DWG. B-081380 FOR GIRT CONNECTION AT 8'-0" OR LESS.

℄ INDICATES CENTER LINE.
℄ INDICATES THE EXTERIOR FACE OF THE STRUCTURALS TO WHICH THE PANELS ATTACH.
M INDICATES THE MODULE LINE OR PANEL SIDELAP.

IMPORTANT NOTE:

PANELING PREPARATION DETAILS INDICATE POSSIBLE LOCATIONS FOR DOORS. BUILDER MUST DETERMINE WHICH DETAIL IS APPROPRIATE BEFORE PROCEEDING WITH PANEL PREPARATION.

FIELD WORK NOTES:

1. FIELD CUT DOOR OPENING FROM FULL LENGTH PANELS AND NOTCH FOR DRIP GUTTER.
2. PREPARE DRIP GUTTER. (4'-0" DOORS ONLY)

ERECTION SEQUENCE:

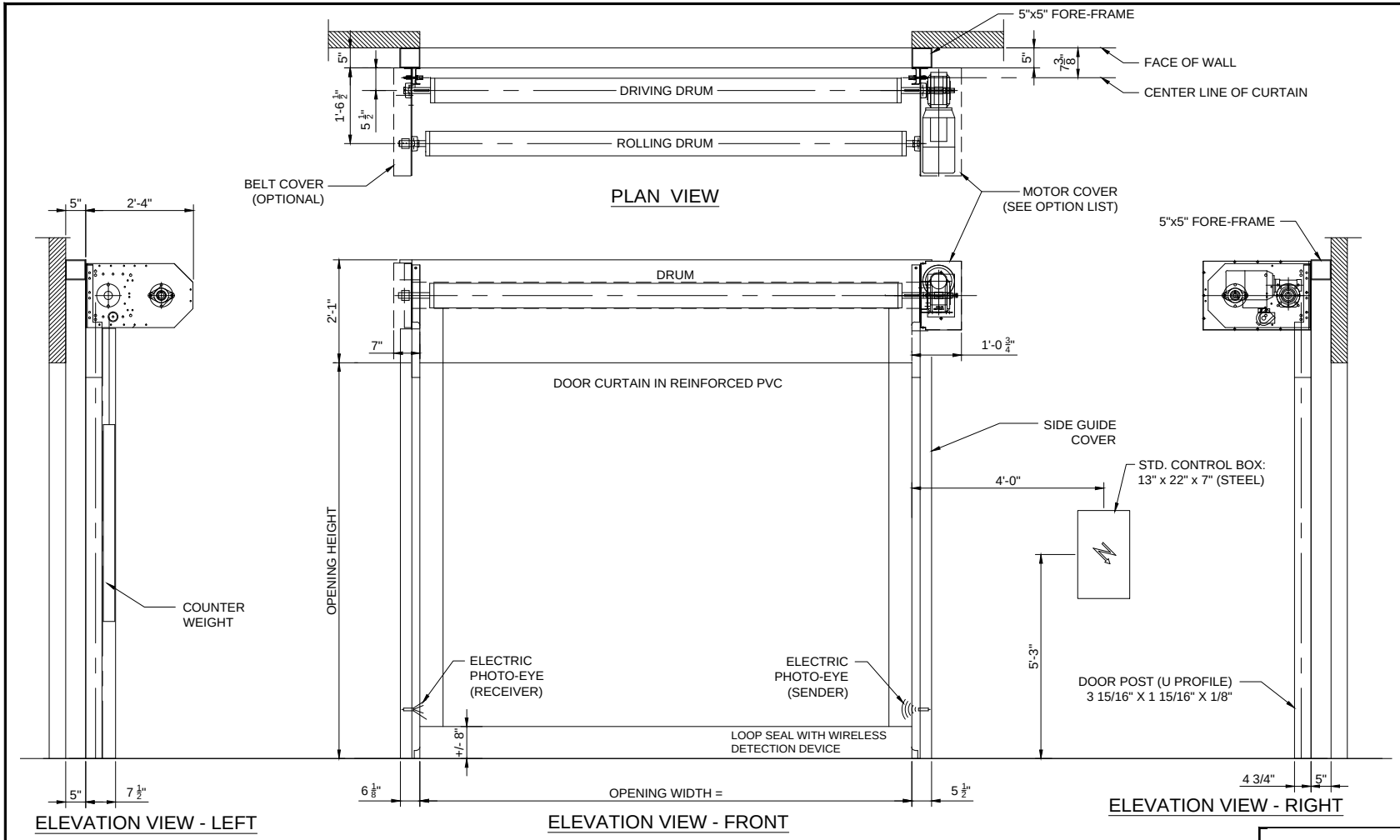
STEP 1. ATTACH DRIP GUTTER.

STEP 2. FIELD WORK PANELS AND INSTALL IN NUMBERED SEQUENCE SHOWN. SEE PANEL PREPARATION DETAILS.
ERECTION TIP: WITH INSULATED WALLS, INSTALL PANEL CLOSURES BEFORE INSTALLING PANELS.

STEP 3. APPLY SEALANT (016688) CONTINUOUS AT PANEL TO DRIP GUTTER JOINT.

PR KNOCK-DOWN AND PRE ASSY. DOOR PANEL AND TRIM INSTALLATION

DRAWN BY	CHECKED BY	GROUP NUMBER: - -		
RHE	RJR			
FIRST RELEASE DATE	REVISION DATE	B	S-081372	04
07/30/10	01/30/13			



RIGHT HAND MOTOR SIDE: AS SHOWN
LEFT HAND MOTOR SIDE: OPP. HAND

ELECTRICAL OPTIONS:

- ☐ 208/230 VAC - 1ph
- ☐ 208/230 VAC - 3ph
- ☐ 460 VAC - 3ph
- ☐ 575 VAC - 3ph
- ☐ STAINLESS CONTROL BOX
- ☐ COMPOSIT CONTROL BOX

ACTIVATORS:

- ☐ PHOTOEYE
- ☐ PULL CORDS
- ☐ MOTION DETECTOR
- ☐ RADIO CONTROL
- ☐ ADDITIONAL TRANMITTERS
- ☐ PUSHBUTTON
- ☐ FLOOR LOOP
- ☐ OTHERS (see notes)

OTHER OPTIONS:

- ☐ SIDE GUIDE COVERS:
  - ☐ POWDERCOAT PAINTED
- ☐ MOTOR & BELT COVER:
  - ☐ GALVANIZED STEEL
  - ☐ POWDERCOAT PAINTED
- ☐ BELT COVER (GALV.)
- ☐ SLANTED CANOPY
- ☐ REDUCED LINTEL
- ☐ BUG SCREEN BANNER(S)
- ☐ BUG SCREEN WINDOW(S)

CURTAIN:

- ☐ BLACK 9005
- ☐ BROWN 8017
- ☐ BLUE 5002
- ☐ GREY 7035
- ☐ RED 3000
- ☐ YELLOW 1003
- ☐ GREEN 6005
- ☐ ORANGE 2004
- ☐ WHITE 9010

DYNACO High Performance Doors

MADE IN USA TEL. (800) 459 1930

M3 POWER

APPROVAL DRAWING

DOOR NO.:	QTY.:	OPENING SIZE (W x H):		NOTES:
		Width =	Height =	
		Width =	Height =	
		Width =	Height =	
		Width =	Height =	
		Width =	Height =	
		Width =	Height =	

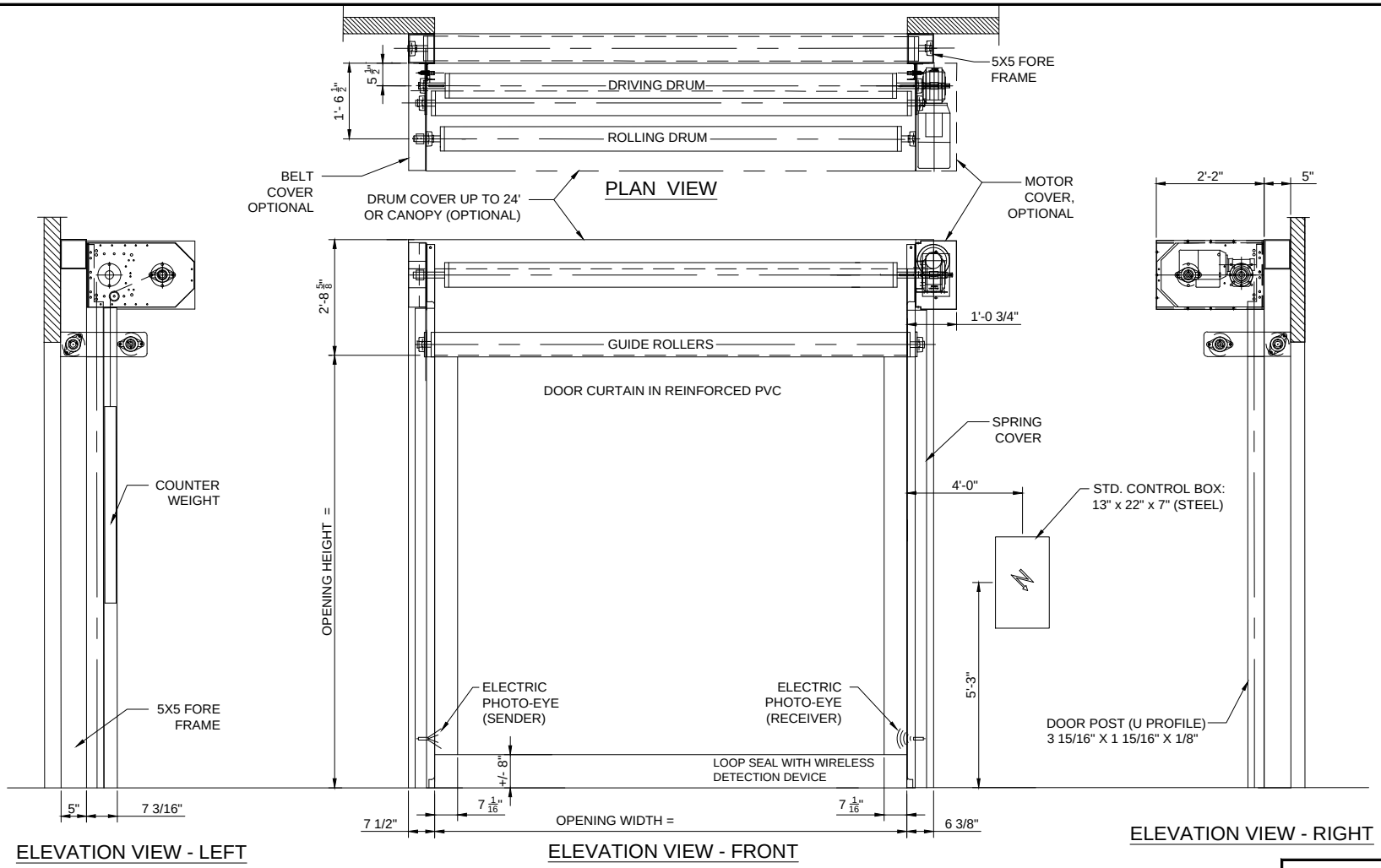
APPROVED BY:

PRINT NAME: _____

SIGNATURE: _____

DATE: _____

PROJECT TITLE:	
LOCATION:	
QUOTE NO.:	END-USER:
DEALER:	
ARCHITECT ORG.:	
REGIONAL MANAGER:	
SCALE: DO NOT SCALE DRAWING	
DATE:	REV.:
DRAWING NO.:	SHEET:



RIGHT HAND MOTOR SIDE: AS SHOWN
LEFT HAND MOTOR SIDE: OPP. HAND

ELECTRICAL OPTIONS:

- ☐ 110 VAC - 1ph
- ☐ 208/230 VAC - 1ph
- ☐ 208/230 VAC - 3ph
- ☐ 460 VAC - 3ph
- ☐ 575 VAC - 3ph
- ☐ STAINLESS CONTROL BOX
- ☐ COMPOSIT CONTROL BOX

ACTIVATORS:

- ☐ PHOTOEYE
- ☐ PULL CORDS
- ☐ MOTION DETECTOR
- ☐ RADIO CONTROL
- ☐ ADDITIONAL TRANMITTERS
- ☐ PUSHBUTTON
- ☐ FLOOR LOOP
- ☐ OTHERS (see notes)

OTHER OPTIONS:

- ☐ EXTREME PACKAGE
- ☐ SIDE GUIDE COVERS:
  - ☐ POWDERCOAT PAINTED
- ☐ MOTOR & BELT COVER:
  - ☐ GALVANIZED STEEL
  - ☐ POWDERCOAT PAINTED
- ☐ BELT COVER
- ☐ SLANTED CANOPY
- ☐ REDUCED LINTEL
- ☐ BUG SCREEN WINDOW(S)

CURTAIN:

- ☐ BLACK 9005
- ☐ BROWN 8017
- ☐ BLUE 5002
- ☐ GREY 7035
- ☐ RED 3000
- ☐ YELLOW 1003
- ☐ GREEN 6005
- ☐ ORANGE 2004
- ☐ WHITE 9010

DYNACO High Performance Doors

MADE IN USA TEL. (800) 459 1930

M3 ALL WEATHER

APPROVAL DRAWING

DOOR NO.:	QTY.:	OPENING SIZE (W x H):		NOTES:
		Width =	Height =	
		Width =	Height =	
		Width =	Height =	
		Width =	Height =	
		Width =	Height =	
		Width =	Height =	

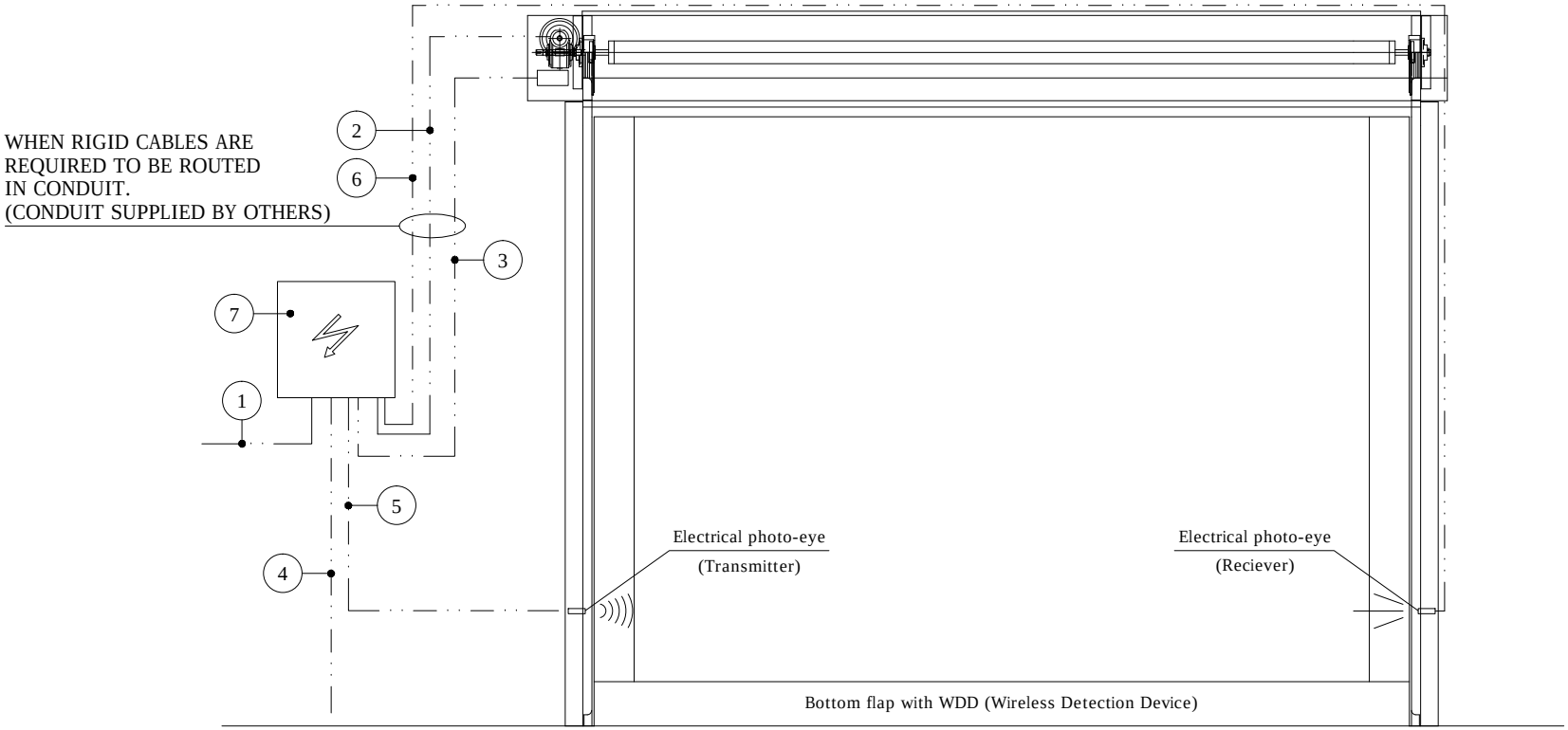
APPROVED BY:

PRINT NAME: _____

SIGNATURE: _____

DATE: _____

PROJECT TITLE:	
LOCATION:	
QUOTE NO.:	END-USER:
DEALER:	
ARCHITECT ORG.:	
REGIONAL MANAGER:	
SCALE: DO NOT SCALE DRAWING	
DATE:	REV.:
DRAWING NO.:	SHEET:



1. Main power supply
2. Wiring motor supply
3. Wiring for the encoder
4. Wiring for floor loop
5. Wiring for the photo-eye (transmitter)
6. Wiring for the photo-eye (reciever)
7. Control box

DYNACO
High Performance Doors

MADE IN USA TEL. (800) 459 1930

DOOR TYPE: M3

APPROVAL DRAWING - ELECTRICAL

NOTES:

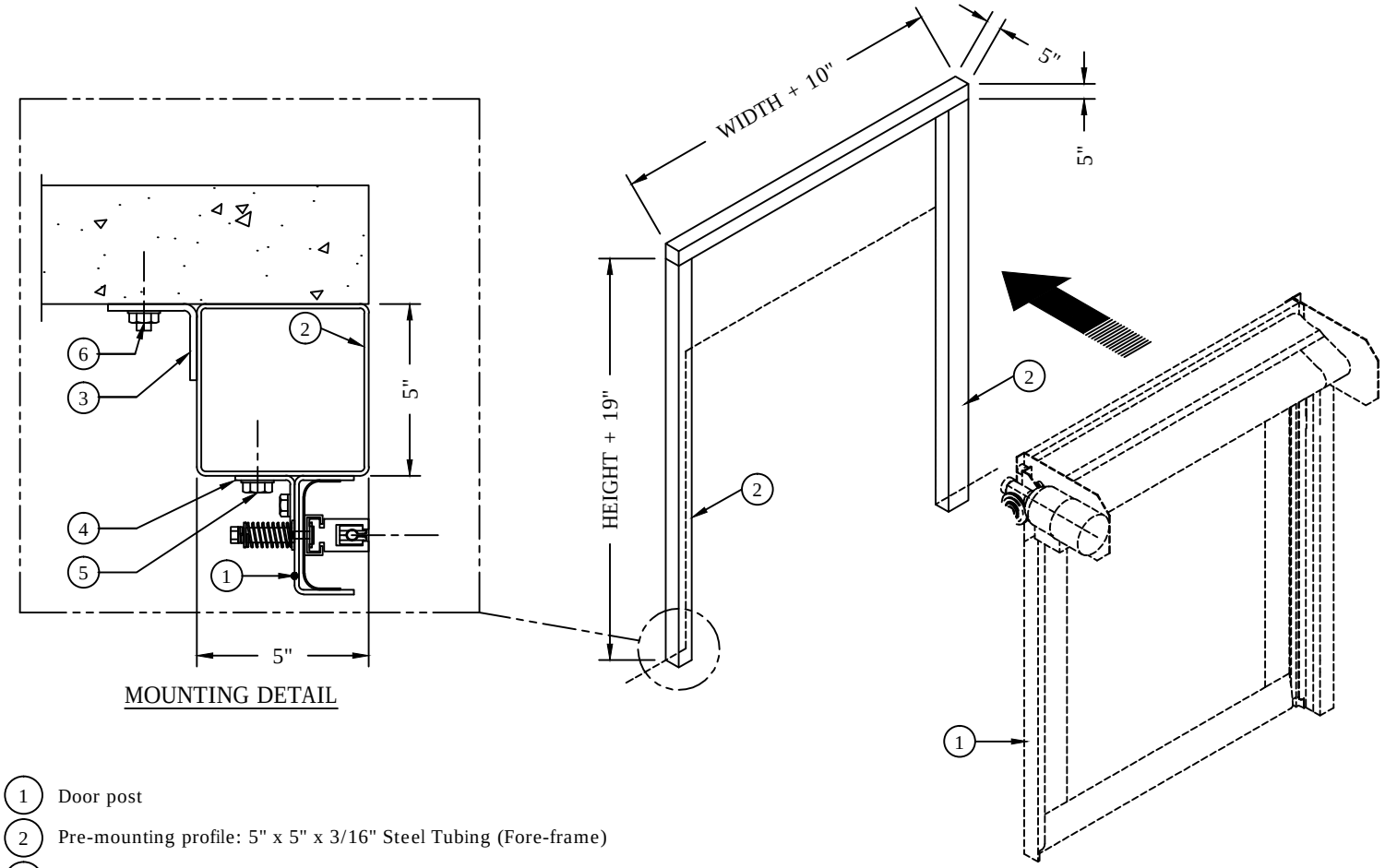
APPROVED BY:

PRINT NAME: _____

SIGNATURE: _____

DATE: _____

PROJECT TITLE:	
LOCATION:	
QUOTE NO.:	END-USER:
DEALER:	
ARCHITECT ORG.:	
REGIONAL MANAGER:	
DATE:	REV.:
DRAWING NO.:	SHEET:



MOUNTING DETAIL

1. Door post
2. Pre-mounting profile: 5" x 5" x 3/16" Steel Tubing (Fore-frame)
3. Mounting bracket
4. Mounting bracket door post
5. Self drilling bolt
6. Anchor (by others)

FOREFRAME

DYNACO High Performance Doors

MADE IN USA TEL. (800) 459 1930

DOOR TYPE: M3 POWER

APPROVAL DRAWING - FORE-FRAME

PROJECT TITLE:	
LOCATION:	
QUOTE NO.:	END-USER:
DEALER:	
ARCHITECT ORG.:	
REGIONAL MANAGER:	
DATE:	REV.:
DRAWING NO.:	SHEET:

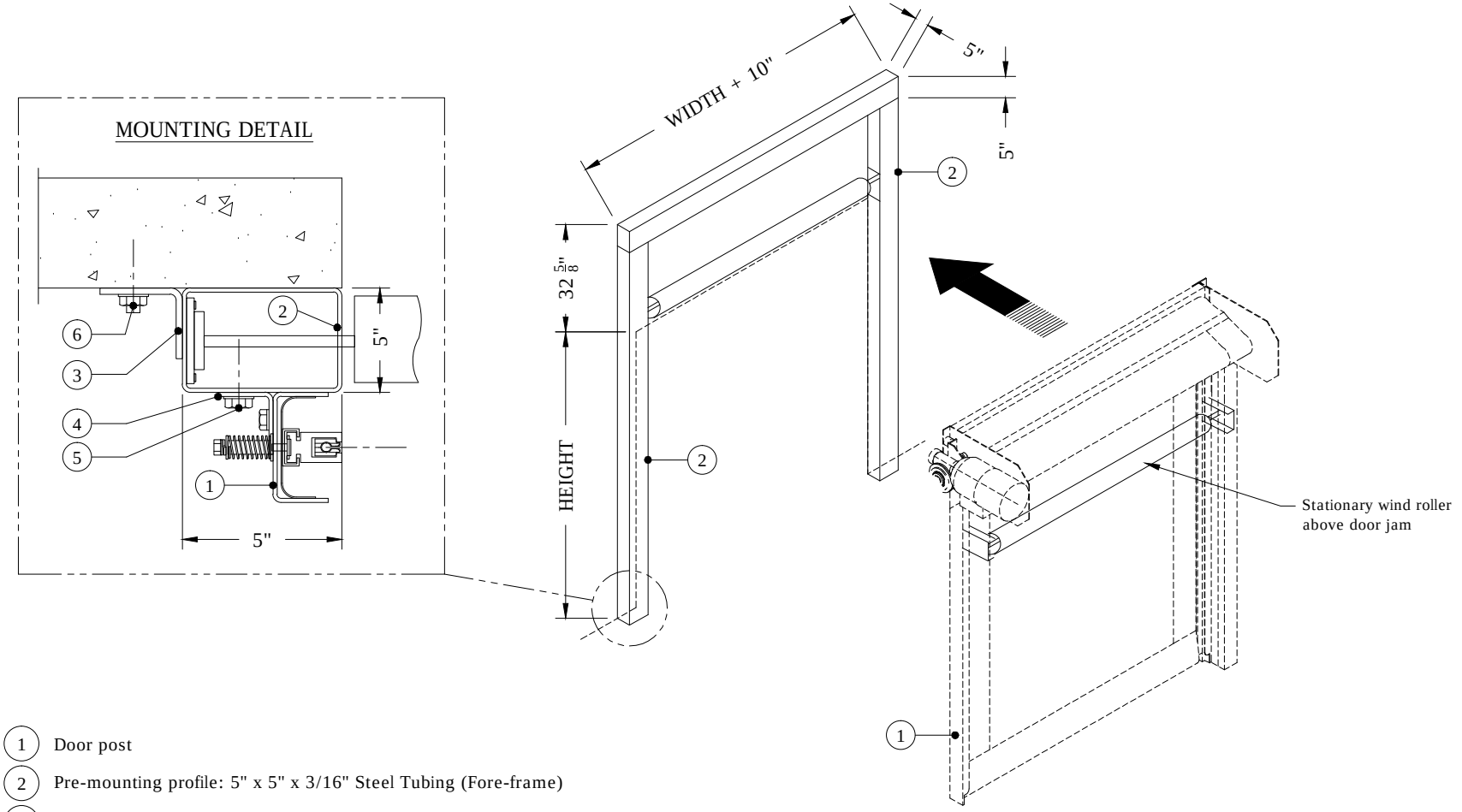
NOTES:

APPROVED BY:

PRINT NAME: _____

SIGNATURE: _____

DATE: _____



1. Door post
2. Pre-mounting profile: 5" x 5" x 3/16" Steel Tubing (Fore-frame)
3. Mounting bracket Pre-mounting profile
4. Mounting bracket door post
5. Self drilling bolt
6. See approval drawing, standard mounting details

FOREFRAME

DYNACO
High Performance Doors

MADE IN USA TEL. (800) 459 1930

DOOR TYPE: M3 ALL WEATHER

APPROVAL DRAWING - FORE-FRAME

PROJECT TITLE:	
LOCATION:	
QUOTE NO.:	END-USER:
DEALER:	
ARCHITECT ORG.:	
REGIONAL MANAGER:	
DATE:	REV.:
DRAWING NO.:	SHEET:

NOTES:

APPROVED BY:

PRINT NAME: _____

SIGNATURE: _____

DATE: _____

PUSH-PULL
gear driven technology

exterior door

HIGH SPEED OPERATION
Up to 31.2 in/s, depending on the size.
Closing speed up to 31.3 in/s.

SAFETY ENGINEERED
Each door panel is made of a resilient curtain material and comes standard with our unique soft bottom edge technology. No stiffeners or rigid bottom bars are used preventing injuries to workers or damage equipment. A wireless reversing edge and built-in infrared sensors protect against the 4 different types of accidents.

DOOR OPERATION
An advanced gear driven push-pull system assures that the All Weather M3 door will operate smoothly. The curtain is positively driven in both directions, eliminating maintenance and damage prone tension systems, wind stiffeners and bottom bars.

PRESSURE RESISTANCE
Spring-loaded, pivoting side guides and encapsulated curtain edges provide superior seal. This well designed mechanism allows reliable operation under high pressure. No wear prone and contamination generating blade or brush systems are required.

USER-FRIENDLY CONTROL
Our state of the art DYNALOGIX controller, housed in a NEMA 4/12 enclosure, provides self-diagnostic and programming functions. The multi-character LCD screen gives immediate visual control over the door status at any moment. A rotary disconnect, push button and emergency stop are standard.

SELF-REINSERTING WITHOUT INTERVENTION
The curtain automatically reinserts itself when dislodged. No manual intervention, or production downtime.

DYNACO
All Weather M3
High Performance Door

DYNACO
High Performance Doors

DYNACO All Weather M3
High Performance Door

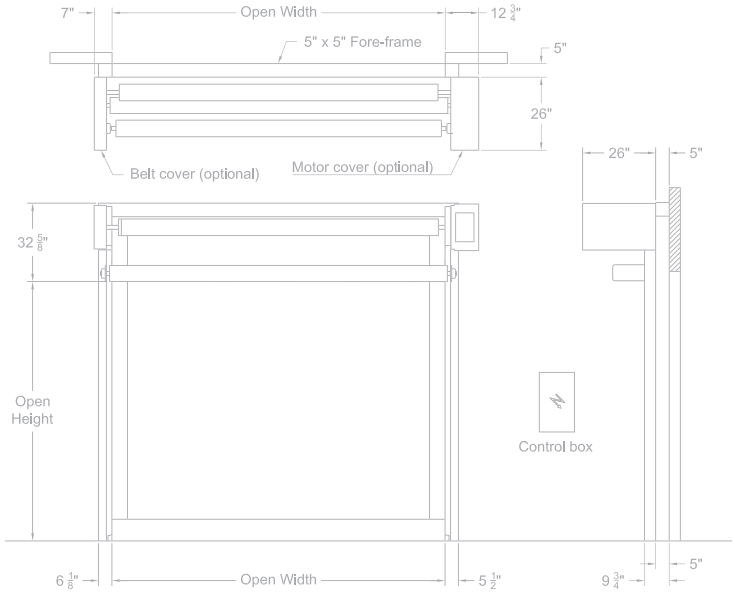
Designed for a large exterior application with extreme weather and high wind loads, the DYNACO All Weather M3 door is a safe and reliable high speed, high cycle door

DYNACO All Weather M3 doors are the optimal choice when the application is a high pressure area. This door operates reliable in areas that are subject to pressure of up to 110mph wind resistance. Incorporating patented "Push-Pull" gear drive technology, the All Weather M3 operates at higher opening and close speed than gravity doors.

The unique combination of technology and industrial engineering make this All Weather M3 door a great performer with a top safety level. The door operates without the need for weighted or rigid components, reducing maintenance and increasing safety for goods and people. A fast open/close cycle, environmental control and reduction of energy cost are just a few of its extra advantages.

The DYNACO All Weather M3 will automatically reinsert itself in its side guides should the curtain be accidentally hit. No manual intervention required

Dimensions and installation requirements



TECHNICAL SPECIFICATIONS

Door Dimensions	Min. 18 ft W x 18 ft H Max. 39 ft W x 18 ft H
Operating Speed (depending on door size)	Up to 31.2 in/s open 31.3 in/s closing
Safety features	Soft bottom edge design with wireless reversing edge and built-in infrared sensor. No coil cords.
Wind resistance	Equivalent to winds up to 110 mph, depending on door size.
Door Panel	27oz reinforced PVC vinyl with choice of color and vision.
Structure	Frame constructed of structural galvanized steel channels of 3 15/16" x 1 15/16"x 1/8".
Side guides	Inner side guides in Polyethylene (PE-UHMW 1000); retained in steel C channels 7/8" x 1 9/16", on springs pivoting.
Fore Frame	Painted fore frame included, with guide roller
Motor	IP65 rated direct drive unit utilizes soft start/stop technology, absolute encoder and dynamic braking.
Control box	UL approved industrial control panel housed in NEMA 4/12 enclosure. DYNALOGIX controller with variable frequency drive and high resolution encoder.
Power supply Frequency	Voltage: 208-240VAC, 480VAC, 575VAC. Motor 3.35HP, 3ph, 60Hz. Protection degree IP65.

Door specifications and technical data subject to change without notice.

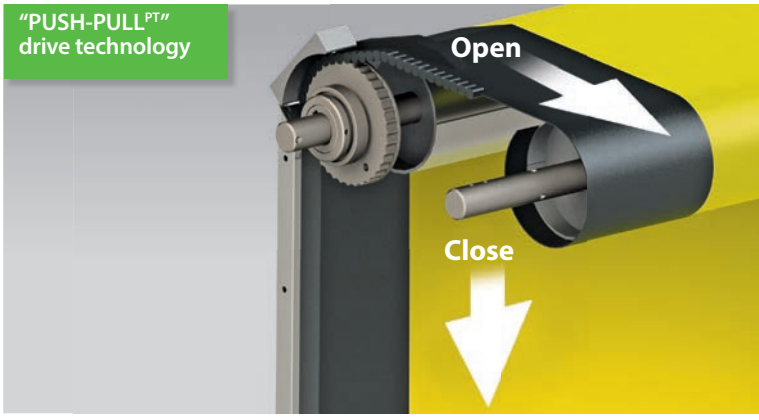
Founded in 1987, the Dynaco brand has a strong heritage and a wealth of expertise in high performance doors. Dynaco is committed to achieving excellence in quality and performance through a certified and dedicated network of partners, providing outstanding service to our customers. Dynaco offers a comprehensive range of products for industrial, commercial, and institutional applications, including high-performance doors. Dynaco offers a comprehensive range of products for industrial, commercial, and institutional applications. Built on nearly 200 years of accumulated expertise, Dynaco is the preferred partner of distributors and the number one choice of end user customers, providing innovative products, technical expertise and a portfolio of industry leading brands.

The Dynaco products are protected by worldwide registered patents. As part of its policy of continuous product development, Dynaco reserves the right to change the characteristics of its products or components without prior notice. Disclaimers: For a correct use of our products, please refer to our manual. Everything that is mentioned in this brochure is only valid under the terms of use in the user manual and on condition that the door was properly installed and maintained and has not undergone abuse nor neglect.

DYNACO
High Performance Doors

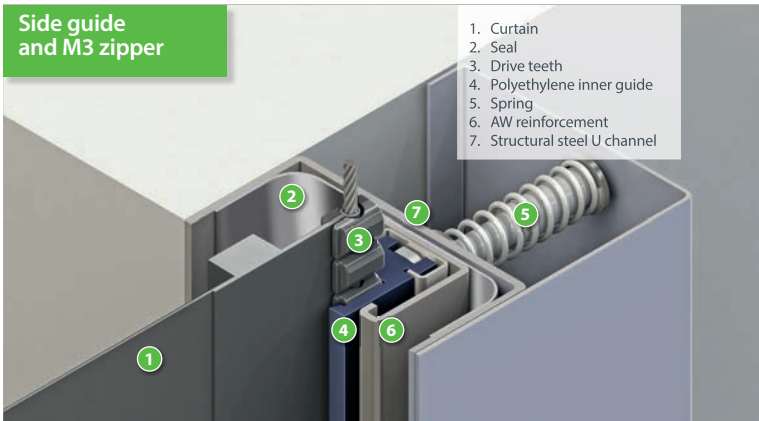
935 Campus Drive Mundelein IL 60060
P: 1-800-459-1930 or 1-847-562-4910
F: 1-800-459-1960 or 1-847-562-4917
Email: info@dynacodoor.us
www.dynacodoor.us

"PUSH-PULL^{PT}" drive technology



Side guide reinforcement

Side guide and M3 zipper



DYNACO

Technical Manual

Door Model M3

DYNACO
High Performance Doors

Door specifications and technical data subject to change without notice.

ASSA ABLOY Entrance Systems AB reserves the right to make technical changes.

These operating instructions are an integral part of the door.

Dynaco HPD NA
935 Campus Dr.
Mundelein IL, 60060
USA

DYNACO Doors on the World Wide Web:
www.dynacodoor.us

Table of Contents

April 2007
Issue 1

Title **Page**

List of Figures

Figure **Page**

List of Tables

Table **Page**

Chapter 1:
Before You Begin

1.1. Safety

1.1.1. Hazard Standards

Throughout this manual you will see a label that indicates situations during the installation process that pose risks to installers and/or equipment.

Installation technicians may be exposed to injury from electrical components.

Damage to equipment is possible.

The mechanical and electrical components of the door may have posted warning and caution information as well. These will typically include the following symbols indicating the type of risk and precaution to be taken.

The Warning sign indicates a danger of severe physical harm or death. The symbol includes specific information regarding the risk such as “High Voltage” or “Keep Hands Clear”.

The Caution sign indicates safe operating procedures. Failure to comply with the procedure may result in injury or damaged equipment. The sign will include procedural text such as “Lock Out for Safety” or “Lookout for Forklifts.”

1.1.2. Installation Precautions

Only certified DYNACO door installers may install DYNACO doors. Always use of the proper tools, procedures, and techniques when installing your DYNACO door. Installation of the DYNACO door requires the assistance of qualified electricians and forklift operators. Installation contractors should ensure that those participating in the installation process have received the appropriate training and certification required to complete the installation.

Installation performed by untrained technicians may result in injury and/or damage to equipment.

Note: Failure to follow the instructions found in this manual may result in an inoperable door and void its warranty. Installation by unauthorized persons may also void the warranty.

1.1.3. Operation Precautions

The following precautions should be taken when operating DYNACO doors.

- Read this manual prior to operating DYNACO doors.
- Keep the control box closed while operating the door.
- Keep all safety features such as covers and safety warnings visible and readable at all times. Observe all safety warnings and procedures.
- Avoid contact with all chains, bearings and other moving parts during activation of the door.

1.1.4. Maintenance Precautions

The following precautions should be taken when performing maintenance on DYNACO doors.

- Only certified personnel should perform maintenance on DYNACO doors. Maintenance performed by untrained technicians may result in injury and/or damage to equipment.

  Note: Service performed by unauthorized persons may void the DYNACO Door warranty.

- Only use DYNACO Factory Direct replacement parts. All door parts are engineered specifically for use within the door.
- Return the door to the original factory condition when maintenance is complete. Take extra care to ensure that all safety features are restored to their original condition.
- Observe all electrical precautions.

1.1.5. Electrical Precautions

Electrical shock can be deadly. Take extreme care when performing installation and maintenance task on the electrical components of the door. Following the precautions listed below.

- All electrical parts used to install or repair DYNACO doors must be UL approved.
- Lock out and tag electrical components in accordance with OSHA regulations and approved electrical codes prior to performing maintenance. Lock out is required for service or maintenance on all mechanical and electrical components including performance of the following tasks.
  - Removal of covers, side guides, motor, limits, and other protective devices.
  - Inspection of the door.
  - Inspection or maintenance of the Control Box.
  - Maintenance or repair of the opening commands.
- Disconnect the Uninterruptible Power Supply (UPS), if present, when performing maintenance. Refer to the UPS manual for information on disconnecting the UPS.

Take special care when addressing frequency inverter failure modes. The frequency inverter stops the door when it senses voltage loss, phase differences, and thermal overload. This stops the door from further operation, but does not disconnect the power. Observe the following precautions related to the frequency inverter.

- Keep the frequency inverter cover closed at all times.
- Disconnect the main power supply, wait 15 minutes, and reconnect the power supply after resolving frequency inverter failure modes.
- Disconnect power and proceed with lock out procedures to perform service after the frequency inverter has stopped the door.

1.2. Installation Tools

You will need the following tools to complete the installation of your DYNACO door successfully.

- 1 water level / laser level
- 2 ladders
- 1 wire stripper
- 3 clamps
- 1 set of screw-drivers
- 1 grinder
- 1 tape measure
- 1 utility knife
- 1 circuit tester V.O.M.
- 1 punch
- 1 hammer drill
- 1 threaded rod
- 1 universal pliers
- 1 set of Allen keys (metric/US)
- Spreader Bar and lifting device
- Straps for lifting
- Welder (option)

1.3. Unpack the Door

The door should be unpacked immediately before installing the door.

1. Carefully unpack each item and check it off on the following manifest.

2. Pull fore frame out of crate while inspecting door parts. Arrange fore frame near door opening.

1.4. M3 Manifest

Check off each item on the manifest, complete and sign the manifest, and fax this page to DYNACO at (800) 459-1960. **This is necessary to validate the warranty**.

Inspect the crate for damage before you begin unpacking. If damaged, do not sign-off on the shipment. Call the shipper and DYNACO within 24 Hours!

Standard Components

- ☐ Door serial number (located in the Control Box and on the side guides) matches order.
- ☐ Guide Roller Brackets (2)
- ☐ Guide Rollers (2)
- ☐ Fore frame (3 pieces)
- ☐ Head Unit
- ☐ 2 Side-Guides
- ☐ Factory installed covers (You will need to disassemble these before you can mount the door.)
- ☐ Control Box
- ☐ Counterweight
- ☐ Accessory Box (with factory packing list)
  - o Motor Key (hex Socket, 6mm)
  - o Side-Guide Attachment Bolts
  - o Counterweight Attachment Hardware
  - o Pneumatic Tube (Power Model only)
  - o 2 Top Inner Guide Spring Kits

Optional Accessories

Be sure to place these items in a secure place. Installation of these items occurs *after* the door is properly mounted, secured to the wall, and finalized. Install these accessories one at a time. Make sure that you test the functionality of each accessory after you have installed it before moving on to the next accessory.

- ☐ Pull Cord
- ☐ Push Button
- ☐ Motion Sensor
- ☐ Magnetic Loop Activator
- ☐ Remote Control
- ☐ Other _____

I have visually confirmed each of the above items was received in good condition.

Door Serial Number _____

Name	Company
Phone	Address
Date	City, State and Zip

Chapter 2: Mechanical Installation

2.1. Introduction

Before installation begins, each part should be checked against the manifest. The M3 Model door comes in two styles, All Weather and Power. Both types of doors are installed in the same manner. Due to the dimensions of M3 doors a fore frame must always be installed first for extra support. An optional canopy may also be mounted above the door.

Contact Dynaco for additional measurements and verifications, for example, if the door dimensions are needed.

2.2. Verify Door Dimensions

The foreframe should match the ordered dimensions plus additional coverage for header and fore frame as listed below.

Table 2-1: Door Dimensions

Door Model	*Width*	*Height*
All Weather	Ordered + 10 (5 per side)	Ordered + 32 $^{5}/_{8}$
Power	Ordered + 10 (5 per side)	Ordered + 27 1/2

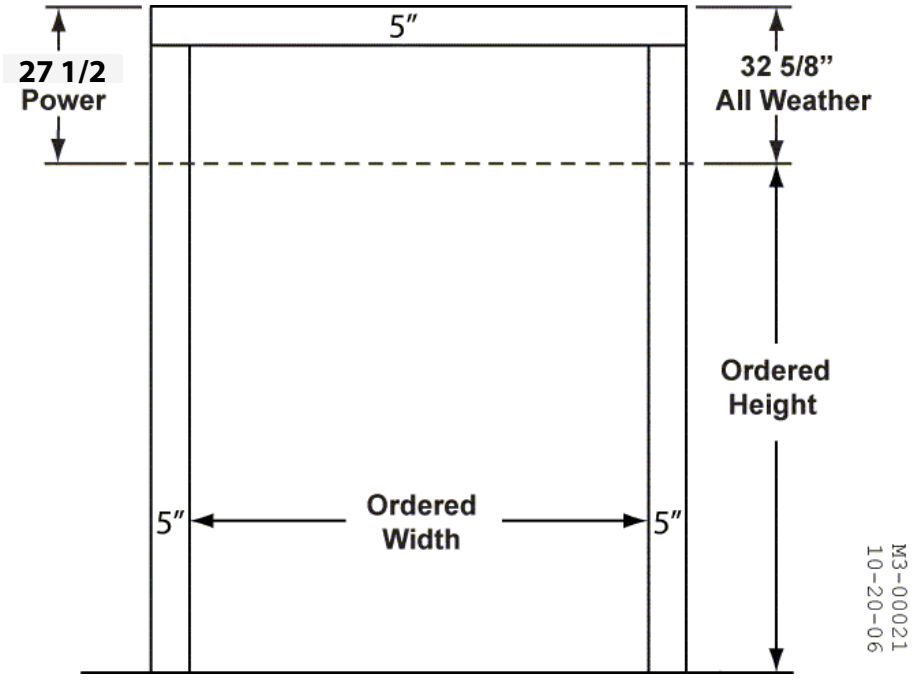


Figure 2-1: Door Dimensions

2.3. Assemble and Mount the Fore Frame

The All Weather and Power model M3 doors require the use of a fore frame. The fore frame supports the full load of the door. The fore frame comes standard with the All Weather model but is optional with the Power Model.

WARNING

Failure to properly install a fore frame with the M3 Model doors may result in the door collapsing. Prep the opening to ensure suitable support for the full weight of the door and for frame.

1. Clear the door mounting area of all obstructions.

2. Lay fore frame out on the floor with cutouts facing up. If the ground is uneven, shim to allow proper alignment.

3. Weld the uprights to the header. Also, tack weld a temporary support along bottom opening (such as angle iron) if needed. See Figure 2-2.

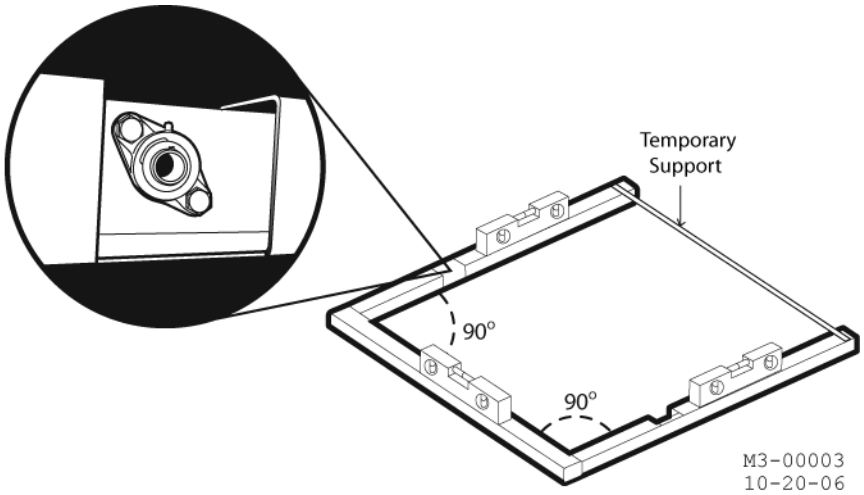


Figure 2-2: Assemble Fore Frame

4. Attach the larger of the two Guide Rollers for All Weather doors and tighten set screws on both sides. See Figure 2-3.

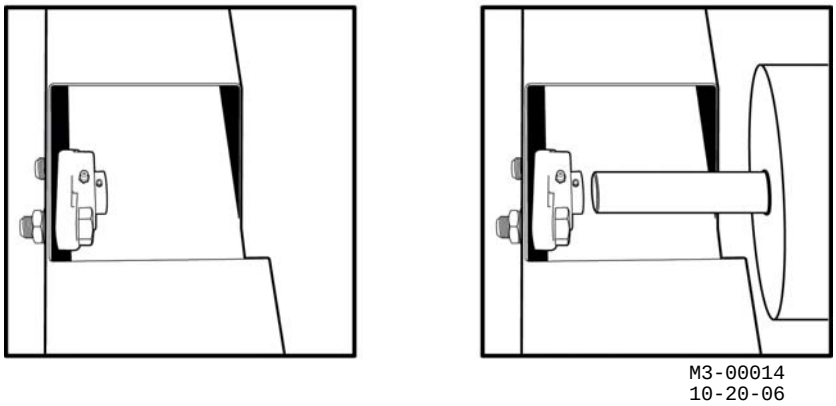


Figure 2-3: Attach Guide Roller

5. Lift the fore frame into place using a crane or other lifting device.

6. Mount the frame to the opening, shimming as necessary. The fore frame may be welded into place as appropriate, or the mounting clips may be used for non-metal surfaces as shown in Figure 2-4.

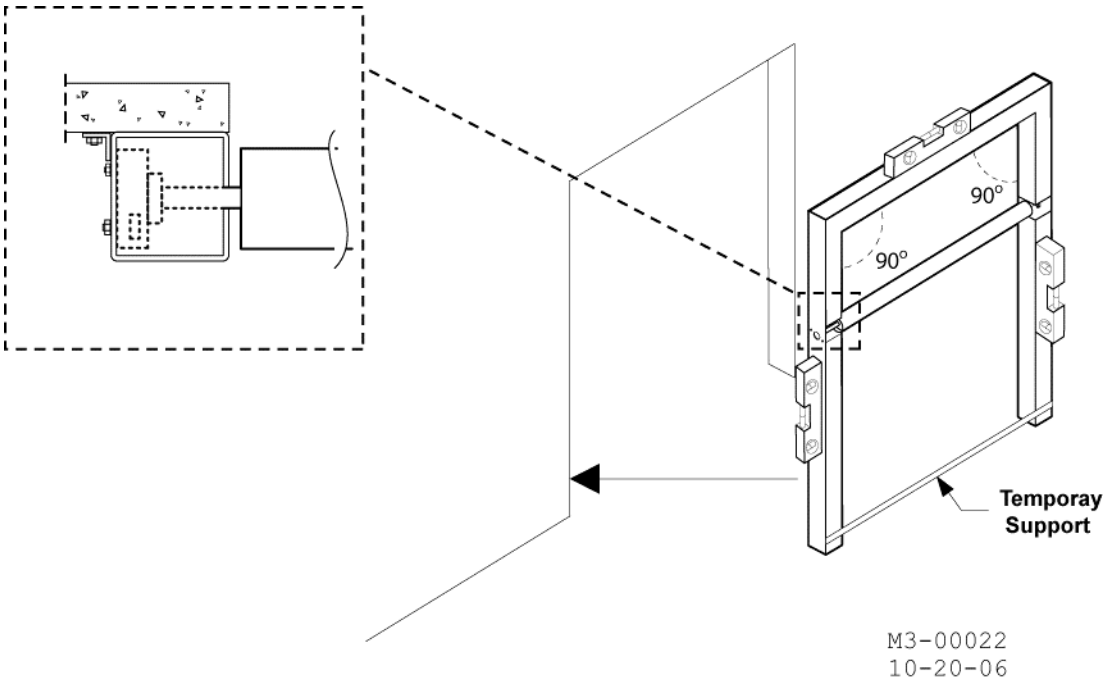


Figure 2-4: Mount Fore Frame

Note: Fore frame must be secure. Adjust mounting as needed based on the specific opening features.

2.4. Assemble the Door

1. Clear the door mounting area of all obstructions.

2. Layout the head unit on the floor and remove the shipping bolts from the side/junction post. See Figure 2-5.

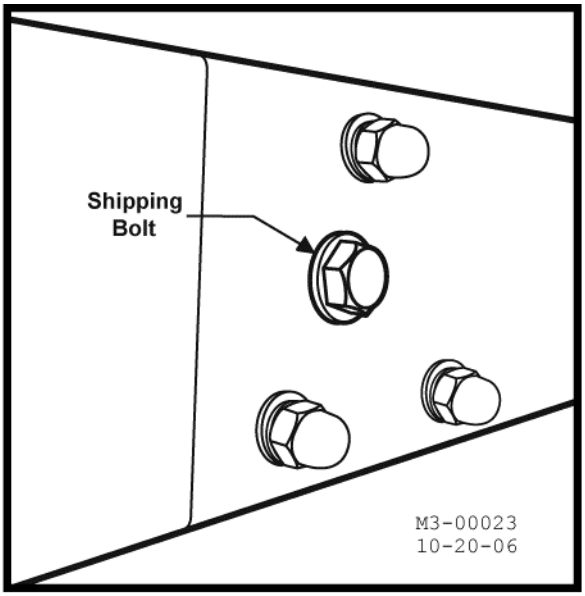


Figure 2-5: Remove Shipping Bolt

3. Layout the side guides on the floor. Install side guide by sliding it into the junction post, making sure to insert the top stud through lower drive assembly. See Figure 2-6.

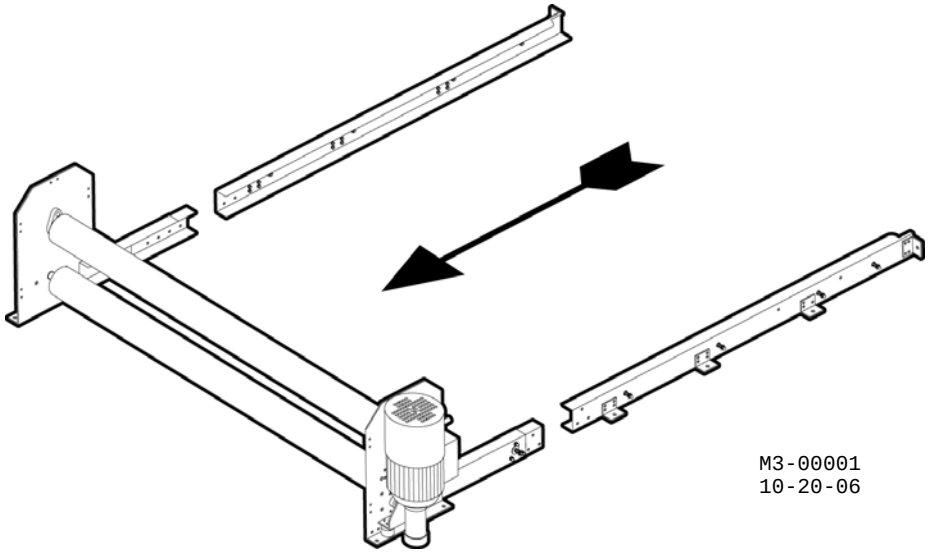


Figure 2-6: Attaching the Side-guides

Note: Take care with the side gaskets to avoid bunching when sliding the assembly together.

4. Attach the Guide Roller Brackets to the side guides. See Figure 2-7.

a. Insert bolt through Inner part of c-channel, through junction post and guide roller bracket.

b. Install lock washer and nut to bolt and secure tightly.

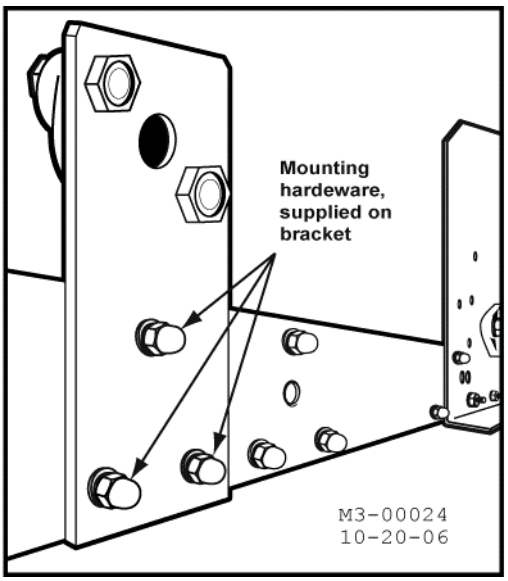


Figure 2-7: Attach Brackets

5. Secure the top stud with the spring assemblies, bolts, nuts, and washers found in the hardware kit. See Figure 2-8.

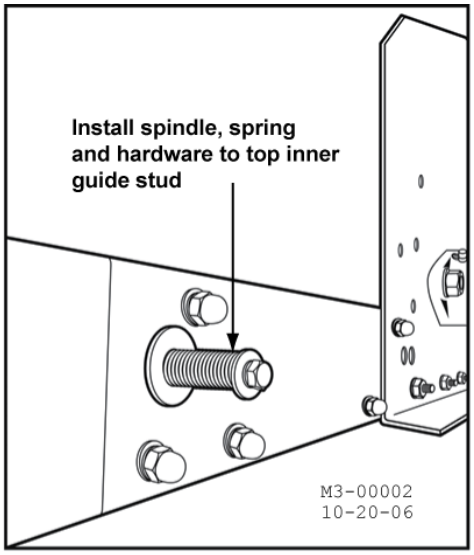


Figure 2-8: Securing the Side-guides

6. Align the inner guides with the reintroduction points. See Figure 2-9.

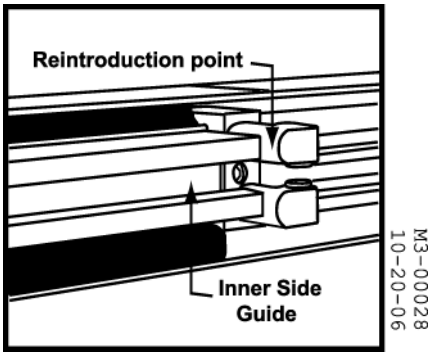


Figure 2-9: Aligning the Inner Guide

Note: The top stud is spring loaded and not fixed. If the alignment is off try adjusting the position of the track.

7. Lift the door into place using an appropriate lifting device. See Figure 2-10.

CAUTION

Do not lift the door from the center only; the drum will bend. Use a spreader bar and straps if using a single fork lift or use two forklifts. Strap the spreader bar to the forks to ensure that it does not slip from the forks while you are raising it.

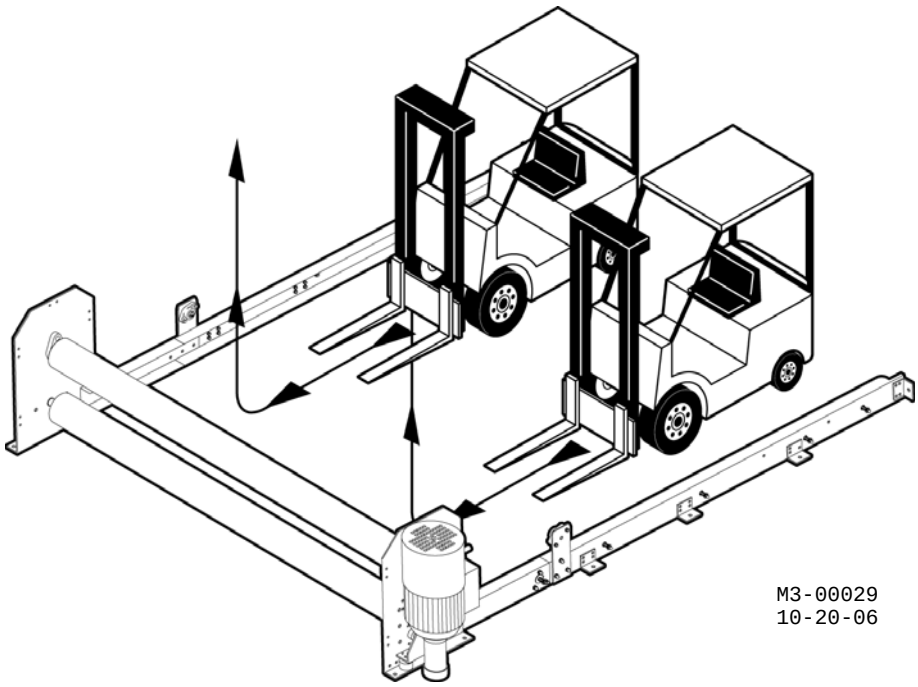


Figure 2-10: Placing the Head Assembly on the Forks

8. Lift the door with the forklift or suitable lifting device. The door will tilt to a vertical position as you lift the forks as in Figure 2-11.

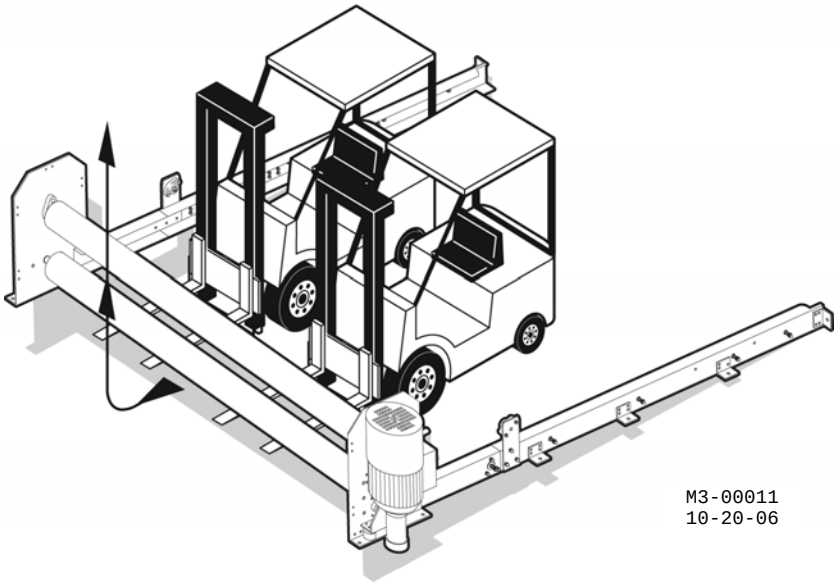


Figure 2-11: Tilting the Door

CAUTION Clear area of obstructions. The door will fall if the side guides get snagged when lifting the door into place.

2.5. Mount the Door

1. The fore frame must be securely mounted before mounting the door. See Figure 2-12.

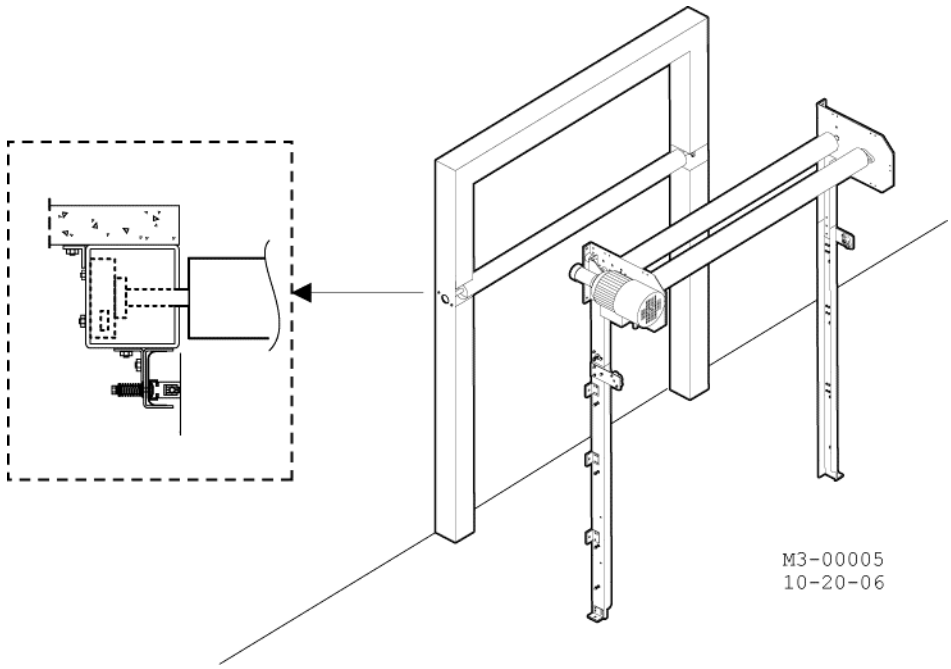


Figure 2-12: Mounting Detail

2. Place the door against the level and plum fore frame while checking the levels (drums, side guides, and side plates). See Figure 2-13.

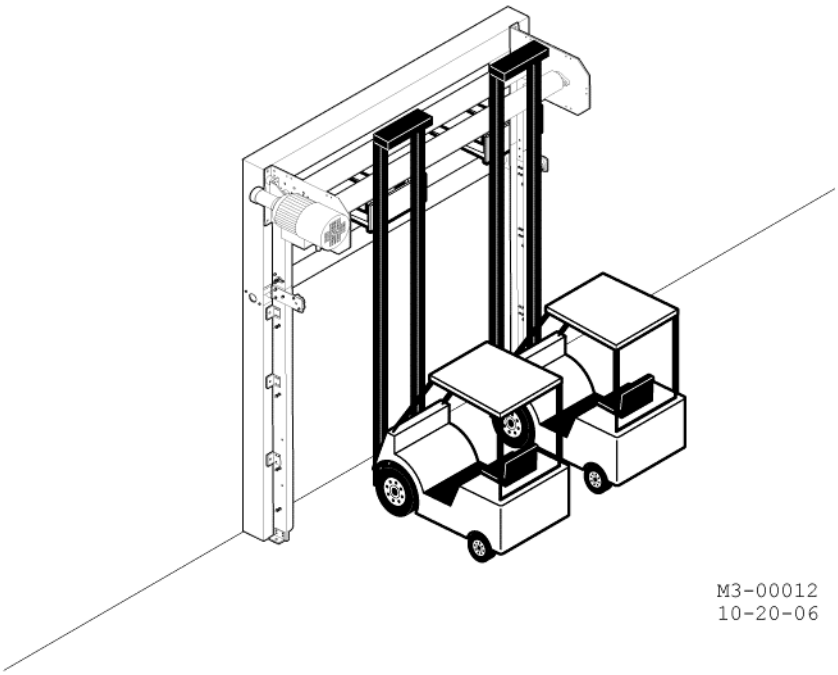


Figure 2-13: Placing the Unit Against Door Opening

Note: Do not permanently secure the door yet. You must first ensure the door is level (true horizontal) and plum (true vertical).

3. Temporarily attach the door with clamps or some other secure method. See Figure 2-14.

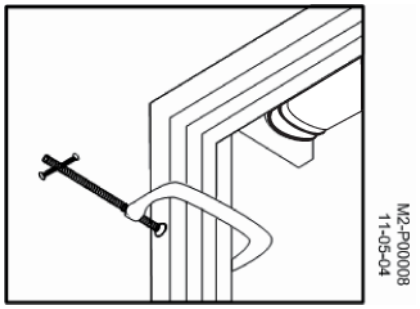


Figure 2-14: Temporarily Attaching the Door

4. Using a level, check each side of the door opening for level and plum. See Figure 2-15.

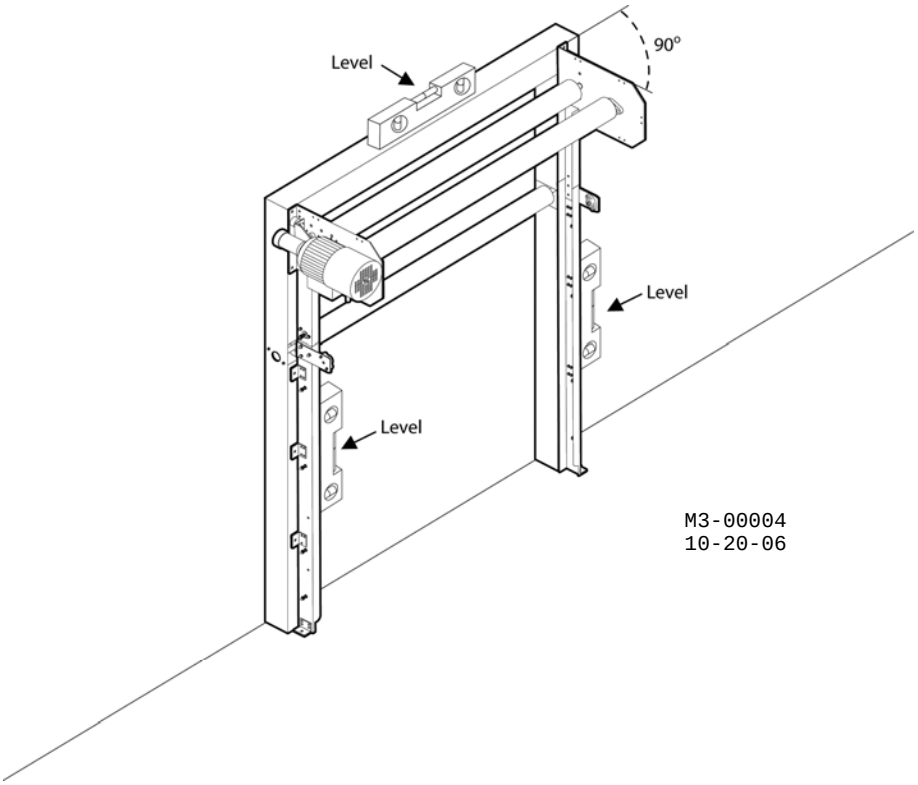


Figure 2-15: Level and Plumb the Door

Note: If necessary shim the along the side guide to correct skew.

5. Continue to adjust the doors until it is absolutely plumb and level.

Note: Ensure that side plates are plum, level, and square. This is crucial for door operations.

6. Measure the inside dimension <W> between the two side-guides ensuring that it is the same at the top, middle and bottom. See Figure 2-16.

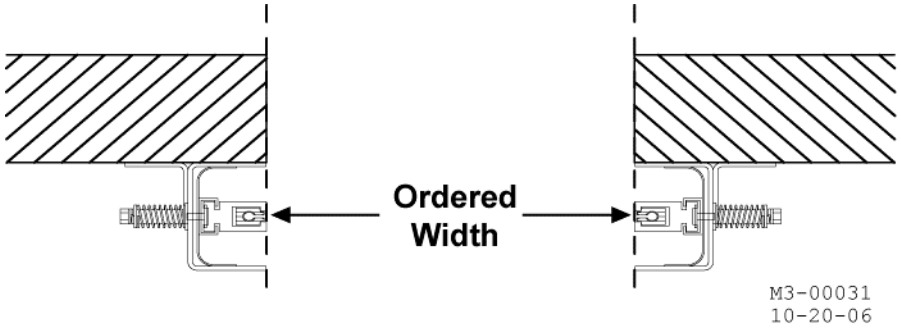


Figure 2-16: Inside Dimension Measurements

7. Permanently anchor the door in the following order. See Figure 2-17.

a. Head Unit Mounting Points

b. Side-Rail Mounting Brackets

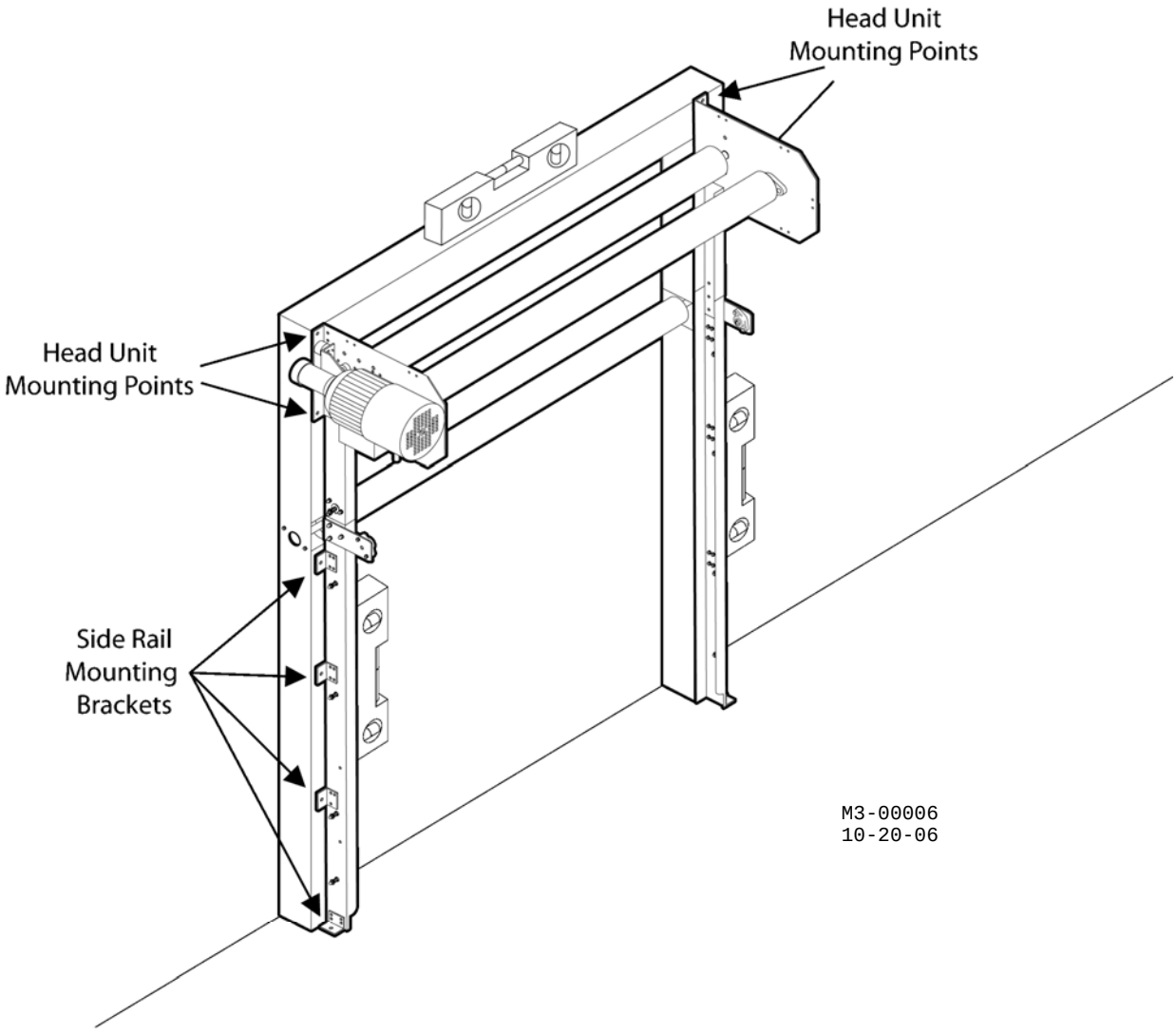


Figure 2-17: Anchoring the Door

2.6. Install the Curtain

1. Remove protective shipping material from the curtain.

2. With one person at each end of the door, loosen the curtain from the roll-up drum and position the first tooth at each side within the drive mechanism.

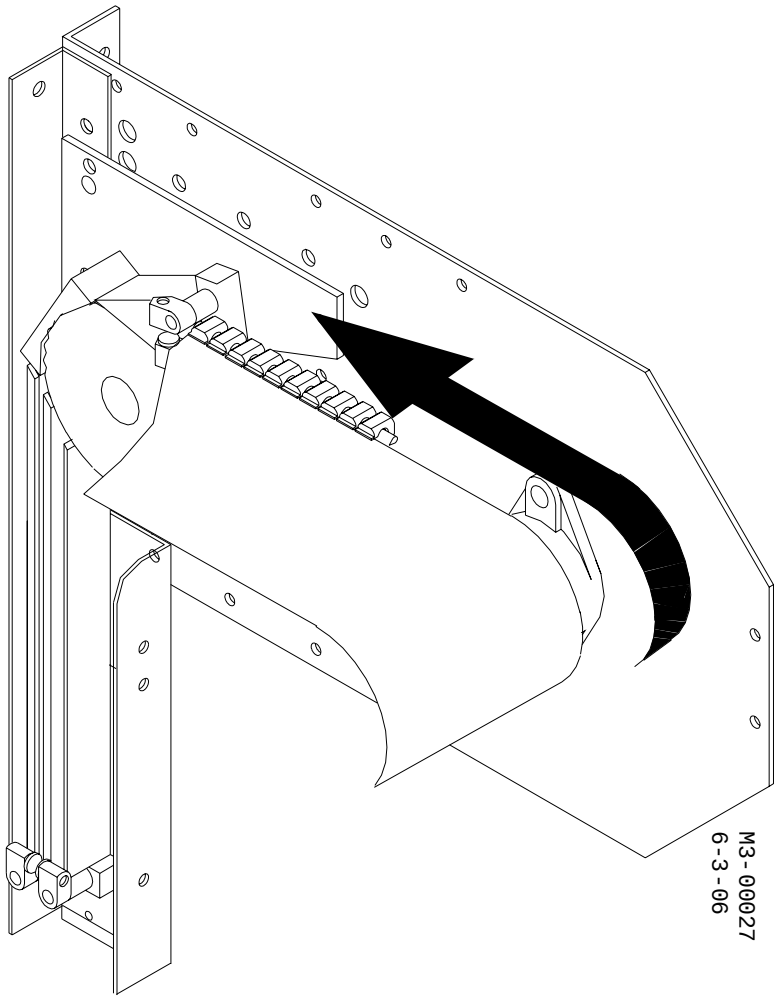


Figure 2-18: Feeding the Curtain

3. Insert the ratchet and key into the drive motor fan opening. See Figure 2-19.

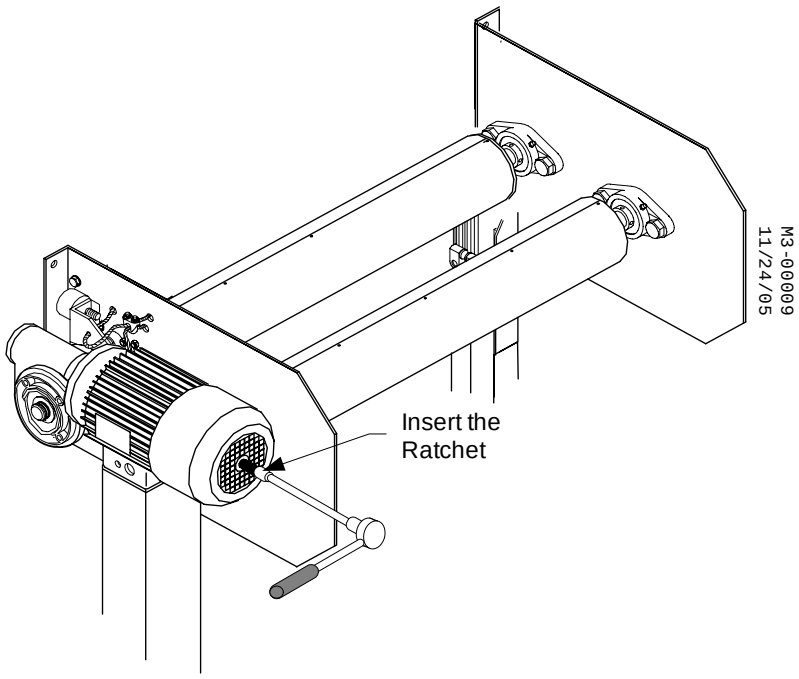


Figure 2-19: Move Curtain through Drive

4. While holding moderate pressure to each zipper, rotate the drive motor backwards slowly to push the zipper back and slip the first tooth of each zipper into the next tooth of the drive gears.

   Note: This ensures that the curtain is even on both sides.

5. Reverse direction of the ratchet and rotate the drive motor until the last tooth on booth sides of the curtain are even with the reintroduction point.

   Note: Repeat until door is even.

CAUTION

Do not leave the door unattended without the counterweight installed. Until you install the counterweight, there is risk of the curtain slowly unraveling onto the floor.

2.7. Install the Counterweight

1. Ensure the curtain is in the up position.
2. Locate the pre-assembled belt on the rollup drum shaft.
3. Unroll the belt until 3" remain on the shaft. See Figure 2-20.

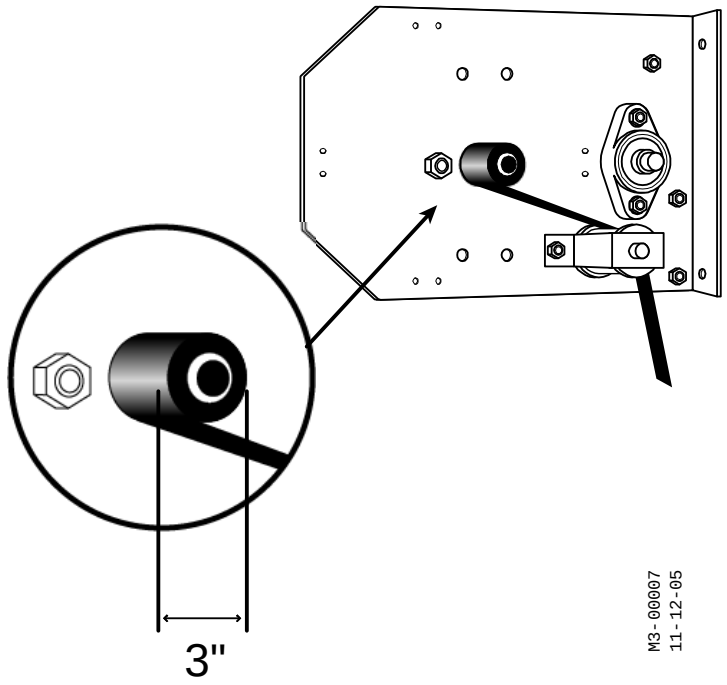


Figure 2-20: Wind Belt on Shaft

4. Pass the belt behind the Counter-weight Pulley without twisting it. See Figure 2-21.

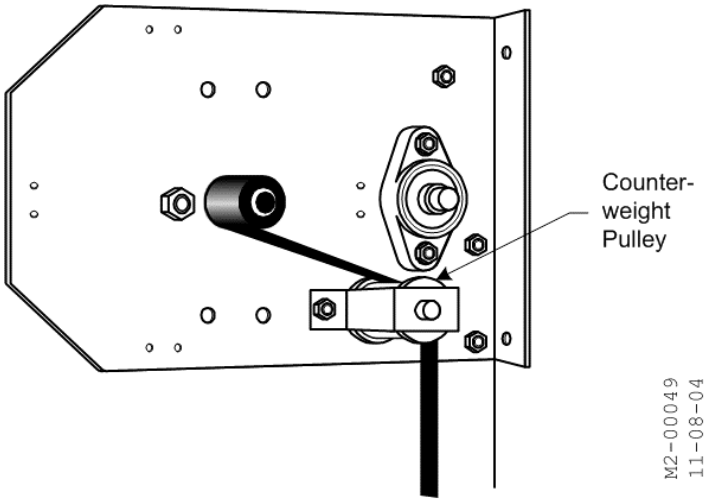


Figure 2-21: Counterweight Pulley

5. Securely support the counterweight at 20 inches above the floor.

Note: The counterweight may be lower depending on door size. Adjust accordingly.

6. Attach the belt to the counterweight with the hardware provided. See Figure 2-22.

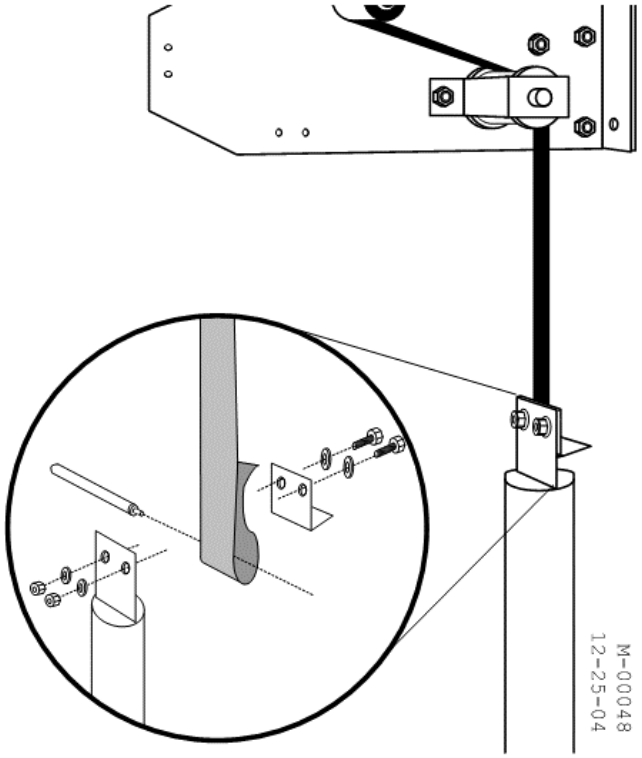


Figure 2-22: Attach Counterweight

7. Verify that the weight is mounted straight vertically and not at an angle.

8. Manually lower the door to verify that travel of the counterweight is unobstructed.

9. Run the door up.

10. Remove any excess belt after the door has been operated normally.

11. Adjust the counter weight as needed.

Note: After door has been operated normally the counterweight may need to be adjusted.

2.8. Install Guide Roller

The second Guide Roller must be installed for All Weather models. Attach the smaller of the two Guide Rollers for All Weather doors to the plates and tighten the set screws on both sides.

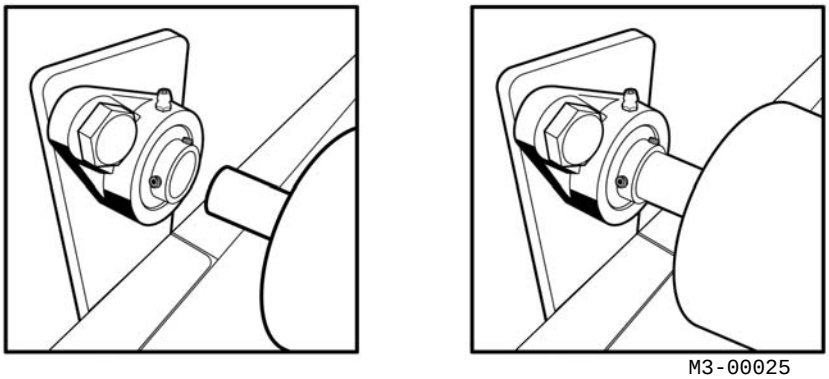


Figure 2-23: Attach Second Guide Roller

2.9. Mount the Control Box and Photo Eyes

CAUTION

Run conduit and cables into the bottom of the Control Box only. Do not drill into the side or top of the Control Box. Doing so will void the warranty! (If you are running conduit, place the motor cable in its own conduit.)

1. Mount the Control Box on the ***motor side*** of the door, approximately 5' 3" above the floor level. See Figure 2-24.
2. Run the conduit as appropriate.
3. Mount the photo eyes in the pre-drilled holes in the side guides (located approximately 12" from the floor). See Figure 2-24.

CAUTION

Ensure that the photo eye is flush with the inside attachment nut and does not project into the side rail.

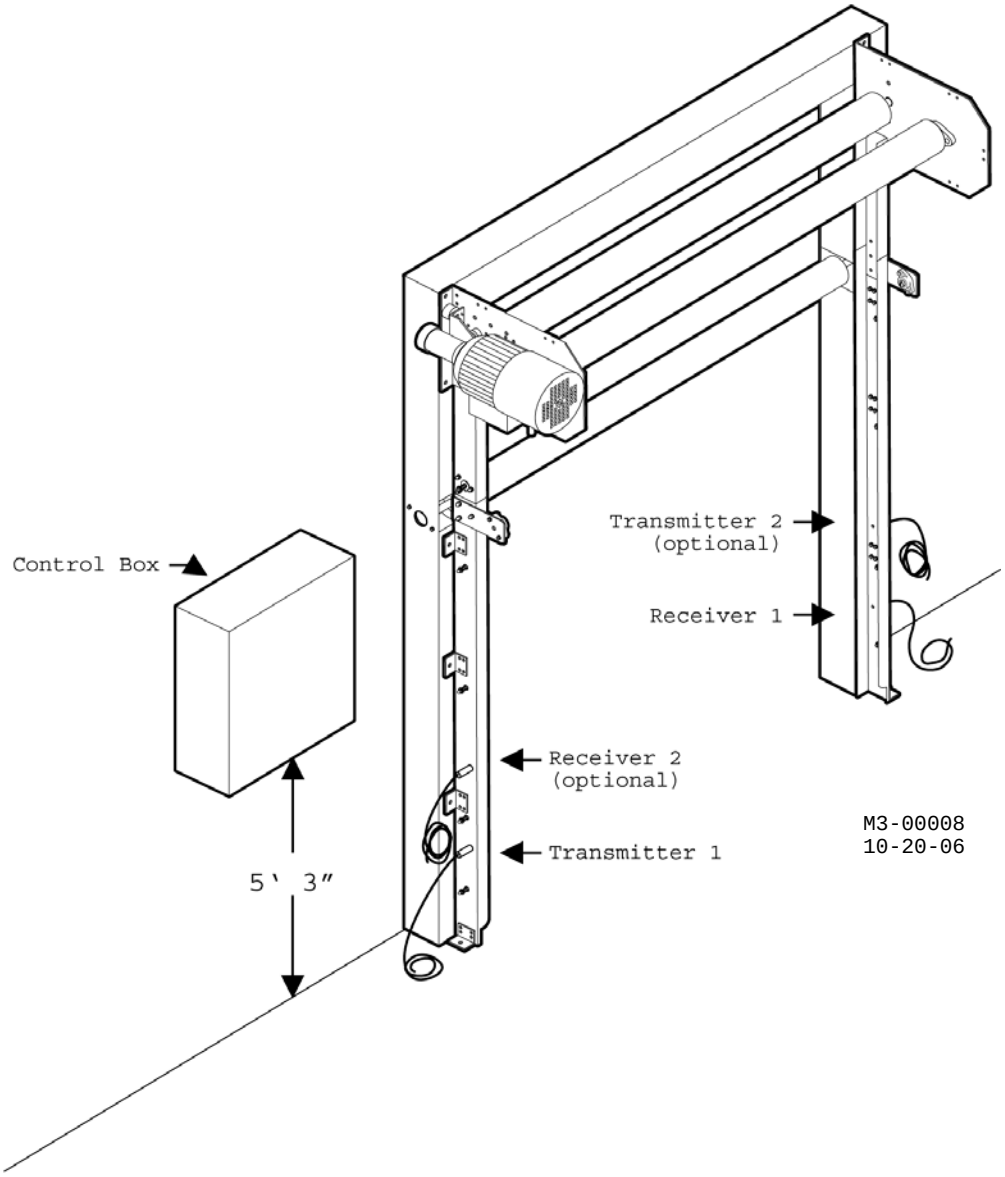


Figure 2-24: Photo Eyes

Note: If more than one pair of photo eyes is used, do not install two transmitters on the same side. The photo eyes emit a low frequency pulsed signal. They must be clean and directly aligned for proper operation. The photo eyes will not line up if the side guides are not plum, level, or are askew.

2.10. Connect Pneumatic Tube

The Pneumatic Tube is standard for the Power model M3 doors. For the All Weather model, please see **Appendix D:** Wireless Bottom Detector**.**

1. Connect the pneumatic tube at the drum. See Figure 2-25.

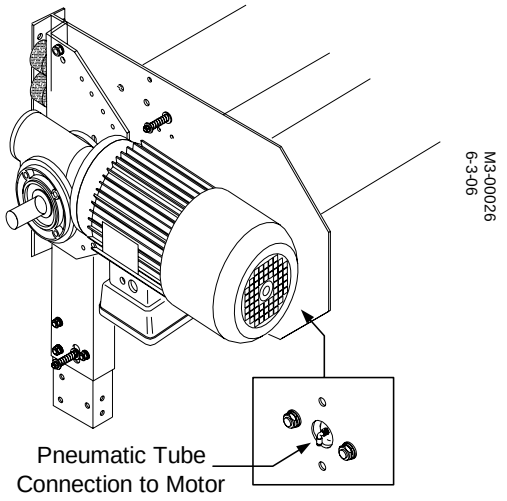


Figure 2-25: Pneumatic Tube on Drum Shaft

2. Connect the pneumatic tube to the press-in fitting within the Control Box. See Figure 2-26.

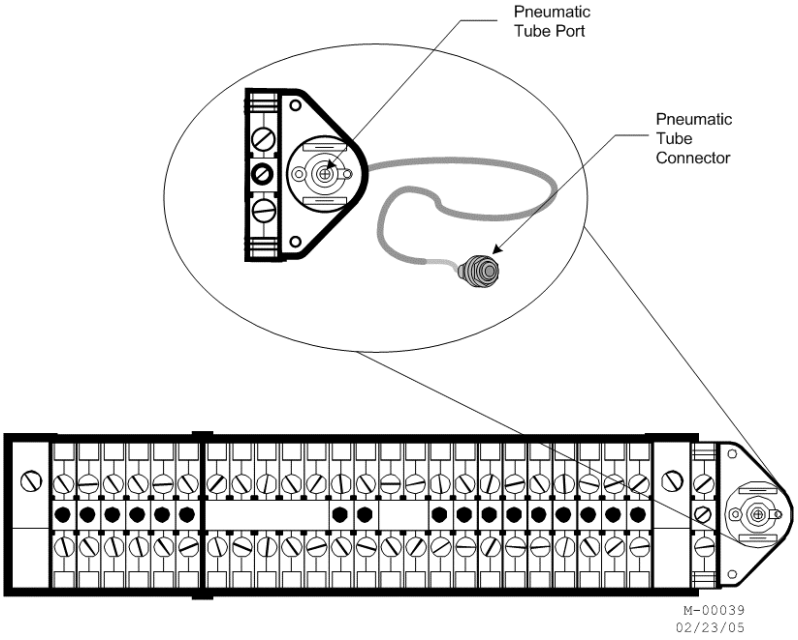


Figure 2-26: Pneumatic Tube Connection in Control Box

Chapter 3:
DYNALOGIX (DY2000)

3.1. Specifications

The DYNALOGIX (DY2000) monitors all operations of the door. You use this device to:

- Define the automatic close timers,
- Monitor and troubleshoot the input connections,
- Interpret and correct any malfunctions or alarms.

Note: The door will not run until the DYNALOGIX display reads **rEAdy.**

3.1.1. Controls

Figure 3-1 illustrates the controls located on the DYNALOGIX control box.

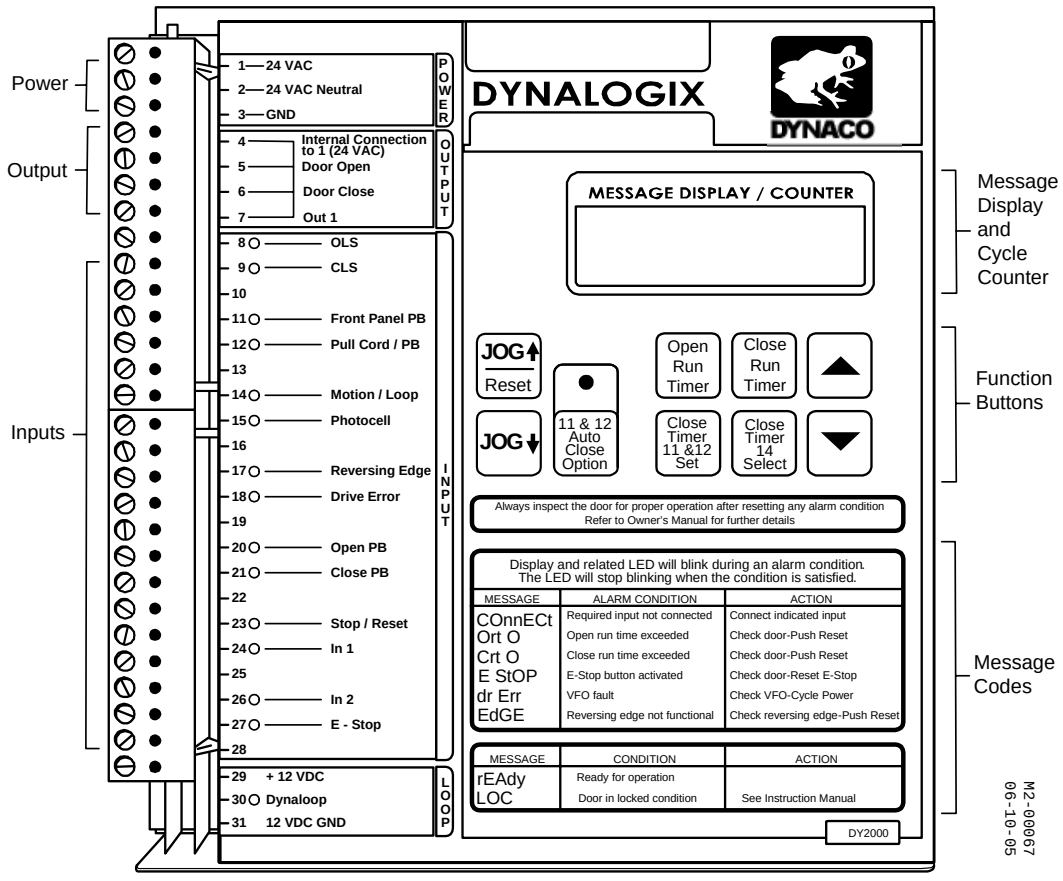


Figure 3-1: DYNALOGIX Controls

Table 3-1 describes the DYNALOGIX buttons and controls.

Table 3-1: DYNALOGIX Controls

Control	*Function*
JOG Buttons	Moves the door up and down. The door moves while the button is depressed and stops as soon as it is released. The **JOG**⇧ button also acts as the **RESET** button. Press this button after the Open or Close Run Timer goes to zero, an Edge Error occurs, or a Drive Error occurs.
Open Run Timer	Begins a countdown as the door opens. In the event that the door becomes stuck and does not reach the open limit setting by the time the countdown reaches 0, the DYNALOGIX shuts down the motor. (Press the RESET button to reset the DYNALOGIX.) Press this button once to display the Open Run Timer's current time setting. Use the up and down buttons to change the setting.
Close Run Timer	Begins a countdown as the door closes. In the event that the door becomes stuck and does not reach the close limit by the time the countdown reaches 0, the DYNALOGIX shuts down the motor. (Press the RESET button to reset the DYNALOGIX.) Press this button once to display the Close Run Timer's current time setting. Use the up and down buttons to change the setting. The DYNALOGIX automatically saves changes when the display changes.
Close Timer 11 & 12 / Set	Controls the automatic close timer for push button or pull cord operation of the door. It begins its countdown as soon as the door reaches the open limit setting. Press this button once to display its current settings. Use the up and down arrows to adjust the timer.
11 & 12 Auto Close Option	Turns the Automatic Close option on and off (set by the Close Timer 11 & 12 button). If the LED is lit, the door will automatically close after "x" seconds. If the LED light is not lit, an operator must manually press the push button or pull the pull cord to close the door.
Close Timer 14 / Select	Controls the automatic close timer for motion loop sensor operation of the door. Press this button once to display its current settings. Use the up and down arrows to adjust the time.

Note: The DYNALOGIX automatically saves changes when the display changes.

3.1.2. Messages

Table 3-2 describes the DYNALOGIX display messages.

Table 3-2: DYNALOGIX Messages

Message	*Cause*
rEAdY or **#**	All required connections are correct and the door is ready for operation. A number displayed is the cycle counter.
LOC	The door is in a lockout condition. Typically indicates an airlock condition.
COnnECt	One of the required terminal connections is loose or missing. The DYNALOGIX will light up the LED of the connection in question. Refer to the description next to the LED to determine which specific component is causing the error.
Ort 0	The open run time timer reached 0. This is usually caused by an obstruction somewhere that stops the door from reaching the open limit setting (full open). When the open run timer reaches 0 the DYNALOGIX shuts down the motor. Once you have determined the cause and made corrections, press the **JOG ⇧/RESET** button.
Crt 0	The close run time timer reached 0. This is usually caused by an obstruction somewhere that stops the door from reaching the close limit setting (full close). When the close run timer reaches 0 the DYNALOGIX shuts down the motor. Once you have determined the cause and made corrections, press the **JOG ⇧/ RESET** button.
E StOP	The **E Stop** button was pressed. Confirm that everything is ok with the door and then twist the **E Stop** button to release the E Stop function.
drErr	A drive error occurred.
EdGE	The pneumatic switch may be malfunctioning. Check it for sensitivity and proper operation.

3.2. Electrical Installation

Ensure that the power supply shipped with the door is compatible with the transformer, motor and inverter.

Frequency Inverter Voltage Range:

575 V = 3 Phase

480 V = 3 Phase

230 V = 1 to 3 Phase

208 V = 1 to 3 Phase

Failure to ensure compatible power supply may result in fire and will damage the door.

Ensure that the electrical installation for this door complies with the National Electrical Code (NEC) and/or your local electrical code.

Refer to the electrical schematic shipped with the door for appropriate circuit protection.

3.2.1. Make the Primary Connections

1. Connect the incoming power. Run the wires (conduit) through the ***bottom*** of the Control Box, up the left side, and connect them into the top of the fused disconnect. See Figure 3-2.

   - For a 3-phase unit, use terminals L1, L2, and L3.
   - For a 1 or 2-phase unit use terminals L1 and L2.
   - Install bonded ground to ground lug.

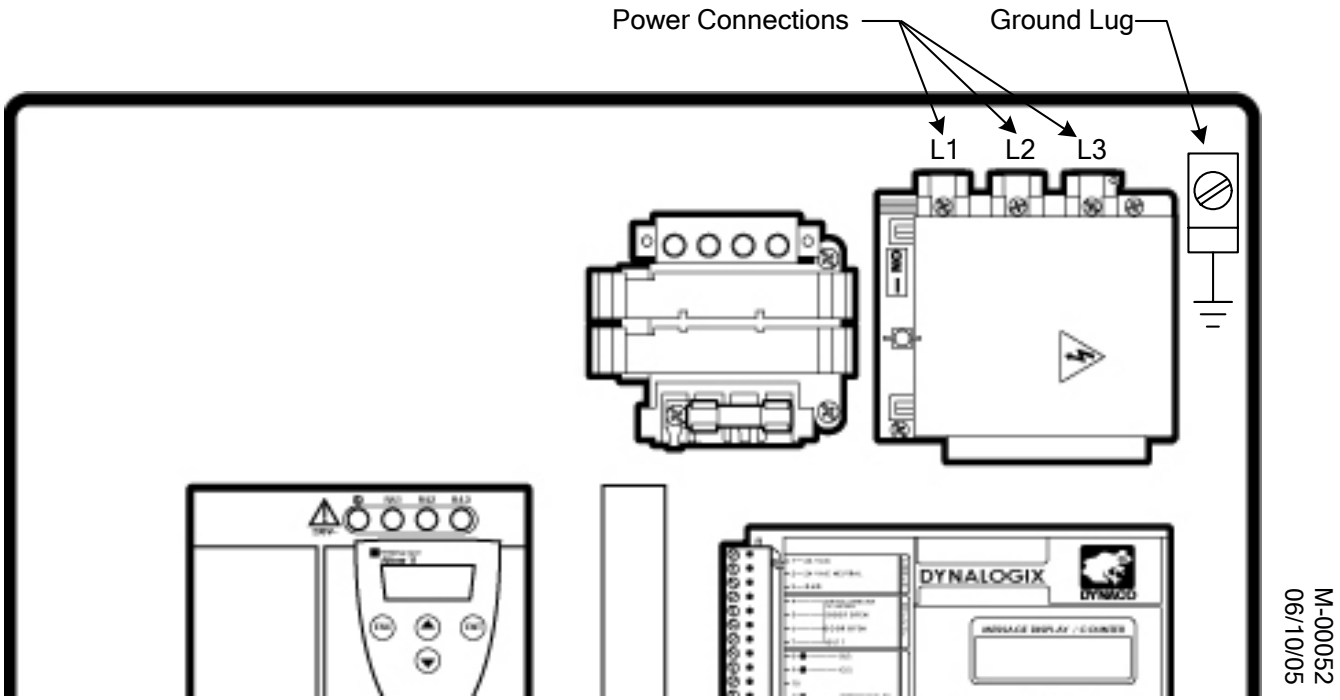


Figure 3-2: Power Connections in Control Box

2. Connect the motor ground wires (ground wire and shield wire) to the ground terminals. See Figure 3-3.

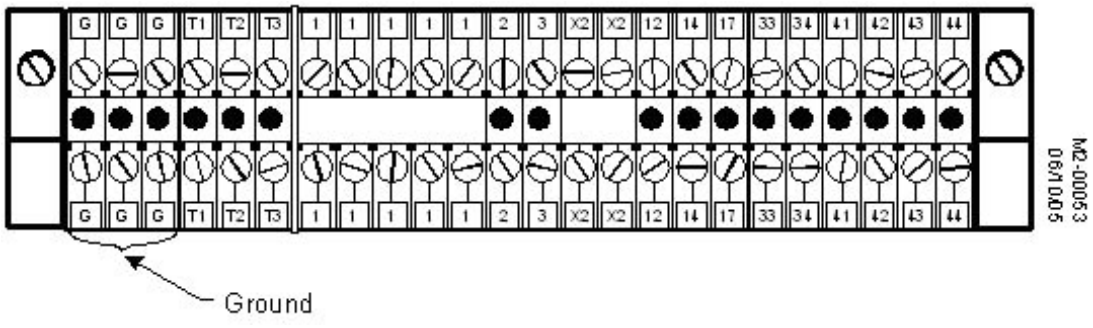


Figure 3-3: Ground Connection on Terminal Block

Connect the motor wires (black) to terminals T1, T2, and T3. See Figure 3-4.

Note: Strip cable only enough to terminate wires. Never strip cable in full or leave excess cable in control box.

WARNING

Use only the motor cable provided. Do not splice the cable**.** Doing so will void the warranty

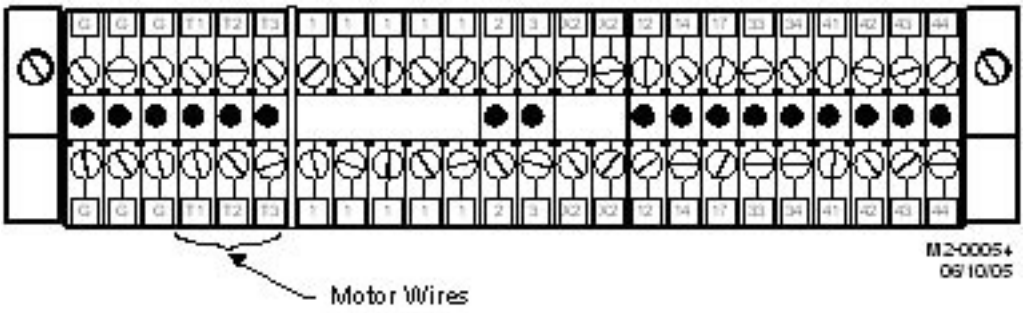


Figure 3-4: Motor Wire Connections on Terminal Block

3. Connect the photo-eye wiring to the terminal block. See Figure 3-5.

- Connect the white wire in the grey transmitter cable to terminal 41.
- Connect the shielded wire in the grey transmitter cable to terminal 42.
- Connect the white wire in the black receiver cable to terminals 43.
- Connect the shielded wire in the black receiver cable to terminal 44.

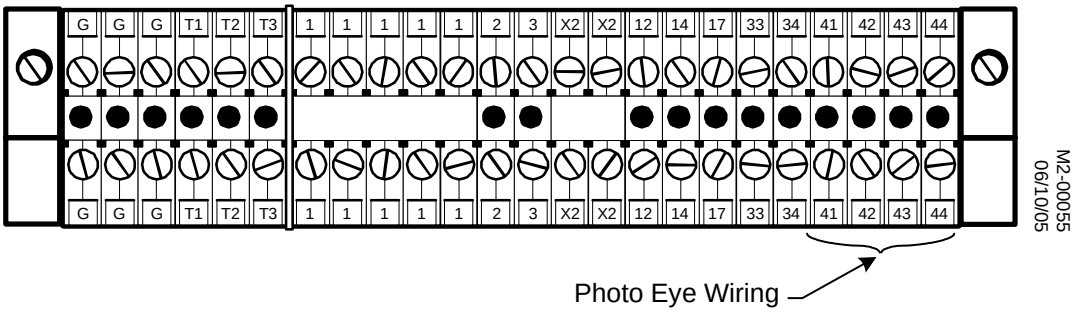


Figure 3-5: Photo Eye Connections on Terminal Block

4. Plug the photo eye amplifier into the 11-pin socket. See Figure 3-6.

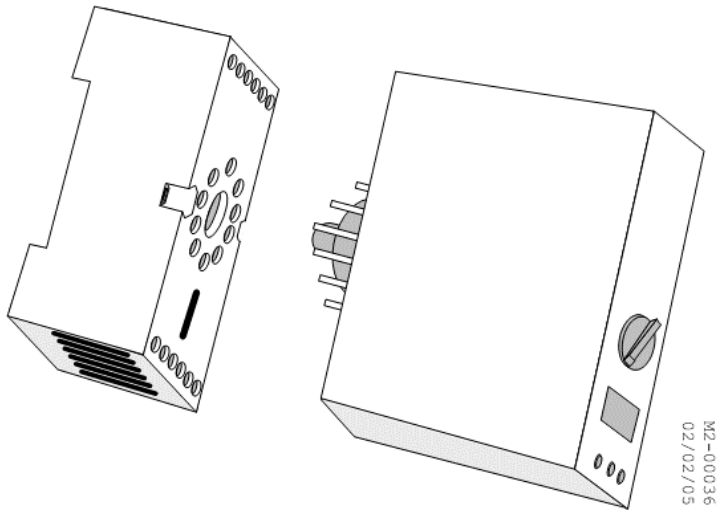


Figure 3-6: 11 Pin Socket for Photo Eye Amplifier

5. Set up the amplifier. See Section 3.3.4: Adjust the Photocell Sensitivity for details.

3.2.2. Make the Encoder Connections

1. Insert the wires into the green connector as listed below. (Terminals are ordered left to right.) See Figure 3-7.

   - Shielded = terminal 1
   - White = terminal 2
   - Black = terminal 3
   - Red = terminal 4
   - Green = terminal 5

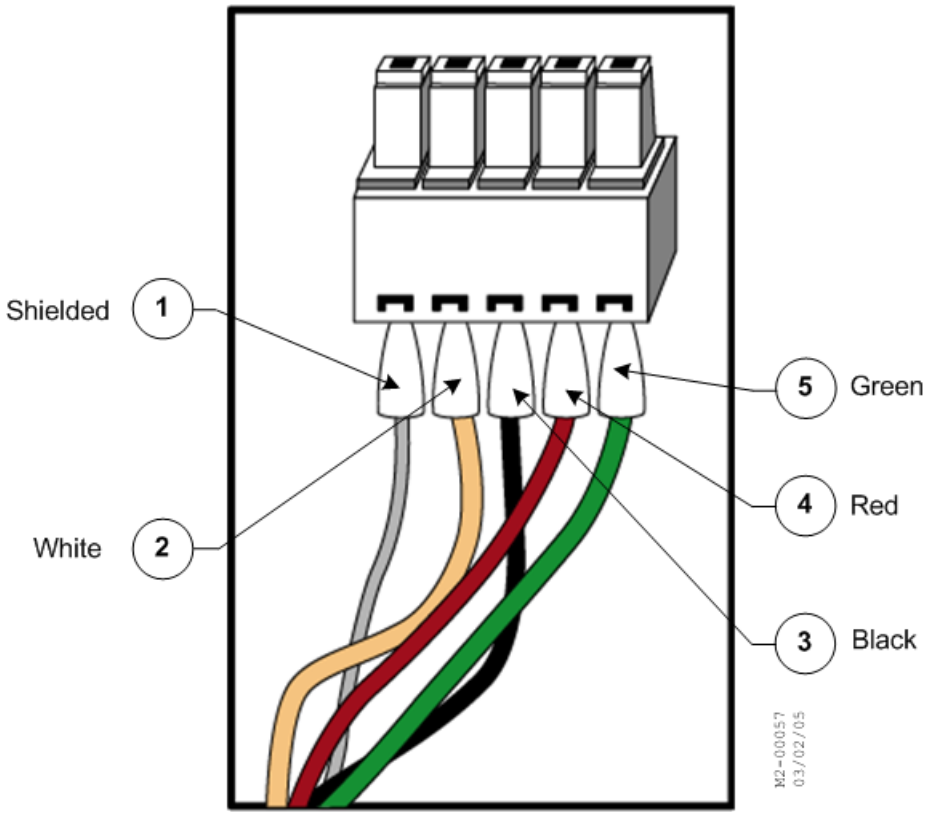


Figure 3-7: Wiring the Green Connector

WARNING

Use only the provided cables. Do not splice the cables**.** Doing so will void the warranty.

2. Insert the green connector into the Dynacoder (DY3000) . See Figure 3-8.

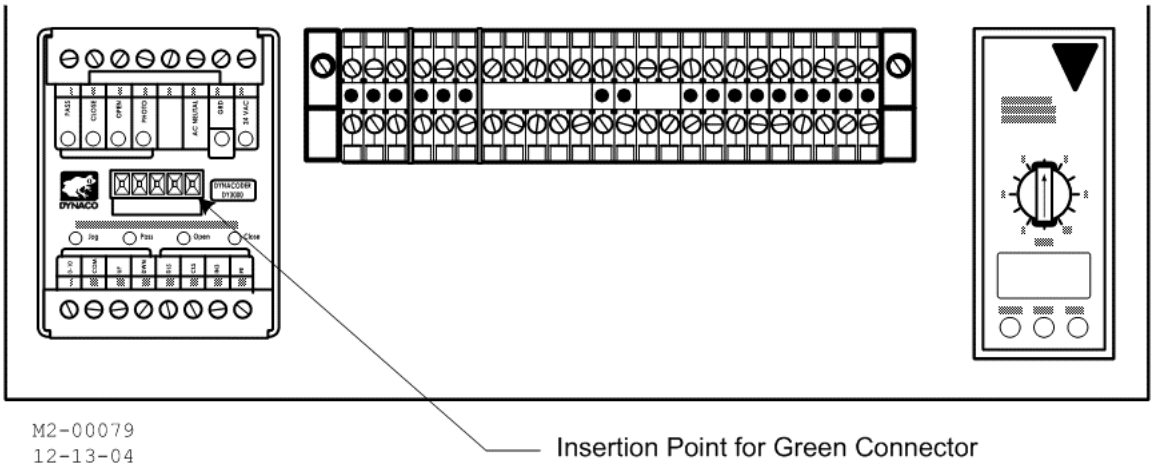


Figure 3-8: Insertion Point for Green Connector

3.2.3. Run Wire for Accessories

Run the wiring for the activation accessories but do not connect them. See the appropriate appendices in this manual for wiring. Connect the activation accessories after the DYNACO installer has finalized the door.

3.2.4. Power the Door

Turn on the main disconnect by rotating it clockwise. See Figure 3-9.

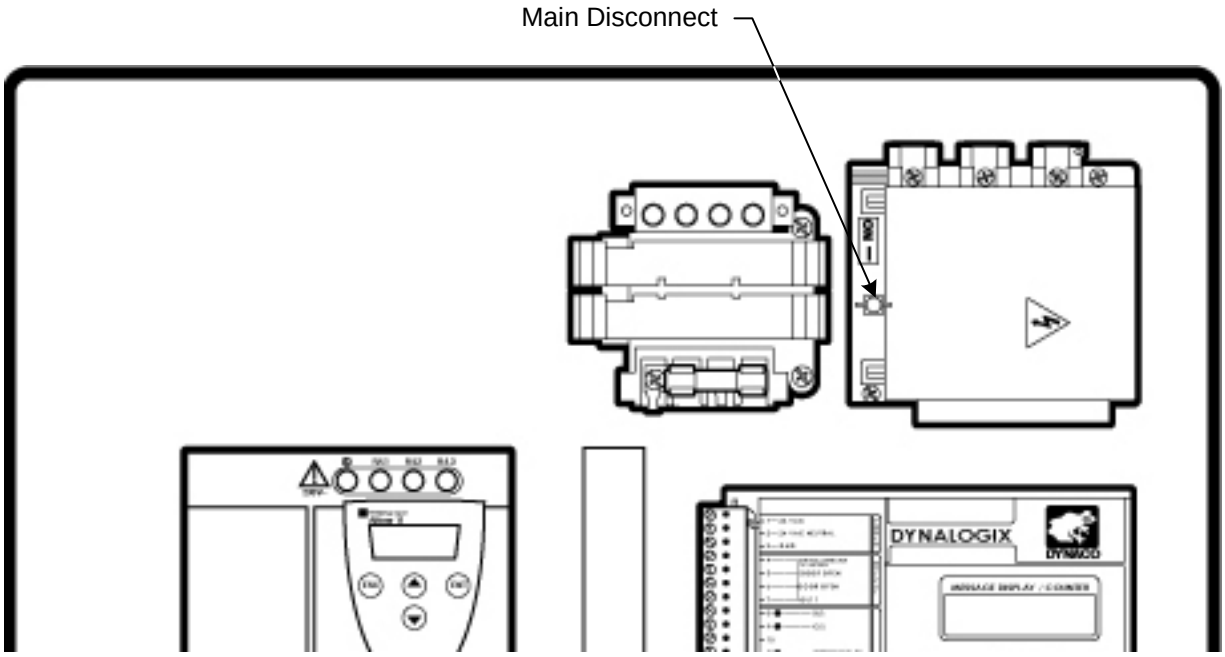


Figure 3-9: Main Disconnect

The display will show one of the following messages:

- Ready
- Connect
- Cycle Counter

The DYNALOGIX display should read “rEAdY.” If the DYNALOGIX display reads COnnECt then twist and release the Emergency Stop button located on the front panel of the Control Box. See Section 3.4, “Troubleshooting Techniques,” for more information on how to find and eliminate problems.

3.3. Final Checks and Verification

Finalizing the door includes setting the door's open and close limits, ensuring that the door works properly, and connecting the activation accessories.

Note: An electrician should connect the accessories to the terminal block if possible.

Before you begin:

- Verify that the wiring is properly connected and the Control Box has power.
- Confirm that the connections are properly grounded.
- Confirm that the three cable connections are positioned in their terminal slots correctly. (Photo Eyes, Dynacoder (DY3000), Reversing Edge)

3.3.1. Set the Door Limits

The Dynacoder (DY3000) controls and monitors the curtain's open and closed position. Once you set the open and closed limits, test the door to ensure that it is working properly.

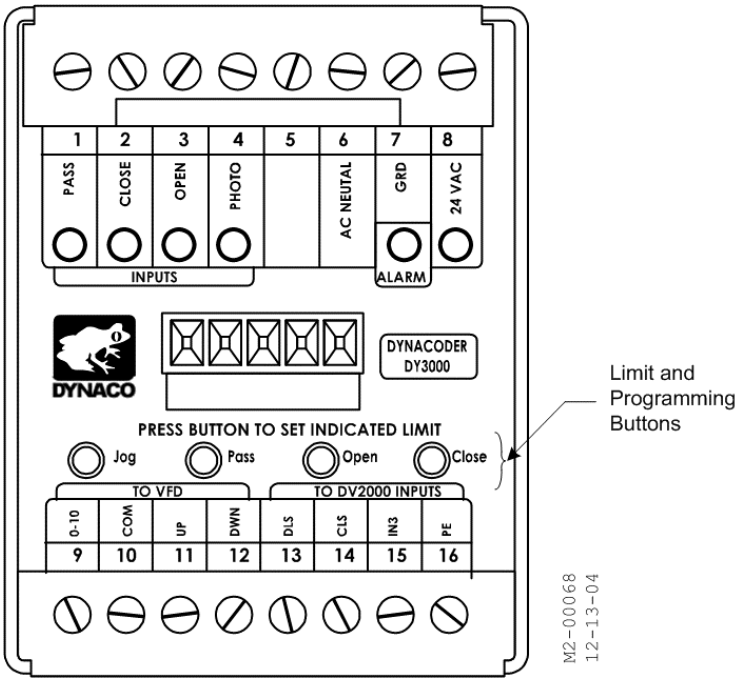


Figure 3-10: Dynacoder with Limit & Programming Buttons

3. Enter the Dynacoder ’s programming mode.

    a. Press and hold the **JOG** button for 4 seconds.

    Note: The **JOG** buttons referenced on this page are the buttons located on the Dynacoder. Do ***not*** use the **JOG** buttons on the DYNALOGIX to set the door limits.

    b. While pressing the **JOG** button, press and release the **PASS** button. (Release the **JOG** button simultaneously as you release the **PASS** button.)

    c. When the red and green LED indicators flash alternately the Dynacoder is in the program mode.

4. Set the close limit position. (This is the base/reference position and must be set before you set the open position.)

    a. While pressing the JOG button, press and release the CLOSE button - moving the door into the desired closed position. (The JOG button allows you to move the door at a reduced speed.)

    Note: If the door moves in the direction opposite of what you expected, stop and review the "Verify Rotation of the Motor" section of this chapter.

    b. Release the JOG button. Wait one second and then press and release the **CLOSE** button. (This step sets the close limit.)

        - If the close limit has been set successfully, the green LED flashes four times.
        - If the close limit was not set successfully, the red LED flashes four times. See Table 3-4 for other LED indicators.

5. Set the open limit position.

    a. While pressing the **JOG** button, press and release the **OPEN** button - moving the door into the desired open position.

    Note: The door's open limit should be set about one inch above the re-introduction point. See Figure 3-11.

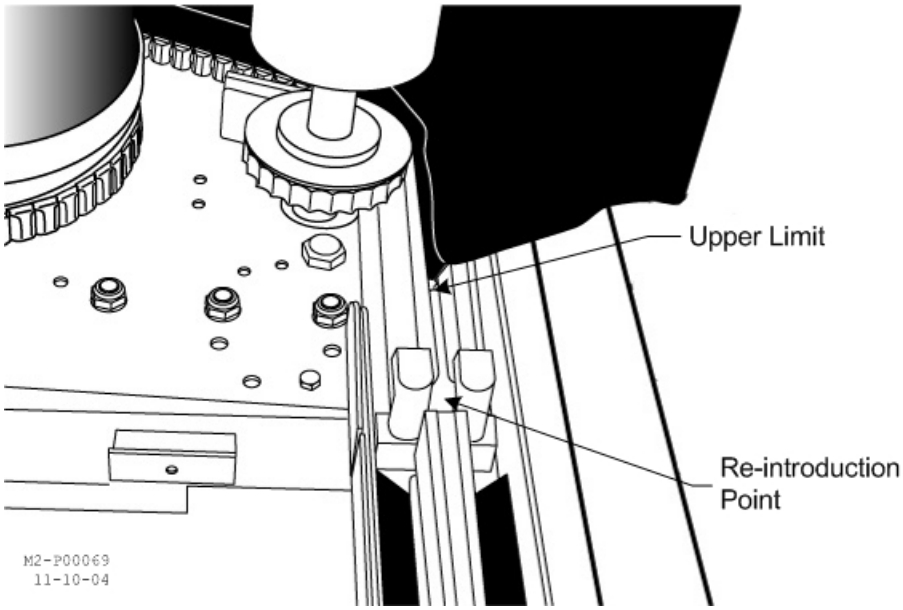


Figure 3-11: Re-introduction Point and Upper Limit

b. Release the **JOG** button. Wait one second and then press and release the **OPEN** button. (This step sets the open limit.)

- If the open limit has been set successfully, the green LED flashes four times.
- If the open limit was not set successfully, the red LED flashes four times. See Table 3-4 for other LED indicators.

6. While pressing the **JOG** button (for four seconds), press and release the **PASS** button to exit programming mode. When the red and green LED indicators stop flashing exit is complete.

7. Reset the DYNOLOGIX by pressing and releasing the JOG⇧ button.

8. Test the upper and lower limits by pressing the **JOG** buttons on the DYNALOGIX.

3.3.2. Set Photo-Eye Disable Position

CAUTION

This procedure should only be used if photo-eye disable position is not set properly from the manufacturer or photo-eye position has changed after the door has left the manufacturer.

1. Press the **JOG** buttons to move the door to the desired position.

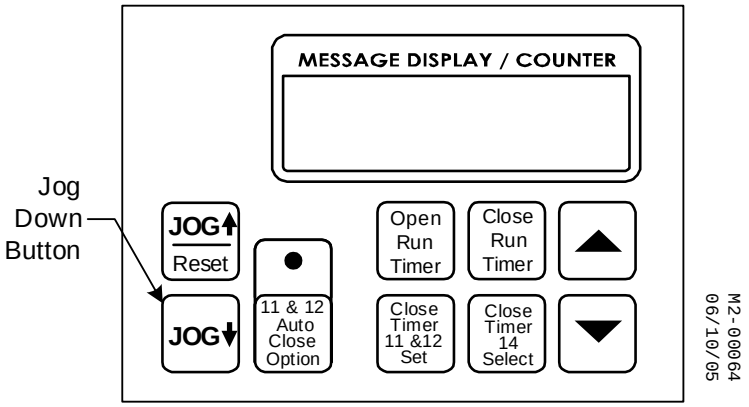


Figure 3-12: Raise/Lower Door

2. Press and hold the Dynacoder **Close** button for 3 seconds.

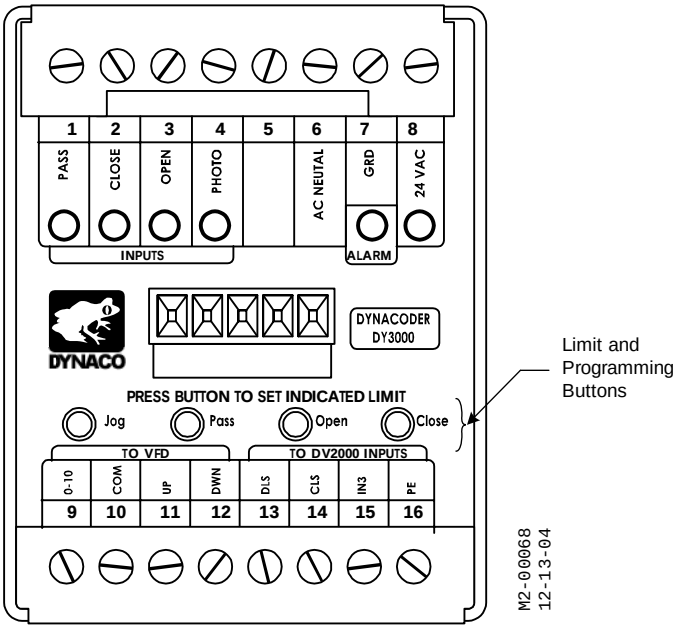


Figure 3-13: Raise/Lower Door

2. Press and release the Dynacoder **Open** button.
The green LED indicator will flash four times to indicate success.

3.3.3. Verify the Rotation of the Motor

This step ensures that the motor connections are terminated into the correct slots.

1. Switch the main switch located on the cover of the Control Box to the **OFF** position.

2. Swap any two of the motor leads on the terminal box. See Figure 3-14.

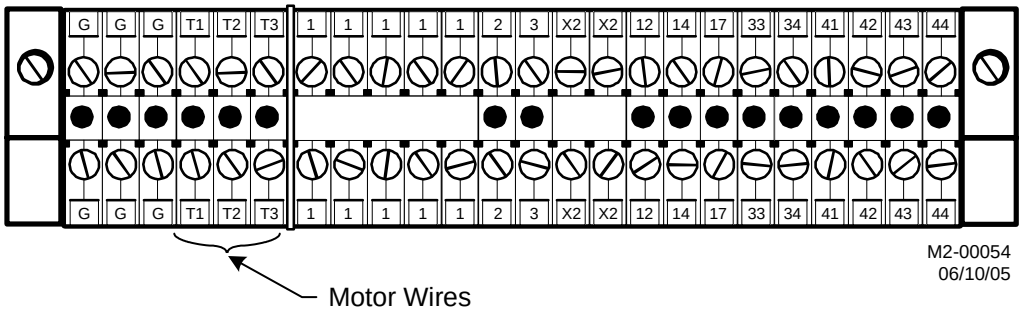


Figure 3-14: Connections for Motor Wires on Terminal Block

3. Switch the main switch located on the cover of the Control Box to the ON position.

4. Return to Section 3.3.1 and continue with setting the limits.

3.3.4. Adjust the Photocell Sensitivity

Note: A revision was made on the Carlos Gavazzi photo eye amplifier. For information on the new photo eye amplifier S142ARNT924, refer to Appendix J.

1. Verify that the transmitter and receiver are aligned with each other, and that the surface of each is clean. Both photo eyes must be mounted flush to the side guides.

2. Confirm that the wiring of the transmitter and receiver is properly connected to the Control Box.

   - Transmitter (grey cable) to terminals 41 and 42
   - Receiver (black cable) to terminals 43 and 44

3. Adjust the sensitivity of the amplifier by turning the Sensitivity Adjustment knob and the two dipswitches. See Figure 3-15.

Note 1: The left-hand dipswitch controls the range of sensitivity. When it is in the up position the photocell is sensitive up to 50 feet. When it is in the down position, it is sensitive up to 16 feet. The adjustment knob controls the sensitivity within these two ranges.

Note 2: The normal adjustment knob setting is between 2 and 4 with the left dipswitch in the up position.

Note 3: When amplifier is working normally, all LEDs are lit.

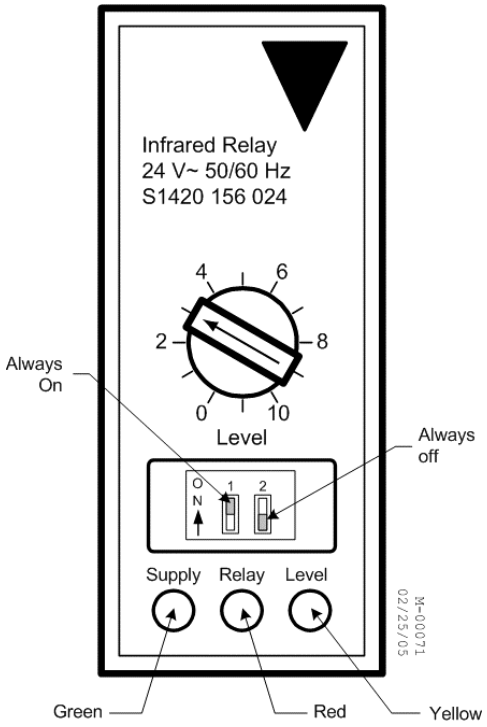


Figure 3-15: Photocell Amplifier

3.3.5. Adjust Reversing Edge Detector Sensitivity

1. Ensure that both ends of the pneumatic tube are properly connected. See Section 2.10: Connect Pneumatic Tube for detailed instructions.

   Note: For the All Weather model please see Appendix D: Wireless Bottom Detector.

2. Close the door.

3. Slowly turn the adjustment screw on the pneumatic sensor clockwise until the red light on the DYNALOGIX comes on. See Figure 3-16.

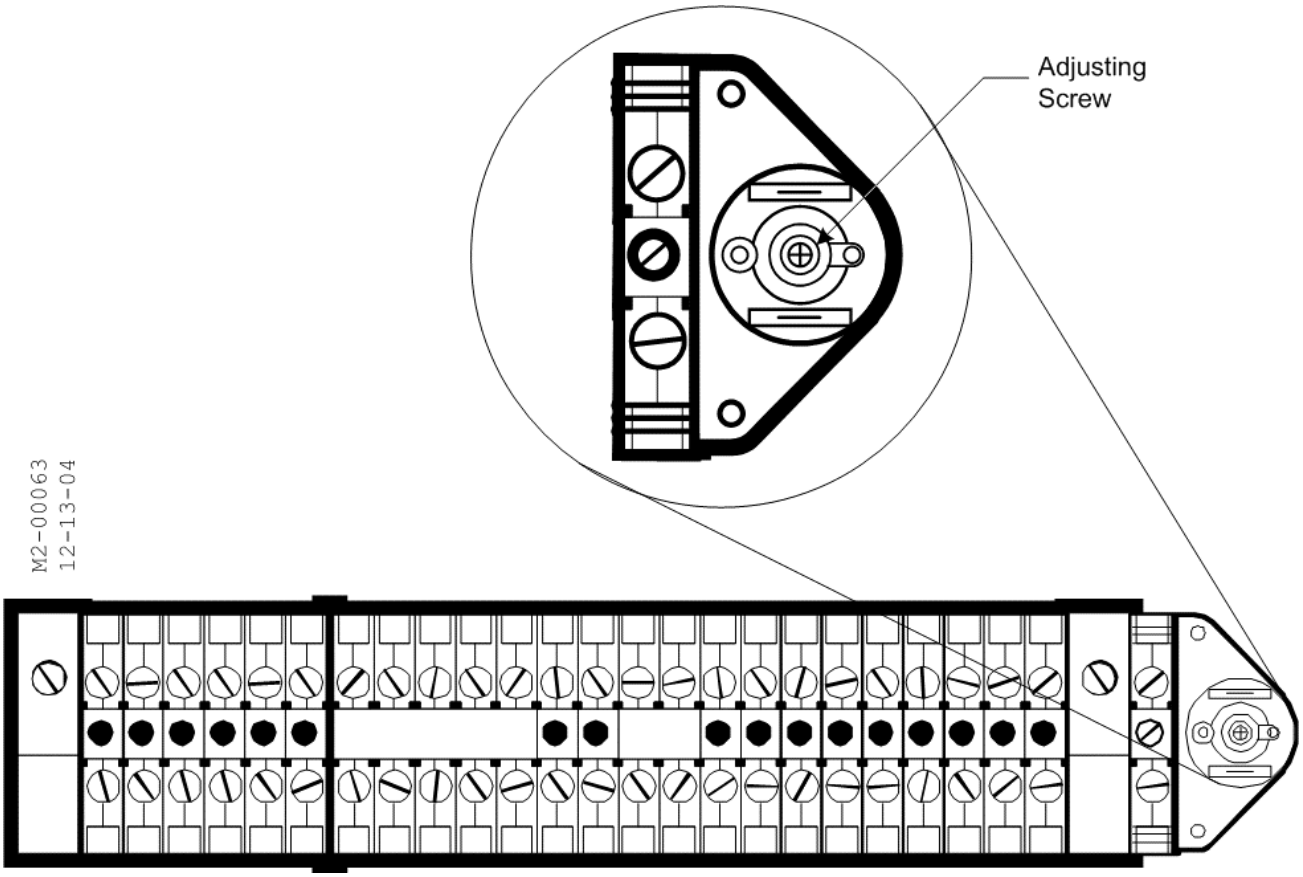


Figure 3-16: Pneumatic Sensor with Adjustment Screw

4. Slowly turn the adjustment screw in the reverse direction (counter clockwise) until the red light extinguishes (usually about 1/4 turn).

5. Open and close the door to test the sensitivity making additional adjustments as necessary.

3.3.6. Install and Test Activation Accessories

See the appendices of this manual and/or the accessory's documentation from the manufacturer for installation instructions. Activation accessories include but are not limited to:

- Motion Sensors
- Magnetic Loop
- Pull Cords
- Additional Open/Close buttons
- Remote Control Activation

CAUTION

Install, connect, and then test each of the activation accessories individually before proceeding to the next accessory. This allows troubleshooting of each component individually.

3.3.7. Set Automatic Timers

The DYNALOGIX allows you to set two automatic close timers. The first sets a count down timer that closes the door after either the **OPEN** button or Pull Cord is used to open the door. The second sets a count down timer that closes the door when the door is opened by a triggering of the motion detector or loop. These timers have a default setting of 1 second.

The DYNALOGIX monitors and controls the function of the door. Should anything go wrong, such as a bad / missing connection or stuck door, the DYNALOGIX displays an error message on its LCD panel or LED indicators.

3.3.8. Set Close Timer 14

Automatic Close Timer 14 activates a countdown timer when a motion or loop detector is used with your DYNACO door.

1. Press the **CLOSE TIMER 14** button on the DYNALOGIX controller. The current countdown time displays in the LCD. See Figure 3-17.

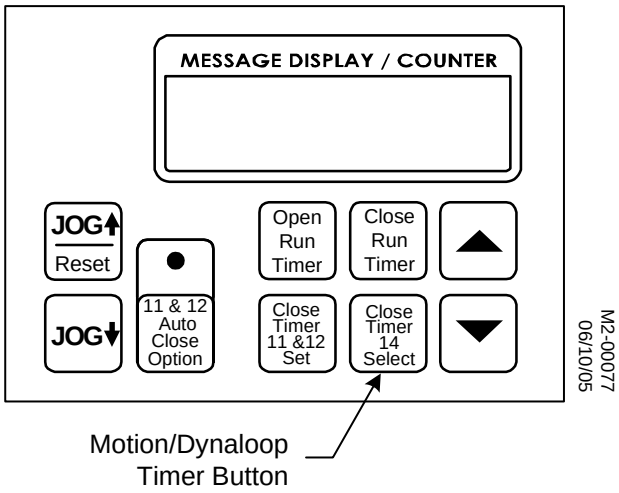


Figure 3-17: Auto Close Timer Setting

2. Use the **UP** and **DOWN** arrow buttons to change the countdown time to the desired duration. The DYNALOGIX will automatically save any changes that you make. See Figure 3-18.

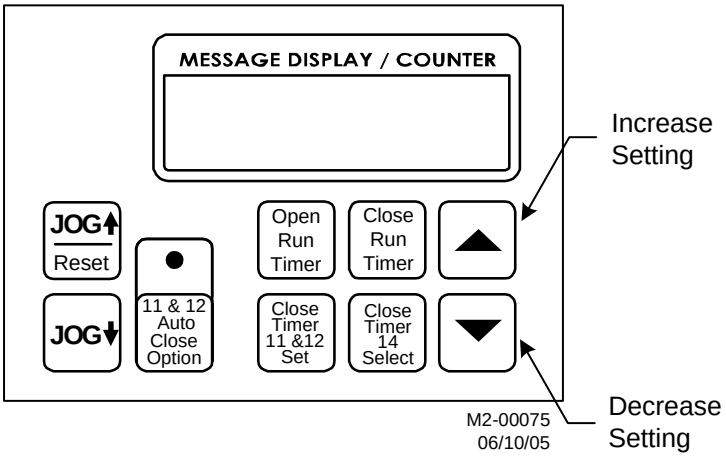


Figure 3-18: Raise/Lower Countdown Timer

3. The LCD display remains on for few seconds. If no action is taken during that time, the LCD display reverts to **rEAdY** or the cycle counter.

3.3.9. Set Close Timer 11 & 12

Automatic Close Timer 11 & 12 activates a countdown timer after you use the front panel **OPEN** button or the Pull Cord to open the door.

1. Press the **CLOSE TIMER 11 & 12** button on the DYNALOGIX controller. The current countdown time displays in the LCD. See Figure 3-19.

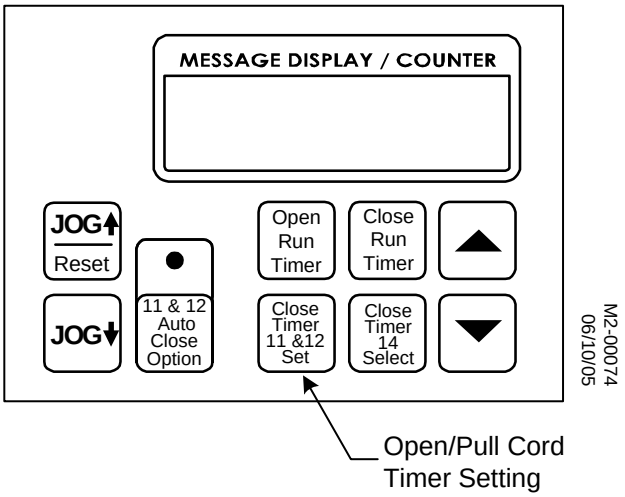


Figure 3-19: Auto Close Timer Setting

2. Use the **UP** and **DOWN** arrow buttons to change the countdown time to the desired duration. The DYNALOGIX will automatically save any changes that you make. See Figure 3-20.

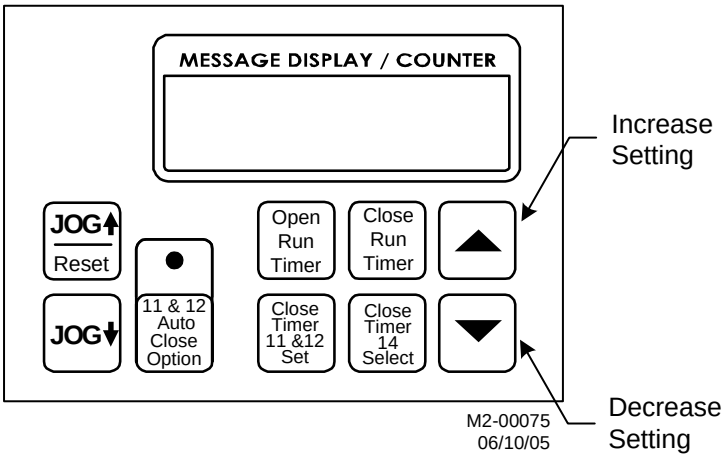


Figure 3-20: Raise/Lower Countdown Timer

3. The LCD display remains on for a few seconds. If no action is taken during that time, the LCD display reverts to **rEAdY** or the cycle counter.

4. Press the **11 & 12 Auto Close Option** button. The light on the Auto Close option shines. This indicates that the Auto Close option is now active. See Figure 3-21.

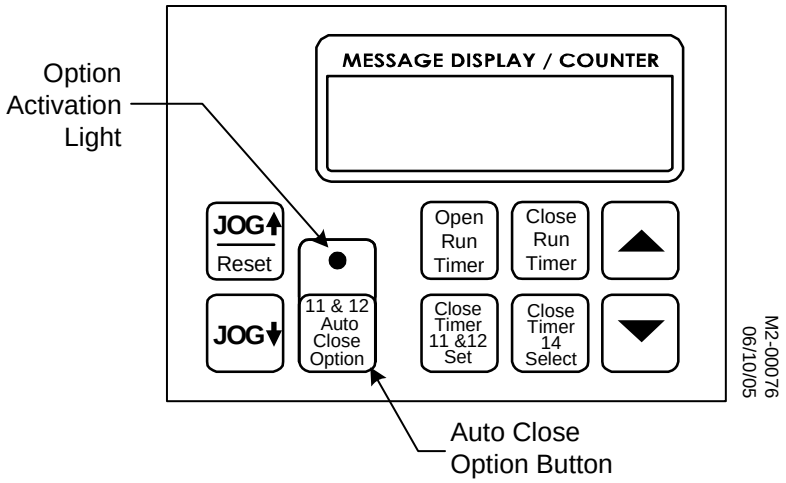


Figure 3-21: Auto Close Option Button

Note: You can deactivate the Auto Close option by pressing the button again.

3.3.10. Set the Open and Close Run Timers

The Open Run Timer and Close Run Timer act as a failsafe to prevent the door from running continuously when the open or close limit switches fail to shut down the motor. These two timers should be set for a period that exceeds the duration of a full open or close cycle (from fully closed to fully open and vice versa).

1. Press the **OPEN RUN TIMER** button on the DYNALOGIX controller. The current countdown time displays in the LCD. See Figure 3-22.

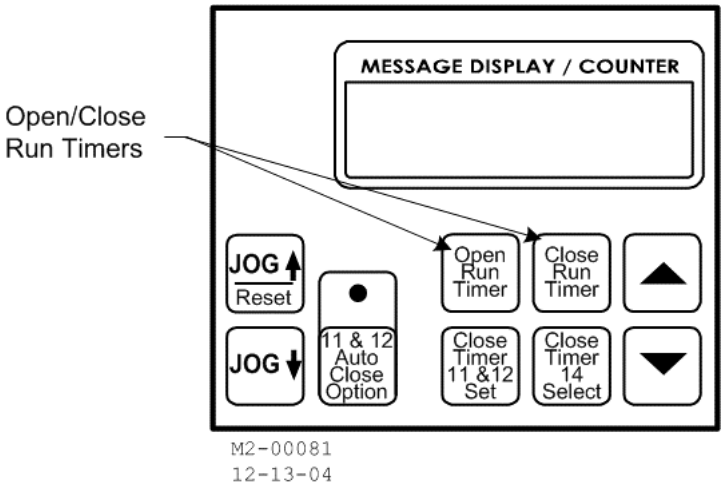


Figure 3-22: Auto Close Timer Setting

2. Use the **UP** and **DOWN** arrow buttons to change the countdown time to the desired duration. The DYNALOGIX will automatically save any changes that you make. See Figure 3-23.

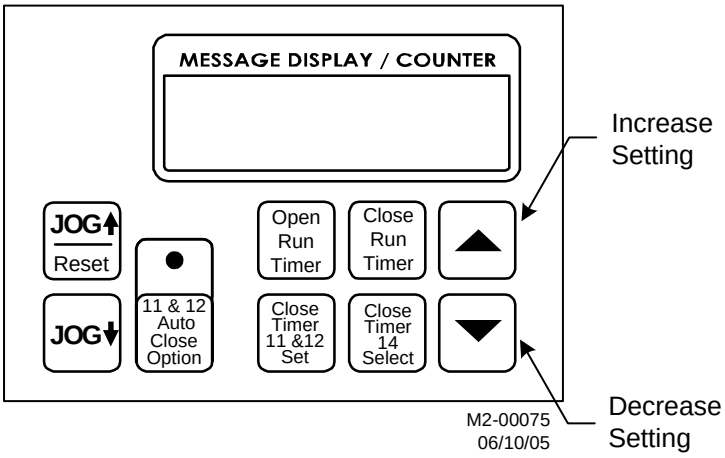


Figure 3-23: Raise/Lower Countdown Timer

3. The LCD display remains on for a few seconds. If no action is taken during that time, the LCD display turns off and retains the displayed setting.

4. Repeat steps 1 and 2 to set the Close Run Timer.

3.3.11. Install Covers

As a final step, ensure that all covers are installed on the door.

- Motor
- Drum
- Counterweight
- Side-guides

3.4. Troubleshooting Techniques

After you have corrected the cause of an error, reset the DYNALOGIX by pressing the **RESET** button. (This is the **JOG** up button, located on the DYNALOGIX.)

3.5. Symptoms

Table 3-3 describes several common door problems and their solutions.

Table 3-3: Door Operation Symptoms

Symptom	*Procedure*
DYNALOGIX displays = "COnnECt"	One of the required NC contacts is missing or isn't completely connected. Note which LED light is blinking and correct the appropriate connection. Also, check the E-Stop to see if it has been activated.
Door stays open until the Photo Cell is triggered. Door only closes while the Photo Cell detects an obstruction.	Check the position of the dipswitches. The right-hand dipswitch should always be in the down position.
Bottom Edge Detector does not detect obstructions or you see "EdGe" in the DYNALOGIX display.	Check for a continuous short and/or adjust the sensor.

3.6. LED Reference

Table 3-4 describes Dynacoder and Photocell Amplifier LED displays.

Table 3-4: Dynacoder LED Indicator Key

Function	*Red LED*	*Green LED*
No Power	Off	Off
Startup ½ Second	Flash (Unison)	Flash (Unison)
OK/Ready	Off	On
Door in Motion	Off	FLASH
Encoder Loss of Feedback	Flash	Off
Jog/Limit (Programming Mode)	Flash Alternately	Flash Alternately

3.7. Manual Operation

In the event that the door must be moved up or down manually, the ratchet and key from the accessory kit may be used to operate the door manually.

1. Check that the door is disconnected from the power source.

2. Insert the ratchet and key into the drive motor fan opening. See Figure 3-24.

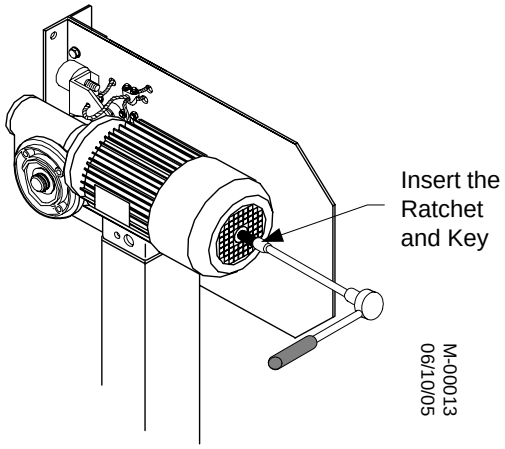


Figure 3-24: Curtain through Drive

3. Turn the ratchet to move the door up and down.

Remove the ratchet and key before applying power.

Chapter 4:
DYNALOGIX II (DY4000)

4.1. Specifications

The DYNALOGIX II (DY4000) monitors all operations of the door. You use this device to:

- Define the automatic close timers,
- Monitor and troubleshoot the input connections,
- Interpret and correct any malfunctions or alarms.

Note: The door will not run until the DYNALOGIX II display reads **Ready.**

4.1.1. Controls

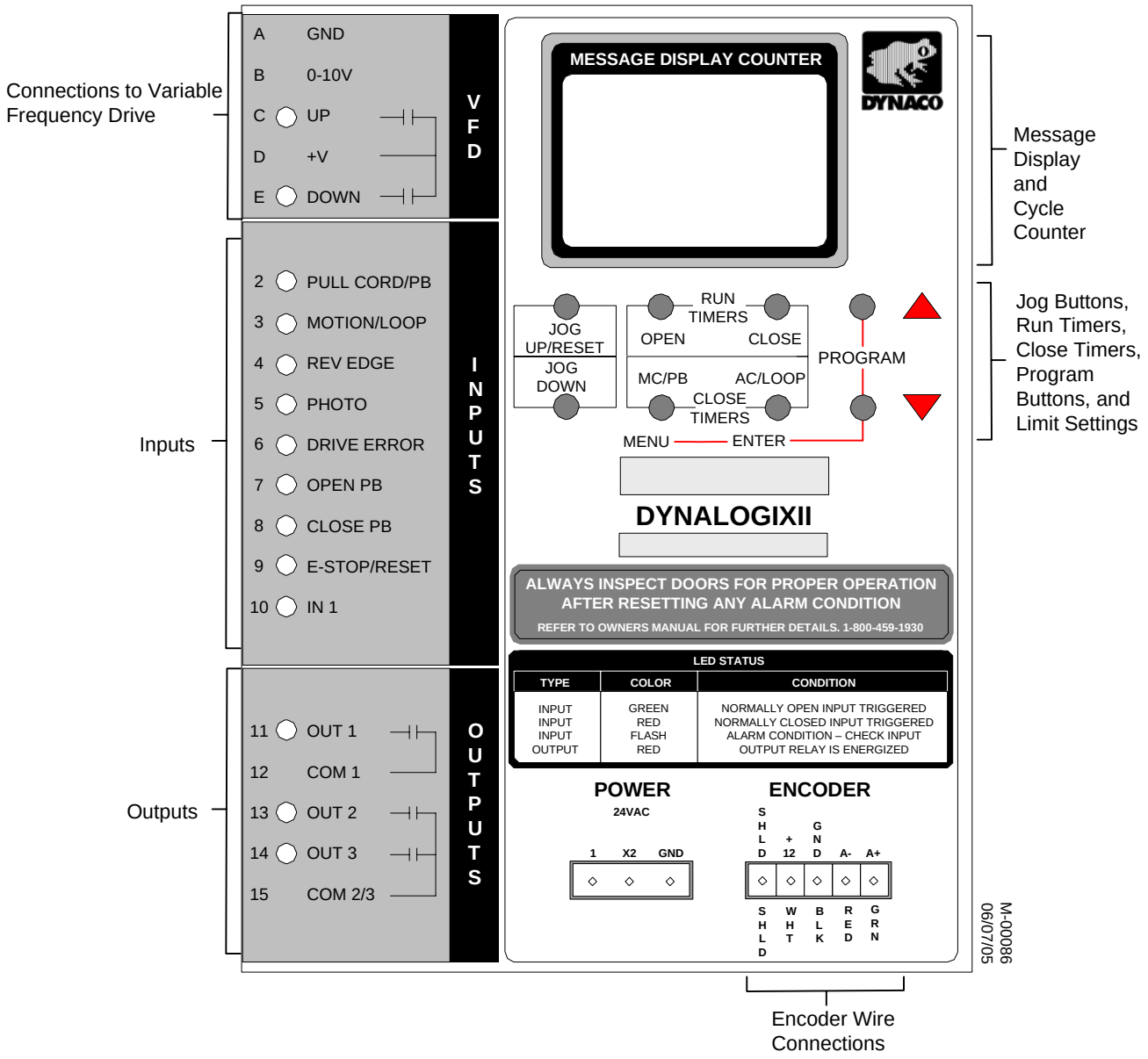


Figure 4-1: DYNALOGIX II Controls and Connections

4.1.2. Messages

Table 4-1 describes the messages that the DYNALOGIX II displays.

Table 4-1: DYNOLOGIX II Messages

Message	*Cause*
Ready ###	All required connections are correct and the door is ready for operation. The number indicates the cycle counter. The DYNALOGIX II will not allow the door to operate unless this message displays.
Drive Error	A drive error occurred. Check drive display for error code.
Rev - Edge Tripped	The reversing edge is staying or was activated. Check pneumatic switch for proper operation.
Opening Expired	The open run time timer expired. This is usually caused by an obstruction somewhere that stops the door from reaching the open limit setting (full open). To prevent motor burn out, when the open run timer reaches 0 the DYNALOGIX II shuts down the motor. Once you have determined the cause and made corrections, press the **JOG ⇧/RESET** button.
Closed Expired	The close run time timer expired. This is usually caused by an obstruction somewhere that stops the door from reaching the close limit setting (full close). To prevent motor burn out, when the close run timer reaches 0 the DYNALOGIX II shuts down the motor. Once you have determined the cause and made corrections, press the **JOG ⇧/ RESET** button.
SET LIMITS	The limits have not been set. Set limits (see Section 4.3.1: Set the Door Limits for instructions.)
ENCODER COM_LOSS	Lost encoder feedback. Check if the encoder is connected and wired correctly.

4.2. Electrical Installation

Ensure that the power supply shipped with the door is compatible with the transformer, motor and inverter.

Frequency Inverter Voltage Range:

575 V = 3 Phase

480 V = 3 Phase

230 V = 1 to 3 Phase

208 V = 1 to 3 Phase

Failure to ensure compatible power supply may result in fire and will damage the door.

Ensure that the electrical installation for this door complies with the National Electrical Code (NEC) and/or your local electrical code.

Refer to the electrical schematic shipped with the door for appropriate circuit protection.

4.2.1. Make the Primary Connections

1. Connect the incoming power. Run the wires (conduit) through the ***bottom*** of the Control Box, up the left side, and connect them into the fused disconnect. See Figure 4-2.

   - For a 3-phase unit, use terminals L1, L2, and L3.
   - For a 1 or 2-phase unit use terminals L1 and L2.
   - Install bonded ground to ground lug.

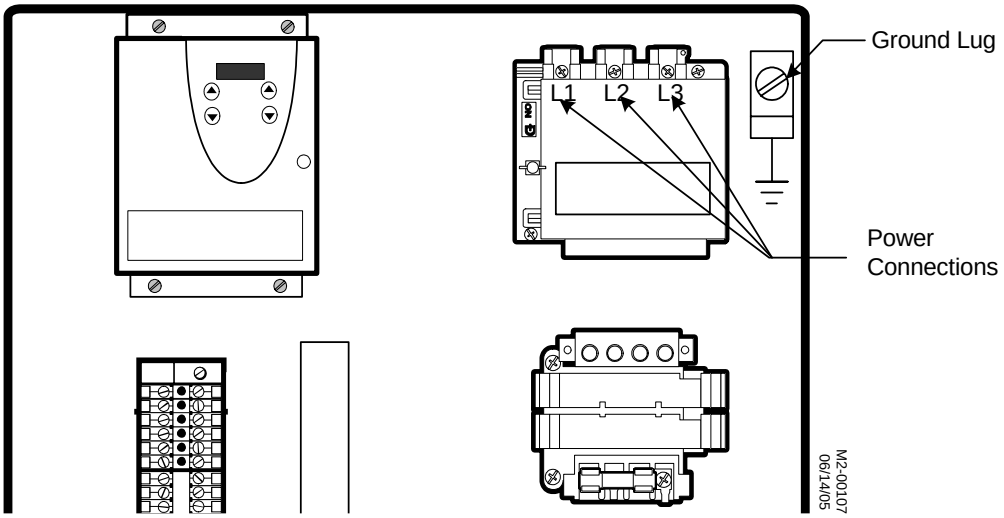


Figure 4-2: Power Connections in Control Box

2. Connect the motor ground wires (ground wire and shield wire) to the ground terminals. See Figure 4-3.

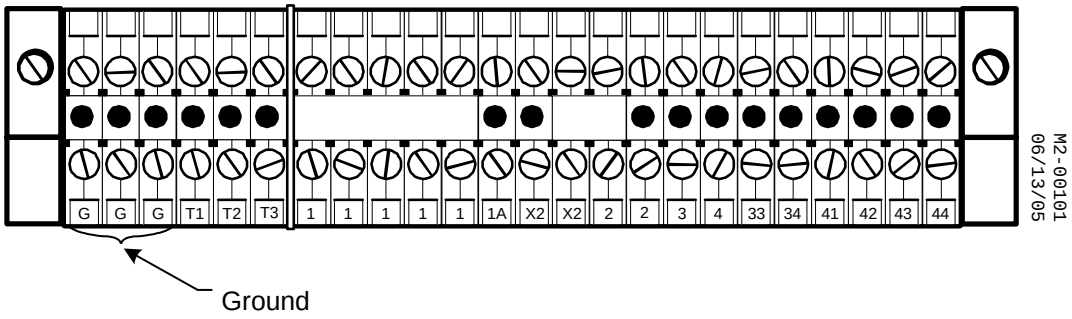


Figure 4-3: Ground Connection on Terminal Block

3. Connect the motor wires (black) to terminals T1, T2, and T3. See Figure 4-4.

Note: Strip cable only enough to terminate wires. Never strip cable in full or leave excess cable in control box.

WARNING

Use only the motor cable provided. Do not splice the cable**.** Doing so will void the warranty.

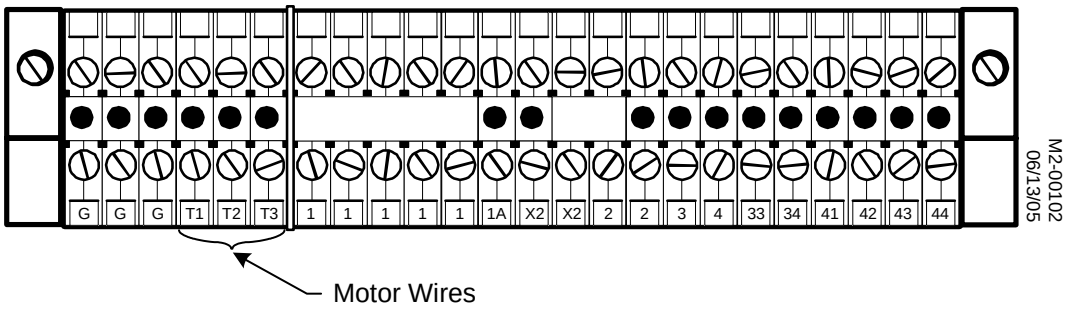


Figure 4-4: Motor Wire Connections on Terminal Block

4. Connect the photo-eye wiring to the terminal block. See Figure 4-5.

- Connect the white wire in the grey transmitter cable to terminal 41.
- Connect the shielded wire in the grey transmitter cable to terminal 42.
- Connect the white wire in the black receiver cable to terminals 43.
- Connect the shielded wire in the black receiver cable to terminal 44.

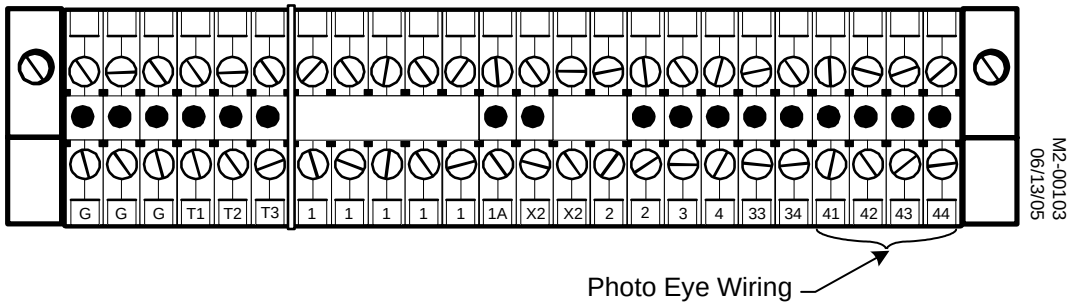


Figure 4-5: Photo Eye Connections on Terminal Block

5. Plug the photo eye amplifier into the 11-pin socket. See Figure 4-6.

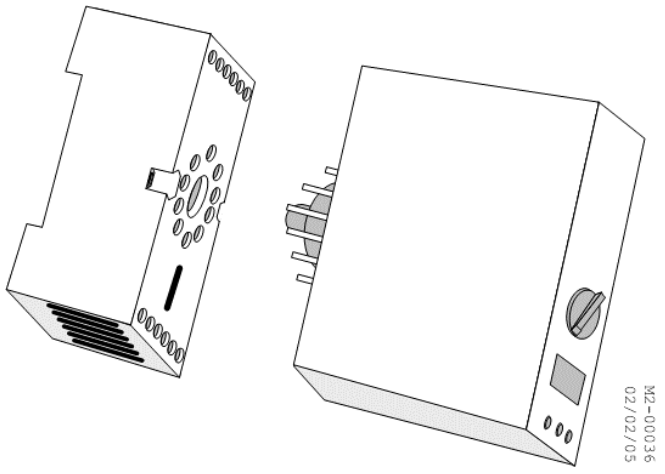


Figure 4-6: 11 Pin Socket for Photo Eye Amplifier

6. Set up the amplifier. See Section 3.3.4: Adjust the Photocell Sensitivity and Section 3.3.5: Adjust Reversing Edge Detector Sensitivity for details.

4.2.2. Make the Encoder Connections

1. Insert the wires into the green connector as listed below. (Terminals are ordered left to right.) See Figure 4-7.

   - Shielded = terminal 1
   - White = terminal 2
   - Black = terminal 3
   - Red = terminal 4
   - Green = terminal 5

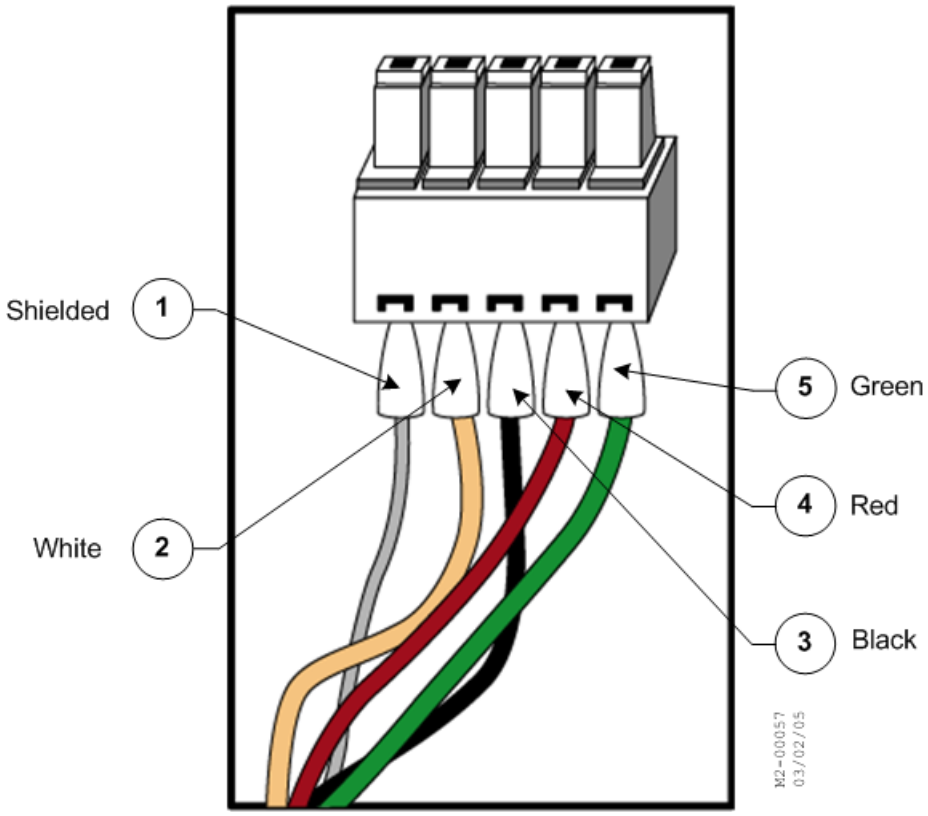


Figure 4-7: Wiring the Green Connector

2. Insert the green connector into the DYNALOGIX II. See Figure 4-8.

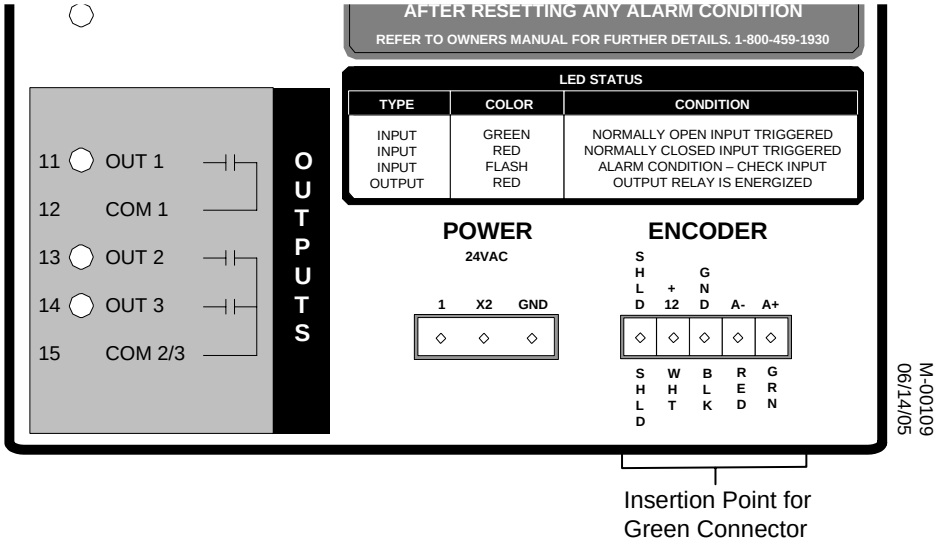


Figure 4-8: Insertion Point for Green Connector

Refer to Section 3.3.4: Adjust the Photocell Sensitivity, and Section 3.3.5: Adjust Reversing Edge Detector Sensitivity.

4.2.3. Run Wire for Accessories

1. Run the wiring for the activation accessories but do not connect them. See the appropriate appendices in this manual for wiring. Connect the activation accessories after the DYNACO installer has finalized the door.

4.2.4. Power the Door

Turn on the main disconnect by rotating it clockwise. See Figure 4-9.

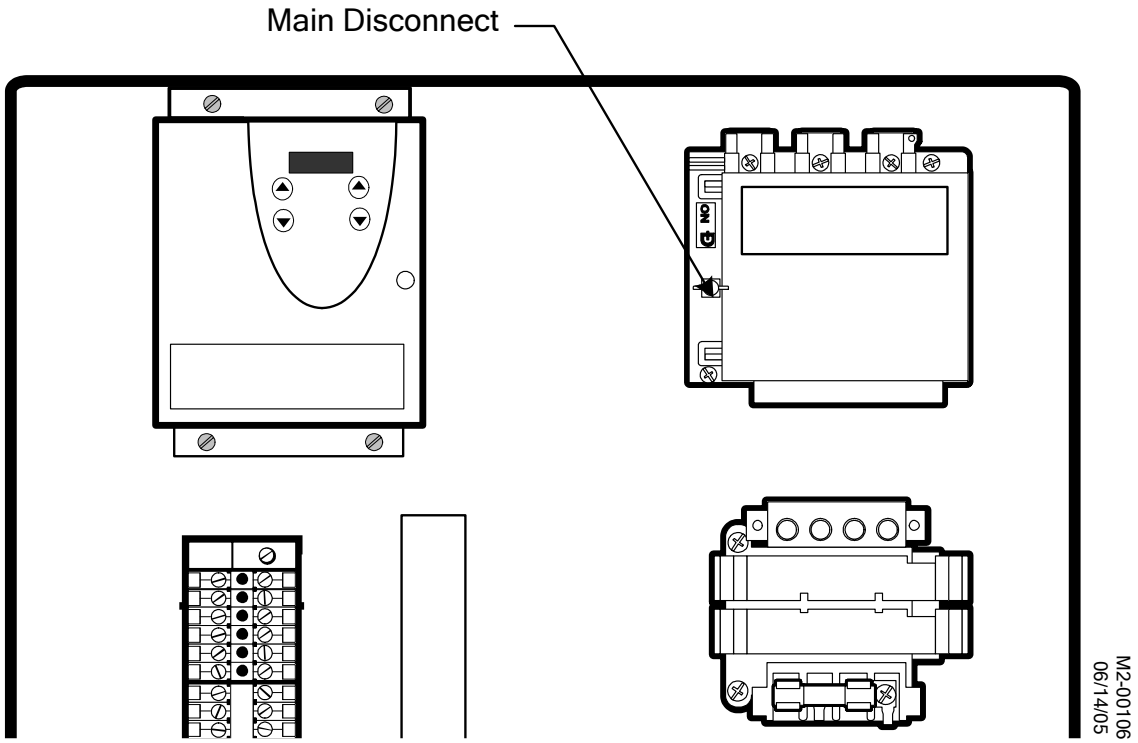


Figure 4-9: Main Disconnect

The DYNALOGIX II display should read **SET LIMITS** on initial power up. See Section 4.3.1: Set the Door Limits for more information on setting the door's limits.

4.3. Final Checks and Verification

Finalizing the door includes setting the door's open and close limits, ensuring that the door works properly, and connecting the activation accessories.

Note: An electrician should connect the accessories to the terminal block if possible.

Before you begin:

- Verify that the wiring is properly connected and the Control Box has power.
- Confirm that the connections are properly grounded.
- Confirm that the cable connections are positioned in their terminal slots correctly. (Photo Eyes and Reversing Edge)

4.3.1. Set the Door Limits

The DYNALOGIX II controls and monitors the curtain's open and closed position. Once you set the open and closed limits, test the door to ensure that it is working properly.

CAUTION

Confirm that all electrical connections are properly wired and terminated before power up. Refer to the wiring diagram that was enclosed with the DYNACO Door.

CAUTION

Automatic activations should be disconnected prior to setting limits. If connected, the door may activate and injury or damage may occur.

1. Enter the programming mode.

2. Press and hold both PROGRAM buttons until display changes to Password. After display changes, release buttons. See Figure 4-10.

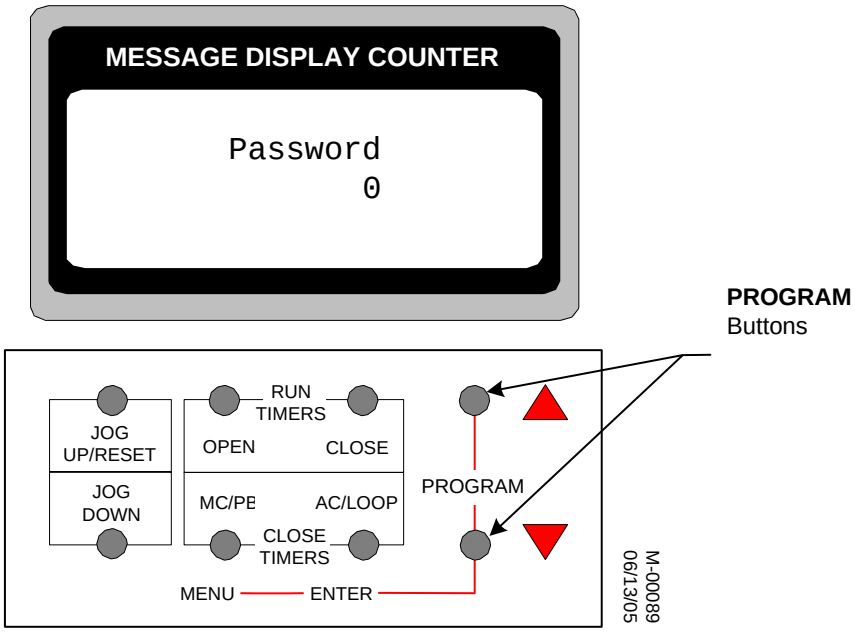


Figure 4-10: DYNALOGIX II Program Mode

a. Press and release one of the PROGRAM buttons to scroll up or down until the password, 562, displays in the LCD.

b. Press and release the ENTER button.
LimitSet displays in the LCD.

Note: On initial start up the **Password** screen will be bypassed, and the DYNALOGIX will directly enter the **LimitSet** screen. See Figure 4-11.

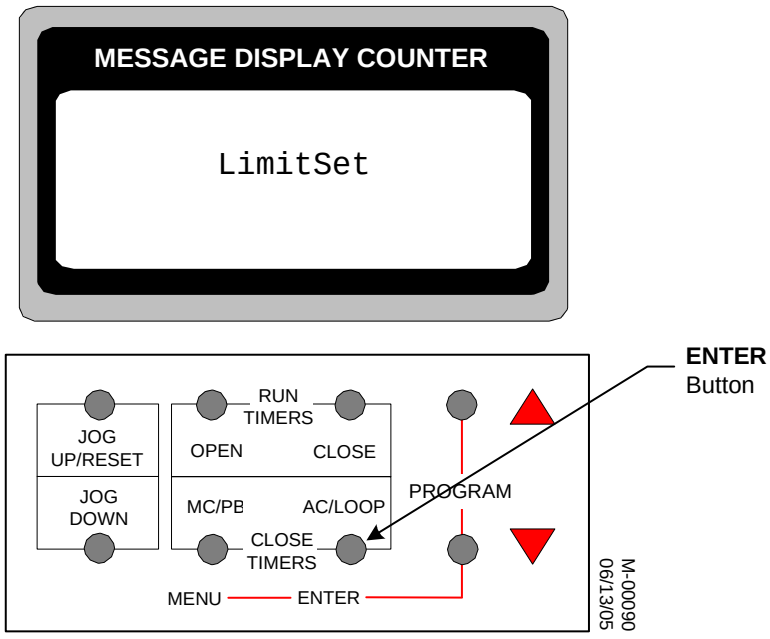


Figure 4-11: ENTER Button

3. Set the close limit position.

   a. Press and release the Enter button.
   ClsLimit displays in the LCD.

   b. Press and release the Enter button.
   JogToCls displays in the LCD.

   c. Press the JOG DOWN button to bring the door down to desired close position. See Figure 4-12.

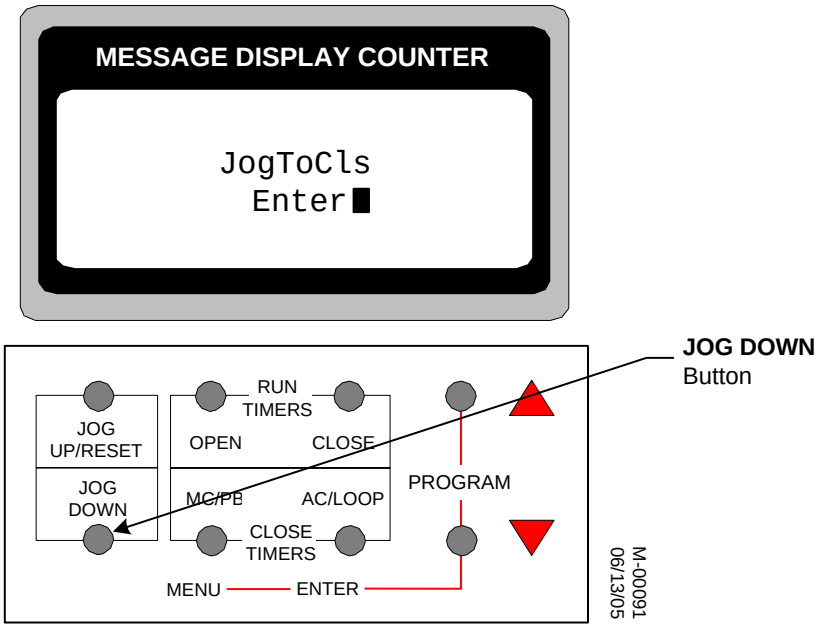


Figure 4-12: JOG DOWN Button

Note: The door is out of phase if it moves up instead of down. Turn power off and switch T2 & T3 on the terminal block. Turn power on and return to Step One.

   d. Press and release the ENTER button to save limit setting.
   ClsLimit_Set—OK displays in the LCD.

4. Set the photo eye shut-off position.

   a. Press and release one of the PROGRAM buttons to scroll up or down until the PhtLimit message displays in the LCD (photo eye shut off position).

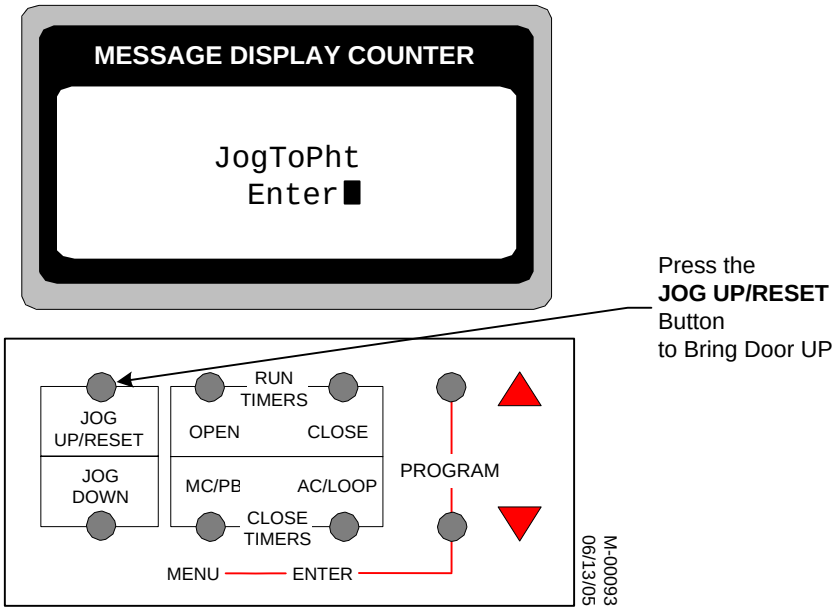


Figure 4-13: Scroll Through Menu

b. Press and release ENTER button.
JogToPht_Enter displays in the LCD.

c. Press the JOG UP/RESET button to bring door up one inch above the photo eyes.

d. Press and release the ENTER button to save limit setting.
PhtLimit_Set—OK displays in the LCD.

5. Set the open limit position.

a. Press and release one of the PROGRAM buttons until the OpnLimit message displays in the LCD.

b. Press and release the ENTER button.
JogToOpn_Enter displays in the LCD.

c. Press and release the JOG UP/RESET button until the door is in the desired open position (roughly an inch and a half above the reintroduction point). See Figure 4-14**.**

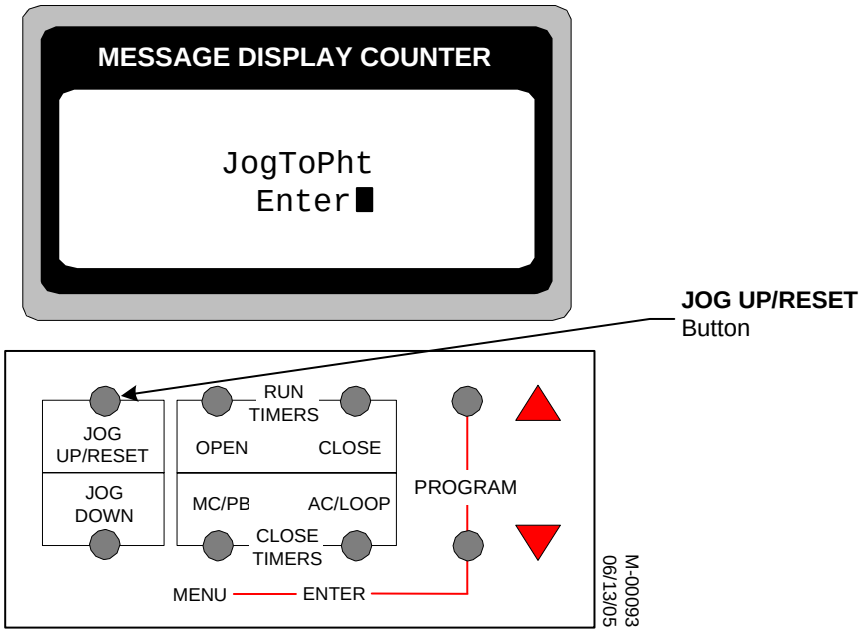


Figure 4-14: JOG UP/RESET Button

a. Press and release the **ENTER** button to save limit setting. **OpnLimit_Set—OK** displays in the LCD.

6. Press and release the MENU button twice. Ready displays in the LCD.

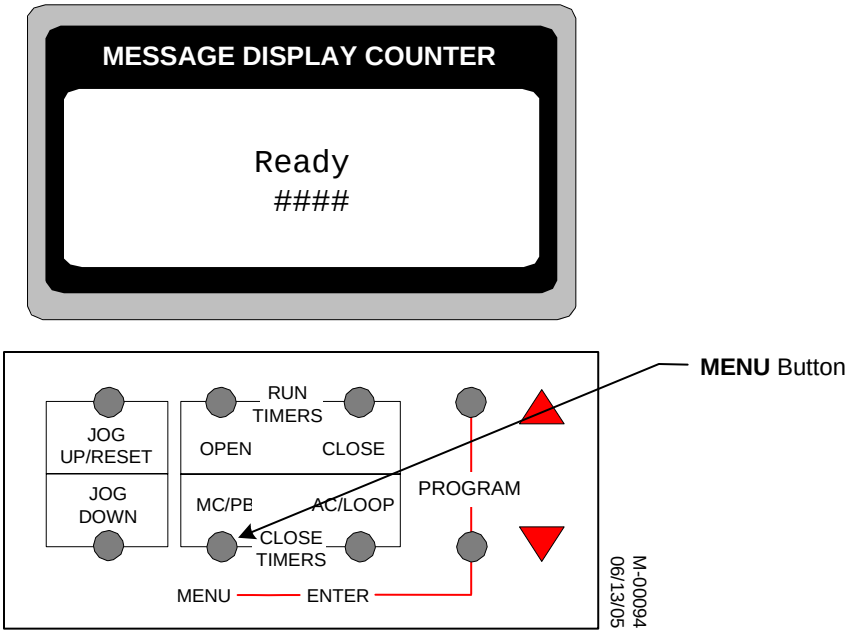


Figure 4-15: Menu Button

7. Press the JOG buttons to test the open and close limits.

4.3.2. Install and Test Activation Accessories

The DYNALOGIX II has nine inputs. Inputs are signals coming to the DYNALOGIX II that get interpreted to create a certain response. For example, if a pull cord is wired to terminal 2, pulling the cord sends a signal to the DYNALOGIX II. The DYNALOGIX II knows what the signal based on the assigned input (terminal 2), thus moving the door up or down. All the inputs have indicator lights and identification. See Figure 4-16.

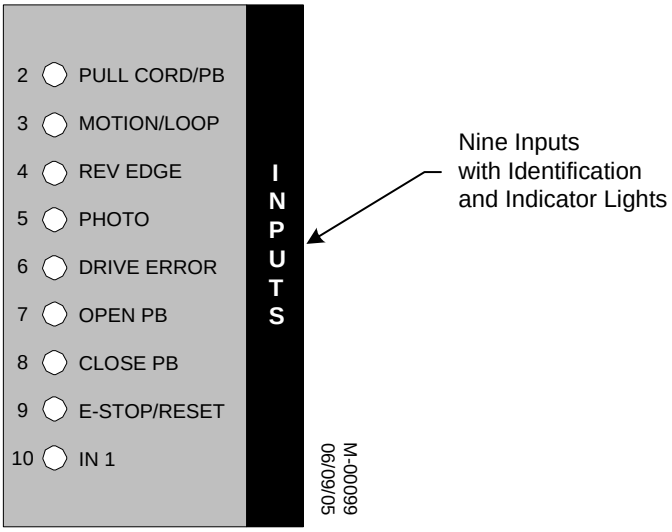


Figure 4-16: Accessory Inputs

See the appendices of this manual and/or the accessory's documentation from the manufacturer for installation instructions.

CAUTION

Install, connect, and then test each of the activation accessories individually before proceeding to the next accessory. This allows troubleshooting of each component individually.

4.3.3. Set Automatic Timers

The Open Run Timer and Close Run Timer act as a failsafe to prevent the door from running continuously when the open or close limit switch fails to stop the door. These timers should be set for a period that exceeds the duration of a full open or close cycle.

1. Press and release the **OPEN** run timer button. **Opening_Time=##** displays in the LCD. See Figure 4-17.

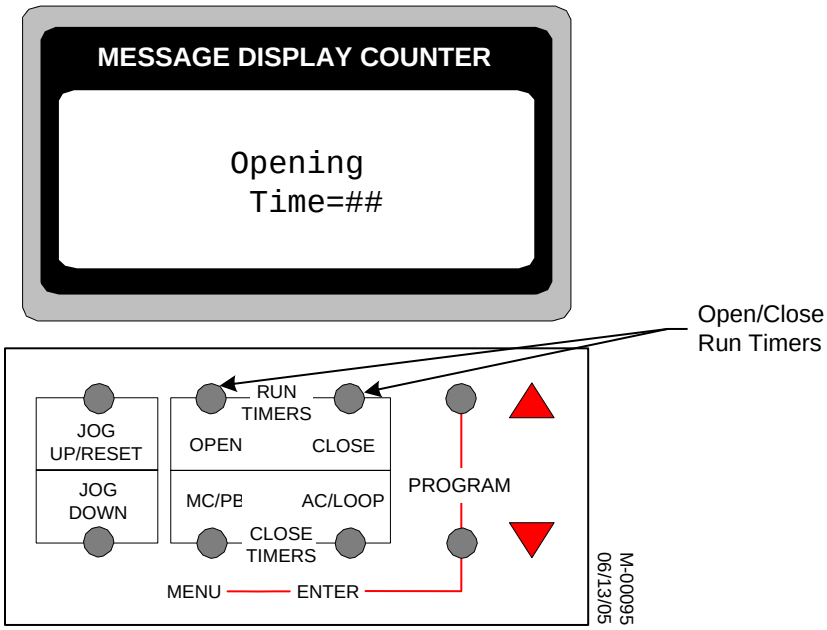


Figure 4-17: RUN TIMERS buttons

2. Press and release the **PROGRAM** buttons to change the countdown time to the desired duration. See Figure 4-18.

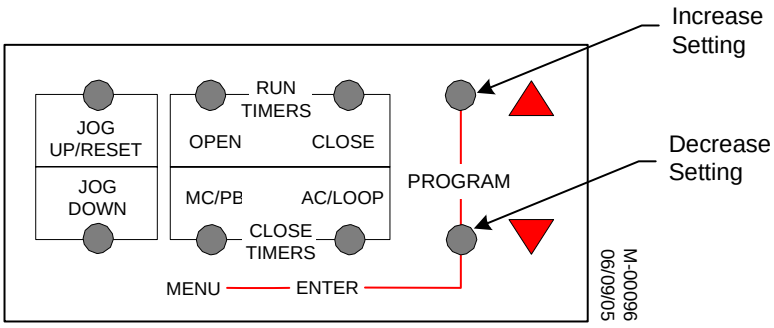


Figure 4-18: Adjust Countdown Time

3. The DYNALOGIX II automatically saves the changes.
4. Press and release the **CLOSE** run timer button.
   Closing_Time=## displays in the LCD.
5. Press and release the **PROGRAM** buttons to change the countdown time to the desired duration.
   The DYNALOGIX II automatically saves the changes.

4.3.4. Set the MC/PB Timer

The MC/PB timer activates a countdown timer for use with an activation installed on terminal number 2 (most commonly used for pull cords or pushbuttons). The MC/PB timer may be turned on or off, enabling manual operation or automatic operation by assigning a countdown value to the timer.

1. Press and release **MC/PB** close timer button.
   MC Delay_Time=## displays on the LCD. See Figure 4-19.

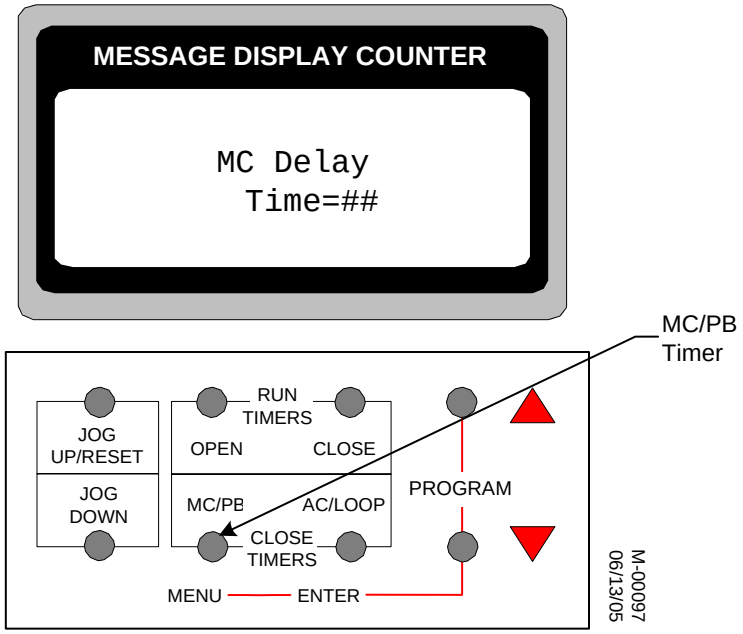


Figure 4-19: Adjust Countdown Time

Note: If the value is set to zero, the timer is deactivated and the activations put on terminal number 2 is now in manual operation.

2. Press and release the **PROGRAM** buttons to change the countdown time to the desired duration.

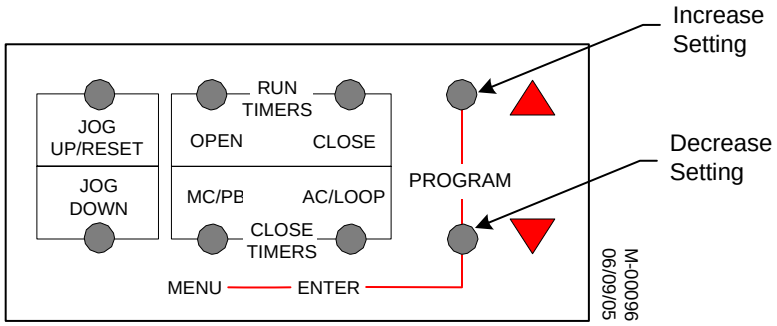


Figure 4-20: Change Setting

The DYNALOGIX II automatically saves the changes.

4.3.5. Set the AC/LOOP Timer

The AC/LOOP timer activates a countdown timer for use with a motion detector or floor loop. The AC/LOOP timer is also used when the reversing edge is triggered.

1. Press and release **AC/LOOP** close timer button. **AC Delay_Timer=##** displays on the LCD.

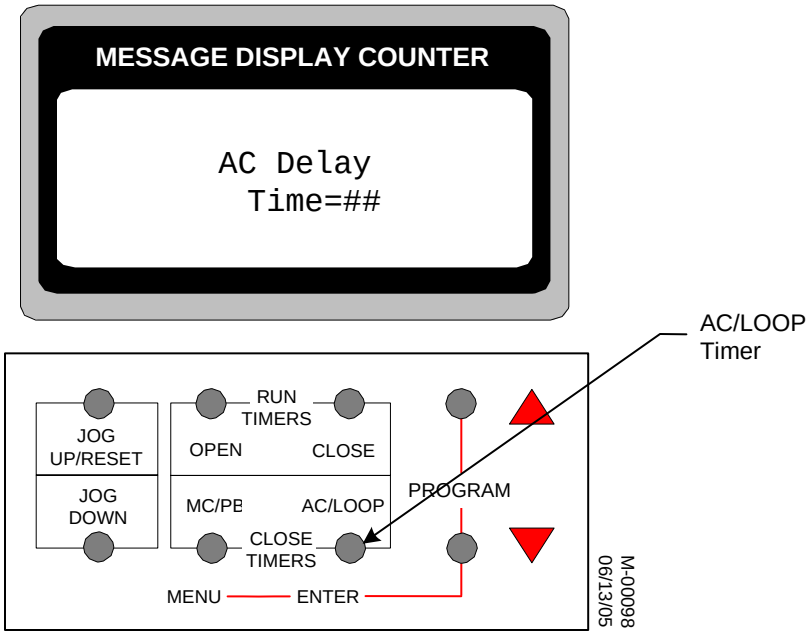


Figure 4-21: AC/LOOP Close Timer

Note: If the value is set to zero, the door will come down after it reaches the open limit.

2. Press and release the **PROGRAM** buttons to change the countdown time to the desired duration. See Figure 4-22**.**

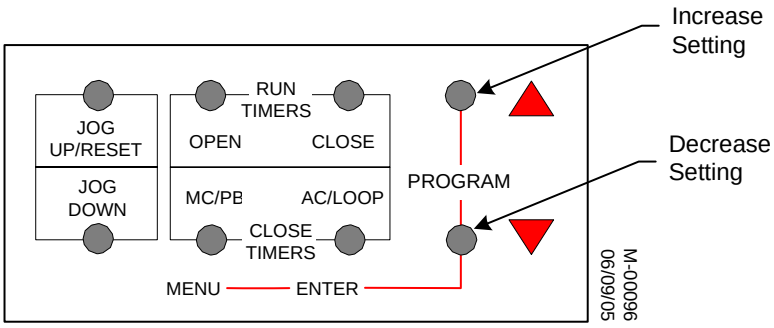


Figure 4-22: Change Setting

3. The DYNALOGIX II automatically saves the changes.

4.3.6. Install Covers

As a final step, ensure that all covers are installed on the door.

- Motor
- Drum
- Counterweight
- Side-guides

4.4. Manual Operation

In the event that the door must be moved up or down manually, the ratchet and key from the accessory kit may be used to operate the door manually.

1. Check that the door is disconnected from the power source.
2. Insert the ratchet and key into the drive motor fan opening. See Figure 4-23.

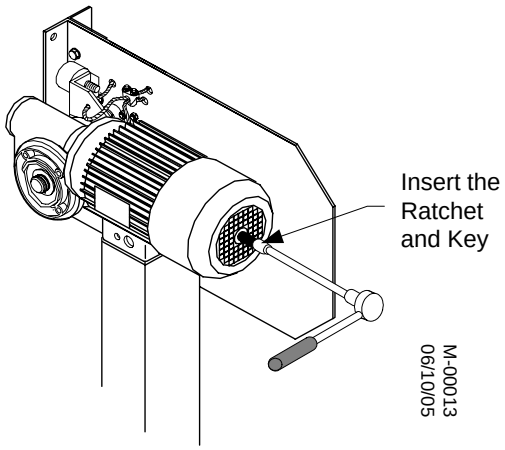


Figure 4-23: Curtain through Drive

3. Turn the ratchet to move the door up and down.

Remove the ratchet and key before applying power.

Appendix A: Canopy Installation

An optional canopy may be installed above the door for additional protection against the elements. Canopies consist of an aluminum frame and a galvanized sheet metal skin. The frame comes standard in nine foot segments and an additional segment measured to fit your door specifications (ordered door width plus 28 inches).

Note: The canopy does not attach to the door or fore frame, An additional structure is needed.

1. Connect frame segments using provided hardware. See Figure A–1.

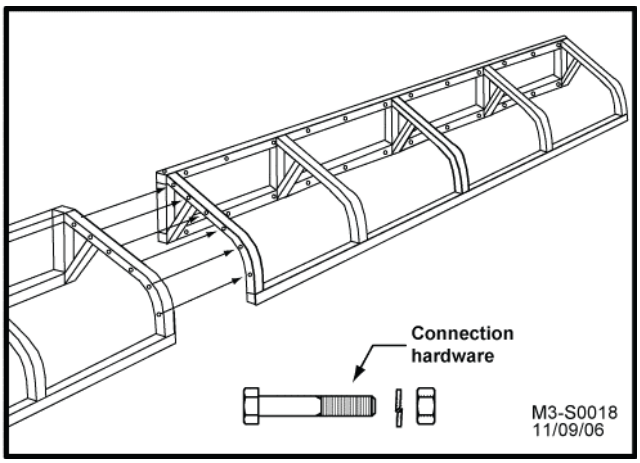


Figure A–1: Connect Frame Segments

2. Anchor frame securely to structure above door. Mounting placement is determined by the installer. See Figure A–2.

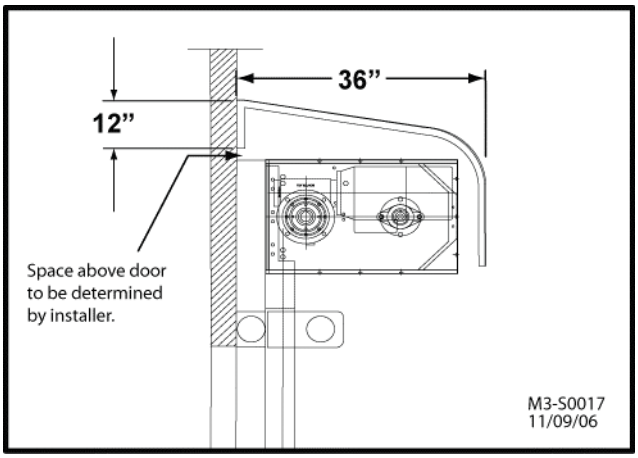


Figure A–2: Mounting Area

3. Attach canopy side plate, with skin, to the mounted frame work. See Figure A–3.

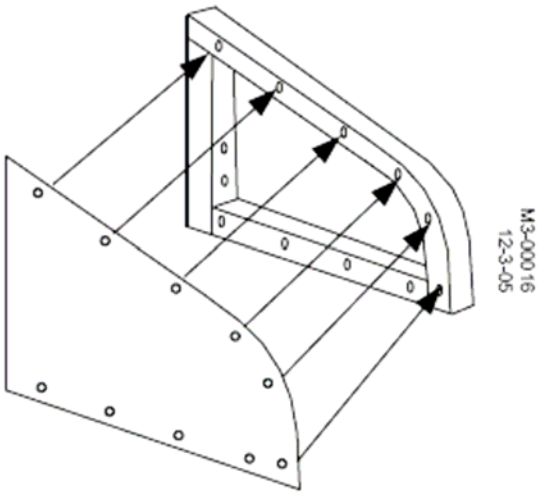


Figure A–3: Attach side plate and skin to frame

4. Attach skin to frame with tech screws. See Figure A–4.

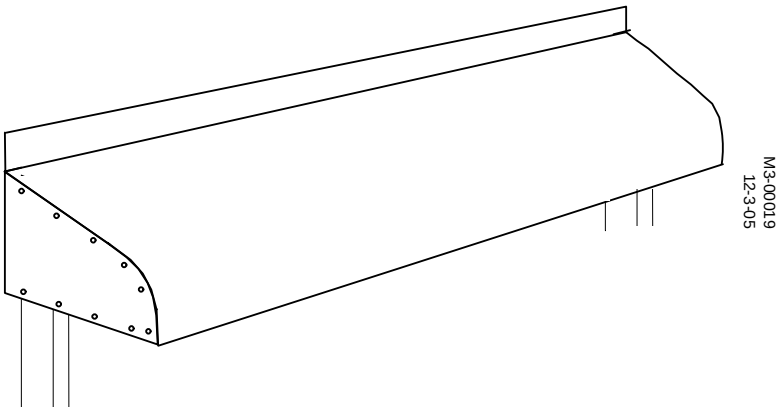


Figure A–4: Attach skin to frame with tech screws

Appendix B:
Radio Frequency Remote Control Installation

B.1. Radio-Frequency Remote Control (RXU)

The RXU superhetrodyne receiver's sensitivity and high selectivity protects it against interference around the receiving frequency. This makes it an ideal receiver in environments containing interference. Its self-instructing programming system allows you to program ROYAL transmitters.

You can program the receiver to one of three functions:

- **Monostable** – Opens the door for as long as the button is pressed. Immediately closes the door when the button is released.
- **Bistable** – Opens the door the first time you press the button. Closes the door the second time you press the button.
- **Timer** – Opens the door when you press the button. The door stays open until the remote control timer runs out, or the DYNALOGIX timer runs out, whichever is first.

B.2. Technical Characteristics

Table B–1: Remote Control Technical Characteristics

Frequency of Use	433.92 MHz
Contact Relay Range	1A 30VCC
Consumption	15 mA at rest
Irradiation on Antenna	-66 dBm
Supply	• 12V CA/CC between connectors and 3 with J6 closed. • 24V CA/CC between connectors 2 and 3 with J6 open.
Operating Temperature	-4 to +140° F
Sensitivity	>= -1 02 dBm (S/N = 1 7 dB, m=100%)
Dimensions	5" 3/16 x 1" 3/16 x 2" 10/16
Weight	3.7 Oz

B.3. Installing the Receiver

The Radio Frequency receiver is located on the inside of the Control Box cover. This comes factory installed. No further installation is required.

B.4. Monostable Programming Instructions

1. Maintain a distance of at least five feet between the transmitter and the antenna of the receiver.

2. Press the desired code on the transmitter dipswitch.

3. Press and release the SW1 button of the receiver once (twice if you wish to program Channel 2).

4. Save the setting by pressing and holding the transmitter button until the LED light goes out.

Table B–2: Monostable Remote Control Switches

Selected Channel	***# Impulses***	***LED LIT = •***	
	On SW1	***L1***	***L2***
Channel 1 Monostable	1	•	
Channel 2 Monostable	2		•

B.5. Timer – Channel 1

1. Press and hold the **SWI** button on the receiver until LED L1 lights up and then turns off.

   LED L1 will flash at low speed (1 flash per second).

2. Count the number of flashes until it reaches the number that corresponds to the desired length of time.

3. Press and release the **SW1** button.

   LED L1 displays a steady light.

4. Save the setting by pressing and holding the transmitter button until the LED light goes out. See Table B–3.

Table B–3: Channel 1 Timer Settings

Number of Flashes	***Imposed Time (Seconds)***	***Number of Flashes***	***Imposed Time (Minutes)***
1	01	17	1
2	02	18	1.5
3	03	19	2
4	04	20	2.5
5	05	21	3
6	06	22	3.5
7	07	23	4
8	08	24	4.5
9	09	25	5
10	10	26	5.5
11	11	27	6
12	12	28	6.5
13	13	29	7
14	14	30	7.5
15	15	31	Bistable
16	16		

B.6. Timer – Channel 2

1. Press any code on the dipswitch of the transmitter.
2. Press and release the **SW1** button on the receiver.
   LED L1 goes out.
3. Press and hold the **SW1** button on the receiver until LED L2 lights up and then turns off.
   LED L2 flashes at low speed (1 flash per second).
4. Count the number of flashes until it reaches the number that corresponds to the desired length of time.
5. Press and release the **SW1** button.
   LED L2 displays a steady light.
6. Save the setting by pressing and holding the transmitter button until the LED light goes out.

Table B–4: Channel 2 Timer Settings

Number of Flashes	***Imposed Time (Seconds)***	***Number of Flashes***	***Imposed Time (Minutes)***
1	01	17	1
2	02	18	1.5
3	03	19	2
4	04	20	2.5
5	05	21	3
6	06	22	3.5
7	07	23	4
8	08	24	4.5
9	09	25	5
10	10	26	5.5
11	11	27	6
12	12	28	6.5
13	13	29	7
14	14	30	7.5
15	15	31	Bistable
16	16		

B.7. Bistable Programming Instructions

B.7.1. Programming 1 Channel

1. Press the required code on the transmitter dipswitch.
2. Press and hold the SW1 button on the receiver until LED L1 lights up and then turns off.
3. The LED L1 will flash at low speed (1 flash per second).
4. Wait until LED L1 cycles through the 30-flash cycle and then remains lit.
5. Save the setting by pressing and holding the transmitter button until LED L1 of the receiver goes out.

B.7.2. Programming 2 Channel

1. Press any code on the dipswitch of the transmitter.
2. Press and release the SW1 button on the receiver.
   LED L1 goes out.
3. Press and hold the SW1 button on the receiver until the LED L2 lights up and then turns off.
4. The LED L2 will flash at low speed (1 flash per second).
5. Wait until LED L2 cycles through the 30-flash cycle and then remains lit.
6. Save the setting by pressing and holding the transmitter button until LED L2 of the receiver goes out.

Appendix C:
Falcon Motion Sensor Installation

C.1. Specifications

Table C–1: Falcon Motion Sensor Specifications

Characteristic	*Specification*
Technology	Microwave and microprocessor
Transmitter Frequency	24.125 GHz
Transmitter Radiated Power	<20 dBm EIRP
Transmitter Power Density	< 5 mW/cm2
Mounting Height	Falcon: from 11.5 to 23’
	Falcon XL: from 6.5 to 11.5’
Tilt angle	0° to 180° in elevation
Detection Zone (typical)	FALCON: 13’ (W) x 16’ (D) for a mounting height of 16’
	FALCON XL: 13’ (W) x 6.5’ (D) for a mounting height of 8.2’
Detection Mode	Movement
Minimum Detection Speed	2.2 in/s (measured in the sensor axis)
Supply Voltage	12V to 24 V AC +/- 10%
	12V to 24V DC +30% /-10%
Mains Frequency	50 to 60 Hz
Power Consumption	< 2W
Output Relay	Free of potential chargeover contact
	Max contact voltage 42 V AC/DC
	Max contact current 1A (resistive)
	Max switching power 30W (DC) / 60 VA (AC)
Hold Time	0.5s to 9s (adjustable)
Manual Adjustment	Orientation of sensing field (mechanically.)
	Multiple Functions (by push buttons.)
Remote Control Adjustments	Sensitivity, hold time, detection mode, pedestrian and parallel traffic rejection mode, relay configuration
Temperature Range	-22°F to 122°F (-30°C to +60°C)
Degree of Protection	IP65
Product Conformity	R&TTE 1999/5/EC
	EMC 89/366/EEC
Dimensions	5 in (D) x 4 in (W) x 3 ¾ (H)
Weight	0.88 lbs (400 g)
Housing Material	ABS and Polycarbonate
Bracket Material	Black anodized aluminum
Cable Length	33 ft (10 m)
Cable Diameter	1/8” (3 mm) (minimum)
	1/4" (6.5 mm) (maximum)

C.2. Installation Summary

A brief summary of the installation instructions is included below. Follow the detailed instructions found in the Falcon & Falcon XL User's Guide to install the motion sensor. A copy of this guide was enclosed in the shipping box that contained the sensor.

1. Mount the sensor.
2. Set the sensing field dimensions.
3. Configure the sensor with the remote control (or push buttons).
4. Wire necessary connections to the terminal block.
    - Brown – AC 12-24 +
    - Green – AC Neutral –
    - White – COM
    - Yellow – NO
    - Gray – Not Used

Notes:

- Firmly fasten the sensor to avoid vibration.
- Do not place the sensor directly behind a panel or other material.
- Clear the sensing field of all moving or vibrating objects.
- Do not install the sensor under florescent lighting**.**

Appendix D:
Wireless Bottom Detector

The WDD receiver is optional on Power models and standard on All Weather models. The WDD receiver provides a wireless connection to the bottom edge of the curtain. The WDD receiver programming persists even if the control box is unplugged.

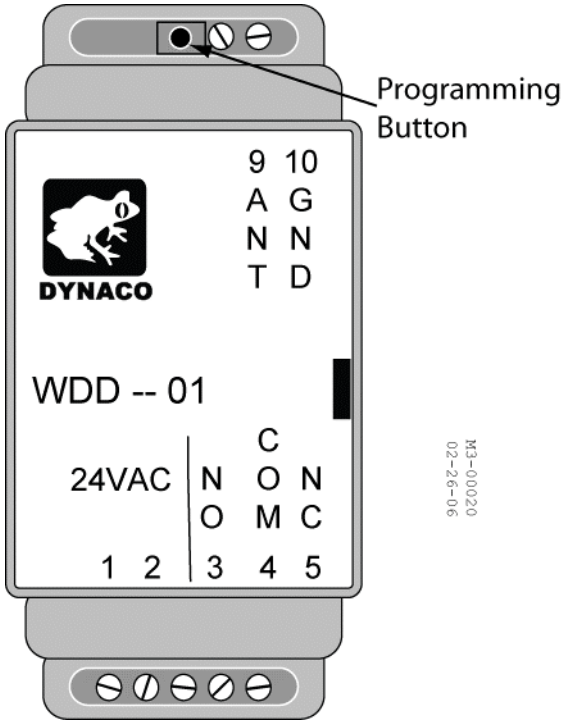


Figure D–1: WDD Receiver

Follow the instructions below to program the receiver if it is installed.

1. Turn on the main disconnect.

   A red LED illuminates across from connector 9 indicating that the WDD is operational and ready for programming.

2. Lower the door to working level and press the e-stop button.

3. Push and hold the micro switch next to the LED using a small screw driver.

4. A green LED illuminates. Activate the bottom of the curtain. The LED will blink once and then illuminate solid. Release all buttons.

5. Test the setting by activating the bottom edge. An audible click should be heard and the Dynalogix LED should illuminate.

Appendix E:
Vehicle Loop Detectors

E.1. LP4224

E.1.1. Specifications

The LP4224 detects the presence of metal objects. It is specially suited for detecting vehicles. The system consists of the following components.

- The detector unit (located in the Control Box).
- The loop, which detects the presence of the vehicle.
- The cable, which connects the loop to the detector.

Table E–1: Vehicle Loop Detector Specifications

Characteristic	***Specification***
Information Memorizing	No time limit
Supply Consumption	24 VAC =/- 15%, 48 Hz to 62 Hz less than 1.5 VA
Exit	Inversed relay – contact max. 5 A/250
Operation Temp	-14° to +158° F

E.1.2. Installation

Fix the connector cable so that it doesn't move or vibrate. Install the connector cable as far as possible from the power cables such as the motor and main power cables. Ensure that there are no vehicles or other metal objects on the loop while you are connecting and adjusting. The presence of metal objects during this activity causes a sensitivity decrease. A grilled or metal floor may cause loss of sensitivity.

1. Make a slot of 0.15 inches by 1 inch to introduce the loop cable.
2. The right or acute angles are cut at 45° in order not to damage the loop.
3. The loop cable must present a section of at least 3 circ/mils. It is recommended to use multi-wired cables.
4. Twist the connector cable at 20 turns/yard. The cable should not be longer than 219 yards.

Perimeter of loop P=2a+2b	**Number of turns**
3.3 – 13 ft	4 to 8
13 – 26 ft	3 to 4
26 – 52 ft	2 to 3
more than 52 ft	1 to 2

E.2. DSP-6LP

E.2.1. Specifications

The DSP-6LP was designed for solar powered applications. It is specially suited for detecting vehicles. The system consists of the following components.

- The detector unit (located in the Control Box).
- The loop, which detects the presence of the vehicle.
- The cable, which connects the loop to the detector.

Table E–2: Vehicle Loop Detector Specifications

Characteristic	***Specification***
Supply Consumption	10 to 30 Volts AC or DC, 1.5 mA (no vehicle) to 25 mA (with vehicle)
Output Ratings	Single output, 1 A relay at 30 VDC Resistive
Operation Temp	-35° to +165° F

E.2.2. Installation

Caution: Fix the connector cable so that it doesn't move or vibrate. Install the connector cable as far as possible from the power cables such as the motor and main power cables. Ensure that there are no vehicles or other metal objects on the loop while you are connecting and adjusting. The presence of metal objects during this activity causes a sensitivity decrease. A grilled or metal floor may cause loss of sensitivity.

1. Make a slot of 0.25 inches by 2 inch to introduce the loop cable.

2. The right or acute angles are cut at 45° in order not to damage the loop.

3. The loop cable must present a section of at least 3 circ/mils. It is recommended to use multi-wired cables.

4. Twist the connector cable at 8-10 turns/foot. Lead ins over 500 feet will cause decreased sensitivity.

Perimeter of loop P=2a+2b	**Number of turns**
2 x 4 ft	5
3 x 3 to 4 x 6 ft	5
6 x 6 to 6 x 30 ft	3
more than 6 x 50 ft	2

Appendix F:
DYNACO Control Box Power Requirements

The following table describes the Control Box specifications.

Table F–1: Control Box Power Requirements

		Variable Frequency Drives								*Class CC Fuses*						*FLA*
Power		**ATV-IIHUI8M2U**	**ATV-IIHU29M2U**	**ATV-58HU4IM2**	**ATV-3IHU75N4**	**ATV-3IHUI5N4**	**ATV-3IHU22N4**	**ATV-3IHUI5SX**	**ATV-28HU29S6XU**	**6 AMP**	**10 AMP**	**12 AMP**	**15 AMP**	**20 AMP**	**30 AMP**	**Full Load Amps**
Power Mono & Tri-phase																
1	200-240v - 0.75kW - 1HP	**X**										**X**				3.87
2	200-240v - 1.5kW - 2HP		**X**											**X**		7.85
3	200-240v - 2.2kW - 3HP			**X**											**X**	10.2
Power Tri-phase																
4	380-500v - 0.75kW - 1HP				**X**					**X**						1.75
6	380-500v - 1.5kW - 2HP					**X**					**X**					3.55
7	380-500v - 2.2kW - 3HP						**X**						**X**			5.1
8	Canada 575v - 1.5kW - 2HP							**X**	**X**	**X**						2.8

Appendix G:
Square-D Frequency Inverter Specifications

G.1. Frequency Inverters

The frequency inverter maintains total control over the breaking and stopping of the DYNACO Door motor by injecting DC current. It can also detect, without damage, a large number of abnormal conditions. When it detects an error, a red LED lights up. DYNACO has selected a range of Square-D™ frequency inverters, which is part of the Schneider-group. These electronic devices are very reliable.

The frequency inverter is factory set and located in the control panel. The factory set parameters correspond to the motor and the size of the door.

Caution: DO NOT CHANGE THESE PARAMETERS. Any changes or alterations to the drive program will immediately void the warranty.

Note: For other display faults contact DYNACO customer service at 800-459-1930.

G.2. ALTIVAR 58 Specifications

Table G–1and Table G–2 list the **ALTIVAR 58** Square-D Frequency Inverter specifications.

Table G–1: ALTIVAR 58 Fault Codes

Displayed Faults	***Probable Cause***	***Procedure***
PHF – Main Power Loss	• Speed controller incorrectly supplied or fuses blown. • Transient fault on one phase.	Check the power connection and the fuses.
USF – Under Voltage	• Line supply too low. • Transient voltage dip.	• Check the line voltage. • Change the load resistor.
OSF – Over Voltage	Line supply too high.	Check the line voltage.
OLF – Motor Overload	Thermal trip due to prolonged overload.	• Check the thermal protection setting and monitor the motor load. • Wait at least 7 minutes to reset.
OPF – Motor Phase Loss	One phase cut at the speed controller output.	Check the motor connections.
SCF – Short Circuit	Short circuit or grounding at the speed controller output.	• Check if the speed controller and motor insulation connection cables are disconnected. • Check the speed controller transistor bridge.

Table G–2: ALTIVAR 58 Technical Specifications

Characteristic	***Specification***
Voltage range	• 200 V (-10%) to 240V (+10%) single phased • 380V (-10% to 500V (+10%) three phased
Mode of operation	Vectorial flow control without sensor.
Protections and safety features of the inverter	Protection against short-circuits • Between output phases, • Between output phases and earth, • On the exits of the internal sources. Thermal protection against overheating and over currents under voltage and over voltage supply. Loss of supply phase safety circuit (avoid single phase run over three phase inverters).
Conformity to standards	The inverters respect the recommendations regarding electric equipment of industrial control. • Low tension EN-50178 • CEM immunity ▪ IEC 1000-4-2/EN 61000-4-2 level 3 ▪ IEC 1000-4-3/EN 61000-4-3 level 3 ▪ IEC 1000-4-4/EN 61000-4-4 level 4 ▪ IEC 1000-4-5/EN 61000-4-5-level 3 ▪ IEC 1800-3/EN 61800-3, environment 1 and 2
Marking	Respects the 73/23/CEE, 93/68/CEE and CEM89/336/CEE guidelines.
Maximum relative humidity	93% without condensation or streaming, according to IEC 68-2-3
Operating temperature	14 . . +120°F without downgrading
Frequency range	50/60 Hz +/-5%
Electrical isolation	Between power and control (input, outputs, power supply).
Motor protection	Thermal protection integrated in speed controller via continuous calculation of the I^2t, taking into consideration the speed. Memorization of motor thermal state when speed controller is powered off. Protection against motor phase breaks.
CE	CEM, conducted and extended emission. • IEC 1800-3/EN 61800-3, environment 1 and 2 • EN 55011 class A (filters reducing incorporated radio perturbations) • EN 55022 class B, with additional filters
Certificates	UL and CSA
Storage temperature	-13. . . +150°F

G.3. ALTIVAR 11 Specifications

Table G–3and Table G–4 list the **ALTIVAR 58** Square-D Frequency Inverter specifications.

Table G–3: ALTIVAR 11 Fault Codes

Displayed Faults	***Probable Cause***	***Procedure***
OSF – Overvoltage during stead state operation or during acceleration	• Line voltage too high. • Induced voltage on output wiring.	• Check the line voltage. Compare with the drive controller nameplate ratings. • Reset the drive controller. • Verify that the wiring is correct.
PHF – Input phase failure	• Input phase loss, blown fuse. • Input phase imbalance. • Transient phase fault. • 3-phase controller used on a single-phase line supply. • Unbalanced load.	• Verify that the input power is correct. • Check the line fuses. • Verify input power connections. • Supply 3-phase power if needed. • Disable IPL (set to nO)
SCF – Short Circuit	Short circuit or grounding at the speed controller output.	• Check the cables connecting the drive controller to the motor and the motor insulation. • Check the speed controller transistor bridge.
SOF – Overspeed	• Instability • Overhauling load	• Check the motor, gain, and stability parameters. • Contact DYNACO.
USF – Under Voltage	• Line supply too low. • Transient voltage dip. • Damaged precharge resistor.	• Check that the line voltage matches the nameplate rating. • Check the setting of parameter UnS. • Replace the drive controller.

Table G–4: SquALTIVAR 11 Technical Specifications

Characteristic	***Specification***
Voltage range	• 200 V (-10%) to 240V (+10%) single phased • 380V (-10% to 500V (+10%) three phased
Mode of operation	Vectorial flow control without sensor.
Protections and safety features of the inverter	Protection against short-circuits • Between output phases, • Between output phases and earth, • On the exits of the internal sources. Thermal protection against overheating and over currents under voltage and over voltage supply. Loss of supply phase safety circuit (avoid single phase run over three phase inverters).
Conformity to standards	The inverters respect the recommendations regarding electric equipment of industrial control. • Low tension EN-50178 • CEM immunity ▪ IEC 1000-4-2/EN 61000-4-2 level 3 ▪ IEC 1000-4-3/EN 61000-4-3 level 3 ▪ IEC 1000-4-4/EN 61000-4-4 level 4 ▪ IEC 1000-4-5/EN 61000-4-5-level 3 ▪ IEC 1800-3/EN 61800-3, environment 1 and 2
Marking	Respects the 73/23/CEE, 93/68/CEE and CEM89/336/CEE guidelines.
Maximum relative humidity	93% without condensation or streaming, according to IEC 68-2-3
Operating temperature	14 . . +120°F without downgrading
Frequency range	50/60 Hz +/-5%
Electrical isolation	Between power and control (input, outputs, power supply).
Motor protection	Thermal protection integrated in speed controller via continuous calculation of the I^2t, taking into consideration the speed. Memorization of motor thermal state when speed controller is powered off. Protection against motor phase breaks.
CE	CEM, conducted and extended emission. • IEC 1800-3/EN 61800-3, environment 1 and 2 • EN 55011 class A (filters reducing incorporated radio perturbations) • EN 55022 class B, with additional filters
Certificates	UL and CSA
Storage temperature	-13. . . +150°F

G.4. ALTIVAR 31 Specifications

Table G–5 and Table G–6 list the **ALTIVAR 58** Square-D Frequency Inverter specifications.

Table G–5: ALTIVAR 31 Fault Codes

Displayed Faults	***Probable Cause***	***Procedure***
bLF – Brake Sequence	Brake release current not reached.	• Check the drive controller and motor connections. • Check the motor windings. • Check the Ibr settings in the Fun-menu.
CrF – Precharge circuit failure	Precharge circuit damaged.	• Reset the drive controller. • Replace the drive controller.
InF – Internal fault	• Internal fault. • Internal connection fault.	• Remove sources of electromagnetic interference. • Replace the drive controller.
OCF -- Overcurrent	• Incorrect parameters settings in the Set- and drC- menus. • Acceleration too rapid. • Drive controller and/or motor undersized for load. • Mechanical blockage.	• Check the SET- and drC- parameters. • Ensure that the size of the motor and drive controller is sufficient for the load. • Clear and mechanical blockage.
SCF – Motor short circuit	• Short circuit or grounding at the drive controller output. • Significant ground leakage current at the drive controller output if several motors are connected in parallel.	• Check the cables connecting the drive controller to the motor and the motor insulation. • Reduce the switching frequency. • Connect output filters in series with the motor.
SOF – Overspeed	• Instability • Overhauling load	• Check the motor, gain, and stability parameters. • Contact DYNACO.
EnF – Auto-tuning failure	• Motor or motor power not suitable for the drive controller. • Motor not connected to the drive controller.	• Use the L or the P ratio. • Check the presence of the motor during auto-tuning. • If a downstream contractor is being used, close it during auto-tuning.
COF – Serial Link Failure	Loss of communication between the drive controller and communication device or remote keypad.	• Check the communication bus. • Refer to the product specific documentation.
EPF – External Fault	User defined.	User defined.
LFF – Loss of 4-20 mA follower	Loss of 4-20 mA reference on input A13.	Check the connection on input A13.
ObF – Over voltage during deceleration	• Braking too rapidly. • Overhauling load.	• Increase the deceleration time. • Install a braking resistor if necessary. • Activate the brA function if it is compatible with the application.

Displayed Faults	***Probable Cause***	***Procedure***
DHF – Drive overload	• Drive controller or ambient temperature is too high. • Continuous motor current load is too high.	Check the motor load, the drive controller ventilation, and the environment. Wait for the drive controller to cool before restarting.
OLF – Motor overload	• Thermal trip due to prolonged motor overload. • Motor power rating too low for the application.	Check the ItH setting (motor thermal protection, page 32), check the motor load. Allow the motor to cool before restarting.
OPF – Motor phase failure	• Loss of phase at drive controller output. • Downstream contactor open. • Motor not connected. • Instability in the motor current. • Drive controller oversized for motor.	• Check the connections from the drive controller to the motor. • If a downstream contactor is being used, set OPL to OAC. Refer to the ATV31 Programming Manual, FLtmenu. • Test the drive controller on a low power motor or without a motor: set OPL to nO. Refer to the ATV31 Programming Manual, FLt- menu. • Check and optimize the UFr, UnS, and nCr parameters and perform auto-tuning.
OSF – Overvoltage during stead state operation or during acceleration	• Line voltage too high. • Induced voltage on output wiring.	• Check the line voltage. Compare with the drive controller nameplate ratings. • Reset the drive controller. • Verify that the wiring is correct.
PHF – Input phase failure	• Input phase loss, blown fuse. • 3-phase controller used on a single-phase line supply. • Input phase imbalance. • Transient phase fault.	• Verify that the input power is correct. • Check the line fuses. • Verify input power connections. • Supply 3-phase power if needed. • Disable IPL (set to nO)
SLF – Serial link failure	Loss of connection between drive controller and communication device or remote keypad.	• Check the communication connection. • Refer to the product-specific documentation.
CFF -- Configuration Fault	The parameter configurations are not suited to the application.	Restore the factory settings or load the backup configuration, if it is valid.
CF I – Configuration fault via serial link	The parameter configurations loaded in the drive controller via the serial link are not suited to the application.	• Load a compatible configuration. • Check the configuration loaded previously.
USF – Under Voltage	• Line supply too low. • Transient voltage dip. • Damaged precharge resistor.	• Check that the line voltage matches the nameplate rating. • Check the setting of parameter UnS. • Replace the drive controller.

Table G–6: ALTIVAR 31 Technical Specifications

Characteristic	***Specification***
Voltage range	• 200 V (-10%) to 240V (+10%) single phased • 380V (-10% to 500V (+10%) three phased
Mode of operation	Vectorial flow control without sensor.
Protections and safety features of the inverter	Protection against short circuits: • Within internal power supplies • Between output phases • Between output phases and ground Protection against input phase loss Thermal protection against overheating and overcurrents. Undervoltage and overvoltage faults. Overbraking fault.
Conformity to standards	The inverters respect the recommendations regarding electric equipment of industrial control. • Low tension EN-50178 • CEM immunity ▪ IEC 1000-4-2/EN 61000-4-2 level 3 ▪ IEC 1000-4-3/EN 61000-4-3 level 3 ▪ IEC 1000-4-4/EN 61000-4-4 level 4 ▪ IEC 1000-4-5/EN 61000-4-5-level 3 ▪ IEC 1800-3/EN 61800-3, environment 1 and 2
Marking	Respects the 73/23/CEE, 93/68/CEE and CEM89/336/CEE guidelines.
Maximum relative humidity	96% without condensation or streaming, according to IEC 60068-2-3
Operating temperature	14 . . +120°F without downgrading
Frequency range	50/60 Hz +/-5%
Electrical isolation	Between power and control (input, outputs, power supply).
Motor protection	Thermal protection integrated in speed controller via continuous calculation of the I^2t, taking into consideration the speed. Protection against motor phase breaks.
CE	CEM, conducted and extended emission. • IEC 1800-3/EN 61800-3, environment 1 and 2 • EN 55011 class A (filters reducing incorporated radio perturbations) • EN 55022 class B, with additional filters

Characteristic	***Specification***
Codes and Standards	UL Listed per UL 508C as incorporating electronic overload protection: UL File E164874 CCN NMMS • CSA Certified to CSA C22.2 No. 14: CSA File LR96921 Class 3211 06 • CE Marked in accordance with the European low voltage (73/23/EEC and 93/68/EEC) and EMC (89/336/EEC) directives • Conforms to applicable NEMA ICS, IEC, NOM, C-TICK, and ISO 9001 standards
Storage temperature	-13. . . +150°F

Appendix H:
Curtain Material Specifications

H.1. Curtain Material

Table H–1: Curtain Material Specifications

Component/Measure	*Standard*	*Description/Measurement*
Base Fabric		Polyester
Coating		PVC
Total Weight	ASTM D-751	26.5 oz/yd2 (900 g/m2)
Grab Break	ASTM D-751	600/550 lbs.
Strip Resistance	ASTM D-751, Proc. B	430/400 lbs. per inch
Tongue Tear	ASTM D-751, 8" x 10" specimen	70/90 lbs.
Adhesion	ASTM D-751, RF weld	11 lbs. per inch
Cold Crack	ASTM D-2136, 1/8" mandrel	Pass -40F
Standard Roll Data	Size, yards Width, inches	65.62 118"

H.2. Curtain Composition

The DYNACO door curtain is consists of a woven polyester fabric that is coated with plastic polyvinylchloride. See Table H–2 below for details on its composition.

Table H–2: Curtain Composition

Composition	*Percent*	*Standard*
Polyethyleneterephtalate	20-80	
Polyvinylchloride	10-40	
Di-isononylphtalate (DINP)	5-40	CAS nr.: 9002-86-2
Inert Fillers	0-30	CAS nr.: 68515-48-0

H.3. Hazard Identification

The curtain material is not hazardous for man or environment when used under normal conditions.

H.4. Acute and Chronic Health Hazards

No TLV exists for PVC coated fabrics. See Table H–3 for other possible health effects.

Table H–3: Health Effects

Route of Entry	***Effect***
Inhalation	Not applicable
Skin	Not Applicable
Ingestion	Choking may occur depending upon size
Eye	Possible irritation due to mechanical effect
Fax	(32) 51 740 964
In Case Of Emergency	(32) 51 740 900

H.5. First Aid

Table H–4: First Aid Treatments

Route of Entry	***Effect***
Inhalation	Not applicable
Skin	Not Applicable
Ingestion	• Free the respiratory channel • In case of ingesting large quantities, seek medical attention
Eye	In case of severe irritation, seek medical attention.

H.6. Fire Fighting

Only well trained persons, who are informed about the hazards of the product, should fight the fire. The following guidelines should be adhered to.

- Wear suitable protection whenever approaching the fire or in confined places. Use a self-contained breathing apparatus.
- Wear protective, chemical resistant clothes. Avoid exposure to the fumes whenever possible.
- Clean protective clothes after the fire. Aerate and thoroughly clean the surrounding area before re-entry.

Table H–5: Fire Fighting Specifications

Characteristic	***Specification***
Flash Point	Not Applicable
Explosion Limits	Not Applicable
Extinguishing Media	CO2, dry chemical, water or other agents as appropriate for materials in the surrounding fire
Special Risks	Decomposition in the burning flame may result in the formation of HCI (Hydrogen chloride), CO (Carbon monoxide), and CO2 (Carbon dioxide).

H.7. Accidental Release

Not Applicable.

H.8. Handling and Storage

No special precautions need be taken for personal protection. Avoid storing the curtain in temperatures above 158° F (70°C). Doing so eliminates slow degradation.

H.9. Other Precautions

The following additional precautions should be taken when handling the curtain.

- Do not overheat the product. Upon fusion of the material, avoid inhaling fumes by providing sufficient ventilation.
- Keep away from fire.
- Respect all local regulations concerning personal protection.

H.10. Exposure Controls and Personal Protection

Table H–6: Exposure Controls and Personal Protection

Condition	***Control/Protection***
Technical Measures	Follow the measures for safe handling and storage.
Release / Spilled Containment	Not applicable
Waste Disposal Method	Disposal must be in accordance with federal, state and local regulations. Use an approved method for solid waste disposal.
Precautions in Handling	Use sufficient ventilation when welding or fusing. To avoid product degradation, do not overheat.
TGG Alkylphtalate	5 mg/m3 based upon ACGIH TLV recommended for di-sec-octylphtalate
Precautions when Machining	When machining the coated fabric dry, a dusty condition may result. Use a suitable dust collection system and an approved dust mask (for respiratory protection).
During Decomposition	Take necessary protective measures to avoid contact with fumes via skin, eye, or inhalation. Protect the eyes and lungs by using a protective facemask with a B-P2 filter class. Use inhalation protection that conforms to the international and national rules of safety and standards.

H.11. Physical and Chemical Properties

Table H–7: Physical and Chemical Properties

Characteristic		***Specification***
Appearance		Fabric sheet coated with plastic
Smell		None
Phase Transitions	Melting Point	Not Applicable
	Boiling Point	Not Applicable
	Softening	Excessive softening occurs from 158°F onwards
	Evaporation Rate	Not Applicable
	Vapor Pressure	Not Applicable
	Flash Point	Not Applicable
	Ignition Temperature	> 660°F (350°C)
	Density	1.3-1.4 g/cm3
	Vapor Density	Not Applicable
Solubility	Insoluble in Water	
	Partly Soluble In	Ketones
		Dimethylsulfoxyde
		Tetrahydrofurane
		Methythydrofurane
Ph		Not Applicable
Viscosity		Not Applicable
Decomposition Temperatures	> 248° F (120° C)	Long Exposure > 3 hrs
	> 482° F (250° C)	Short Exposure
Oxidizing Properties		Not Applicable

H.12. Stability and Reactivity

Table H–8: Curtain Material Stability and Reactivity

Characteristic	*Specification*
Stability	The product is stable under the normal conditions.
Conditions to Avoid	When heated to decomposition / combustion temperatures, products of decomposition (including CO, CO2, HCI, and other volatile agents) are released.
Materials to Avoid	None
Remarks	Material dissolves in some organic solvents.

H.13. Toxicological Information

To our knowledge, the product is biologically inert and not dangerous. No TLV exists for PVC coated fabrics. The hazards associated with the product are related to the individual constituents.

H.14. Environmental Information

The material is biologically inert and non-degradable.

H.15. Disposal Considerations

Dispose of the coated fabric in accordance with local, federal, national, and international regulations. Either landfill or incineration is possible if it is in compliance with these regulations.

H.16. Transportation Information

Not Applicable

H.17. Regulation Information

Not Applicable

H.18. Miscellaneous

This product information is based upon our actual knowledge and experience and is not limiting. The information of the product is based on the properties of the product as specified in the product technical data sheet.

Be aware that whenever a product is combined or mixed with other substances new risks may occur.

Keep to all hygiene and safety regulations when working with this product. The MSDS does not have any effect on these regulatory obligations.
Photocell Specifications.

Appendix I: PhotoCell Specifications

I.1. Photoelectric Cell with Transmitter-Receiver

The Photoelectric cell is type S 1420 156 024 + MHF TR 15/20. Three components make up the photoelectric cell.

- Transmitter (installed on the same side of the door as the Control Box)
- Receiver (install on the opposite side of the door as the Control Box)
- Amplifier (located inside the Control Box)

The transmitter sends an infrared beam to the receiver. When this beam is interrupted, the receiver activates the electric contact in the amplifier. This stops the door from closing and returns it to the open position.

I.2. Transmitter/Receiver Specifications

The following tables describe the Transmitter/Receiver traits.

Table I–1: Transmitter/Receiver Specifications

Characteristic	***Specification***
Maximum range	50 ft (100% sensibility)
	16 ft (25% sensibility)
Protection degree	NEMA 4x
Case	black Luran
Type of Transmitter	GaAlAs LED, 880 nm
Light immunity	maximum 50000 lux
Temperature tolerances	-4°F to +140° F

Table I–2: Photocell Amplifier LED indicator Key

LED	***On***	***Off***
Green	Amplifier Powered	No Power to Amplifier
Red	Barrier Intact	Barrier Broken
Yellow	Sensitivity OK	Sensitivity too low

I.3. Amplifier Specifications

The following table describes the Amplifier traits.

Table I–3: Amplifier Specifications

Characteristic	***Specification***
Current tension (pins 2 & 10)	24 VAC +/- 15%, 45 to 65 Hz
Consumption	2.5 VA
Exit contact (pins 1, 3, 4)	AC: 10A/250 VAC resistive charge
	DC: 1A/250 VDC resistive charge
Temperature tolerances	-4°F to +122° F

Table I–4: S 142 ARNT 924 Amplifier Specifications

Characteristic	***Specification***
Current tension (pins 2 & 10)	24 VAC +/- 15%, 45 to 65 Hz
Consumption	2 VA
Exit contact (pins 1, 3, 4)	AC: 10A/250 VAC resistive charge
	DC: 2A/25 VDC resistive charge
Temperature tolerances	-20°F to +50° F

Appendix J:
Photo Cell Amplifier S142ARNT924

J.1. Installation and Setup

1. Install Photo Cell Amplifier into gray eleven pin socket.
2. Confirm adjustment knob is in the auto position.
3. Turn power on.
4. Lights 1 and 2 will illuminate green. Lights 3 and 4 will illuminate amber. Refer to Figure J–1**.**
5. After door limits are set, verify operation of photo cells by blocking beam and assuring the door reverses.
6. Under normal operations lights 3 and 4 will go out when beam is blocked.

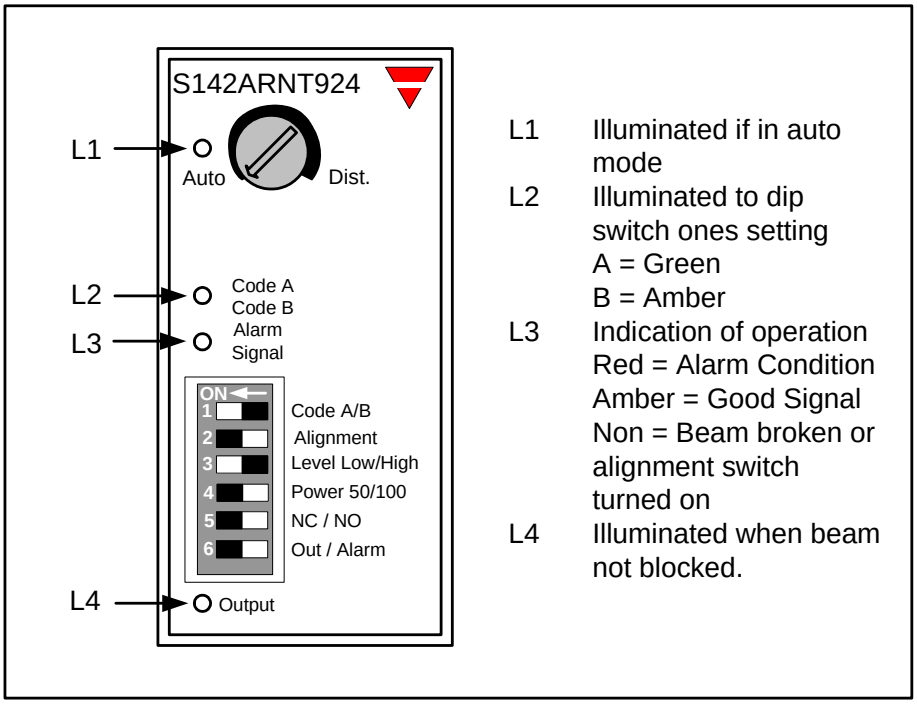


Figure J–1: Photo cell amplifier

J.2. Dip Switch Description

Dip switches come preset from DYNACO USA Inc. and need not be adjusted unless otherwise advised. **Refer to** Figure J–2**.**

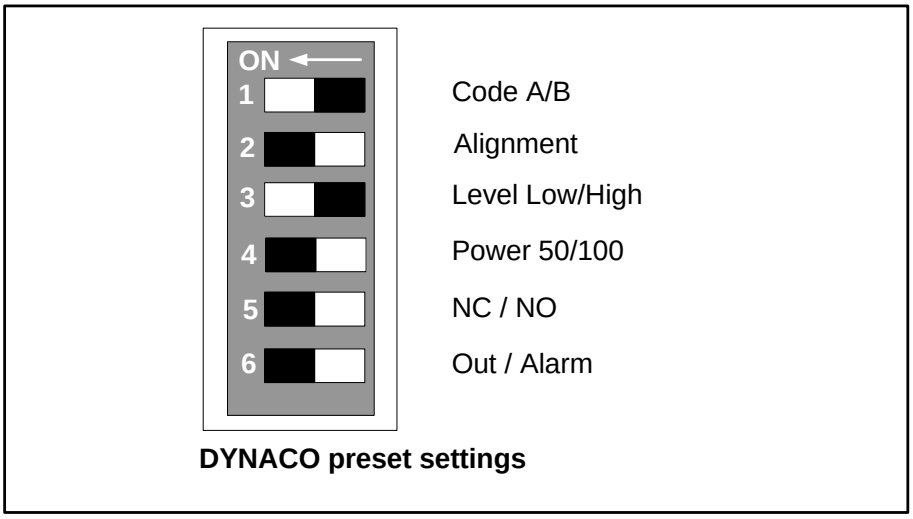


Figure J–2: Dip Switches

Dip switch 1	Controls the switch of code A or B.
Code A	Single photo cell
Code B	Two sets of photo cells, avoids crosstalk between them
Dip switch 2	Alignment of photo cell
ON	Able to tune in photo cells via manual adjust dial / physical alignment of photo cells. L3 will illuminate steady for a strong signal or blink slowly for a weak signal.
OFF	Normal operation / L3 illuminated
Dip switch 3	This switch selects the power gain. Low or High
Dip switch 4	Power level 50% or 100%
Dip switch 5	Selection on output contact N/O or N/C
Dip switch 6	Dip switch needs to be left in Alarm position, used to alarm when photo eyes shorted or malfunctioning.

Appendix K:
Recommended Quarterly Maintenance

DYNACO recommends that the following maintenance task be performed on a quarterly basis. For your convenience, we've provided a printable quarterly inspection sheet below Table J–1. Contact DYNACO for assistance.

Only certified personnel should perform maintenance on DYNACO doors. Maintenance performed by untrained technicians may result in injury and/or damage to equipment.

Lock out / tag out procedures must be performed while performing maintenance tasks on DYNACO doors.

Note: Service performed by unauthorized persons may void the DYNACO Door warranty.

Note: The DYNACO door must be lubricated quarterly to ensure proper operation. **Apply white lithium spray grease along the inner face of the side guides and the curtain teeth.**

Table J–1: Quarterly Maintenance List

Category	***Component***	***Inspections***	***Corrective Measures***
Safety Controls / Operations	Photo Eyes	• Eyes are clean and free of debris • Door reverses when beam is broken. • Adjusted and aligned in accordance with the specifications described in this manual.	• Clean the Photo eyes. • Replace broken parts. • Adjust as described in this manual. See Section 3.3.4: Adjust the Photocell Sensitivity.
	Bottom Edge	• Door reverses when tripped. • Adjusted and aligned in accordance with the specifications described in this manual. • Inspect air tube for break and kinks.	• Replace or repair broken parts, including air tube. • Adjust as described in this manual. See Section 3.3.1: Set the Door Limits for DY3000 setup or Section 4.3.1: Set the Door Limits for DY4000 setup.
Door Controls	Activations	Test each activation for proper function and distance from the door (where applicable). The distance assures that there is enough time for the door to open.	Adjust as described in this manual. See Section 3.3.6: Install and Test Activation Accessories for DY2000 setup or Section 4.3.2: Install and Test Activation Accessories for DY4000 setup.

Category	Component	Inspections	Corrective Measures
	Function Buttons	Test each button on the front panel, the emergency stop, and the main rotary disconnect for proper function.	Repair as needed.
	Timers	Test each timer for adequate times to allow proper door operation and traffic flow.	Adjust as described in this manual. See Sections 3.3.6 to 3.3.9 for DY2000 setup or Sections 4.3.3 to 4.3.5 for DY4000 setup.
	Door Limits	• Test each limit for proper function and distance. • Test door for smooth operation. No jerking should occur.	Repair and adjust as described in this manual. See Section 3.3.1: Set the Door Limits for DY3000 setup or Section 4.3.1: Set the Door Limits for DY4000 setup.
Curtain	Teeth	Inspect for broken or missing teeth.	Replace teeth as needed. Use Craftsman™ two-jaw puller (model #46905) to remove and install teeth.
	Curtain	Inspect for broken cables, rubber delaminating, holes, and other damage.	Repair as needed.
	Windows	Inspect for holes, delaminating, or cracking.	Clean windows. PVC polish or cleaner, such as Novus scratch remover, may take scratches off.
	Air Tube	Inspect for breaks and kinks along the length of the tube.	Replace or repair as needed.
Side Guides	N/A	• Ensure that covers are properly installed. • Test springs and hardware for tightness and proper functionality. • Verify that the Inner side guide plastic track gap does not exceed 9.5mm. • Inspect for heavy splintering present along the guides. • Inspect for collision damage or other damage. • Remove old excess grease.	Repair as needed.
Head Unit	Head Unit	• Inspect drums for damage. • Inspect upper and lower muthylene pieces for excessive wear. • Remove old excess grease from the drive sprockets.	Repair as needed.

Category	***Component***	***Inspections***	***Corrective Measures***
	Motor	• Verify that the safety cable is on the motor. • Verify that the motor mounting bumpers are tight against the head unit, to ensure that the motor is not loose. • Test fan for proper operation (the blades move with the shaft).	Repair as needed.
	Counter weight	• Inspect strap for fraying and cuts. • Inspect nylon pulley for wear. • Verify that counter weight movement is not obstructed. • Verify that pulley support is not bent or shifted to the side.	Repair and adjust as described in this manual. See Section 2.7: Install the Counterweight.

DYNACO DOOR QUARTERLY INSPECTION SHEET

Date: _____

Customer Information

Dealer Name: _____
Dealer Tech: _____
End User _____
Contact: _____
City/State _____

Door Information

Door Model: _____
Serial#/Controls: _____
Location: _____
Cycles: _____
Status: _____

Activations Present

_____

Door Operation

Inspection of Components	OK	BAD
Activation Operation	○	○
Activation Distances	○	○
Photo eyes	○	○
Reversing Edge	○	○

Comments: _____

Covers

Inspection of Components	OK	BAD
Drum Cover	○	○
Motor Cover	○	○
Belt Cover	○	○
Side Guide Covers	○	○

Comments: _____

Counter Weight

Inspection of Components	OK	BAD
C.W. Strap	○	○
C.W. Bracket/Pulley	○	○
C.W. Roll-up Diameter	○	○
C.W Inches From Grnd.	○	○

Comments: _____

Side Guides

	OK	BAD
Inner Guide Gasket	○	○
Springs & Hardware	○	○
Left Inner Guide Gap (mm)	○	○
Right Inner Guide Gap (mm)	○	○
Six Inch Segments	○	○

Comments: _____

Curtain

	OK	BAD
Curtain Condition	○	○
Teeth Worn/Missing	○	○
Windows(If Applicable)	○	○
Zipper Rubber Strips	○	○
Air Hose/Bellows	○	○

Comments: _____

Head Unit

	OK	BAD
Side Plate Squareness	○	○
Left Hand Muthylene	○	○
Left Hand Gear/Elbow	○	○
Right Hand Muthylene	○	○
Right Hand Gear/Elbow	○	○

Comments: _____

Parts Required _____

Recommendations _____

Customer's Signature _____ Date _____

Service Technician _____ Date _____

DYNACO USA
3175 MacArthur Blvd.
Northbrook, IL 60062

The Leader in Door Safety and Design
Phone (847) 562 4910 Fax: (847) 562 4917
Internet site : www.dynacodoor .us

Index

R

S

T

U

W