

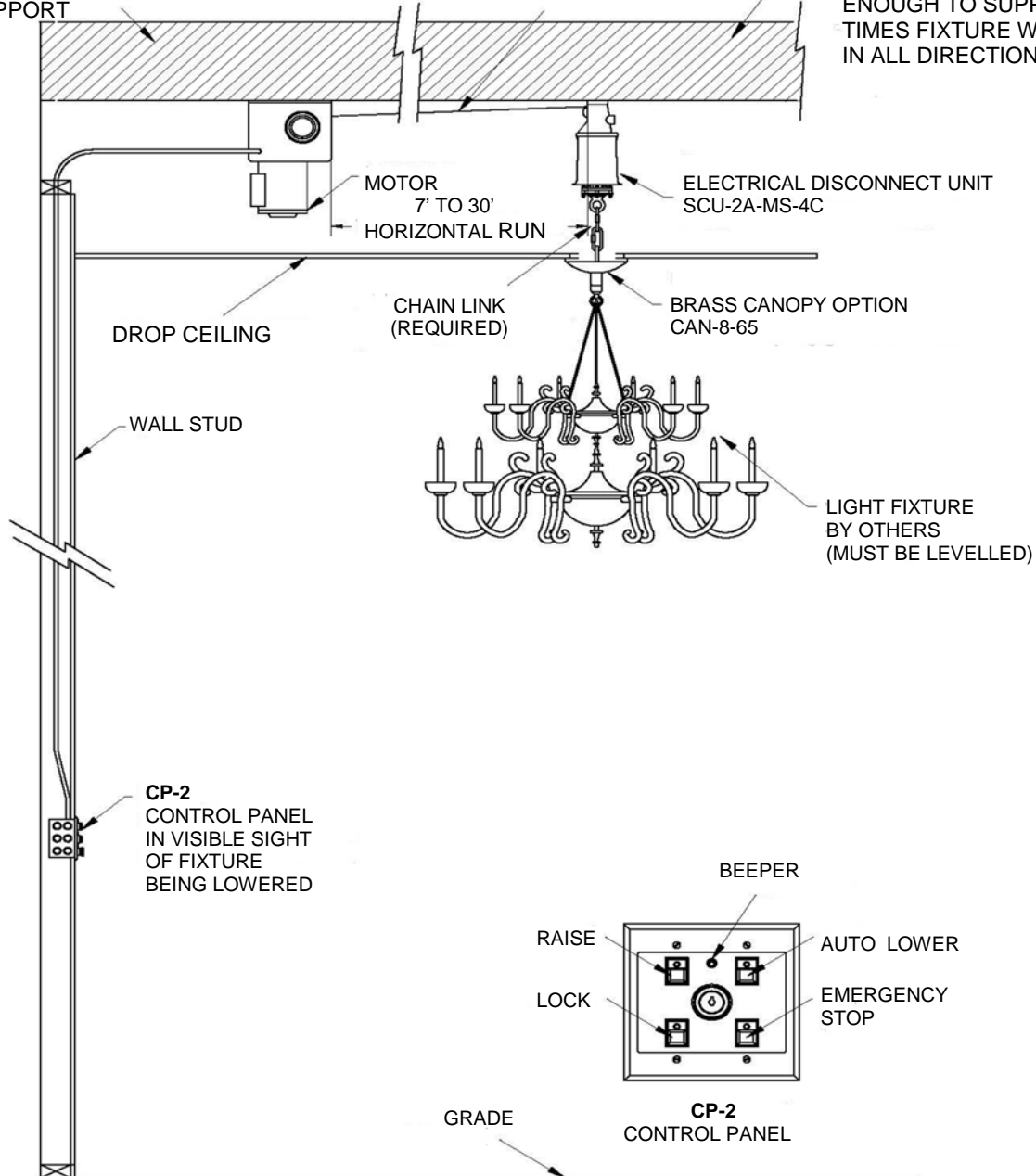
DROP CEILING SAMPLE LAYOUT FOR FIXTURES WEIGHTING UP TO 400 LBS

MOTOR SHOULD BE MOUNTED IN A LOCATION WITH EASY ACCESS.

MOTOR SHOULD BE MOUNTED IN ANY ORIENTATION TO A RIGID STRUCTURAL SUPPORT

CABLE PATH AND PULLEY SHOULD BE ALIGNED WITH THE CENTERLINE OF THE CABLE DRUM AND FREE FROM OBSTRUCTIONS

DISCONNECT UNIT SUPPORT MUST BE LEVELLED AND STRONG ENOUGH TO SUPPORT 5 TIMES FIXTURE WEIGHT, IN ALL DIRECTIONS





MLS-400-THX-YY-4C

BILL OF MATERIAL

MOTORIZED LOWERING SYSTEMS FOR FIXTURE WEIGHT OF UP TO 400 LBS		
MLS-400-TH5-70-4C (5" WIDE DRUM, NEAREST PULLEY/SCU-2A, 7-30FT AWAY)		
MLS-400-TH8-70-4C (8" WIDE DRUM, NEAREST PULLEY/SCU-2A, 12-30FT AWAY)		
QTY	PART NUMBER	DESCRIPTION
1	SCU-2A-MS-4C	ELECTRICAL DISCONNECT UNIT WITH LOCKING MECHANISM
1	CP-2	CONTROL PANEL WITH BEEPER ASSEMBLY
1	3/16" DIA LOWERING CABLE	CABLE ASSEMBLY (CABLE LENGTH: AS REQUIRED, 70FT STD.)
MOTOR ASSEMBLY OPTION		
1	TH5	5" WIDE DRUM MOTOR ASSEMBLY (MLS-400-TH5-70-10C)
1	TH8	8" WIDE DRUM MOTOR ASSEMBLY (MLS-400-TH8-70-10C)

OPTIONS	
SUFFIX	DESCRIPTION
-YY	ADDITIONAL CABLE LENGTH, STANDARD 70 FEET
-XC	X= NUMBER OF CONTACTS (UP TO 8) STANDARD 4 CTS FOR 2 CIRCUITS PLUS 1 EARTH
-CL	CHAIN LINKS REQUIRED IF NOT PART OF FIXTURE
-CR	CORROSION RESISTANT (contact factory for details)
-38	WITH 3/8" CONDUIT INTERNAL THREAD STEM
OPTIONAL MATERIAL AS NEEDED	
CAN-8-65	BRASS CANOPY
CP-8	CONTROL PANEL FOR UP TO 8 SYSTEMS
3P-5	PULLEY
3P-6	PULLEY
3P-7	PULLEY

All fixtures MUST be hung by at least 4 Chain links or Quick links. Links must be rated for the size and weight of the fixture. They can be purchased thru Lighting & Lowering Systems.

COMMENTS

The disconnect unit must be mounted to a HORIZONTAL RIGID STRUCTURE. All mounting must be able to withstand static and dynamic loading for at least **5 X weight** of the fixture in all directions. This structure must be approved by others. The winch or motor assembly must be placed away from the first pulley or disconnect unit: **7-30ft for TH5, 12-30ft for TH8 motors**. A pulley must be used every 2-30' of horizontal straight run. Centerline of pulley groove must be aligned with cable path. Cable path must be free from interference. Please visit our website at www.lowering-device.com for specification-sheets if not provided with the quote. If the system is mounted under certain climatic conditions, please inform us. Please provide any other specifications, conditions or special requirements at this time.

Specifications are subject to change without notice.



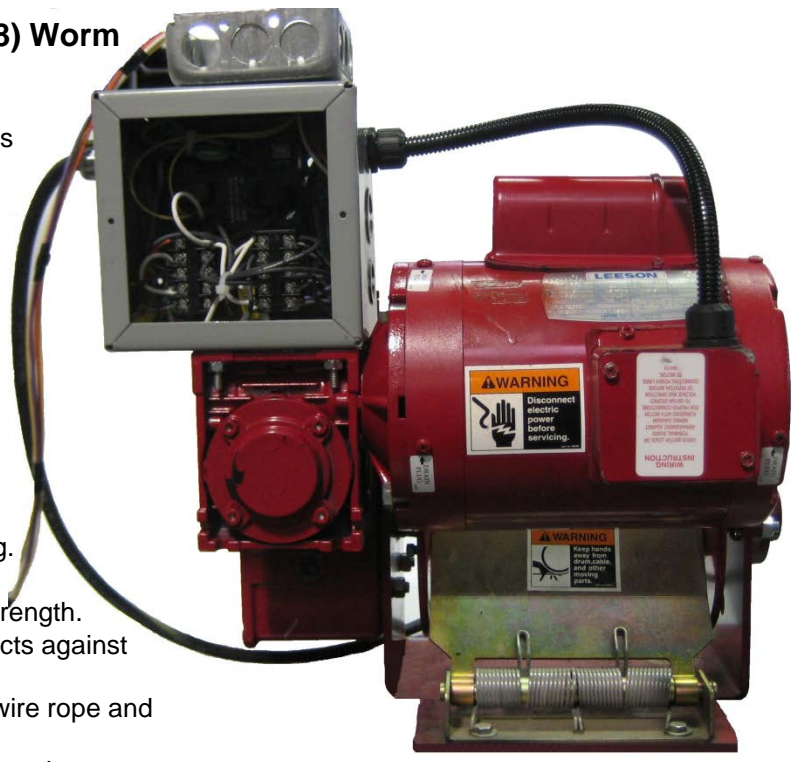
MOTORIZED LOWERING SYSTEMS

Specs for TH5 & TH8 Motor Assemblies

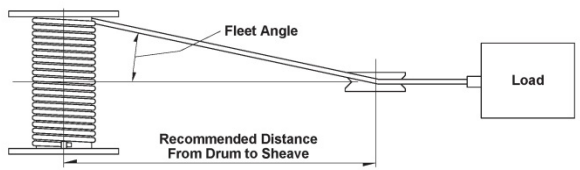
Specs for TH5 (4WP2) and TH8 (4WP2T8) Worm Gear Power Winch Assemblies

Up to 1100 LB Fixture weight Capacity

- ◆ **115 Bolt Single Phase Electric Motor** includes power cord with grounded plug.
- ◆ **Machine Cut Worm Gears** provide accurate operation and long lasting service.
- ◆ **Enclosed Oil Bath** provides continuous lubrication of gears to minimize wear. Oil seals keep oil in and dirt out.
- ◆ **Internal Mechanical Brake** provides positive load control for lifting and lowering operations.
- ◆ **Ball Bearings** and self-aligning bronze bearings provide smooth and efficient operation.
- ◆ **Pressure Plate** applies pressure to drum and wire rope to help maintain uniform winding.
- ◆ **Mounting Options** include floor, wall, or ceiling.
- ◆ **Two-year Limited Warranty**
- ◆ **Cast Aluminum** construction, for lightweight strength.
- ◆ **Corrosion Resistant** durable paint finish protects against corrosion in harsh environments.
- ◆ **Large Diameter Drums** minimize wear to the wire rope and help extend its life.
- ◆ **Relay Box** includes two heavy duty, 1,000,000 cycle, enclosed (dust-proof) Relay. Also includes Adjustable Current Sensor.
- ◆ **Junction Box** with color coded wire leads for ease of installation and trouble shoot.



Part Number	Motor HP	Load rating (lb)			Wire Rope dia. (in)	Line speed (fpm)		Drum capacity (ft)			approx Ship wt. (lb)
		1 st Layer	Mid drum	Full drum		1 st layer	Full drum	1 st layer	Mid drum	Full drum	
TH5	1.3	2000	1500	1200	1/4	8	13	11	35	70	85
TH8	1.3	2000	1200	800	1/4	8	19	19	110	220	101



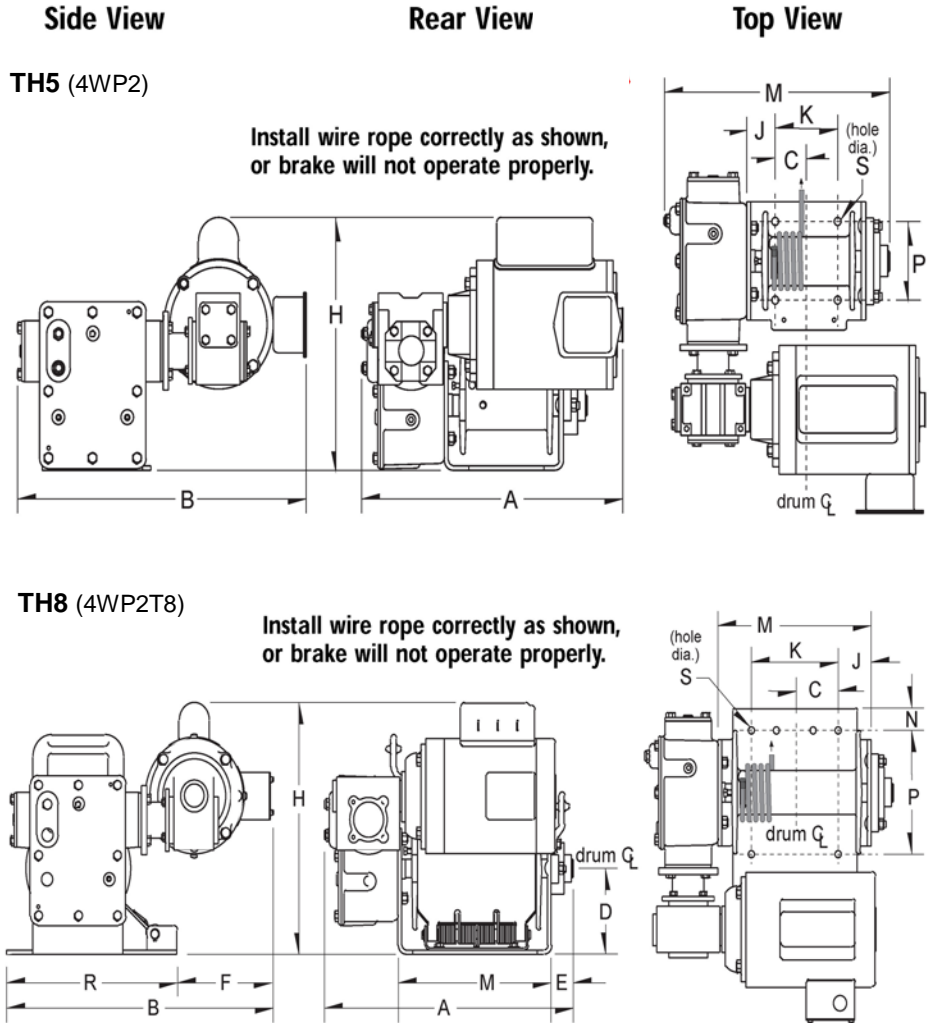
Motor Assemblies – Drum Dimensions				
Part Number	Drum diameter	Flange diameter	Drum width	Fleet angle distance
TH5	2.50 in	5.00 in	5.00 in	7 ft
TH8	2.50 in	7.00 in	8.00 in	12 ft

Dimensions are for reference only and subject to change notice. Fleet angle distance is the recommended distance between cable drum and lead sheave or disconnect unit.

Specifications are subject to change without notice.

IMPORTANT:

Study all applicable codes, manuals, and regulations. Be sure to read the Installation and Operations Guide before installing and operating.



Dimensions for the TH5 and TH8 assemblies (in)

Model	A	B	C	D	E	F	H	J	K	M	N	P	R	S (hole dia.)
TH5	15.63	17.28	1.72	3.50	1.375	9.00	12.84	1.72	3.75	13.50	1.00	4.00	6.50	.41
TH8	15.62	17.80	2.75	4.88	1.44	6.43	14.25	2.25	5.81	10.25	1.25	7.00	11.38	.41

Dimensions are for reference only and subject to change without notice.

Specifications are subject to change without notice.

Specifications Guide

❖ The EDU shall have a 3-way tracking guide and support. It shall be constructed of precision cast high strength aluminum alloy 356-T6. A permanently fixed position piece incorporating a special tracking guide system permits the moveable portion of the *Disconnect Unit* to align in the same position every time the system is operated, thereby eliminating the need to re-orientate the fixture. The Electrical Disconnect Unit shall have twin high strength stainless steel locking cams securing the load of the *Lower Contact Assembly* and fixture. All tension on the cable is relieved when the fixture is in the raised position.

❖ The MULTI-CONTACT Connector assembly shall be modular for easy installation and retrofit requirements.

❖ The connector shall also have 4-8 size 12 contacts. Material of contacts shall be copper with nickel plating, and with gold plating over nickel per MIL-G-45204. Electrical contacts shall have a rating of 20 year mean time between failures. All hardware shall be corrosion resistant stainless steel. It shall have a self-aligning and self-adjusting mechanical system comprised of two principal assemblies:

The UPPER CONTACT HALF shall house the socket contacts. It shall incorporate spring assisted **polymer** contact body with precision-machined stainless steel guideposts. The socket contact body shall have integral guideposts for precise contact alignment.

The LOWER CONTACT HALF shall house the pin contacts comprised of spring assisted **polymer** contact body with precision-machined stainless steel guidepost receivers. The pin contact body aligns with guideposts of integral socket body guideposts.

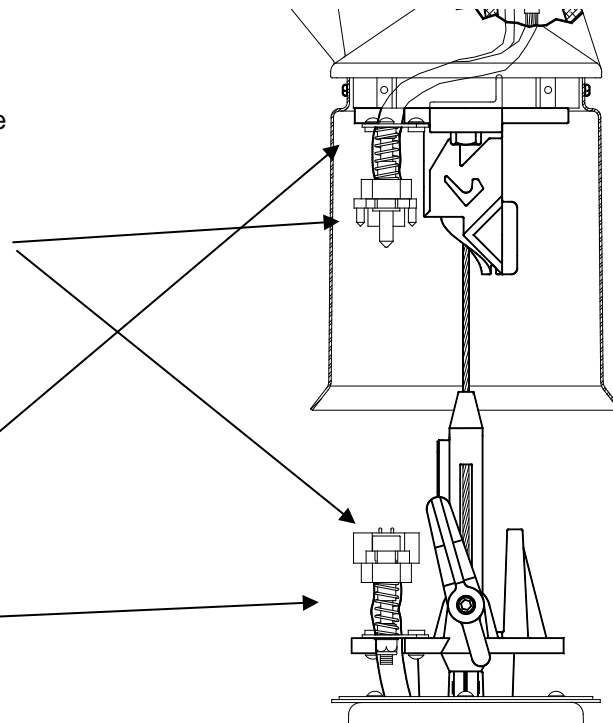
❖ The wire leads are potted in Superflex® Black RTV **Silicone**, an industrial grade sealant for bonding and sealing.

❖ The unit shall have a guidepost constructed of precision cast high strength stainless steel. It shall utilize a cast-in-place guide bar for precise alignment of *Lower Contact Assembly* with the fixed portion of the *EDU*.

❖ The **EDU shall have** twin (2) tracking support arms made of precision cast high strength stainless steel. When locked in the *3-Way Tracking Guide and Support* notches, the *Twin Tracking/Support Arms* shall hold the weight of the fixture and components and it shall remove all tension from the *Control Cable or Lowering Cable*.

❖ The lower contact assembly shall be constructed of precision cast high strength aluminum alloy. It shall feature a cast-in-place guide that mate with the fixed portion of the *Disconnect Unit* to aid in tracking and stability. All hardware used on the *Lower Contact Assembly* as well as the entire *Disconnect Unit* shall be made of corrosion resistant stainless steel.

❖ The disconnect unit shall have a **HOUSING SEAL** made up of a spun aluminum closure ring with a sealing gasket constructed of extra flexible polymer providing a weather-tight seal between *Lower Contact Assembly* and *Disconnect Unit Cover*. This provides a flexible environmental seal. Seal swipes and conforms to interior of cylinder housing during all operating stages of the disconnect unit.



U.S. Patent No.
6,261,122

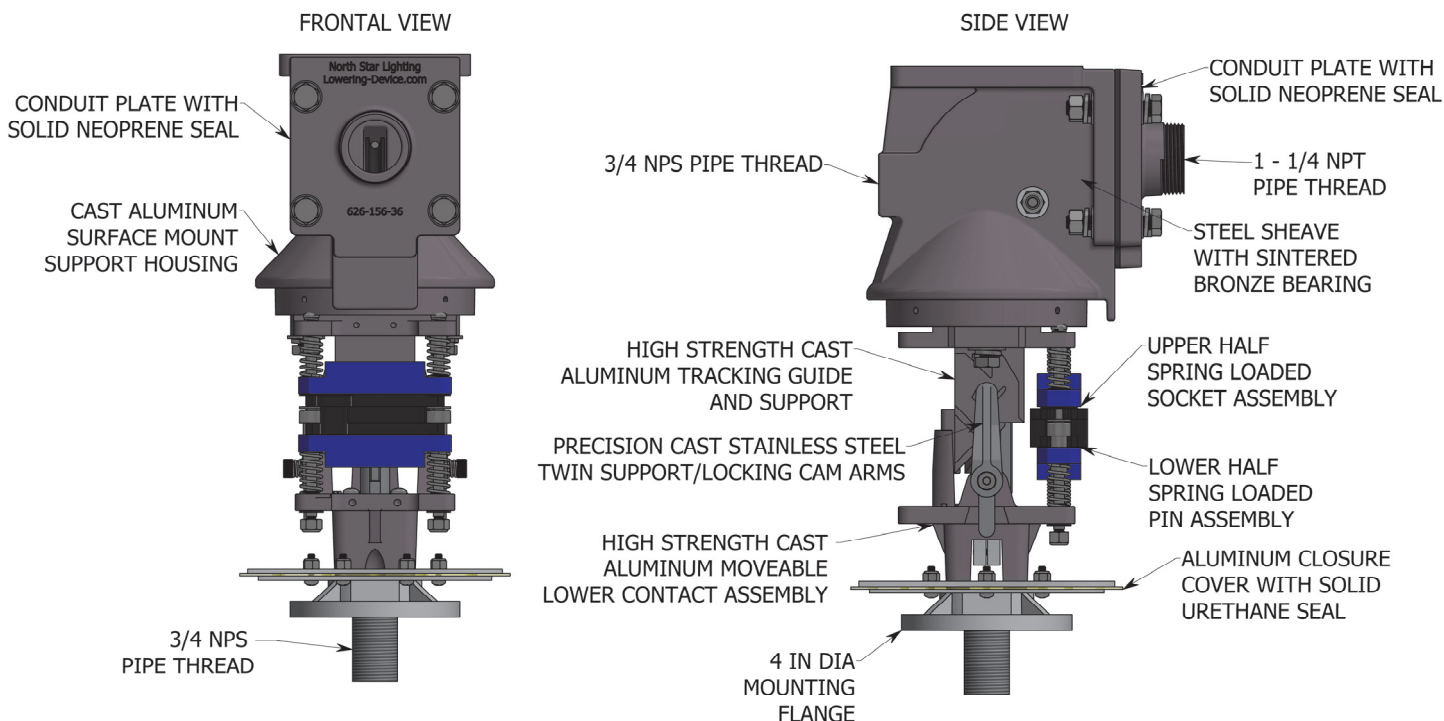
Electrical Contact Rating:

120V, 20 Amps per contact, (Multiple circuits)
240V/277V, 15 Amps per contact (Multiple circuits)
480V, 10 Amps (1 circuit max)
600V, 5 Amps (1 circuit max)

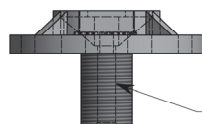
Mechanical Rating: 400 lbs with 6:1 safety factor
Weight: 8.5 LBS

SYSTEM DESIGNED SPECIFICALLY FOR USE WITH LIGHT FIXTURES, CAMERAS, AND RELATED EQUIPMENT ONLY.
NOT FOR LIFTING PEOPLE OR THINGS OVER PEOPLE.
SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Specifications Guide

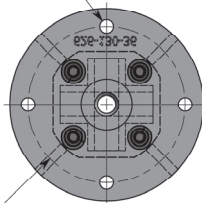


FIXTURE MOUNTING FLANGE



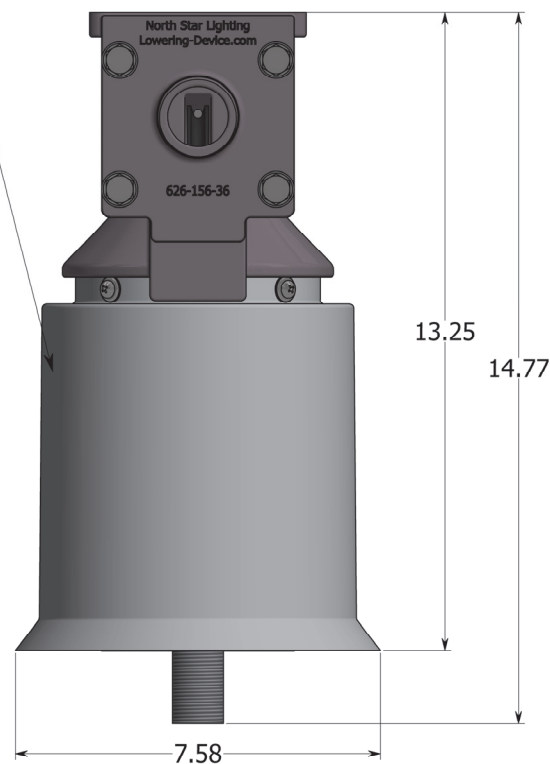
3/8 NPT INTERNAL PIPE THREAD

Ø.28 MOUNTING HOLES (4)



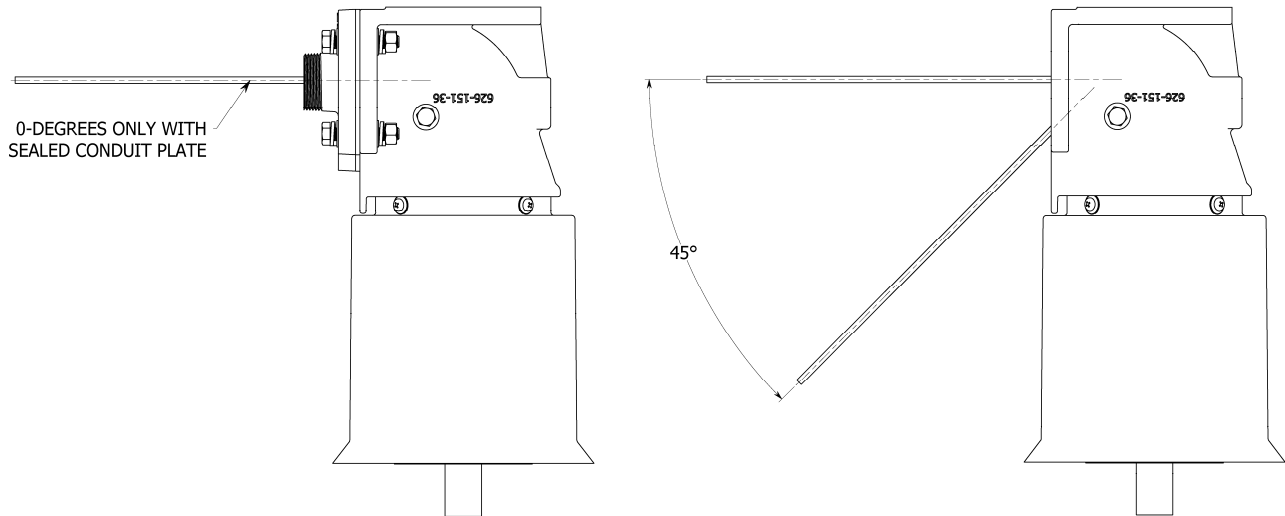
Ø3.25 IN MOUNTING HOLE DIAMETER

SEAMLESS ALUMINUM ROUND COVER



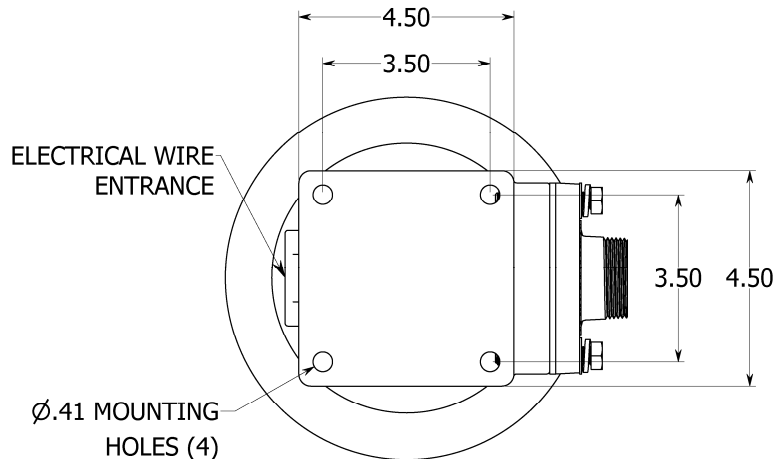
Options	Suffix
(4) Contacts (2 circuits)	-4C
(6) Contacts (3 circuits)	-6C
(8) Contacts (4 circuits)	-8C
3/8" Internal Pipe Thread Mounting	-38
Other mounting-consult factory	

Cable Orientation Options:



The disconnect unit allows the cable path orientation at an angle. The pulley installed in the upper casting attached to the disconnect unit guides the cable in the required orientation.

Mounting Details:



The disconnect unit must be mounted on rigid horizontal support. This support must be approved by others to be able to withstand static and dynamic loading of at least 5 X the weight of the fixture in all directions. Unistrut mounting structure should not be used due to bending and flexing of the unistrut during the raising and lowering operation. Square center hole is optional. Please specify if required at the time of ordering.

MOTORIZED LOWERING SYSTEM COMPONENTS

For MLS Systems

LOWERING CABLE SPECIFICATIONS

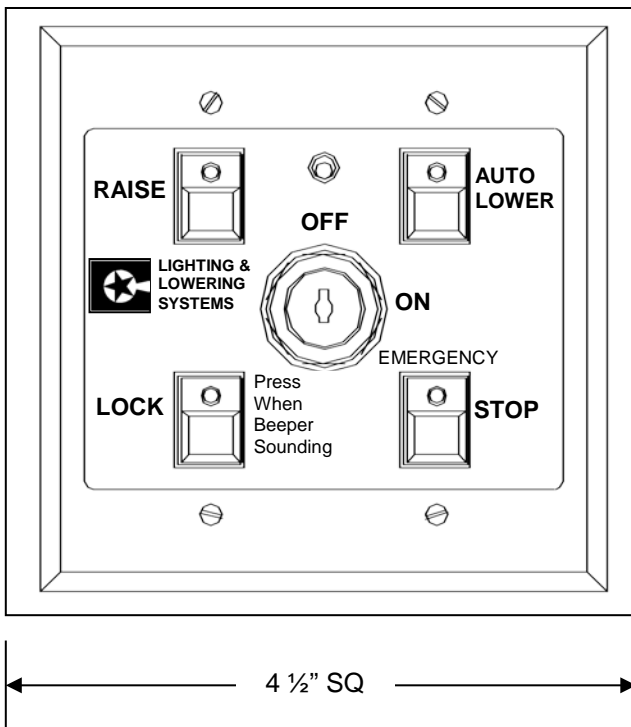
Comp. A-Carbon Steel Zinc Coated (Standard).
Comp. B-Corrosion Resistant Stainless Steel (Optional).

MLS Assembly	Nominal Diameter Of Wire Rope	Construction	Minimum Breaking Strength Comp. A	Minimum Breaking Strength Comp. B	Maximum Fixture Weight (lbs)	Cable Weight Per 1000 Feet (lbs.)
MLS-400	3/16"	7x19	4,200	3,700	600	65.0
MLS-600 MLS-1100	1/4"	7x19	7,000	6,000	1100	110.0



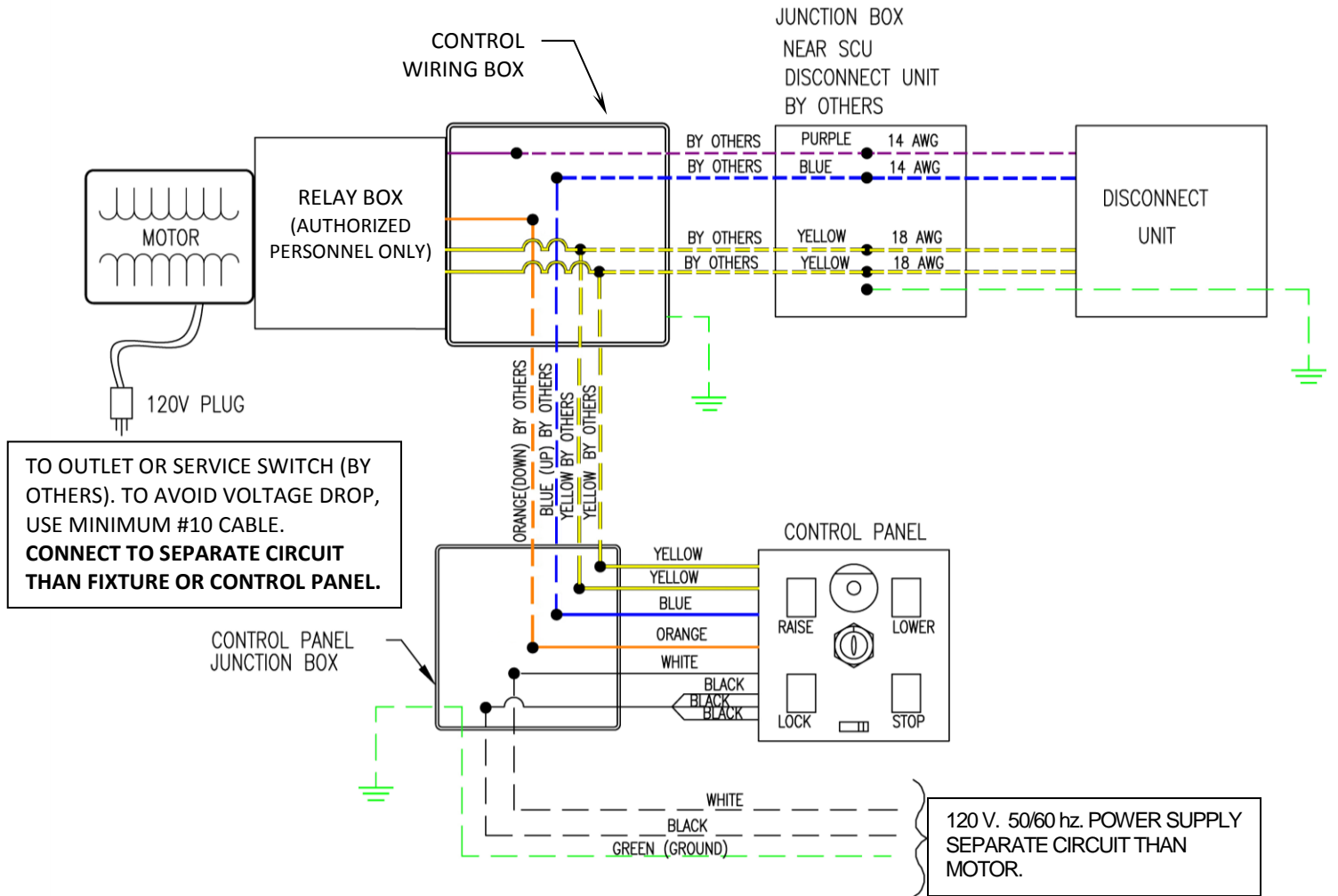
Cable is cut to size at the factory. Notify factory (or Sales Rep) of cable length before ordering.

SPECIFICATIONS FOR CP-2 CONTROL PANEL



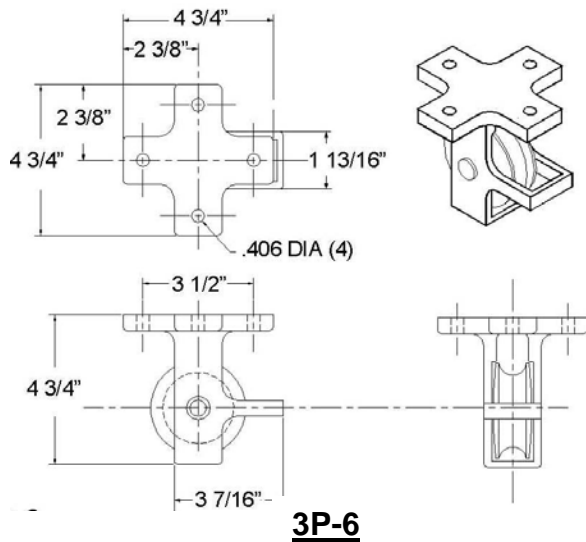
- ◆ Computerized panel. Programmable lowering distance .
- ◆ "TEACH" switch on front panel in back of wall plate allows for easy programming of Control Panel.
- ◆ Key lock power ON/OFF switch.
- ◆ Connection Box: 4" Square Double Deep (3 1/4 ") box provided.
- ◆ The Connection Box comes with 1/2" & 3/4" comb. knockouts.
- ◆ 4 1/2" Square White Wall Plate Cover provided.
- ◆ Operating Voltage: 105V-135V AC 50/60 Hz @ 1/4 ampere. Motor current is separate. See motor specs.
- ◆ Buttons: Momentary switches with LED lights.
- ◆ Equipped with Beeper to indicate when fixture has reached the top.
- ◆ "LOCK" button (feature) assures operator that system is mechanically locked. When locked, cable is slack and power to the motor is off.

* All specifications subject to change without notice



Factory provides color coded insulated wire leads coming out of the control panel, the disconnect unit, and the motor control wiring box. All 14 AWG wire leads are for 120 V. power. Motor and CP-2 control panel operate off of 120 Volt unless otherwise noted. To avoid voltage drop, use proper size cable in between **disconnect unit**, **motor**, and **control panel**. **Due to the motor amp rating, Motor should be on a separate circuit than the fixture and the control panel.** Electrical wire for the fixture is separate. Electrical circuit for the light fixture must be on a different circuit than for the motor. All electrical wires and conduits between the disconnect unit, motor, and the control panel, are provided by others. **Contractor should maintain same color codes for ease of installation, maintenance, and continuity check.**

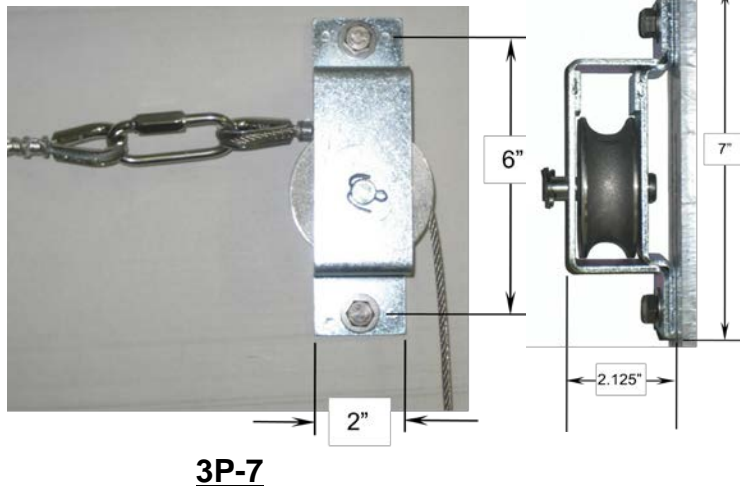
* Specifications subject to change without notice. Details shown are intended as an application example only. Actual installation details may vary. Contact manufacturer's representative or factory for specific details about special installation application or other information.



Various types of pulleys are available and should be designed for exact load and gear box. All pulleys have oilite bronze bearings for maintenance free life. This also insures their use for dirty atmosphere applications. Painted pulleys are available for highly corrosive areas. Pulleys can be spaced 6-30' apart on horizontal runs. A pulley must be used at every 30' of horizontal straight runs. Pulleys are required when vertical or horizontal changes in direction occur. It is important that pulleys are properly aligned. The centerline of the pulley-sheave groove must coincide with the centerline of the cable path when installing. Always take pulley friction into consideration if loads are near limits of the gear box. Pulleys must be installed on rigid surfaces which are able to withstand at least 5 X load of the fixture in all directions. The installation must be approved by others.

3P-6

Load capacity for a 3P-6 pulley is 20-400 lbs. A 3P-6 pulley can facilitate a change in direction of the cable from wall to ceiling i.e. from vertical to horizontal. 3P-6 pulleys should be spaced 6-30' apart on horizontal runs. Change in direction of cable to angles other than 90 degrees is possible. See page p3 for details. This pulley allows the twisted quick-link to pass through.



3P-7

A 3P-7 pulley can facilitate a change in direction of the cable on the same plane i.e. on the ceiling or on the wall. The pulley allows the cable connecting link to pass through.

Load capacity: Up to 400 lb. fixtures.

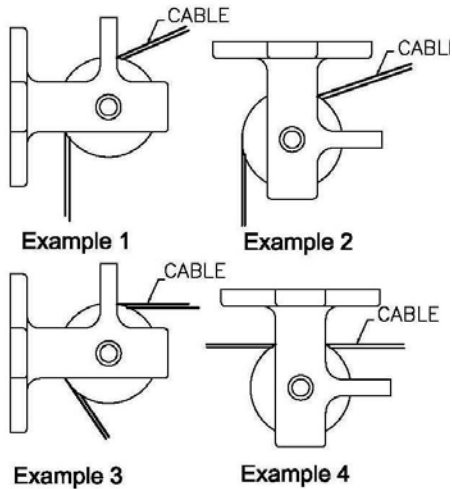
Frame Material: Frame material of zinc plated 7ggs. Steel.

Frame Material Option: Stainless steel frame. Contact factory.

Sheave Material: Sheave of cast aluminum with oilite bronze bearing.

Mounting: Two mounting holes for 3/8" bolts. Hardware by others. Type of hardware depends on the type of structure that the pulley is mounted to. Structure must not move while the system is in operation.

*Specifications subject to change without notice.

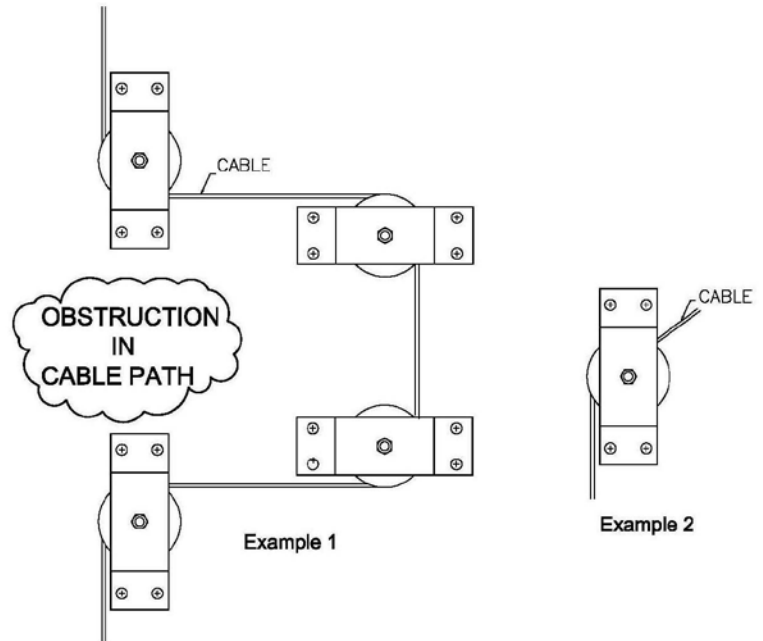


3P-6 and 4P-4 Uses

3P-6 and 4P-4 pulleys (depending upon load) can facilitate a change in direction of the cable from wall to ceiling i.e. from vertical to horizontal. These pulleys should be spaced 6-30' apart on horizontal runs. The above examples show that change in direction of cable to angles other than 90 degrees is possible. These pulleys can be placed horizontally (examples 2 and 4), vertically (examples 1 and 3) and on inclined surfaces for maximum versatility as long as the cable path is aligned to the pulley sheave groove and as long as the cable path is not interfered by any obstacles.

MAXIMUM FIXTURE LOAD

400 LBS	3P-6
1100 LBS	4P-4



3P-7 and 4P-3 Uses

3P-7 and 4P-3 pulleys (depending upon load) can facilitate a change in direction of the cable on the same plane. Example 1 is a simple way using 4 pulleys to go around an obstruction in the cable path. In example 2, the pulley allows the cable to change direction on the same plane.

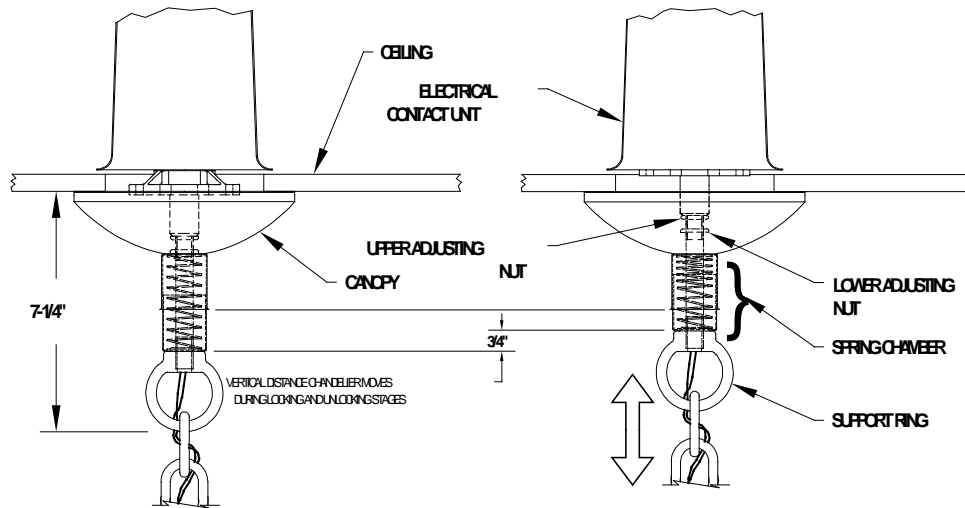
MAXIMUM FIXTURE LOAD

400 LBS	3P-7
1100 LBS	4P-3

* Specifications subject to change without notice. Details shown are intended as an application example only. Actual installation details may vary. Contact manufacturer's representative or factory for specific details about special installation application or other information. Lifting capacity is 400 lbs and must not be exceeded.

Specification Sheet for CAN-8-65

CAN-8-65: Height-compensating canopy assembly



During the lowering or raising of the fixture, when the electrical contacts engage within the ceiling mounted locking device, there is approximately $\frac{3}{4}$ " travel up and down to set the locking mechanism. The height compensating canopy will adjust to this condition to assure that the canopy will remain against the ceiling surface.

CANOPY: One piece 8" diameter and $2\frac{1}{4}$ " deep heavy gauge spinning with standard polished brass finish.

SPRING CHAMBER: Telescoping cups with bright brass finish enclose a $\frac{3}{8}$ " pipe stem that connects the electrical contact unit with the chandelier support ring. A large diameter compression spring within the chamber provides a constant and even pressure to keep the canopy against ceiling.

SUPPORTING RING: A heavy duty solid brass ring is provided. The ring is threaded onto the end of the $\frac{3}{8}$ " stem and secured with a lock nut. Electrical wires are fed through a center hole in the ring.

- * Wiring from the locking contact mechanism to the chandelier support chains, connecting links, and chandeliers with related hardware are provided by others.
- * All specifications subject to change without notice.