

## 01. SWING OPERATOR - CONTROL HARNESS DETAIL

C05190.00V1 Control for EasyAccess™, HD-Swing™ LE, HD-Swing™ and FlexSwing™.

- The C5190 Microprocessor Control is Horton Automatics' latest advancement in Swing Door Control Technology. It incorporates and supports all functions including sensor monitoring to meet ANSI 156.10 regulations and ANSI A156.19 for Low Energy Operators where applicable.
- If there are any questions about these instructions, contact Horton Automatics Technical Assistance Team at 1.800.531.3111.

## 02. C5190 CONTROL INITIALIZATION

### Step 1: Power-Up Door Unit

Be sure the toggle circuit is complete after applying AC power to the unit (Blue LED D6 is ON [TOG]). **Caution: The Door will move.**

- With power established, the Control LED Display shows the Standard Control Version and Date message.

- Followed by:



### Step 2: Perform Learn Initialization Setup

Instruct the control to perform a full learn Setup by:

- Press and Hold **SET** and **RESET** buttons simultaneously, then release **RESET** holding **SET** until 'Setup Request' appears on the screen followed by 'Begin Setup?' and 'Up-Yes, Down-No'. Press **UP** button.
- The next message reads, 'Arm/Dr Load Needed?' Again press the **UP** or **DOWN** button depending on your needs.
- Next, press the **UP** or **DOWN** button if you have a 'Full Energy Operator'.
- Press the **UP** or **DOWN** button if you have 'Monitored Sensors'.
- For the 'Fire Safety Spec' message, again press the **UP-US** or **DOWN-UK** button.
- The next message reads, 'Confirm Settings' and 'Up-Yes, Down-No'. With Yes, message then reads, 'Operator Spindle Moves in 5 Sec' to 1 Sec. countdown.
- Message reads, 'Finding Stop,' with swing door moving to Full-Open.

- Message then reads, 'Load Arm/Door Now' and 'SET to Complete.' After loading the Arm/Door, press **SET** to complete Setup.
  - With **SET** pressed, the Control displays a **Cautionary Message** that the door will move in 5 sec and proceeds to count-down to 1 sec.
  - Door goes through a Close Cycle then displays whether the Operator is a 4000 or 7000 Unit.
  - The Control initiates a First Open/Close Run to determine the Door Stroke then displays the Total Stroke.
  - The Control then initiates a Second Open/Close Run to determine if any Obstructions exist.
  - The Control completes the Setup and Saves the Data. It then reverts to the Standard Control Mode and Type Traffic 'Day 2-Way' message.
- Refer to Sheet H410A.02 on backside for Illustration Details on installing the Arm/Door during the Initial Setup.

C04320.0000 Automatic / Off / Hold-Open Rocker Switch

From Int. Sensor to CN5 INT APP Input

E06300.0110 Harness

Interior Approach Sensor

1 - BLK	+24V
2 - RED	0V
3 - BLU	PRES-IN
4 - BRN	COM
5 - N/C	N/C
6 - WHT	COM
7 - GRN	MOT-IN
8 - YEL	N/C
9 - ORG	TEST -
10 - VIOL	TEST +

From Optex OS-12C T Safety Beam Amplifier to CN13 Input

E06302.0000 Harness

Beam

1 - ORG	
2 - BRN	
3 - WHT	
4 - YEL	
5 - RED	
6 - BLK	

From Door-Mounted Safety Sensor to CN16 DOOR SAF Input

E06321.0000 Optex Elite T and Premium T  
E06327.0000 Optex OA-Edge T

Door-Mounted Safety Sensor

1 - BLK	0V
2 - RED	+24V
3 - WHT	COM
4 - W/GN	SAF
5 - GRN	COM
6 - W/BK	ACT
7 - N/C	COM
8 - N/C	APP/REC
9 - YEL	COM
10 - ORG	STOP/STALL
11 - PINK	DATA OUTPUT+
12 - TAN	DATA OUTPUT-
13 - VIO	MON/TEST OUT1+
14 - BLU	MON/TEST OUT1-
15 - N/C	MON/TEST OUT2+
16 - N/C	MON/TEST OUT2-
17 - W/TRD	KNW ACT ACTU OUT
18 - RD/GN	KNW ACT ACTU OUT

Dipswitch Settings for Optex Sensors

Function	iOneXT	XZoneT	Factory Default Settings
Safety Output- N.O.	DS 15 ON	DS 12 NO	Change Dipswitches as Shown
Safety / Test Input-OFF	DS 16 LOW	DS 13 LOW	

### IMPORTANT!

It is imperative that these Dipswitches are in the correct position.

C05190.00V1 MICROPROCESSOR CONTROL ASSEMBLY  
Primary Control for Swing Door Operators

C5190 Swing Door Control  
Refer to Setup Instructions H410A or H410 for proper adjustments on the C05190.00V1 Swing Door Control.

To ensure safe and proper operation, this door must be installed by a trained certified installer and adjusted to conform to Horton Automatics' recommendations, all code requirements, ANSI A156.10 and A156.19.

Warning: To avoid risk of fire, the replacement fuse must be of the same type and rating classification.  
Avertissement: Pour éviter le risque d'incendie, le fusible de remplacement doit être du même type et de la même classification.

F1 and F2 Fuses  
120 VAC, 60 Hz  
15 AMP SLOW BLOW

High Voltage Input  
2-WHT-NEUTRAL  
1-BLK-LINE-HOT  
GRN - GROUND

Horton Automatics  
800.531.3111 Corpus Christi, Texas 78405 USA

From Motor Encoder to CN6 Input

1 - RED  
2 - YEL  
3 - GRN  
4 - BLK

## C05190.00V1 Control with Transformer Single Unit Configuration Harness Attachment Detail

**WARNING: To Reduce the Risk of Injury to Persons, Motor Connection Must Remain Connected at All Times or Entrapment May Occur.**

**Motor Power Must Be Connected Properly**  
With Power 'OFF', pushing Door OPEN is achieved with little effort. Swing Door Unit will Spring CLOSE at controlled speed.

From Motor Power to CN2 Input

E06303.0000 Harness

1 - BLK  
2 - RED

From Transformer to CN11 XFMR Input

1 - BRN 6 - BLK  
2 - ORG 7 - WHT  
3 - N/C 8 - N/C  
4 - GRN 9 - GRN  
5 - RED 10 - RED

For LH and RHR Operators, Connect: Red-Red / Black-Black  
For RH and LHR Operators, Connect: Red-Black / Black-Red

C24164.0000 TRANSFORMER ASSEMBLY  
120VAC PRIMARY CONFIGURATION

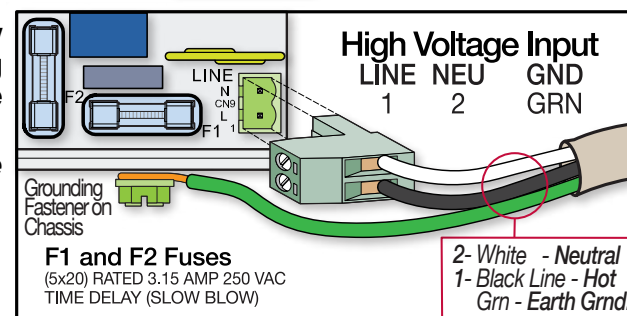
IP: 0V-120V	OV-120V	PRIMARY
BLK-WHT	BRN-ORG	PRIMARY
OP: 90V/1A	RED-RED	SECONDARY
19.4V/3A	GRN-GRN	SECONDARY

2 - WHT-NEUTRAL  
1 - BLK LINE-HOT  
GRN - EARTH GROUND

From Incoming Power to CN9 Power Input  
120VAC, 60Hz, 15Amp Service. Terminate Ground from Incoming Power to Green Fastener on Chassis.

120 VAC, 60 Hz, 15 Amp Service

Enlarged View of Incoming Power Cable  
120VAC, 60Hz, 15Amp Service



WHT\_CN20\_1 - TOG  
BLK/WHT\_CN20\_4 - HOLD  
BLK\_CN07\_5 - COM

E06300.0110 Harness

Exterior Approach Sensor

1 - BLK	+24V
2 - RED	0V
3 - BLU	PRES-IN
4 - BRN	COM
5 - N/C	N/C
6 - WHT	COM
7 - GRN	MOT-IN
8 - YEL	N/C
9 - ORG	TEST -
10 - VIOL	TEST +

From Exterior Sensor to CN12 EXT APP Input

E06331.0000 CANBUS Harness To Secondary

Header-Mounted Safety

1 - BLK	0V
2 - RED	+24V
3 - WHT	COM
4 - BRN	SAFE-IN
5 - VIO-YEL	MON/TEST OUT+
6 - VIO	MON/TEST OUT-
7 - BLU	DATA OUTPUT+
8 - BRN	DATA OUTPUT-

From C5191 Secondary Board CN4 Input to CN4 Input on C5190 Primary Board

E06613.0000 Harness

Header-Mounted Safety

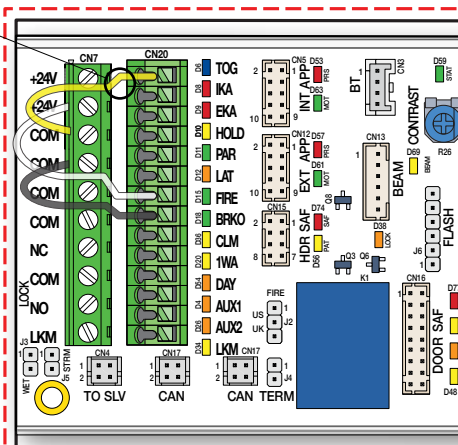
1 - BLK	0V
2 - RED	+24V
3 - WHT	COM
4 - BRN	SAFE-IN
5 - VIO-YEL	MON/TEST OUT+
6 - VIO	MON/TEST OUT-
7 - BLU	DATA OUTPUT+
8 - BRN	DATA OUTPUT-

From Header-Mounted Safety Sensor to CN15 HDR SAF Input on C5190 Primary Control

Use TOG Jumper ONLY if the 2 Position Switch (ON/OFF), or 3 Position Switch (Auto/Off/Hold-Open) is Not Used.

ENLARGED VIEW of INPUT CONNECTORS CN7 and CN20 with LED's

JUMPERS  
FIRE Input on CN7-Pin 2 (+24V) to CN20-Pin 7 (FIRE)  
BREAKOUT Input on CN7-Pin 4 (COM) to CN20-Pin 8 (BRKO)



From C5191 Secondary Board CN1 Input to CN1 Input on C5190 Primary Board

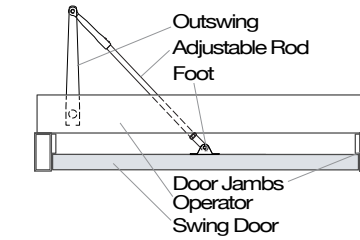
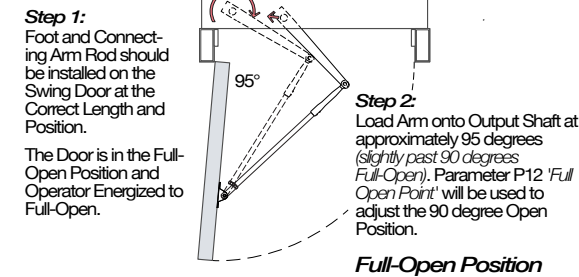
E06330.0000 Dual Operator Power Harness

1 - WHT  
2 - BRN  
3 - RED  
4 - BLK  
5 - N/C  
6 - GRN

Table: 'Standard' Parameter Settings					
NO.	PARAMETER	RANGE	FULL ENERGY DEFAULT	LOW ENERGY DEFAULT	DESCRIPTION
P01	Door Type	Low Energy Full Power BIFold	Full Energy	Low Energy	Max. Open Speed restricted to 50%; Std. Time Delay defaults to 5 sec. Max. Open Speed = 100%; Standard Time Delay defaults to 2 sec. Max. Open Speed = 100%; Standard Time Delay defaults to 2 sec.
P02	Open Speed	10% - 100%	75%	40%	Motor Speed in opening between Full Close and Open Check Point; 50% for Low Energy / 80% for Full Energy.
P03	Open Check Speed	10% - 50%	40%	30%	Motor Speed in opening between Open Check Point and Full Open.
P04	Open Seek Speed	5% - 50%	15%	15%	Motor Speed in opening when Seek Speed is selected from Sensor Actuation.
P05	Open Check Point	50% - 75%	65%	65%	Point of Rotation during opening where speed changes from Open Speed to Open Check Speed.
P06	Close Speed	10% - 100%	40%	30%	Motor Speed in closing between Full Open and Close Check Point.
P07	Close Check Speed	1% - 50%	10%	10%	Motor Speed in closing between Close Check Point and Full Close.
P08	Close Check Point	5% - 45%	15%	15%	Point of Rotation during closing where speed changes from Close Speed to Close Check Speed (can't be less than 60%).
P14	Time Delay, Standard	0 - 30 secs	2	5	Time door remains open after opening of actuating inputs or reaching Full Open, whichever occurs last.
P15	Time Delay, Obstruction	0 - 30 secs	0	0	Time door remains stopped after door motion is inhibited.
P17	Unmonitored Unlock Delay	0 - 30000 msecs	2000 msecs	2000 msecs	If Unmonitored Lock is selected, time between Lock Relay unlocks and door begins opening.
P19	Lock Type	None Momentary Fail-Safe (Maglock) Fail-Secure	None	None	No Automatic Lock is present; Lock Relay does not change states during door cycle. Lock Relay changes states before Open Cycle, then reverts back after door opening 10 degrees. Lock Relay changes states before Open Cycle, then reverts back after door fully closes. Lock Relay changes states before Open Cycle, then reverts back when door is fully open.
P20	Lock is Monitored	NO / YES	NO	NO	If 'NO', after lock relay unlocks, control will initiate 'Time Delay, Unmonitored Lock' before initiating Open Cycle. If 'YES', use Lock Monitor (LKM) on the control located on CN7-pin 10.
P21	Lock Function	OFF ON	OFF	OFF	Lock Relay will not change states during door operation. Lock Relay will always change states during door operation, based on Lock Type.
P22	Unjamb Autolock	NO / YES	NO	NO	When 'YES', Lock Relay changes states, motor is momentarily powered close before opening cycle.
P23	Unjamb Autolock Power	10% - 21%	10%	10%	Sets the power applied in the closing direction when initiating the Power Close before opening sequence.
P24	Power Assist Close	OFF (Spring Only)	OFF	OFF	Power Assist Close is not enabled - Note: Cannot be enabled without a minimum of one Monitored Door-Mounted Safety Sensor on approach side.
P26	Power Assist Boost	10% - 30%	10%	10%	Sets amount of maximum motor power temporarily applied in close direction when door is obstructed in close cycle.
P29	Push 'N' Go	ON / OFF	OFF	OFF	Pushing the door open slightly will initiate an Automatic Open Cycle, then Time-Out and Close.
P30	Enable Breakout Switch	NO / YES	NO	NO	
P36	Safety Zone Function	Inhibit Open / Close	Inhibit	Inhibit	If door actuation occurs, Safety Sensor(s) inhibit door motion when at Full-Close and Full-Open. If door actuation occurs, Safety Sensor(s) will cause door to move at Seek Speed. If door mounted safety actuates during open cycle, door stops. When Sensor clears Time Delay Obstruction, door resumes opening at Seek Speed to Full-Open. If door is arrested during closing, door re-opens. Time Delay expires and door then closes.
P37	Open Obstruction Response	Slow Open / Close Stop/Delay/Seek Stop/Delay/Resume Stop/Delay/Close	Stop/Delay/Seek	Stop/Delay/Seek	
P40	Soft Touch	OFF / ON	ON	ON	
P43	Monitor Interior Presence - Primary	NO / YES	NO	NO	
P44	Monitor Exterior Presence - Primary	NO / YES	NO	NO	
P45	Mon Head-Mntd Safety - Primary	NO / YES	NO	NO	
P46	Mon Dr-Mntd Safety - Primary	NO / YES	NO	NO	
P47	Mon Dr-Mntd Activation - Primary	NO / YES	NO	NO	
P48	Mon Dr-Mntd Recycle - Primary	NO / YES	NO	NO	
P49	Mon Dr-Mntd Stall - Primary	NO / YES	NO	NO	
P50	Monitor Safety Beam - Primary	NO / YES	NO	NO	
P51	Mon Hdr-Mntd Safety - Secondary	NO / YES	NO	NO	
P52	Mon Dr-Mntd Safety - Secondary	NO / YES	NO	NO	
P53	Mon Dr-Mntd Activ - Secondary	NO / YES	NO	NO	
P54	Mon Dr-Mntd Recycle - Secondary	NO / YES	NO	NO	
P55	Mon Dr-Mntd Stall - Secondary	NO / YES	NO	NO	
P56	Monitor Safety Beam - Secondary	NO / YES	NO	NO	
P57	Fire Safety Spec	USA / UK	USA	USA	The safety fire spec parameter dictates how the control will respond in the event that the fire contact is dropped to 0 v.
P58	Learned Gear Slack	# Set on First Run	# Set on First Run	# Set on First Run	

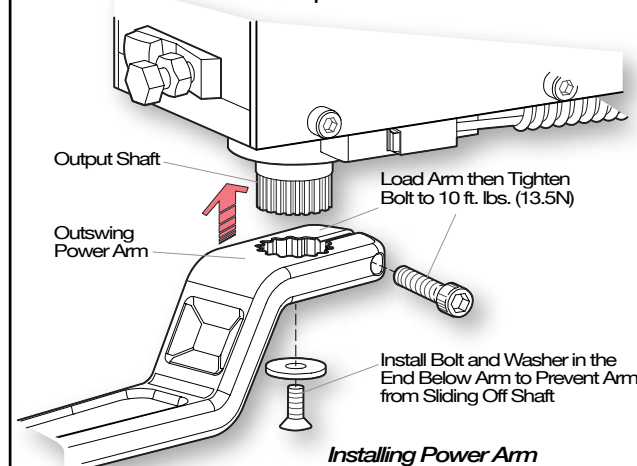
## Illustrations

**Illustration 1\_ Plan View**  
Loading Outswing Arm onto Output Shaft



**Illustration 3\_ Plan View**  
Full-Close Position

**Illustration 2\_ Isometric Detail**  
Loading Outswing Arm onto Output Shaft



Installing Power Arm

**Table: Task Shortcut Procedure**

STARTUP	Procedure
1. Initiate Setup	Press and Hold <b>SET</b> and <b>RESET</b> simultaneously, then release <b>RESET</b> holding <b>SET</b> until message appears.
2. Restart Setup	Press and hold <b>SET</b> button after entering <b>SETUP MODE</b> while door is at rest.
3. Answer Setup Prompts	Press <b>UP</b> button to answer <b>YES</b> . Press <b>DOWN</b> button to answer <b>NO</b> .
4. Finish Arm / Door Load	After initiating <b>Arm / Door Load</b> via prompt, Press <b>SET</b> when complete.
OPERATION	Procedure
1. Enter Parameter Menu	Quickly Press <b>SET</b> button twice or just switch Toggle Switch to <b>OFF</b> position.
2. Exit Parameter Menu	Quickly Press <b>SET</b> button twice or just switch Toggle Switch to <b>AUTOMATIC</b> position.
3. Save Parameters to Storage	Press <b>SET</b> button until 'Saving Parameters . . .' message appears.
4. Cycle Door	Press <b>DOWN</b> button during normal operation.
5. Begin Cycle Testing	Press the <b>UP</b> and <b>DOWN</b> buttons simultaneously during normal operation and while door is at rest.
6. End Cycle Testing	Press the <b>RESET</b> button while unit is cycling, or turn Toggle Switch to <b>OFF</b> position.
7. Show Encrypted Password	Press and hold the <b>UP</b> , <b>DOWN</b> , and <b>SET</b> buttons simultaneously after a <b>RESET</b> or <b>POWER-UP</b> .
8. Re-Learn Obstr. Sensitivities	To Reset, double Press the <b>DOWN</b> button. Then to Re-Learn press the <b>DOWN</b> button once.

**Table: Task Shortcut Procedure, cont.**

PARAMETER MENU	Procedure
1. Navigate to Previous Parameter	Press <b>DOWN</b> after entering Parameter Menu (Hold for <b>AUTOSCROLL</b> ).
2. Navigate to Next Parameter	Press <b>UP</b> after entering Parameter Menu (Hold for <b>AUTOSCROLL</b> ).
3. Increment Parameter Value	Press and Hold the <b>SET</b> button while Pressing the <b>UP</b> button (Hold for <b>AUTOSCROLL</b> ).
4. Decrement Parameter Value	Press and Hold the <b>SET</b> button while Pressing the <b>DOWN</b> button (Hold for <b>AUTOSCROLL</b> ).
DIAGNOSTIC	Procedure
1. Enter Diagnostic Menu	Double-Press <b>UP</b> button while door is at rest.
2. Navigate to Prev Menu Item	Press <b>DOWN</b> button once for each Previous Diagnostic Menu Item.
3. Navigate to Next Menu Item	Press <b>UP</b> button once for each Next Diagnostic Menu Item.
4. Select/Run Diagnostic	Press <b>SET</b> button with the desired Diagnostic Menu Item selected.
5. Exit Selected Diagnostic	Press the <b>UP</b> or <b>DOWN</b> button once to exit the Selected Diagnostic Menu Item.
6. Exit Diagnostic Menu	Quickly Double-Press <b>SET</b> button to Exit the Diagnostic Menu.

### C05190.00V1 PRIMARY CONTROL Terminal Block/Connector Descriptions

CN7 Input Terminal Block	
CN7-1	+24V
CN7-2	+24V
CN7-3	COM
CN7-4	COM
CN7-5	COM
CN7-6	COM
CN7-7	NC
CN7-8	NO
CN7-9	NO
CN7-10	LKM

CN4 Connector 2x2 CANBUS to Slave	
CN4-1	COM
CN4-2	CANL
CN4-3	CANH
CN4-4	+24V

CN17 Connector 2x2 CANBUS to Slave	
CN17-1	COM
CN17-2	CANL
CN17-3	CANH
CN17-4	+24V

CN18 Connector 2x2 CANBUS	
CN18-1	COM
CN18-2	CANL
CN18-3	CANH
CN18-4	+24V

CN12 Connector 2x5 Exterior Approach Sensor	
CN12-1	+24V
CN12-2	0 V
CN12-3	PRESEN
CN12-4	COM
CN12-5	NC

CN12 Connector 2x5 Exterior Approach Sensor	
CN12-6	COM
CN12-7	MOTIN
CN12-8	NC
CN12-9	TEST -
CN12-10	TEST +

CN12 Connector 2x5 Exterior Approach Sensor	
CN12-11	COM
CN12-12	MOTIN
CN12-13	NC
CN12-14	TEST -
CN12-15	TEST +

CN5 Connector 2x5 Interior Approach Sensor	
CN5-1	+24V
CN5-2	0 V
CN5-3	PRESEN
CN5-4	COM
CN5-5	NC

CN5 Connector 2x5 Interior Approach Sensor	
CN5-6	COM
CN5-7	MOTIN
CN5-8	NC
CN5-9	TEST -
CN5-10	TEST +

CN15 Connector 2x4 Header-Mounted Safety	
CN15-1	0 V
CN15-2	+24V
CN15-3	COM
CN15-4	SAFE-IN

CN15 Connector 2x4 Header-Mounted Safety	
CN15-5	MONTEST OUT+
CN15-6	MONTEST OUT-
CN15-7	DATA OUTPUT+
CN15-8	DATA OUTPUT-

CN16 Connector 2x9 Door-Mounted Safety	
CN16-1	0 V
CN16-2	+24V
CN16-3	COM
CN16-4	SAFE
CN16-5	MONTEST OUT+
CN16-6	MONTEST OUT-
CN16-7	MONTEST OUT1+
CN16-8	MONTEST OUT1-
CN16-9	KNOWACT/ACTUOUT
CN16-10	KNOWACT/ACTUOUT

CN16 Connector 2x9 Door-Mounted Safety	
CN16-11	STOP/STALL
CN16-12	DATA OUTPUT+
CN16-13	DATA OUTPUT-
CN16-14	MONTEST OUT1+
CN16-15	MONTEST OUT1-
CN16-16	ACT
CN16-17	APP/REC
CN16-18	COM

CN16 Connector 2x3 Power to Slave	
CN16-1	HVNSD
CN16-2	COM
CN16-3	LOVNSD
CN16-4	HVRET
CN16-5	COM
CN16-6	LOVRET

CN16 Connector 2x2 Motor	
CN16-1	LINE-1
CN16-2	LINE-2
CN16-3	NC
CN16-4	NC

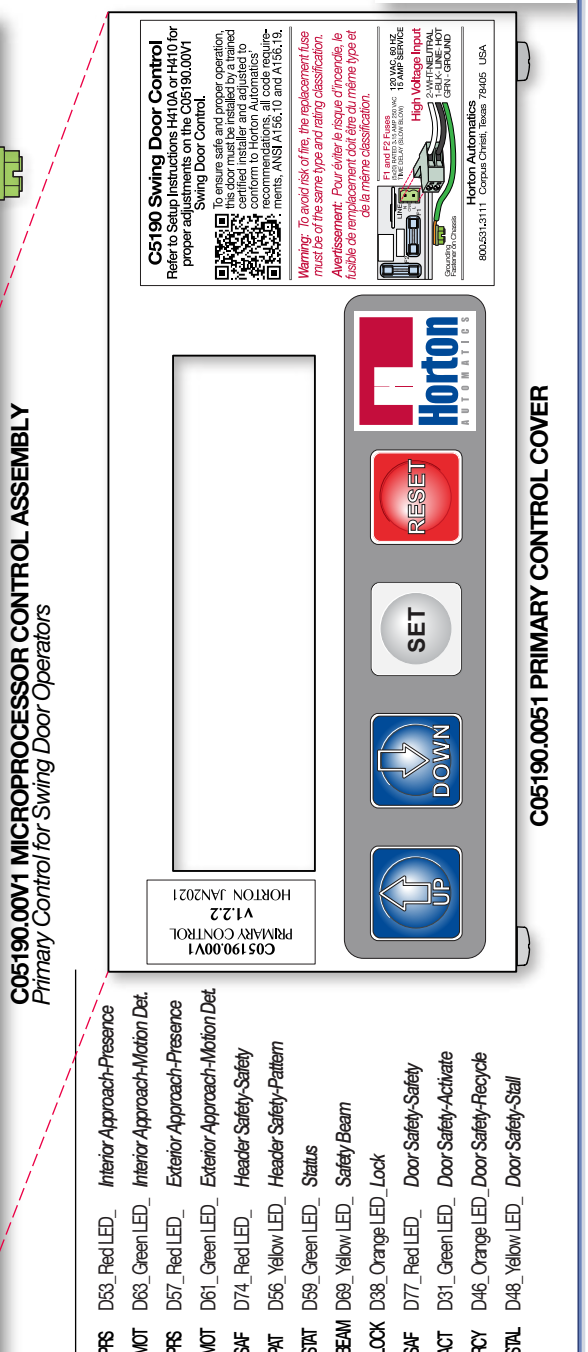
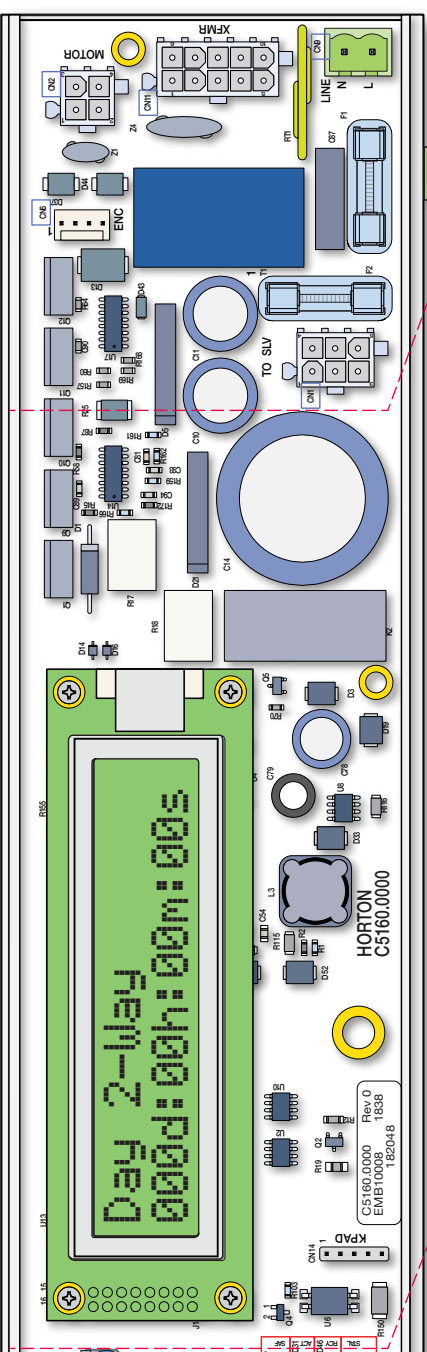
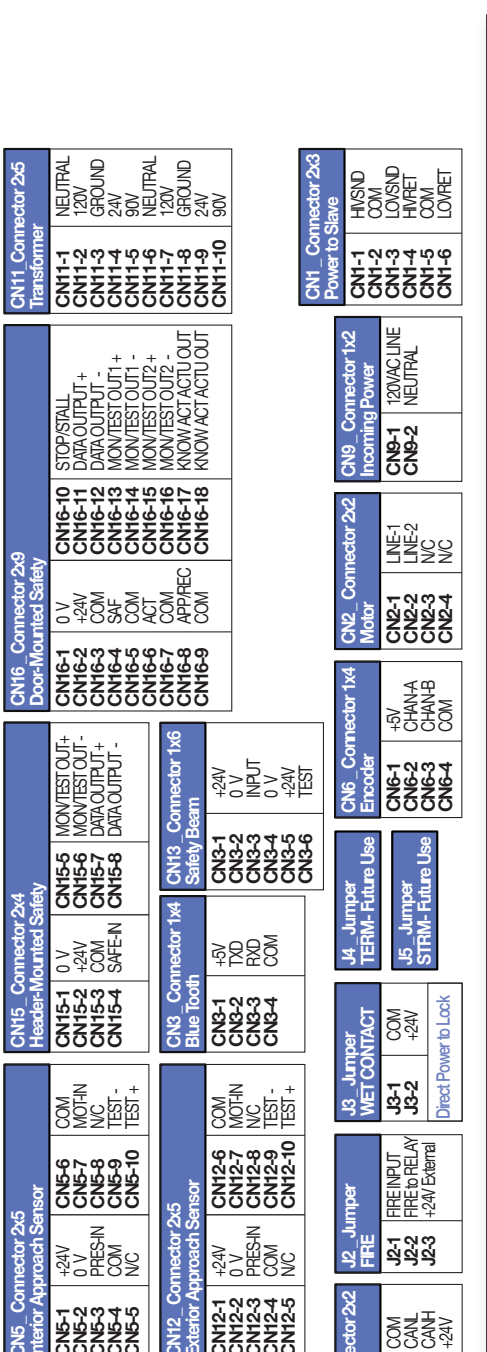
CN1 Connector 2x9 Door-Mounted Safety	
CN1-1	0 V
CN1-2	+24V
CN1-3	COM
CN1-4	SAFE-IN
CN1-5	MONTEST OUT+
CN1-6	MONTEST OUT-
CN1-7	DATA OUTPUT+
CN1-8	DATA OUTPUT-
CN1-9	KNOWACT/ACTUOUT
CN1-10	KNOWACT/ACTUOUT

CN1 Connector 2x3 Power to Slave	
CN1-1	HVNSD
CN1-2	COM
CN1-3	LOVNSD
CN1-4	HVRET
CN1-5	COM
CN1-6	LOVRET

CN2 Connector 2x2 Motor	
CN2-1	LINE-1
CN2-2	LINE-2
CN2-3	NC
CN2-4	NC

CN1 Connector 2x3 Power to Slave	
CN1-1	HVNSD
CN1-2	COM
CN1-3	LOVNSD
CN1-4	HVRET
CN1-5	COM
CN1-6	LOVRET

### Illustration 1: C05190.00V1 PRIMARY Swing Door Control TERMINAL BLOCK / CONNECTOR and LED DESCRIPTIONS



#### C05190.00V1 PRIMARY CONTROL LED Descriptions

TOG	D6	Blue LED	Toggle
IKA	D8	Red LED	Interior Knowing Act
EVA	D9	Red LED	Exterior Knowing Act
HOLD	D10	Yellow LED	Hold Open
PAR	D11	Green LED	Partial Open
LAT	D12	Orange LED	Latch
FIRE	D15	Green LED	Fire
BRKO	D18	Green LED	Breakout Switch
QJM	D36	Yellow LED	Close Monitor Switch
1WA	D20	Yellow LED	1-Way Traffic
DAY	D64	Orange LED	Day Mode
AUX1	D4	Orange LED	Auxiliary 1
AUX2	D26	Orange LED	Auxiliary 2
LKM	D34	Yellow LED	Lock Monitor Switch

#### C05190.00V1 MICROPROCESSOR CONTROL ASSEMBLY Primary Control for Swing Door Operators

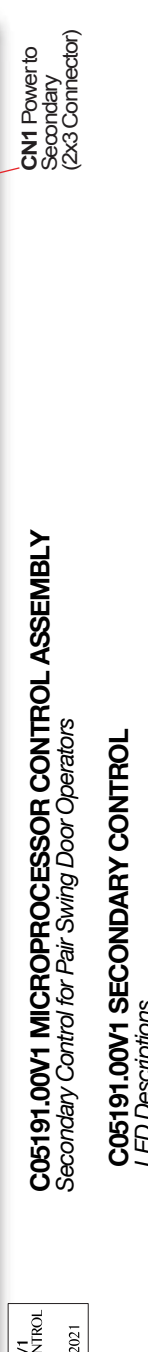
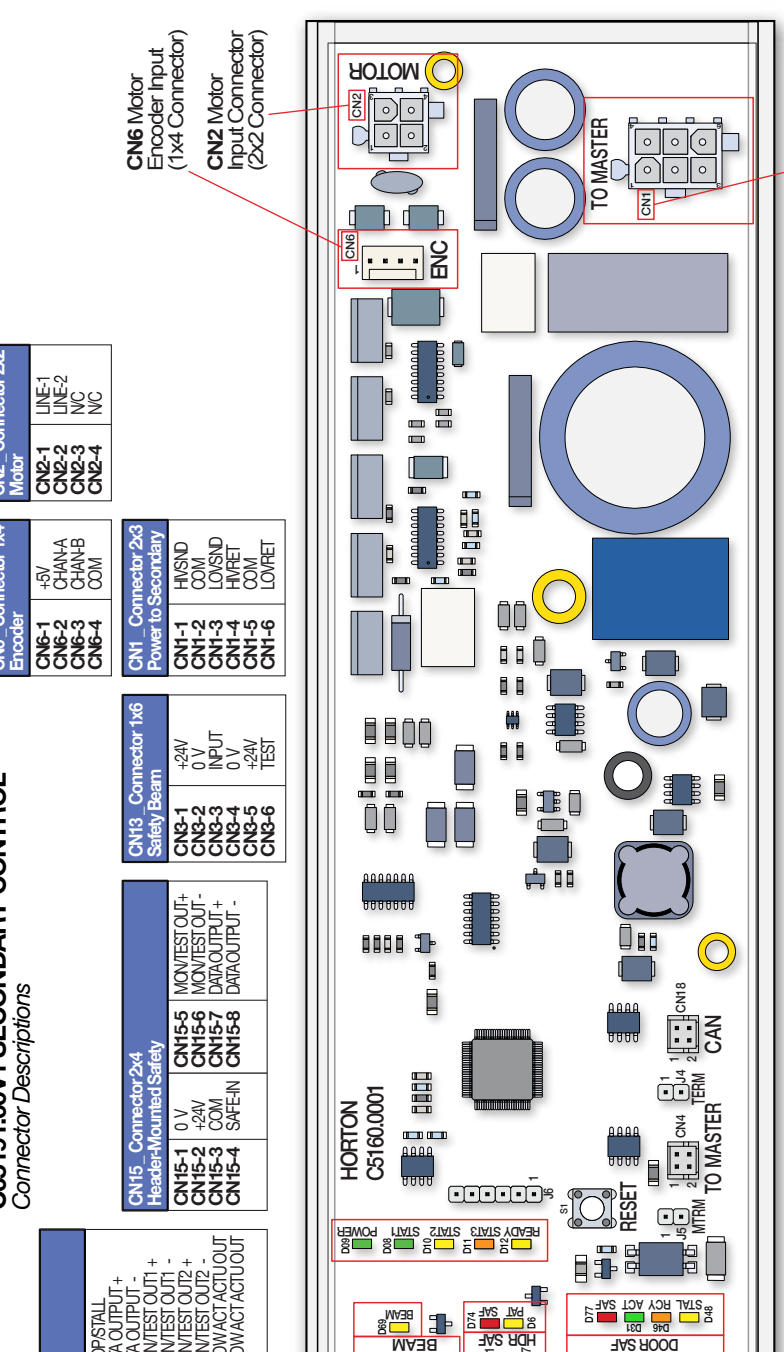
FRS	D53	Red LED	Interior Approach-Presence
MOT	D63	Green LED	Interior Approach-Motion Det.
FRS	D57	Red LED	Exterior Approach-Presence
MOT	D61	Green LED	Exterior Approach-Motion Det.
SAF	D74	Red LED	Header Safety-Safety
PAT	D56	Yellow LED	Header Safety-Pattern
STAT	D59	Green LED	Status
BEAM	D69	Yellow LED	Safety Beam
LOCK	D38	Orange LED	Lock
SAF	D77	Red LED	Door Safety-Safety
ACT	D31	Green LED	Door Safety-Activate
RCY	D46	Orange LED	Door Safety-Recycle
STPL	D48	Yellow LED	Door Safety-Still

#### C05190.00V1 PRIMARY CONTROL LED Descriptions

TOG	D6	Blue LED	Toggle
IKA	D8	Red LED	Interior Knowing Act
EVA	D9	Red LED	Exterior Knowing Act
HOLD	D10	Yellow LED	Hold Open
PAR	D11	Green LED	Partial Open
LAT	D12	Orange LED	Latch
FIRE	D15	Green LED	Fire
BRKO	D18	Green LED	Breakout Switch
QJM	D36	Yellow LED	Close Monitor Switch
1WA	D20	Yellow LED	1-Way Traffic
DAY	D64	Orange LED	Day Mode
AUX1	D4	Orange LED	Auxiliary 1
AUX2	D26	Orange LED	Auxiliary 2
LKM	D34	Yellow LED	Lock Monitor Switch



### Illustration 2: C05191.00V1 SECONDARY Swing Door Control CONNECTOR and LED DESCRIPTIONS



#### C05191.00V1 SECONDARY CONTROL Connector Descriptions

CN16 Connector 2x9 Door-Mounted Safety	
CN16-1	0 V
CN16-2	+24V
CN16-3	COM
CN16-4	SAFE
CN16-5	MONTEST OUT+
CN16-6	MONTEST OUT-
CN16-7	MONTEST OUT1+
CN16-8	MONTEST OUT1-
CN16-9	KNOWACT/ACTUOUT
CN16-10	KNOWACT/ACTUOUT

CN15 Connector 2x4 Header-Mounted Safety	
CN15-1	0 V
CN15-2	+24V
CN15-3	COM
CN15-4	SAFE-IN

CN15 Connector 2x4 Header-Mounted Safety	
CN15-5	MONTEST OUT+
CN15-6	MONTEST OUT-
CN15-7	DATA OUTPUT+
CN15-8	DATA OUTPUT-

CN13 Connector 1x6 Safety Beam	
CN13-1	+24V
CN13-2	0 V
CN13-3	INPUT
CN13-4	0 V
CN13-5	+24V
CN13-6	TEST

CN1 Connector 2x3 Power to Secondary	
CN1-1	HVNSD
CN1-2	COM
CN1-3	LOVNSD
CN1-4	HVRET
CN1-5	COM
CN1-6	LOVRET

CN2 Connector 2x2 Motor	
CN2-1	LINE-1
CN2-2	LINE-2
CN2-3	NC
CN2-4	NC

#### C05191.00V1 SECONDARY CONTROL LED Descriptions

SAF	D77	Red LED	LED Illuminates with Safety Sensor Object Detection.
PAT	D6	Yellow LED	LED Illuminates with Object Detection.
BEAM	D69	Yellow LED	LED Illuminates with Safety Beam Object Detection.

#### C05191.00V1 SECONDARY CONTROL LED Descriptions

POWER	D9	Green LED	LED Illuminates when Secondary Control has power.
STAT1	D8	Green LED	LED blinks (heartbeat) with Secondary Control in Operational Mode.
STAT2	D10	Yellow LED	LED Illuminates signifying a CAN connection.
STAT3	D11	Orange LED	LED Illuminates signifying that an exception has occurred.
READY	D12	Yellow LED	LED Illuminates when Secondary Control has low-voltage power.

#### CN16 Door-Mounted Safety

SAF	D77	Red LED	LED Illuminates with Safety Sensor Object Detection.
ACT	D31	Green LED	LED Illuminates with every Open/Re-open Signal from Safety Sensor.
RCY	D46	Orange LED	LED Illuminates with Detection of Object during dosing door re-opens, time delay expires, then door resumes closing. Based on Parameter P40 'Recycle Function'.
STAT	D48	Yellow LED	LED Illuminates with Detection of Object during Open Cycle, door stops, sensor clears, time delay expires, then door resumes opening. Based on Parameter P37 'Stop Delay/Resume'.

#### C05191.00V1 SECONDARY CONTROL LED Descriptions

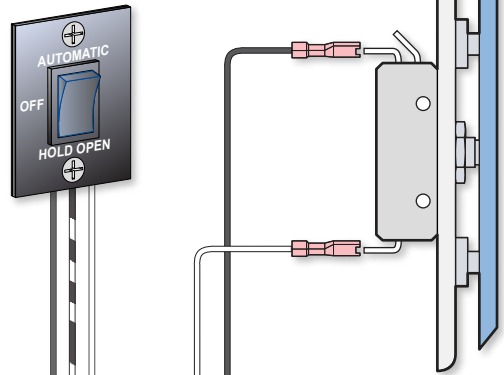
POWER	D9	Green LED	LED Illuminates when Secondary Control has power.
STAT1	D8	Green LED	LED blinks (heartbeat) with Secondary Control in Operational Mode.
STAT2	D10	Yellow LED	LED Illuminates signifying a CAN connection.
STAT3	D11	Orange LED	LED Illuminates signifying that an exception has occurred.
READY	D12	Yellow LED	LED Illuminates when Secondary Control has low-voltage power.



**WARNING: To Reduce the Risk of Injury to Persons, Motor Connection Must Remain Connected at All Times or Entrapment May Occur.**

**C4320-1**  
Auto / Off / Hold-Open  
Rocker Switch

WHT Rocker Sw. CN20\_1-TOG  
BLK/WHT Rocker Sw. CN20\_4-HOLD  
BLK Rocker Sw. CN07\_5-COM



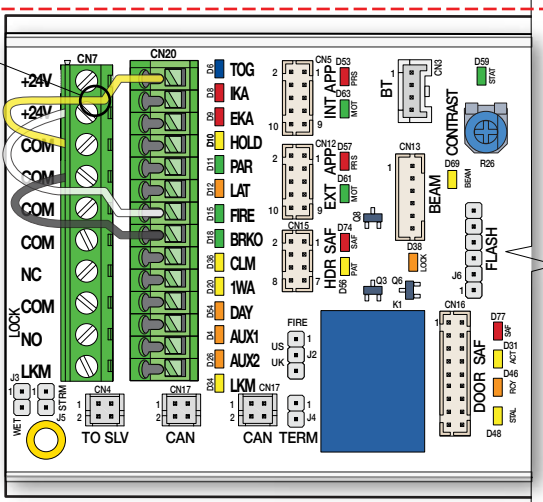
**INTERIOR**  
Momentary  
C1260 Push-Plate Switch

BLK Int. Act. Sw. CN20\_2-1KA  
WHT Int. Act. Sw. CN7\_4-COM

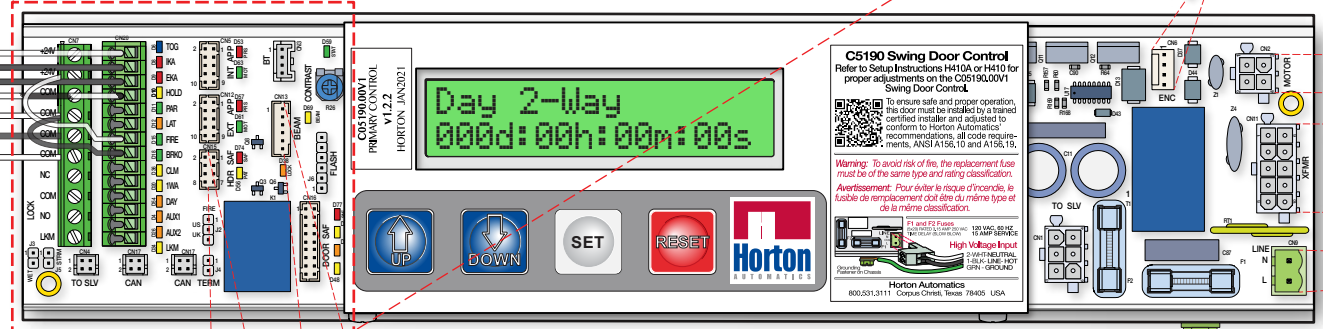
Use TOG Jumper ONLY if the 2 Position Switch (Auto/Off/ Hold-Open) is Not Used.

**JUMPERS**  
FIRE Input on CN7-Pin 2 (+24V) to CN20-Pin 7 (FIRE)  
BREAKOUT Input on CN7-Pin 4 (COM) to CN20-Pin 8 (BRKO)

**ENLARGED VIEW of INPUT CONNECTORS**  
CN7 and CN20 with LED's



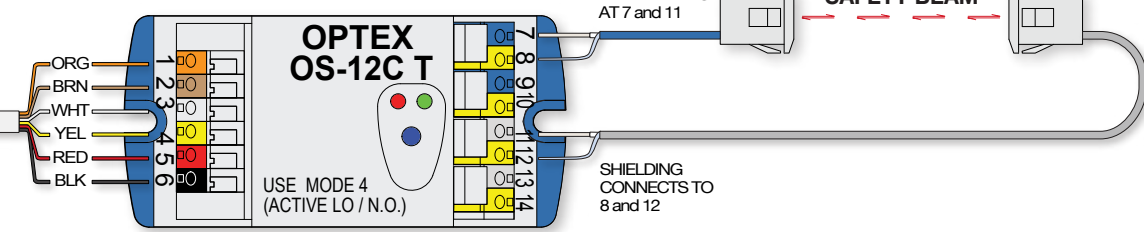
**C05190.00V1 MICROPROCESSOR CONTROL ASSEMBLY**  
For Swing Door Operators



E06613.0000 Harness  
E06302.0000 Harness

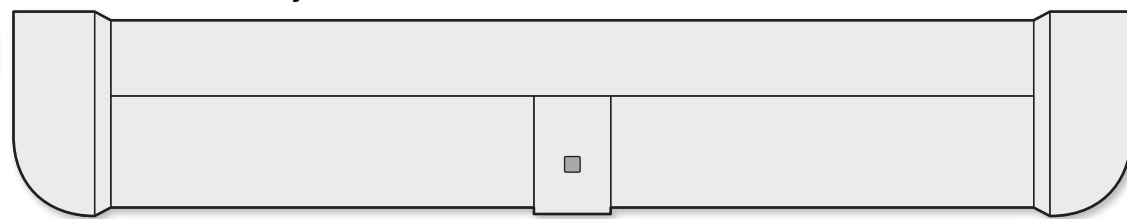
**OPTEX OS-12C T**  
C7775 Two-Channel Photoelectric  
Safety Beam with Amplifier Assembly

REFER TO MANUFACTURER'S INSTRUCTIONS FOR PROGRAMMING



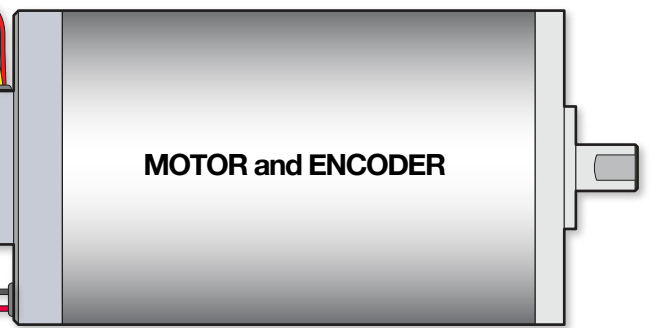
**BEA BodyGuard T**  
Header-Mounted Safety Sensor

1 - BLK 6 - YEL  
2 - RED 7 - VIO/YEL  
3 - WHT 8 - VIO  
4 - GRN 9 - BLU  
5 - N/C 10 - BRN



For LH and RHR Operators, Connect:  
Red-Red / Black-Black  
For RH and LHR Operators, Connect:  
Red-Black / Black-Red

E06303.0000 Harness  
1 - BLK  
2 - RED



**Motor Power Must Be Connected Properly**

With Power 'OFF', pushing Door OPEN is achieved with little effort. Swing Door Unit will Spring CLOSE at controlled speed.

1 - BRN 6 - BLK  
2 - ORG 7 - WHT  
3 - N/C 8 - N/C  
4 - GRN 9 - GRN  
5 - RED 10 - RED

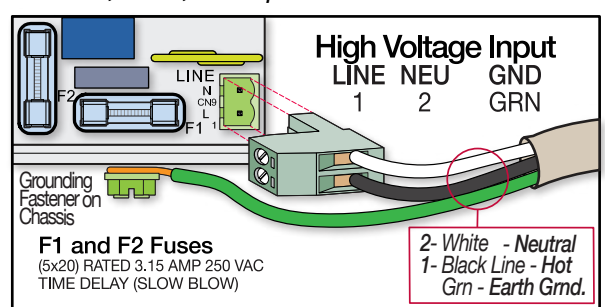
2 - WHT-NEUTRAL  
1 - BLK LINE-HOT  
GRN - EARTH GROUND

**120 VAC, 60 Hz, 15 Amp Service**

**C24164.0000**  
**TRANSFORMER ASSEMBLY**  
120VAC PRIMARY CONFIGURATION

I/P: 0V-120V	0V-120V	PRIMARY
BLK-WHT	BRN-ORG	
O/P: 90V/1A	RED-RED	SECONDARY
19.4V/3A	GRN-GRN	SECONDARY

**Enlarged View of Incoming Power Cable**  
120VAC, 60Hz, 15Amp Service



**EXTERIOR**  
Momentary  
C1260 Push-Plate Switch

BLK Ext. Act. Sw. CN20\_3-EKA  
WHT Ext. Act. Sw. CN7\_6-COM

Dipswitch Settings for Optex Sensors			
Function	iOneXT	XZoneT	Factory Default Settings
Safety Output-N.O.	DS 15 ON	DS 12 NO	Factory Default Settings
Safety / Test Input-OFF	DS 16 LOW	DS 13 LOW	Change Dipswitches as Shown

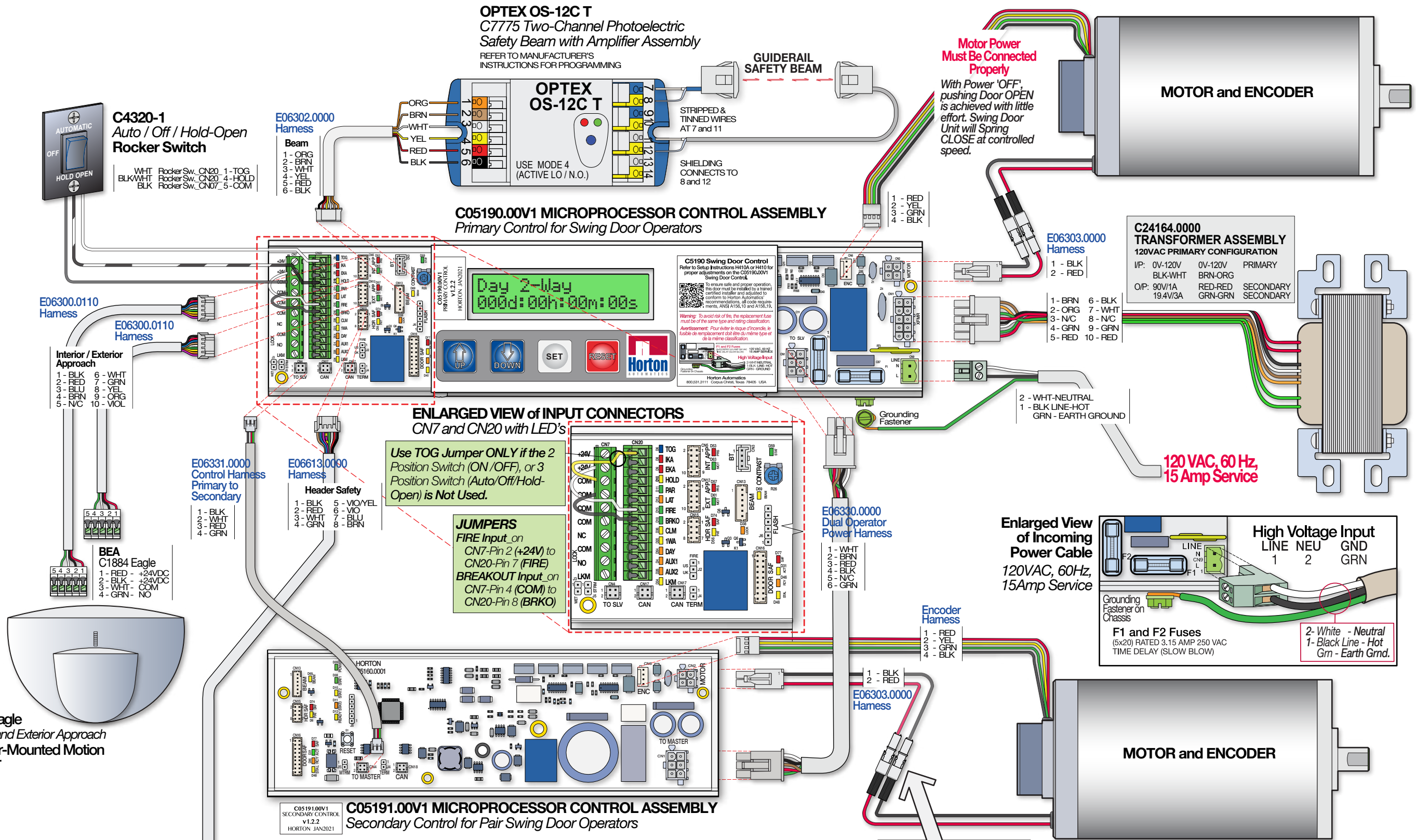
**IMPORTANT!**  
It is imperative that these Dipswitches are in the correct position.



**WARNING: To Reduce the Risk of Injury to Persons, Motor Connection Must Remain Connected at All Times or Entrapment May Occur.**

**Motor Power Must Be Connected Properly**  
With Power 'OFF', pushing Door OPEN is achieved with little effort. Swing Door Unit will Spring CLOSE at controlled speed.

For LH and RHR Operators, Connect: Red-Red / Black-Black  
For RH and LHR Operators, Connect: Red-Black / Black-Red



**Dipswitch Settings for Optex Sensors**

Function	iOneXT	XZoneT	Factory Default Settings
Safety Output- N.O.	DS 15 ON	DS 12 NO	Factory Default Settings
Safety / Test Input- OFF	DS 16 LOW	DS 13 LOW	Change Dipswitches as Shown

**IMPORTANT!**  
It is imperative that these Dipswitches are in the correct position.

- BEA BodyGuard**
- 1 - BLK
  - 2 - RED
  - 3 - WHT
  - 4 - GRN
  - 5 - N/C
  - 6 - YEL
  - 7 - VIO/YEL
  - 8 - VIO
  - 9 - BLU
  - 10 - BRN

**BEA BodyGuard T**  
Header-Mounted Safety Sensor

Use TOG Jumper ONLY if the 2 Position Switch (ON / OFF), or 3 Position Switch (Auto/Off/Hold-Open) is Not Used.

**JUMPERS**  
FIRE Input on CN7-Pin 2 (+24V) to CN20-Pin 7 (FIRE)  
BREAKOUT Input on CN7-Pin 4 (COM) to CN20-Pin 8 (BRKO)

**Motor Power Must Be Connected Properly**  
With Power 'OFF', pushing Door OPEN is achieved with little effort. Swing Door Unit will Spring CLOSE at controlled speed.

**MOTOR and ENCODER**

**C24164.0000**  
TRANSFORMER ASSEMBLY  
120VAC PRIMARY CONFIGURATION

IP: 0V-120V  
OP: 90V/1A  
19.4V/3A

0V-120V  
BLK-WHT  
BRN-ORG  
RED-RED  
GRN-GRN

PRIMARY  
SECONDARY

**120 VAC, 60 Hz, 15 Amp Service**

**Enlarged View of Incoming Power Cable**  
120VAC, 60Hz, 15Amp Service

