ELEVATOR CONTROLS
SIMPLE. SOLID. SUPPORTABLE.

6150 WAREHOUSE WAY, SACRAMENTO, CA 95826
PHONE: (800) 829-8106 FAX: (916) 428-1728
E-MAIL: technical.support@elevatorcontrols.com

JOB NAME:

438 W. 51ST ST SE1

JOB NUMBER:

16-18550

CONTROLLER ID:

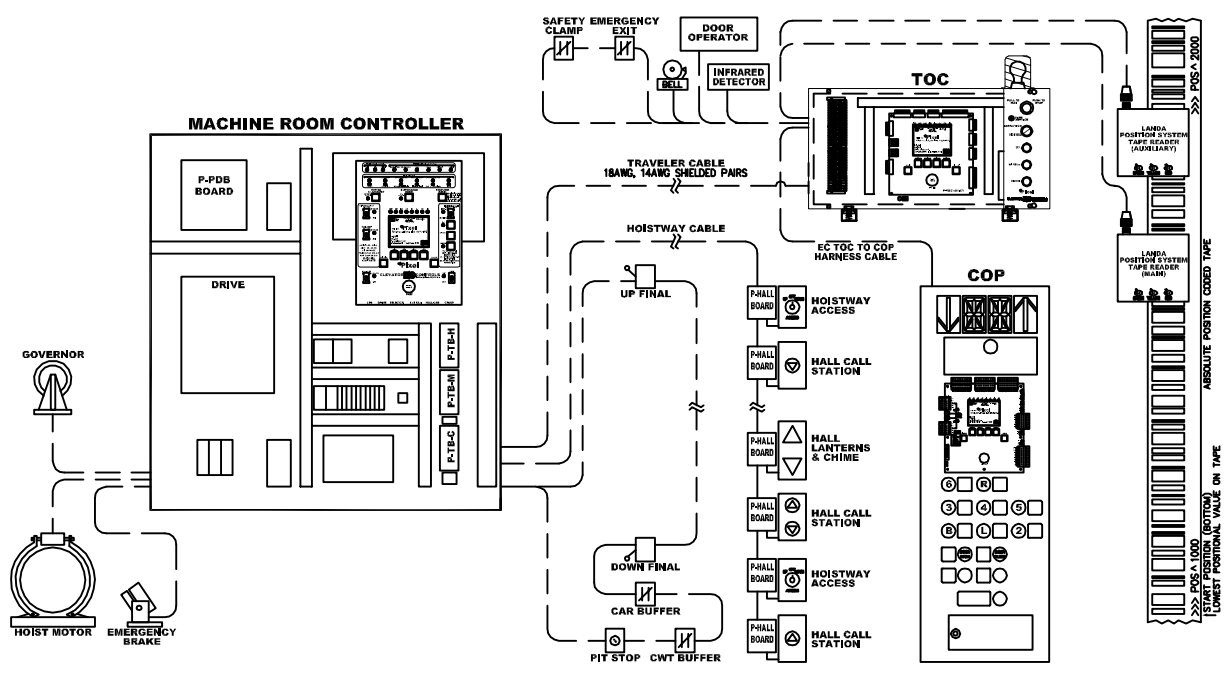
SIMPLEX

CONTROLLER MODEL:

PIXEL AC VECTOR-MRL-S

TABLE OF CONTENTS

TYPICAL Pixel CONTROLLER INTERCONNECTION OVERVIEW



PIXEL CONSTRUCTION MODE OPERATION

CONSTRUCTION MODE OPERATION ALLOWS QUALIFIED ELEVATOR PERSONAL TO RUN THE CAR ON CARTOP & MACHINE ROOM WITH MINIMAL FIELD WIRING.
THE TOP OF CAR BOX (TOC), LANDA POSITION SYSTEM & P-COP BOARD ARE NOT REQUIRED TO RUN THE CAR ON CONSTRUCTION MODE.
THE MAXIMUM SPEED IS 50FPM OR PROGRAMMED INSPECTION SPEED, WHICHEVER IS LESS.

1 COMPLETE POWER, HOIST MOTOR AND BRAKE CONNECTIONS (REFER TO PAGE QR4 FOR HOISTWAY WIRING DIAGRAMS)

- ☐ A. VERIFY DISCONNECT POWER IS WITHIN 10% OF SPECIFIED VOLTAGE ON PAGE QR4 (OR PAGE 1)
- ☐ B. WIRE THE DISCONNECT TO CONTROLLER PER PAGE QR4 (OR PAGE 1)
- ☐ C. VERIFY THE HOIST MOTOR AND BRAKE DATA PLATES MATCH THE JOB PRINTS (PAGES 1 & 2)
- ☐ D. WIRE THE HOIST MOTOR AND MAIN BRAKE TO CONTROLLER PER PAGE QR4 (OR PAGES 1 & 2)
- ☐ E. WIRE THE VELOCITY ENCODER TO THE DRIVE ENCODER CARD PER PAGE QR4 (OR PAGE 1)
- ☐ F. IF AN INDEPENDENT MACHINE BRAKE IS USED FOR THE EMERGENCY BRAKE WIRE TO CONTROLLER PER PAGE QR4 (OR PAGE 2)

2 PLACE PIXEL CONTROL SYSTEM ON CONSTRUCTION MODE OPERATION

- ☐ IF THE PIXEL P-MP BOARD DISPLAYS "CONSTRUCTION" AT THE TOP OF THE LCD SKIP TO STEP 3
- ☐ A. PIXEL SWITCH PRESETTING: MACHINE ROOM INSPECTION=INSP POSITION, TEST=TEST POSITION & CAPTURE=CAPTURE POSITION
- ☐ B. FROM THE HOME SCREEN, SELECT "INSTALL" MENU USING THE TOUCH & GO KNOB
- ☐ C. ONCE IN THE INSTALLATION MENU SELECT "CONSTRUCTION MODE" USING THE TOUCH & GO KNOB
- ☐ D. AT THE CONSTRUCTION MODE MENU PRESS THE "ENABLE" SOFT KEY. IF CONSTRUCTION MODE IS "ACTIVE" SKIP TO STEP 3

3 INSTALL REQUIRED INSPECTION AND SAFETY DEVICES (REFER TO DIAGRAM TO THE RIGHT)

- ☐ A. GOVERNOR OVERSPEED SWITCH (TERMINALS GOV & 4A)
- ☐ B. CARTOP RUN BOX STOP SWITCH (TERMINALS SAFC & 4A)
- ☐ C. CARTOP RUN BOX INSPECTION SWITCH (TERMINALS ICT & 4A)
- ☐ D. CARTOP RUN BOX INSPECTION ENABLE, UP & DOWN BUTTONS (TERMINALS ICTE, ICTU, ICTD & 4A)

4 INSTALL REQUIRED CONSTRUCTION MODE TEMPORARY JUMPERS, IF DEVICES ARE NOT AVAILABLE AT THIS TIME

- ☐ A. HOISTWAY SAFETY STRING (TERMINALS SAFH TO SAFC)
- ☐ B. TOP DOOR LOCK (TERMINALS DLAT TO 4A)
- ☐ C. FRONT INTERMEDIATE DOOR LOCKS (TERMINALS DLSF TO 4A)
- ☐ D. BOTTOM DOOR LOCK (TERMINALS DLAB TO 4A)
- ☐ E. FRONT CAR GATE (TERMINALS CGF TO 4A)
- ☐ F. IF REAR DOORS ARE APPLICABLE, REAR INTERMEDIATE DOOR LOCKS (TERMINALS DLSR TO 4A)
- ☐ G. IF REAR DOORS ARE APPLICABLE, REAR CAR GATE (TERMINALS CGR TO 4A)
- ☐ H. HOISTWAY ACCESS INSPECTION SWITCH (TERMINALS IA TO 4A)
- ☐ I. IN-CAR INSPECTION ENABLE (TERMINALS IIC TO 4A)

NOTE: FOR CARTOP INSPECTION OPERATION ONLY, PLACE THE HOISTWAY AND CAR DOOR LOCK SWITCHES IN THE "BYPASS" POSITION AND SKIP THE INSTALLATION OF THE TEMPORARY DOOR LOCK JUMPERS (STEP 4: B-G).
MACHINE ROOM INSPECTION WILL NOT OPERATE WITH HOISTWAY AND/OR CAR DOOR BYPASS SWITCHES IN THE BYPASS POSITION

5 DRIVE PARAMETER VERIFICATION AND SETUP

- ☐ A. VERIFY DRIVE PARAMETERS ON PAGE QR7 MATCH THE ELEVATOR INSTALLATION REQUIREMENTS
- ☐ B. MOTOR AUTO-TUNE (REFER TO PAGE QR7)
- ☐ C. VERIFY PROPER DIRECTIONAL MOVEMENT ON INSPECTION OPERATION (REFER TO PAGE QR7)
- ☐ D. VERIFY RUNNING SPEED VS. COMMANDED SPEED WITH A HANDHELD TACHOMETER
  ADJUST THE SPEED AS REQUIRED BY MANIPULATING PARAMETERS (L1000A DRIVE):
  E1-04 AND E1-06 SHOULD BE ADJUSTED TO EQUAL VALUES
  E1-04 (MAX. OUTPUT FREQUENCY) – LOWER VALUES WILL DECREASE SPEED AND HIGHER VALUES WILL INCREASE SPEED
  E1-06 (BASE FREQUENCY) – LOWER VALUES WILL DECREASE SPEED AND HIGHER VALUES WILL INCREASE SPEED

CAUTION: ONCE THE TOC BOX, LANDA POSITION SYSTEM & P-COP BOARD HAVE BEEN INSTALLED AND THE CAR IS READY TO RUN ON AUTOMATIC OPERATION. VERIFY ALL CONSTRUCTION MODE TEMPORARY JUMPERS HAVE BEEN REMOVED AND THE REQUIRED SAFETY DEVICES HAVE BEEN INSTALLED, BEFORE DISABLING CONSTRUCTION MODE.

PIXEL AUTOMATIC OPERATION

6 AUTOMATIC OPERATION REQUIRES THE INSTALLATION OF:

- ☐ HOISTWAY SAFETY DEVICES (PIT STOP SWITCH, COUNTERWEIGHT BUFFER, CAR BUFFER, UP & DOWN FINAL LIMITS...ETC)
- ☐ TOC BOX (CARTOP INSPECTION STATION, EMERGENCY EXIT, SAFETY CLAMP, LANDA POSITION SYSTEM, DOOR OPERATOR, INFRARED DETECTOR...ETC)
- ☐ DOOR LOCKS (CAR GATE(S), HOISTWAY DOOR LOCKS)
- ☐ EMERGENCY BRAKE (ROPE GRIPPER OR INDEPENDENT MACHINE BRAKE...ETC)
- ☐ CAR OPERATING PANEL (HOISTWAY ACCESS, EMERGENCY STOP, CAR CALLS, DOOR BUTTONS, INDEPENDENT SERVICE...ETC)
- ☐ FIRE ALARM INITIATING DEVICES (FIRE PHASE 1 RECALL SWITCH, FIRE SENSORS...ETC)
- ☐ IF APPLICABLE EARTHQUAKE DEVICES (SEISMIC SWITCH, RING & STRING...ETC)

7 PIXEL HOISTWAY POSITION SETUP OVERVIEW (REFER TO PIXEL MANUAL FOR DETAILS):

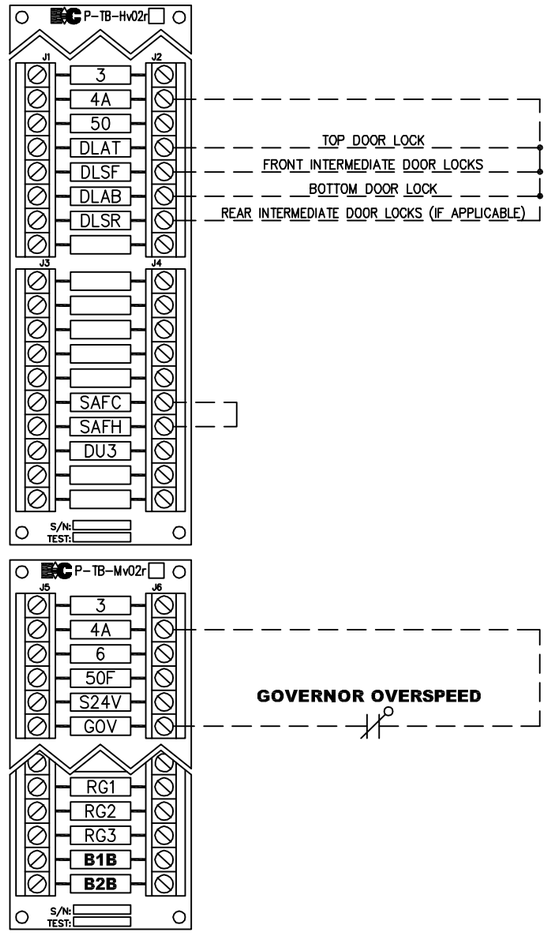
- ☐ A. TAPE READER OFFSET: INSTALL>LEARN FUNCTIONS>VIRTUAL LIMITS>TAPE READER OFFSET, THEN LEARN>SAVE
- ☐ B. FLOOR LANDING DOOR ZONES: INSTALL>LEARN FUNCTIONS>FLOOR SETUP>LANDING NUMBER, THEN DOOR ZONE POSTION>LEARN>SAVE
  NOTE: ALWAYS LEARN THE BOTTOM LANDING DOOR ZONE FIRST. THIS NORMALIZES THE HOISTWAY POSITION AND THE BOTTOM LANDING WILL BE SET TO 1.2 FEET. THE VIRTUAL DOWN NORMAL LIMIT WILL BE AUTOMATICALLY SET TO 1.0 FEET.
- ☐ C. BOTTOM (BAL) AND TOP (TAL) HOISTWAY ACCESS LIMIT ZONES: INSTALL>LEARN FUNCTIONS>VIRTUAL LIMITS>BAL & TAL, THEN LEARN>SAVE

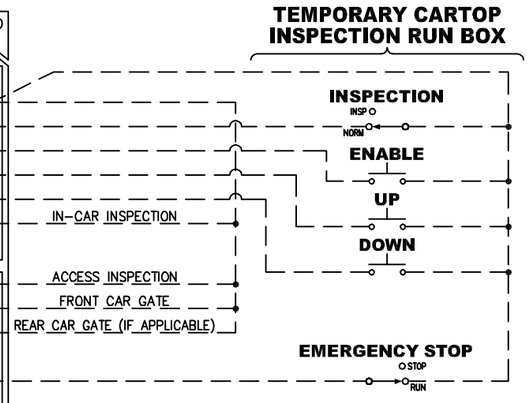
8 DISABLE CONSTRUCTION MODE OPERATION

- ☐ A. PIXEL SWITCH PRESETTING: MACHINE ROOM INSPECTION=INSP POSITION, TEST=TEST POSITION & CAPTURE=CAPTURE POSITION
- ☐ B. FROM THE HOME SCREEN, SELECT "INSTALL" MENU USING THE TOUCH & GO KNOB
- ☐ C. ONCE IN THE INSTALLATION MENU SELECT "CONSTRUCTION MODE" USING THE TOUCH & GO KNOB
- ☐ D. AT THE CONSTRUCTION MODE MENU PRESS THE "DISABLE" SOFT KEY, THE CONSTRUCTION MODE MENU WILL NOW DISPLAY "DISABLED"

9 PIXEL HOISTWAY TERMINAL SLOWDOWN SETUP (REFER TO PIXEL MANUAL FOR DETAILS):

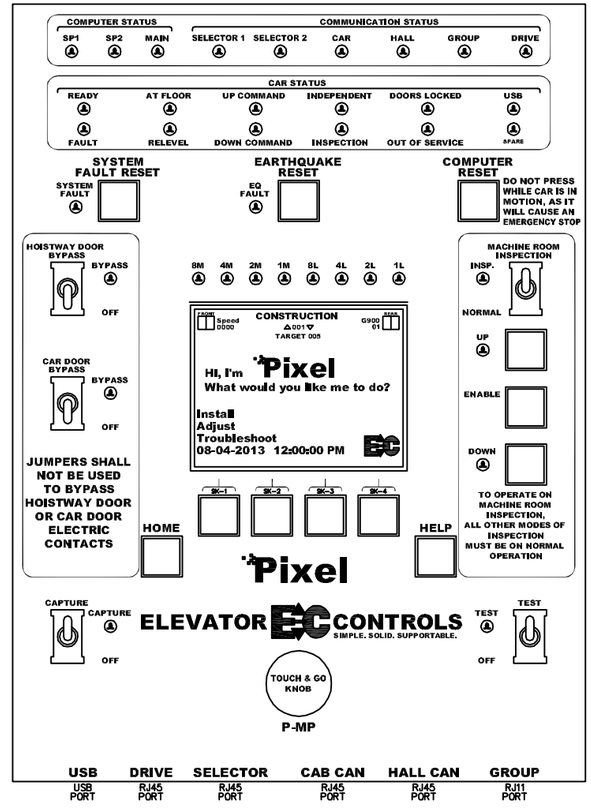
- ☐ A. TURN OFF MACHINE ROOM INSPECTION & PLACE THE CAR ON TEST MODE. CLEAR ANY FAULTS THAT ARE DISPLAYED.
- ☐ B. REGISTER CAR CALLS TO INTERMEDIATE FLOORS USING THE AUTO CALL SIMULATION SCREEN: TROUBLESHOOT>AUTO CALL SIMULATION>RUN TO FLOOR 00_. DO NOT REGISTER CALLS TO THE TERMINAL LANDINGS UNTIL ETS IS LEARNED.
- ☐ C. BOTTOM & TOP EMERGENCY TERMINAL SLOWDOWN LIMITS: INSTALL>LEARN FUNCTIONS>ETS LEARN>FOLLOW ON SCREEN INSTRUCTIONS, THEN SAVE





P-MP BOARD SWITCH GEAR NOTES:

- MACHINE ROOM INSPECTION DIRECTIONAL CONTROL REQUIRES UP OR DOWN AND THE ENABLE BUTTON TO BE PUSHED SIMULTANEOUSLY
- CAPTURE SWITCH: DISABLES HALL CALL OPERATION TO COMMANDEER FOR FOR TEST MODE
- TEST SWITCH: DISABLES DOOR & HALL CALL OPERATION FOR TESTING
- HOISTWAY DOOR BYPASS SWITCH: BYPASSES HOISTWAY DOOR SAFETY CIRCUIT ONLY OPERATIONAL ON CARTOP & IN-CAR INSPECTION MODES
- CAR DOOR BYPASS SWITCH: BYPASSES CAR DOOR SAFETY CIRCUIT ONLY OPERATIONAL ON CARTOP & IN-CAR INSPECTION MODES



PIXEL QUICK START UP INSTRUCTIONS

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY:	DATE:	REVISION DATE:
Jason Kirlis	10/27/16	

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M_PIXEL-QR1.dwg 04/30/15
FILE: J18550_QR1.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S
JOB NUMBER: 16-18550
CONTROLLER ID: SIMPLEX
PAGE NUMBER: QR1

MAIN CONTROLLER

CAB TERMINALS

TOC & LANDA (AUX) COMMUNICATION (CAB CAN)
- CAN_H — P-TB-C, J6-6
- CAN_L — P-TB-C, J6-5
- CSHLD — P-TB-C, J6-4

LANDA (MAIN) COMMUNICATION (RS485)
- SEL+ — P-TB-C, J6-3
- SEL− — P-TB-C, J6-2
- SSHLD — P-TB-C, J6-1

- (GROUND) – 3 — P-TB-C, J2-8
- (120VAC) – 4A — P-TB-C, J2-7
- (CARTOP INSP.) – ICT — P-TB-C, J2-6
- (CARTOP INSP. ENABLE) – ICTE — P-TB-C, J2-5
- (CARTOP INSP. UP) – ICTU — P-TB-C, J2-4
- (CARTOP INSP. DOWN) – ICTD — P-TB-C, J2-3
- (IN-CAR INSP.) – IIC — P-TB-C, J2-2
- (IN-CAR INSP. ENABLE) – IICE — P-TB-C, J2-1
- (HOISTWAY ACCESS) – IA — P-TB-C, J4-10
- (CAR GATE FRONT) – CGF — P-TB-C, J4-9
- (CAR GATE REAR) – CGR — P-TB-C, J4-8
- (EMERGENCY STOP) – ESTP — P-TB-C, J4-7
- (SAFETY STRING CARTOP) – SAFC — P-TB-C, J4-6
- (SERIAL PI DATA) – DU3 — P-TB-C, J4-5

COP PHONE
- T1 — P-TB-C, J4-4
- T2 — P-TB-C, J4-3

TOC POWER SUPPLY
- TOC1
- TOC2

115VAC CAB POWER
- WHT
- BLK
- GRN

TRAVELING CABLE

TWISTED SHIELDED PAIR

TWISTED SHIELDED PAIR

TWISTED SHIELDED PAIR

TWISTED SHIELDED PAIR

COP BOARD(S) & TERMINALS

- CAN_H
- CAN_L
- CSHLD
- SEL+
- SEL−
- SSHLD
- 3
- 4A
- ICT
- ICTE
- ICTU
- ICTD
- IIC
- IICE
- IA
- CGF
- CGR
- ESTP
- SAFC
- DU3
- T1
- T2
- TOC1
- TOC2
- WHT
- BLK
- GRN

TWISTED SHIELDED PAIR → CH, CL, SHLD (P-COP JCCB1)

FRONT MAIN CAR OPERATING PANEL

MAIN FRONT P-COP BOARD

V− (JCCB1 P-COP), V+ (JCCB1 P-COP)

P-COP CAN CONFIG SW2

1 2 3 4 (ON)

FIRE CAR CALL CANCEL

P-COP V+ → V+ FCC (JFCC)

JUMPER

20 — JUMPER — SAFC

FIRE OPERATION

F20FF (JMIN P-COP), FDHD (JMIN P-COP), FCS (JMIN P-COP) → NORMAL / HOLD / FIREMAN SERVICE → V+ (JMIN P-COP)

FRONT CAR LANTERN & CHIME

GEU (JMOUT P-COP) → V+ (JCCB1 P-COP)

CHIME 24VDC

GED (JMOUT P-COP)

CAR CALL CAR READER OVERRIDE

CMRO (I9 P-COP) — OFF / ON — V+ (JCCB1 P-COP)

FIRE WARNING

FWI (JMOUT P-COP) — BUZZER 24VDC — V+ (JCCB1 P-COP)

EMERGENCY POWER

EPO (O8 P-COP) — 24VDC — V+ (JCCB1 P-COP)

FIRE SERVICE

85X (JMOUT P-COP) — 24VDC — V+ (JCCB1 P-COP)

FRONT NUDGING

NDB (JMOUT P-COP) — BUZZER 24VDC — V+ (JCCB1 P-COP)

FRONT CAR CALLS

LANDING 7
- CF7L (O7 P-COP) — 24VDC — V+ (JCCB1 P-COP)
- CF7B (I7 P-COP) — V+ (JCCB1 P-COP)

↑ THRU ↑

INTERMEDIATE LANDINGS SIMILAR TO 2ND LANDING

↑ THRU ↑

LANDING 2
- CF2L (O2 P-COP) — 24VDC — V+ (JCCB1 P-COP)
- CF2B (I2 P-COP) — V+ (JCCB1 P-COP)

LANDING 1
- CF1L (O1 P-COP) — 24VDC — V+ (JCCB1 P-COP)
- CF1B (I1 P-COP) — V+ (JCCB1 P-COP)

FRONT DOOR HOLD

DHD (JMIN P-COP) — V+ (JMIN P-COP)

FRONT DOOR OPEN

DOB (JMIN P-COP) — V+ (JMIN P-COP)

FRONT DOOR CLOSE

DBC (JMIN P-COP) — V+ (JMIN P-COP)

INDEPENDENT SERVICE

IND (JMIN P-COP) — OFF / ON — V+ (JMIN P-COP)

POSITION INDICATOR (C.E.E. MICRO-COMM)

- V− — GND (1)
- V+ — 24VDC (2)
- DU3 — DATA (3)

SIMILAR CONNECTIONS FOR C.E.E. SERIAL FIXTURES (MICROCOMM) LOCATED IN CAR

HOISTWAY ACCESS ENABLE

IA — ENABLE / OFF — 4A

JUMPER

IIC — JUMPER — 4A

CAB LIGHT

LT (#14AWG) — OFF / ON — GRY (#14AWG)

CAB FAN

FLO (#14AWG) — LOW / OFF / HIGH — FHI (#14AWG)

CAB OUTLET

WHT (#14AWG) — BLK (#14AWG)

GRN (#14AWG)

EMERGENCY STOP

ESTP — STOP / RUN — 4A (POLE 1)

STOP / RUN (POLE 2) — ALARM

B-OUT

B-RTN — BATTERY 6V OR 12V — BPOS

PLANK SWITCH

20 — 20A

SLACK CABLE OR COMP. SWITCH

20A — 20B

CAB JUNCTION BOX

3	4A								DU3
ICT	ICTE	ICTU	ICTD	SAFC	ESTP	IA	IIC	IICE	CGF
TOC1	TOC2								CGR
WHT	BLK	GRN							
CAN_H	CAN_L	SEL−	SEL+						
T1	T2								

TELEPHONE

TRAVELING CABLE WIRE COUNT

16	#18 AWG
3	#14 AWG
4	SHIELDED PAIR

10% SPARE WIRES IS RECOMMENDED

REFER TO PAGE QR3 FOR TOP OF CAR WIRING DIAGRAMS

COP FIXTURE REQUIREMENTS			
FIXTURE DESCRIPTION:	VOLTAGE	CONTINUOUS	MAXIMUM
CAR CALL INDICATOR	24VDC	0.2A	0.5A
FIRE INDICATOR	24VDC	0.2A	0.5A
FIRE BUZZER	24VDC	0.2A	0.5A
MISCELLANEOUS FIXTURES	24VDC	0.2A	0.5A
PASSING FLOOR CHIME	24VDC	0.5A	2A
CAR LANTERNS & CHIME	24VDC	0.5A	2A

[1] TERMINAL PROVIDED BY COP MANUFACTURER OR CUSTOMER

PIXEL INSTALLATION: COP WIRING DIAGRAMS

JOB NAME: 438 W. 51ST ST SE1

CUSTOMER: G-TECH ASSOCIATES, LLC

ENGINEERED BY: Jason Kirlis — DATE: 10/27/16

REVISION DATE:

ELEVATOR CONTROLS
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CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

JOB NUMBER: 16-18550

CONTROLLER ID: SIMPLEX — PAGE NUMBER: QR2

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FILE: J18550_QR2.dwg

TOC BOX WIRING (TOP OF CAR)

FRONT COP PANEL

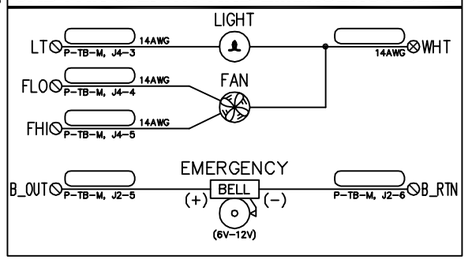
FRONT COP TO TOC HARNESS

P-TOC BOARD & TERMINALS

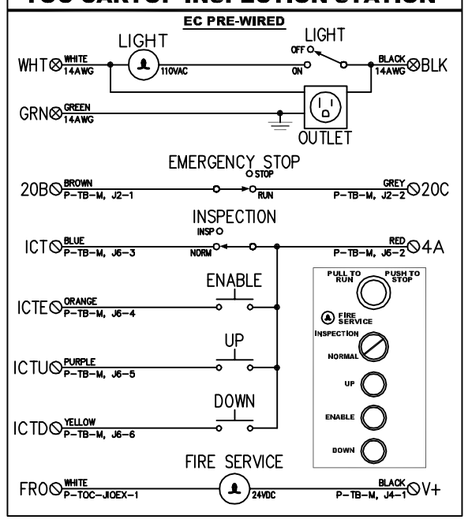
TOC & LANDA (AUX) COMMUNICATION (CAB CAN)	CAN_H	TWISTED SHIELDED PAIR	CH	P-TOC, JTRAV-6
	CAN_L		CL	P-TOC, JTRAV-5
	CSHLD		SHLD	P-TOC, JTRAV-4
LANDA (MAIN) COMMUNICATION (RS485)	SEL+	TWISTED SHIELDED PAIR	SEL+	P-TOC, JTRAV-1
	SEL-		SEL-	P-TOC, JTRAV-2
	SSHLD		SHLD	P-TOC, JTRAV-3
(GROUND) - 3		#18AWG-GREEN (GROUND)	3	P-TB-M, J5-1
(120VAC) - 4A		#18AWG-RED (120VAC)	4A	P-TB-M, J5-2
(CARTOP INSP.) - ICT		#22AWG-BLUE (CAR TOP INSPECTION)	ICT	P-TB-M, J5-3
(CARTOP INSP. ENABLE) - ICTE		#22AWG-ORANGE (CAR TOP INSP ENABLE)	ICTE	P-TB-M, J5-4
(CARTOP INSP. UP) - ICTU		#22AWG-PURPLE (CAR TOP INSP UP)	ICTU	P-TB-M, J5-5
(CARTOP INSP. DOWN) - ICTD		#22AWG-YELLOW (CAR TOP INSP DN)	ICTD	P-TB-M, J5-6
(SAFETY STRING CARTOP) - 20B		#22AWG-BROWN (TOC SAFETIES)	20B	P-TB-M, J1-1
ALARM BELL	B-OUT	#22AWG-PINK (BELL OUT)	B-OUT	P-TB-M, J1-5
	B-RTN	#22AWG-GREY (BELL RETURN)	B-RTN	P-TB-M, J1-6
	BPOS	#22AWG-GREY (BATTERY POSITIVE)	BPOS	P-TB-M, J1-7
(CAR GATE FRONT) - CGF		#22AWG-WHITE (CAR GATE FRONT)	CGF	P-TB-M, J1-8
24VDC POWER SUPPLY	V+	#18AWG-BLACK (+24VDC)	V+	P-TB-M, J3-2
	V-	#18AWG-WHITE (24VDC COM)	V-	P-TB-M, J3-4
TOC POWER SUPPLY	TOC1	#18AWG-RED (TOC1 POWER)	TOC1	
	TOC2	#18AWG-BLUE (TOC2 POWER)	TOC2	
115VAC CAB POWER	WHT	#14AWG-WHITE	WHT	
	BLK	#14AWG-BLACK	BLK	
	GRN	#14AWG-GREEN	GRN	
CAB FAN & LIGHT TIMED POWER	GRY	#14AWG-GREY (FAN/LIGHT-TIMED)	GRY	
115VAC CAB/FAN LIGHT POWER	LT	#14AWG-ORANGE (LIGHT)	LT	P-TB-M, J3-6
	FLO	#14AWG-RED (FAN LOW)	FLO	P-TB-M, J3-7
	FHI	#14AWG-YELLOW (FAN HIGH)	FHI	P-TB-M, J3-8
SP1		#18AWG-BLUE (SPARE #1)	SP1	P-TB-M, J3-10

[1] TERMINAL PROVIDED BY COP MANUFACTURER OR CUSTOMER

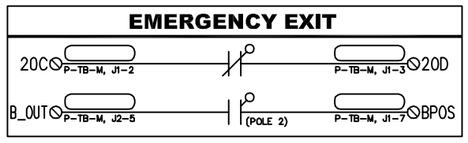
CAB FAN & LIGHT AND EMERGENCY BELL



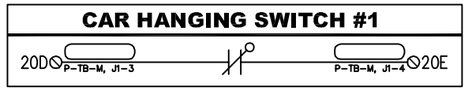
TOC CARTOP INSPECTION STATION



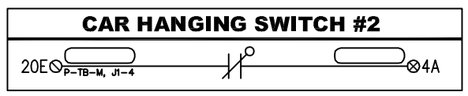
EMERGENCY EXIT



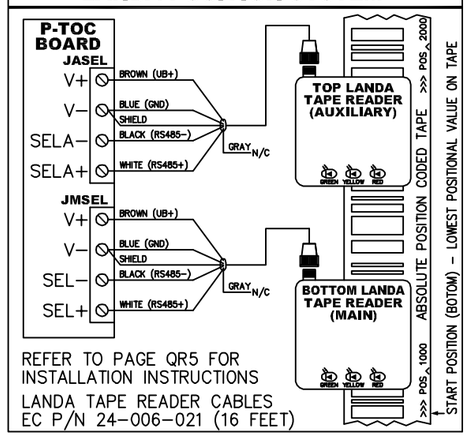
CAR HANGING SWITCH #1



CAR HANGING SWITCH #2



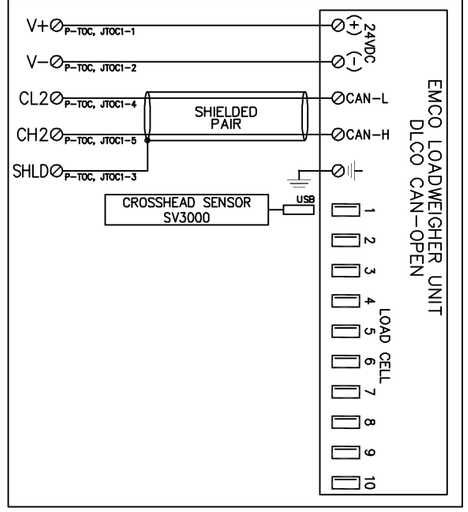
LANDA POSITION SYSTEM



REFER TO PAGE QR5 FOR INSTALLATION INSTRUCTIONS

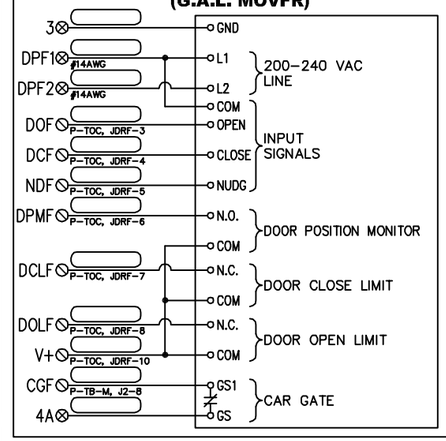
LANDA TAPE READER CABLES EC P/N 24-006-021 (16 FEET)

LOAD WEIGHER INTERFACE

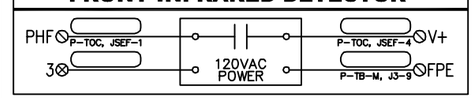


FRONT DOOR OPERATOR

(G.A.L. MOVFR)



FRONT INFRARED DETECTOR



REFER TO PAGE QR6 FOR TOC BOX MOUNTING INSTRUCTIONS

PIXEL INSTALLATION: TOC WIRING DIAGRAMS

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

ELEVATOR CONTROLS
6150 WAREHOUSE WAY
SACRAMENTO, CA 95826 USA
PHONE:(800)829-8106 FAX:(916)428-1728
www.elevatorcontrols.com

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

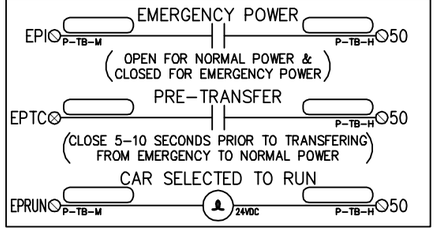
JOB NUMBER: 16-18550

CONTROLLER ID: SIMPLEX | PAGE NUMBER: QR3

M_PIXEL-QR3.dwg 05/14/15

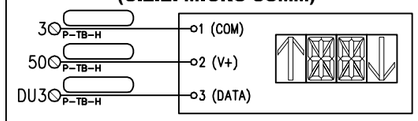
FILE: J18550_QR3.dwg

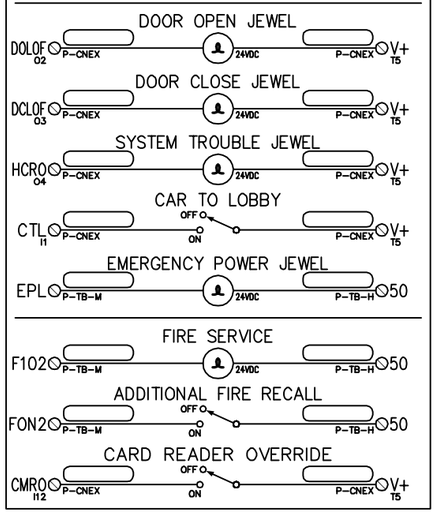
EMERGENCY POWER



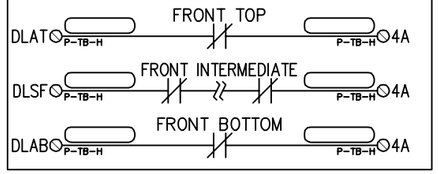
LOBBY PANEL

(C.E.E. MICRO-COMM)

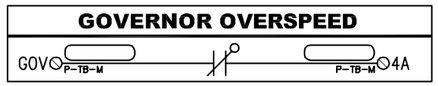




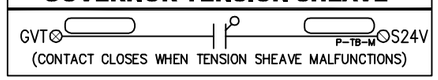
HOISTWAY DOOR LOCKS



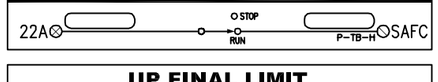
GOVERNOR OVERSPEED



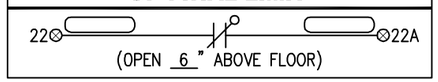
GOVERNOR TENSION SHEAVE



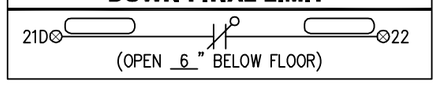
OVERHEAD STOP SWITCH



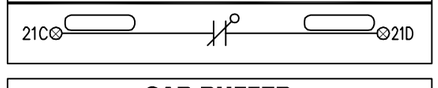
UP FINAL LIMIT



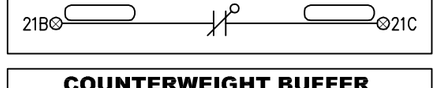
DOWN FINAL LIMIT



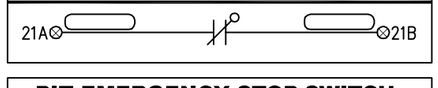
COMPENSATION CHAIN SHEAVE SWITCH



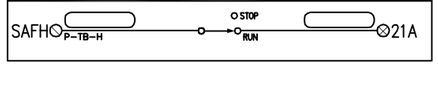
CAR BUFFER



COUNTERWEIGHT BUFFER

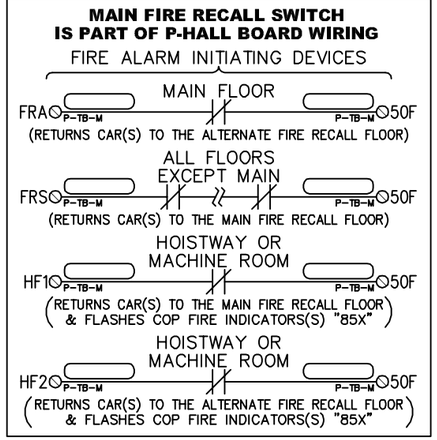


PIT EMERGENCY STOP SWITCH



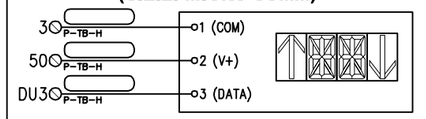
FIRE SERVICE

MAIN FIRE RECALL SWITCH IS PART OF P-HALL BOARD WIRING



HALL POSITION INDICATOR

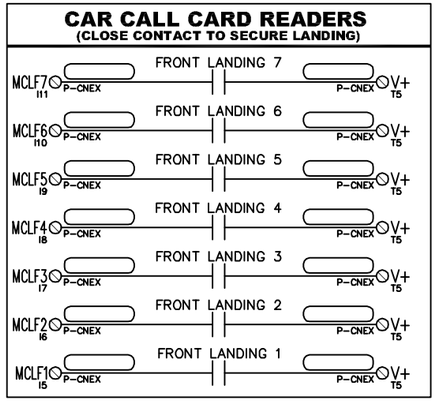
(C.E.E. MICRO-COMM)



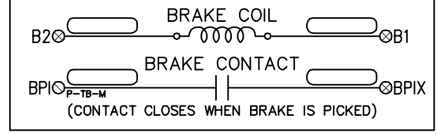
SIMILAR CONNECTIONS FOR C.E.E. SERIAL FIXTURES (MICROCOMM) LOCATED IN THE HALL

CAR CALL CARD READERS

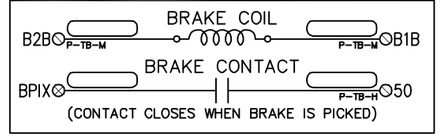
(CLOSE CONTACT TO SECURE LANDING)



MACHINE BRAKE



EMERGENCY BRAKE



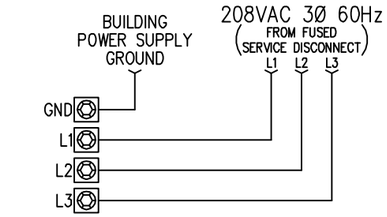
MOTOR WIRING

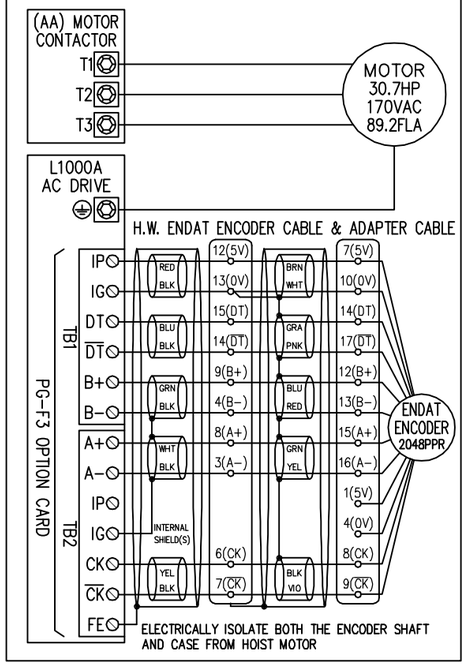
NOTES:

CONDUCTORS MUST HAVE AN AMPACITY RATING IN ACCORDANCE WITH TABLE 310.16 (COPPER/75°C) OF THE NATIONAL ELECTRICAL CODE

DO NOT ROUTE INCOMING CONTROLLER POWER OR MOTOR WIRES NEAR PRINTED CIRCUIT BOARDS

REFER TO HOIST MOTOR DATA PLATE & MANUAL FOR PROPER MOTOR LEAD WIRING.





FLOOR OPENINGS

BLDG. LDG.	FLOOR LABEL	SIMPLEX (ELEV. SE1) F	R
7	R	X	
6	5	X	
5	4	X	
4	3	X	
3	2	X	
*2	L	X	
1	C	X	
SPEED:		350fpm	
CAPACITY:		4,500lbs	

CONTROLLER TO HOISTWAY CONNECTIONS

3	4A							50	50F
SAFH	21A	21B	21C	21D	22	22A	SAFC	GVT	DU3
									V+
GOV				S24V	EPI	EPTC	EPRUN		
FRA	FRS	HF1	HF2			DOLOF	DCLOF	HCRO	CTL
DLAT	DLSF	DLAB				EPL	CMRO	F102	FON2

WIRE COUNT

35	#18 AWG
0	#14 AWG
0	SHIELED PAIR
1	CAT5e CABLE

10% SPARE WIRES IS RECOMMENDED

[1] TERMINAL IS NOT PROVIDED IN CONTROLLER. REFERENCE POINT ONLY.

PIXEL INSTALLATION: HOISTWAY & MACHINE ROOM WIRING DIAGRAMS

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE: 02/15/2017 JPK

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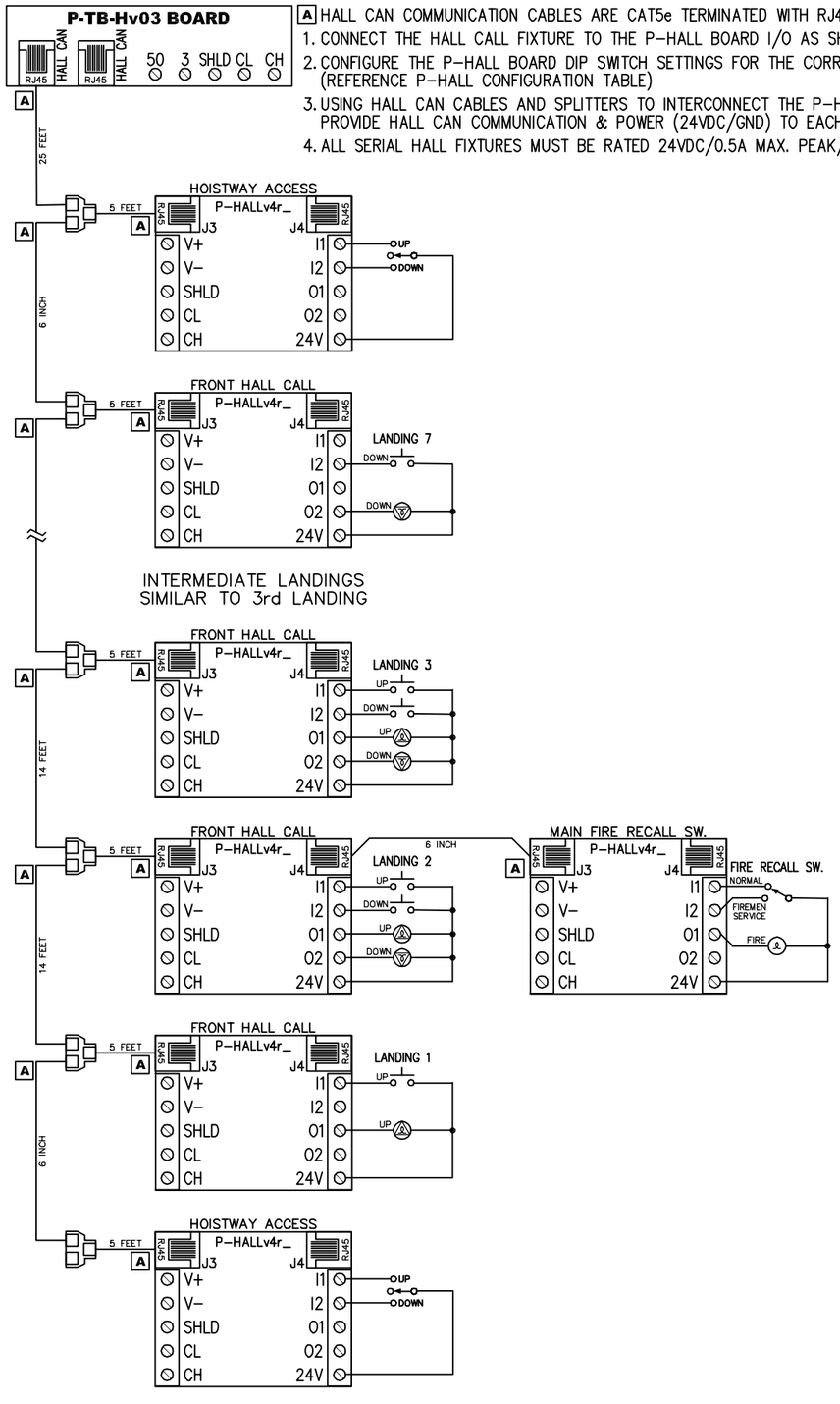
M_PIXEL-QR4.dwg 09/22/16
FILE: J18550_QR4-M1.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

JOB NUMBER: 16-18550

CONTROLLER ID: SIMPLEX | PAGE NUMBER: QR4

TYPICAL P-HALL BOARD INTERCONNECTIONS



A HALL CAN COMMUNICATION CABLES ARE CAT5e TERMINATED WITH RJ45 CONNECTOR AND WIRED TO 568–B STANDARDS.

1. CONNECT THE HALL CALL FIXTURE TO THE P–HALL BOARD I/O AS SHOWN BELOW.
2. CONFIGURE THE P–HALL BOARD DIP SWITCH SETTINGS FOR THE CORRESPONDING HALL FIXTURE. (REFERENCE P–HALL CONFIGURATION TABLE)
3. USING HALL CAN CABLES AND SPLITTERS TO INTERCONNECT THE P–HALL BOARDS AS SHOWN BELOW, THESE CABLES PROVIDE HALL CAN COMMUNICATION & POWER (24VDC/GND) TO EACH P–HALL BOARD.
4. ALL SERIAL HALL FIXTURES MUST BE RATED 24VDC/0.5A MAX. PEAK/0.2A MAX. CONTINUOUS.

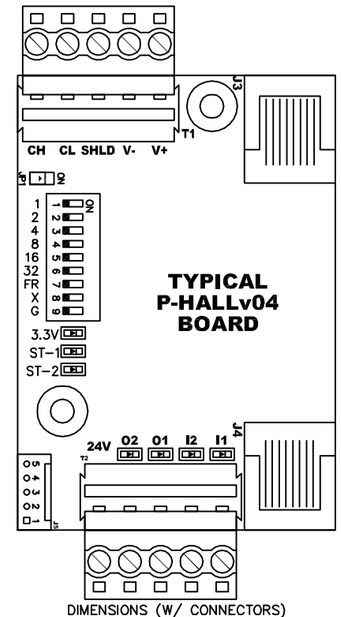
QTY:	EC P/N:	PART DESCRIPTION:
10	17–002–114v04	P–HALLv04 BOARD
9	10–008–009	RJ45 SPLITTER
3	19–001–023–06in	CAN CABLE: 6 INCH
9	19–001–023–05ft	CAN CABLE: 5 FEET
0	19–001–023–07ft	CAN CABLE: 7 FEET
6	19–001–023–14ft	CAN CABLE: 14 FEET
1	19–001–023–25ft	CAN CABLE: 25 FEET
0	19–001–023–X	CAN CABLE: **X** FEET

P-HALL BOARD CONFIGURATION TABLE

1. SET P–HALL BOARD DIP SWITCHES FOR THE RESPECTIVE LANDING NUMBER AND FUNCTION, USING THE BELOW CONFIGURATION TABLE.
2. SET P–HALL BOARD JP1 SWITCH FOR THE RESPECTIVE FUNCTION BY SLIDING THE SWITCH INTO THE APPROPRIATE POSITION, USING THE BELOW CONFIGURATION TABLE.

DIP SWITCHES (1) THRU (32) LANDING ADDRESS SELECTION		DIP SWITCHES (FR), (X) & (G) FUNCTION SELECTION		
LANDING NUMBER	JP1 IS OFF FLOOR DESIGNATION	HALL CALL	HOSPITAL CALL	HALL LANTERN
7				
6				
5				
4				
3				
2				
1				

DIP SWITCHES (1) thru (G) FUNCTION SELECTION		
LANDING NUMBER	MISCELLANEOUS FUNCTIONS	JP1 IS ON FUNCTION SETTINGS
7	HOISTWAY ACCESS TOP	
1	HOISTWAY ACCESS BOTTOM	
2	MAIN FIRE RECALL	



TYPICAL P-HALLv04 BOARD

DIMENSIONS (W/ CONNECTORS)
4"H X 2 1/8"W 7/8"D

FRONT P–HALL HOISTWAY WIRING DIAGRAMS

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY:	DATE:	REVISION DATE:
Jason Kirlis	10/27/16	

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SACRAMENTO, CA 95826 USA
PHONE:(800)829–8106 FAX:(916)428–1728
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CONTROLLER MODEL:	
PIXEL AC VECTOR–MRL–S	
JOB NUMBER:	
16–18550	
CONTROLLER ID:	PAGE NUMBER:
SIMPLEX	QR4b

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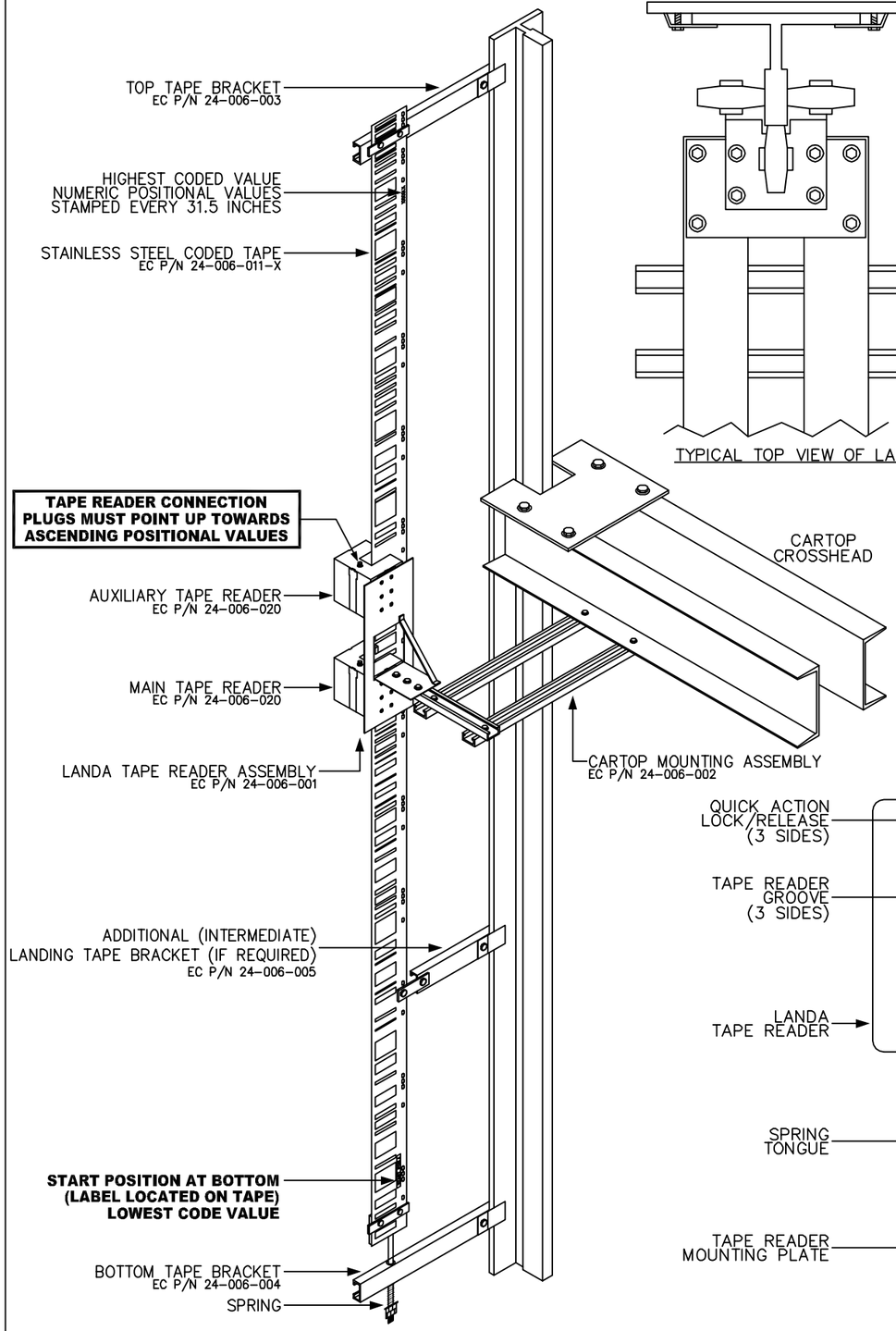
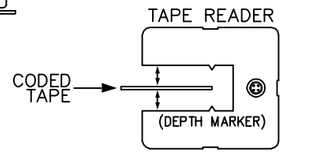
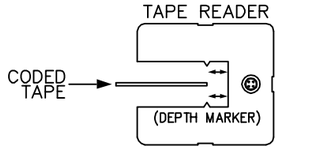
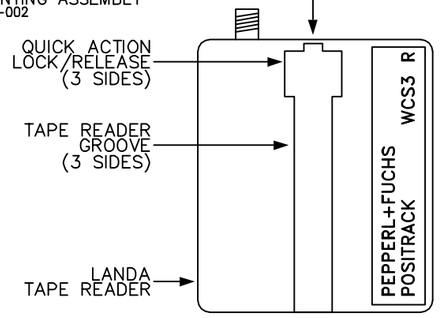


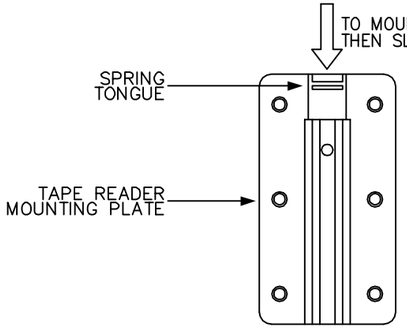


SIDE TO SIDE TOLERANCE
OF +/- 0.59" (15mm)



IN & OUT TOLERANCE
OF +/- 0.55" (14mm)

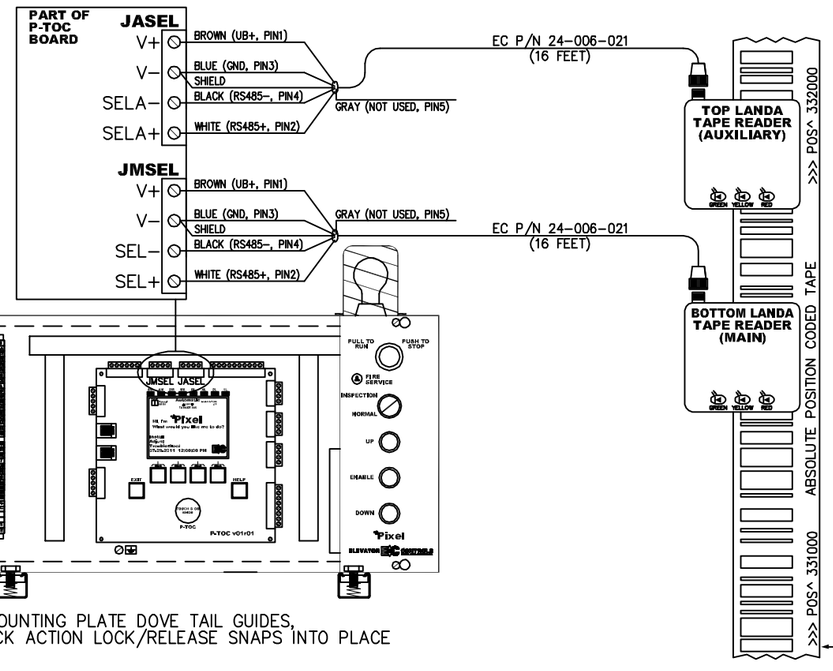




TO MOUNT TAPE READER ALIGN GROOVE WITH MOUNTING PLATE DOVE TAIL GUIDES,
THEN SLIDE TAPE READER DOWN UNTIL THE QUICK ACTION LOCK/RELEASE SNAPS INTO PLACE

INSTALLATION:

1. ATTACH TOP AND BOTTOM TAPE BRACKETS TO RAIL USING CLIPS AND HARDWARE PROVIDED.
2. HANG STAINLESS STEEL CODED TAPE FROM TAPE BRACKETS. VERIFY START POINT (LOWEST POSITIONAL VALUE) IS AT BOTTOM. THE TAPE HAS POSITIONAL VALUES STAMPED INTO THE TAPE EVERY 31.5 INCHES.
3. ADJUST TAPE BRACKETS SO THE STAINLESS STEEL CODED TAPE IS IN PROPER VERTICAL ALIGNMENT (FRONT TO BACK AND SIDE TO SIDE).
4. ADJUST THE SPRING ON THE BOTTOM TAPE BRACKET TO APPLY TENSION ONTO THE TAPE.
5. MOUNT THE LANDA POSTION SYSTEM ONTO THE CARTOP USING UNISTRUTS AND HARDWARE (TYPICAL MOUNTING SHOWN TO THE LEFT).
6. TAPE READER ORIENTATION CAN BE ADJUSTED BY USING THE QUICK ACTION LOCK/RELEASE FEATURE (SEE PICTURE BELOW)
7. ALIGN TAPE READERS SO THAT THE TAPE IS CENTERED INSIDE READERS WHILE ALIGNED TO DEPTH MARKERS AT ANY POSITION IN THE HOISTWAY. TOLERANCES: +/- 0.59" (15mm) SIDE TO SIDE AND +/- 0.55" (14 mm) IN & OUT FROM CENTER OF TAPE READER.
8. RUN THE CAR FROM TOP TO BOTTOM TO VERIFY THE ABOVE RUNNING TOLERANCES ARE NOT EXCEEDED AND ADJUST ACCORDINGLY.
9. CONNECT THE BOTTOM TAPE READER (MAIN) TO THE P-TOC BOARD JMSEL TERMINALS USING THE LANDA CABLE (EC P/N 24-006-021). TAPE READER PLUG ALWAYS POINTS UP TOWARD ASCENDING POSITION VALUE.
10. CONNECT THE TOP TAPE READER (AUXILIARY) TO THE P-TOC BOARD JASEL TERMINALS USING THE LANDA CABLE (EC P/N 24-006-021). TAPE READER PLUG ALWAYS POINTS UP TOWARD ASCENDING POSITION VALUE..



PIXEL INSTALLATION: LANDA POSITION SYSTEM

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY:	DATE:	REVISION DATE:
Jason Kirlis	10/27/16	

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CONTROLLER MODEL:	
PIXEL AC VECTOR-MRL-S	
JOB NUMBER:	
16-18550	
CONTROLLER ID:	PAGE NUMBER:
SIMPLEX	QR5

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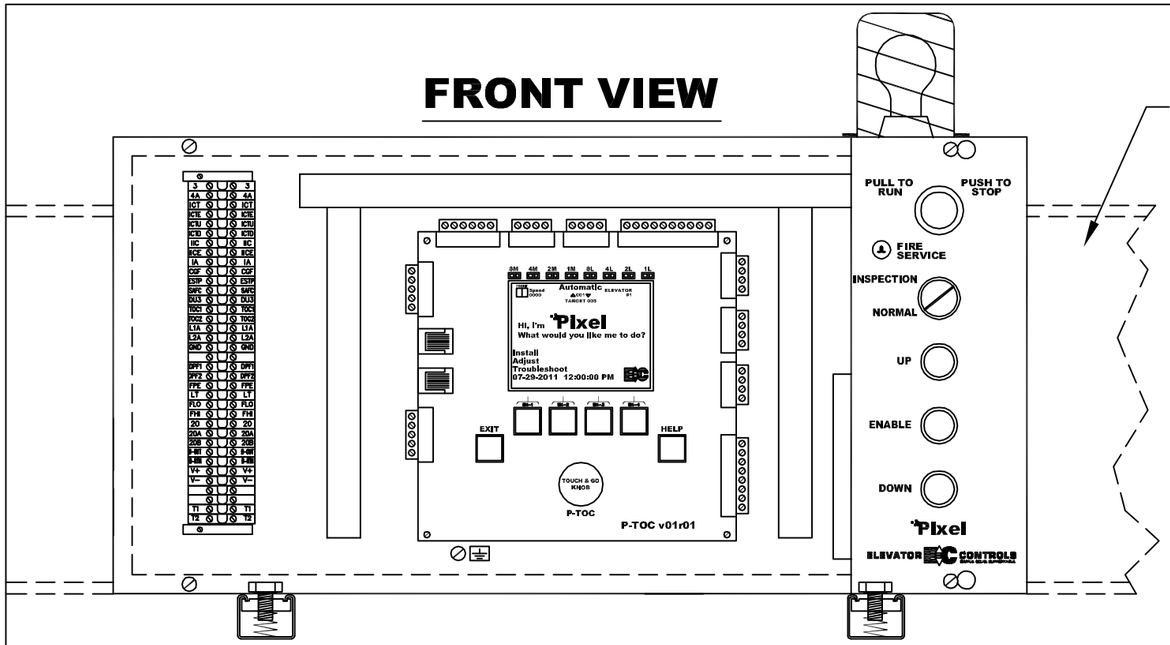
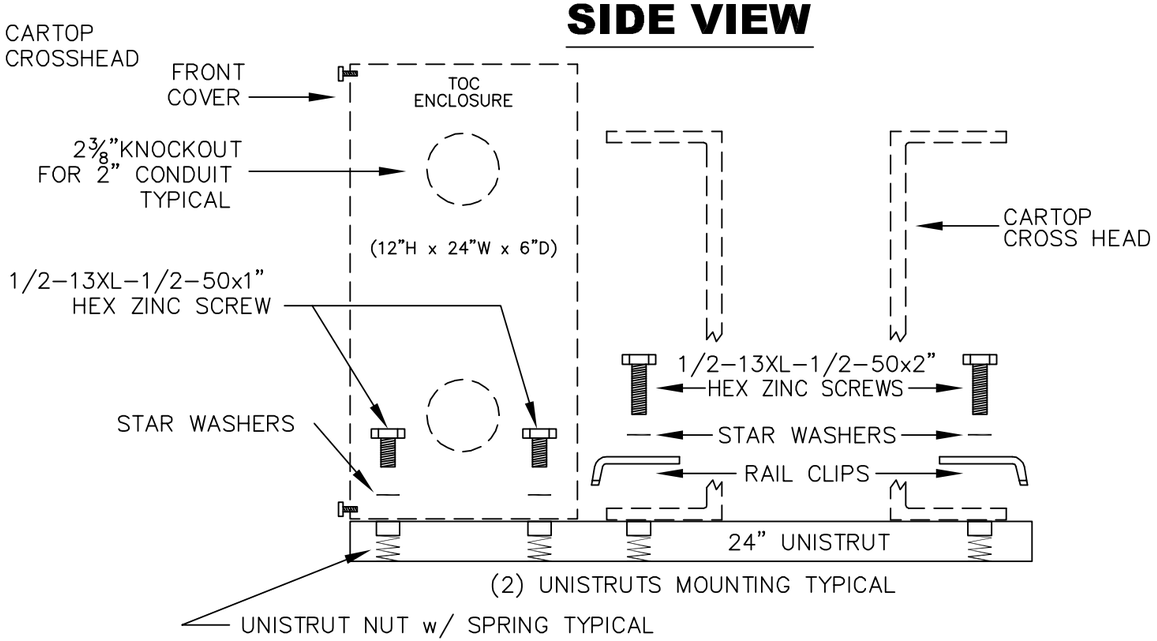
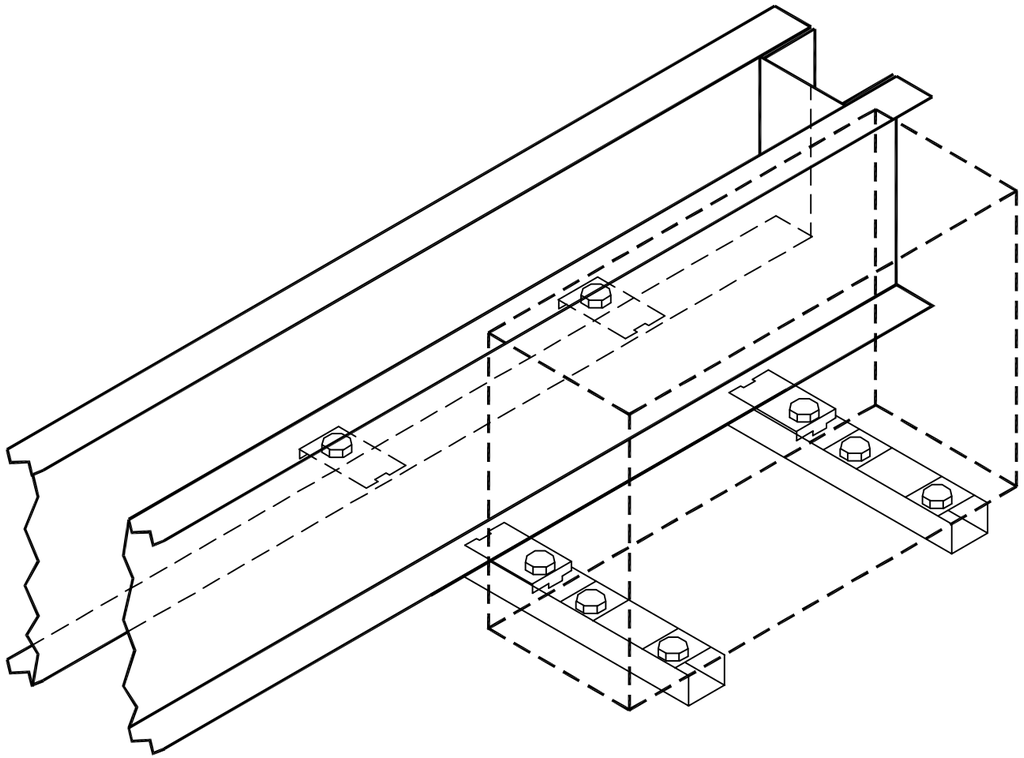
FILE: J18550_QR5.dwg

FRONT VIEW



SIDE VIEW





PIXEL TOC (TOP OF CAR) BOX MOUNTING INSTRUCTIONS

1. THE TOC BOX IS TYPICALLY MOUNTED TO THE CARTOP USING THE UNISTRUTS AND RAIL CLIPS (PROVIDED BY ELEVATOR CONTROLS), AS SHOWN IN THIS DIAGRAM. CHOOSE A MOUNTING LOCATION CLOSE TO THE LANDA POSITION SYSTEM (16 FOOT CABLES).
2. IF THIS MOUNTING TECHNIQUE CANNOT BE USED, IT IS UP TO THE INSTALLER TO MOUNT THE CARTOP ASSEMBLY PROPERLY. VERTICAL MOUNTING AS SHOWN, IS PREFERRED. WHEN MOUNTING HORIZONTALLY, CAUTION SHOULD BE TAKEN AGAINST METAL DEBRIS THAT CAN CAUSE ELECTRICAL DAMAGE.
3. SEVERAL KNOCKOUTS HAVE BEEN PROVIDED FOR 2" CONDUIT CONNECTIONS. CONNECT TRAVELING CABLE, SELECTOR, DOOR OPERATOR(S) AND COP USING THESE KNOCKOUTS.

PIXEL INSTALLATION: TOC (TOP OF CAR) BOX MOUNTING

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

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M_PIXEL-QR6.dwg | 03/24/16
FILE: J18550_QR6.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

JOB NUMBER: 16-18550

CONTROLLER ID: SIMPLEX | PAGE NUMBER: QR6

L1000A CLOSED LOOP FLUX VECTOR, PIXEL VECTOR AC FOR PM MOTOR CONTROLLERS

Basic Start-up Procedure

1. Review and become familiar with the Yaskawa L1000A quick start guide, EC manuals and EC schematics

2. Verify all interconnections to the drive & controller are made in accordance with the EC schematic and Yaskawa L1000A quick start guide.

3. Verify the drive parameters marked with an " » " are correct and match the actual motor and job site data.

4. Use the modified constants menu in the drive to verify the EC parameter settings on this sheet. record any parameter changes in the field setting column.

5. AUTO-TUNING a permanent magnet (PM) motor- is a 3 step process, stationary auto tuning, initial magnet pole search and PG encoder offset.

a. Move one of the jumper legs from H1 to HC terminal (two legs are both installed into H1 terminal on the L1000A drive) terminals HC, H1 & H2 are now jumped together to enable drive hardware

b. Set H1-08=F, to disable base block

c. Set C5-01=3 and C5-19=3, to reduce drive response gains

d. If the Ianda positioning system is not installed, place the controller on construction mode (install menu)

e. Set T2-01 = 1 and enter the required auto-tuning data (refer to E5-02, E1-05, E5-03, E5-04 and F1-01 for data) press the up key until "tuning ready?" is displayed

f. Using controller insp., press both the up & enable buttons continue to press both buttons until auto-tune is complete

g. Press the run key and the keypad will display "tune proceeding" until process is complete = "tune successful"

h. Auto-tuning for initial magnet pole search with T2-01 = 3 repeat steps f & g (above)

i. Rotational or stationary encoder offset auto-tuning: rotational (preferred method & most accurate)

1) Rotational encoder offset (ropes must be removed)
Set H2-01 = 6 (Drive Ready), allows brake to lift
Set T2-01 = 10 and repeat steps f & g (above)
Set T2-01 = 11 and repeat steps e & f (above)
Restore H2-01 = 0 (Drive Run)

2) Stationary encoder offset
Set T2-01 = 4 and repeat steps f & g (above)

j. Remove jumper from terminal HC and restore H1-08=9, C5-01=15 & C5-19=15

k. Record encoder offset (E5-11) in field setting column

Rotational auto-tuning notes:
If the motor rotates in the opposite direction, change B1-14 from 0 to 1. this switches the phase order to U-W-V.

Encoder setup: Rotate the motor and check parameter U1-05 (Speed Feedback). verify the value is positive in the up and negative in the down direction.
change F1-05 from 1 to 0 if the values are reversed.

Basic Adjustment Procedure

1. For contract speed calibration refer to section A2.5 of the Pixel traction controller installation and adjustment manual.

2. Contract speed-response and control:
If slow response during acceleration, increase C5-01 then shorten C5-02. If vibration occurs, decrease C5-01 then lengthen C5-02.

3. Starting-response and rollback control:
If rollback occurs after the brake is lifted, increase C5-19 & S3-39 then shorten C5-20. if vibration occurs, decrease C5-19 & S3-39 then lengthen C5-20.
If rollback persists, increase S3-02 in small adjustments. If required increase S3-01 in small adjustments.

4. Stopping-response and control:
If stopping with poor accuracy, check analog pattern, jerk and deceleration rates. Increase S3-03 in small adjustments.
If vibration occurs, decrease S3-03. Increase S1-05
if additional brake engagement time is required.

Saving And Uploading Parameters

After completely setting up the drive parameters, save the values as user-set defaults by setting 02-03 = 1 and pressing the enter key. The display will return to 0.

To restore values saved in user-set defaults (02-03), set A1-03 = 1110 (uploads only the parameters saved in 02-03)

	Number	Parameter Name	Unit	Range	Default	EC Setting	Field Setting	Notes
	A1-01	Access Level Selection	–	0-2	2	2		2=Adv. Access
	A1-02	Control Method Selection	–	0,2,3,7	2	**7**		7=C.L. PM Motor
	b1-01	Speed Reference Selection	–	0-3	0	**2**		2=MOD BUS
	b1-02	Up/Down Command Selection	–	0-3	1	**2**		2=MOD BUS
»	b1-14	Phase Order Selection	–	0-1	0	0		0=U-V-W
	C1-01	Acceleration Ramp 1	SEC	0.00-600.00	1.50	**1.00**		
	C1-02	Deceleration Ramp 1	SEC	0.00-600.00	1.50	**0.20**		
	C1-03	Acceleration Ramp 2	SEC	0.00-600.00	1.50	**0.00**		
	C1-04	Deceleration Ramp 2	SEC	0.00-600.00	1.50	**0.00**		
	C1-09	Fast Stop Ramp	SEC	0.00-600.00	1.50	**0.50**		
	C2-01	Jerk At Accel Start	SEC	0.00-10.00	0.50	**0.00**		
	C2-02	Jerk At Accel End	SEC	0.00-10.00	0.50	**0.00**		
	C2-03	Jerk At Decel Start	SEC	0.00-10.00	0.50	**0.00**		
	C2-04	Jerk At Decel End	SEC	0.00-10.00	0.50	**0.00**		
	C2-05	Jerk Below Leveling Speed	SEC	0.00-10.00	0.50	**0.00**		
	C5-01	Spd Cntrl Lp Proportional Gain 1	–	0.00-300.00	3.00	**10.00**		
	C5-02	Spd Cntrl Lp Integral Time 1	SEC	0.000-10.000	0.30	**0.50**		
	C5-03	Spd Cntrl Lp Proportional Gain 2	–	0.00-300.00	3.00	**10.00**		On if C5-07 > 0
	C5-04	Spd Cntrl Lp Integral Time 2	SEC	0.000-10.000	0.30	**0.50**		On if C5-07 > 0
	C5-07	Spd Cntrl Settings Switching Speed	%	0.0-100.0	2	**0**		0=Disable C5-03/04
	C5-13	Spd Cntrl Lp Proportional Gain 3	–	0.00-300.00	3.00	**10.00**		On if C5-07 > 0
	C5-14	Spd Cntrl Lp Integral Time 3	SEC	0.000-10.000	0.30	**0.50**		On if C5-07 > 0
	C5-17	Motor Inertia	kgm^2	0.0001-600.00	B	A		
	C5-19	Spd Cntrl Lp Proportional Gain During Position Lock	–	0.00-300.00	10.00	10.00		
	C5-20	Spd Cntrl Lp Integral Time During Position Lock	SEC	0.000-10.000	0.10	**0.50**		
	C6-03	Carrier Frequency	kHz	1.0-15.0	B	**8**		
	C6-06	PWM Method	–	0-2	0	0		0=2/3-PH Conversion
»	E1-01	Input Voltage Setting	V	155-255	230	**208**		
»	E1-04	Maximum Output Frequency	Hz	4.0-120.0	60	**41.6**		
»	E1-05	Maximum Voltage (Motor)	V	0.0-255	200	**170**		
»	E1-06	Base Frequency (Motor)	Hz	0.0-120.0	60	**41.6**		Equal To E1-04
»	E5-02	Motor Rated Power	kW	0.10-650.00	B	**22.90**		kW = HP x 0.746
»	E5-03	Motor Rated Current	A	10-200% Rating	B	**89.2**		Rating= B
»	E5-04	Number Of Motor Poles	#POLES	2-48	12	**28**		
	E5-05	Motor Stator Resistance (Single Phase)	Ω	0.000-65.000	B	A		
	E5-06	Motor D-axis Inductance	mH	0.00-600.00	B	A		
	E5-07	Motor Q-axis Inductance	mH	0.00-600.00	B	A		
	E5-09	Motor Induction Voltage Constant 1	mV/(rad/SEC)	0.0-6500.0	B	A		
	E5-11	Encoder Offset	DEG	-180-180	0.0	A		
	E5-24	Motor Induction Voltage Constant 2	mV/(r/MIN)	0.0-6500.0	0.0	A		
»	F1-01	Encoder 1 Resolution	PPR	1-60000	2048	**2048**		
	F1-02	Operation Sel. At PG Open Circuit (PGO)	–	0-3	1	**0**		0=Ramp To Stop
	F1-03	Operation Selection At Overspeed	–	0-3	1	**0**		0=Ramp To Stop
	F1-04	Operation Selection At Deviation	–	0-3	3	**0**		0=Ramp To Stop
»	F1-05	Encoder 1 Rotation Direction Selection	–	0,1	1	1		
	F1-10	Excessive Speed Deviation Detection Level	%	0-50	10	**25**		
	F1-19	DV4 Detection Selection	–	0-5000	128	**0**		0=Disabled
	H1-03	Terminal S3 Function Selection	–	Multi-function Digital Inputs	24	**20**		20=Ext Flt Ramp To Stop
	H1-04	Terminal S4 Function Selection	–		14	**F**		F=Not Used
	H1-05	Terminal S5 Function Selection	–		3	**F**		F=Not Used
	H1-06	Terminal S6 Function Selection	–		4	**F**		F=Not Used
	H1-07	Terminal S7 Function Selection	–		5	**15**		15=Fast Stop N.O.
	H1-08	Terminal S8 Function Selection	–		F	**9**		9=Baseblock N.C.
	H2-01	Terminal M1-M2 Function Selection (relay)	–	& Digital Outputs	50	**0**		0=During Run
	H2-02	Terminal M3-M4 Function Selection (relay)	–		51	**F**		F=Not Used
	H2-03	Terminal M5-M6 Function Selection (relay)	–		6	**F**		F=Not Used
	H3-02	Torque Compensation	–	0,2,3,14,1F	0	**14**		14=Pre-torque

	Number	Parameter Name	Unit	Range	Default	EC Setting	Field Setting	Notes
	H5-02	Communication Speed Selection	–	0-8	3	**8**		8=115200bps
	H5-11	Communications Enter Function Sel.	–	0,1	0	**1**		1=Enter Not Necessary
	L5-01	Number Of Auto Reset Attempts	–	0-10	0	**2**		
	L5-02	Fault Output Operation During Auto Reset	–	0,1	0	**1**		1=Active
	L6-01	Torque Detection Selection 1	–	0-8	0	**2**		2=oL3 Active During Run
	L6-02	Torque Detection Level 1	%	0-300	150	**200**		
	L7-01	Forward Torque Limit	%	0-300	200	**300**		
	L7-02	Reverse Torque Limit	%	0-300	200	**300**		
	L7-03	Forward Regenerative Torque Limit	%	0-300	200	**300**		
	L7-04	Reverse Regenerative Torque Limit	%	0-300	200	**300**		
	L8-05	Input Phase Loss Protection Selection	–	0-3	1	**0**		0=Disabled
	L8-55	Internal Braking Transistor Protection	–	0,1	B	**0**		0=DISABLED
	n8-62	Output Voltage Limit	V	0.0-230.0	200.0	**188**		E1-01 Minus 20v
	o1-03	Digital Operator Display Unit Selection	–	0-6	1	**1**		1=0.01%
	o1-04	V/f Pattern Setting Units	–	0,1	1	**0**		0=Hz, C.L. Only
	o1-12	Length Units	–	0,1	0	**1**		1=Inches
»	o1-20	Traction Sheave Diameter	INCH	3.70-78.00	15.70	**15.00**		
»	o1-21	Roping Ratio	–	1-4	2	**2**		2=2:1
»	o1-22	Mechanical Gear Ratio	–	0.10-50.00	1.00	1.00		
	P1-01	–	–	–	–	**AC**		
	P1-02	–	–	–	–	**26**		
	P1-03	–	–	–	–	**45**		
	P1-04	–	–	–	–	**4B**		
	S1-01	Zero Speed Level At Stop	%	0.000-9.999	0.350	0.350		
	S1-04	Position Lock Time At Start	SEC	0.00-10.00	0.40	0.40		
	S1-05	Position Lock Time At Stop	SEC	0.00-10.00	0.60	**1.0**		
	S1-06	Brake Release Delay Time	SEC	0.00-10.00	0.20	**0.00**		
	S1-07	Brake Close Delay Time	SEC	0.00-(S1-05)	0.10	0.10		
	S1-10	Run Command Delay Time	SEC	0.00-1.00	0.10	0.10		
	S3-01	Position Lock Gain At Start 1	–	0-100	5	**15**		
	S3-02	Position Lock Gain At Start 2 (anti-rollback)	–	0.00-100.00	0.00	**15**		
	S3-03	Position Lock Gain At Stop	–	0-100	5	5		
	S3-10	Starting Torque Compensation Increase Time	mSEC	0-5000	500	**200**		
	S3-14	Torque Compensation Fade Out Speed	%	0.0-100%	0.0	**1**		
	S3-16	Torque Limit Reduction Time	mSEC	0-10000	100	**200**		
	S3-27	Torque Compensation Value With Load Condition 1	%	-100%-100%	-50	**-100**		
	S3-28	Torque Compensation Value With Load Condition 2	%	-100%-100%	50	**100**		
	S3-29	Analog Input From Load Cell With Load Condition 1	%	-100%-100%	0	**-100**		
	S3-39	Anti-rollback Integral Gain	–	-30.00-30.00	0.00	0.00		
	S3-40	Anti-rollback Movement Detection	PULSE	0-100	1	1		
	S3-41	Position Lock Gain At Start 2 Reduction	–	0.00-1.00	0.50	0.50		
	S6-11	Overacceleration Detection Time	mSEC	0-5000	50	**500**		

*** Pixel Parameters ***

Speed Profile	
Pattern Delay (ms)	400ms
Ramp To Stop	YES
Releveling Offset (set to 40% Dead Zone)	0.0
Speed Pattern Scaling % (Jobs below 10Hz)	OFF
Motor/Brake Timers	
Brake Pick Delay (s)	0.2s
Brake Drop Delay (s)	0.2s
Zero Speed Hold Delay (s)	2.0s

Parameter Constrain Settings

Pattern Delay > = S1-04
Zero Speed Hold > S1-05 + S3-16
S1-04 > S3-10, and S1-05 > Brake Drop Delay
Zero Speed Hold > Brake Drop Delay

A Parameter Is Modified During Auto-tuning Process
B o2-04 (Drive Model Selection) Dependent Parameters

VVVF YASKAWA L1000A DRIVE PARAMETER LIST

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

ELEVATOR CONTROLS
6150 WAREHOUSE WAY
SACRAMENTO, CA 95826 USA
PHONE:(800)829-8106 FAX:(916)428-1728
www.elevatorcontrols.com

M_PIXEL-QR7_L1000A.dwg 09/26/16
FILE: J18550_QR7.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S
JOB NUMBER: 16-18550
CONTROLLER ID: SIMPLEX | PAGE NUMBER: QR7

AC INVERTER DRIVE
MAGNETEK L1000A
MODEL: LU2A0145DAA-088
(40HP - 240V)

R/L1, S/L2, T/L3, GND

6 BUILDING POWER SUPPLY GROUND

FROM FUSED SERVICE DISCONNECT
208VAC 3Ø 60HZ
L1 L2 L3

PAGE 2

SIZE: XTCE115G00A
COIL VOLTAGE: 120VAC

U/T1, V/T2, W/T3

AC HOIST MOTOR

H.W. ENDAT ENCODER CABLE & ADAPTER CABLE

CABLE TERMINATION
M23 FEMALE 17-PIN CIRCULAR

CABLE TERMINATION
D-SUB FEMALE 15-PIN

PG-F3 OPTION CARD
PORT/CONNECTOR CN5-C
CN3 8V 5V
TB1: IP, IG, DT, /DT, B+, B-
TB2: A+, A-, IP, IG, CK, /CK, FE

IP	RED(5V)	12(5V)	BROWN WHITE	7(5V)
IG	BLACK(0V)	13(0V)		10(0V)
DT	BLUE(DT+)	15(DT)	GRAY PINK	14(DT)
/DT	BLACK(DT-)	14(/DT)		17(/DT)
B+	GREEN(B+)	9(B+)	BLUE RED	12(B+)
B-	BLACK(B-)	4(B-)		13(B-)
A+	WHITE(A+)	8(A+)	GREEN YELLOW	15(A+)
A-	BLACK(A-)	3(A-)		16(A-)
IP				1(5V)
IG	INTERNAL SHIELD(IS)			4(0V)
CK	YELLOW(CK+)	6(CK)	BLACK VIOLET	8(CK)
/CK	BLACK(CK-)	7(/CK)		9(/CK)
FE	SHIELD(EG)			

ECN113
EnDat01
ENCODER
2048PPR
5

DB1, DB2, DB3, DB4, DB5, DB6
RG1 20Ω 2000W, RG2 20Ω 2000W, RG3 20Ω 2000W
6.67Ω 6000W TOTAL
RG4 20Ω 2000W, RG5 20Ω 2000W, RG6 20Ω 2000W
6.67Ω 6000W TOTAL
RG7 20Ω 2000W, RG8 20Ω 2000W, RG9 20Ω 2000W
6.67Ω 6000W TOTAL
4

BRAKING UNIT #1 (YASKAWA - CDBR-2037D)
BRAKING UNIT #2 (YASKAWA - CDBR-2037D)
BRAKING UNIT #3 (YASKAWA - CDBR-2037D)
INPUT, B1, B2, S3
SINK / SOURCE, IN(SLAVE) / OUT(MASTER), A(N.O.) / B(N.C.)
MA MC IN1 IN2 OUT1 OUT2
TP

⊕1, ⊕3, ⊖

AA

JUMPER S3 SINK MODE

(SAFE DISABLE COM) HC
(SAFE DISABLE INPUT 1) H1
(SAFE DISABLE INPUT 2) H2
(INPUT PWR SUPPLY COM) SC
(INPUT PWR SUPPLY +24VDC) SP
(INPUT PWR SUPPLY 0V) SN
(EXTERNAL FAULT H1-03 = 20) S3
(FAST STOP N.O. H1-07 = 15) S7
(BASEBLOCK N.C. H1-08 = 9) S8
P
RELAY OUTPUT 1: (DURING RUN H2-01 = 0) M1, (RELAY 1 COM) M2
FAULT RELAY: (N.C.) MB, (COM) MC

RS485 COMMUNICATION SET S2 DIP SW. TO "ON"
S+ WHITE/ORANGE
S- ORANGE
R- BLUE
R+ WHITE/BLUE

RS485/RS422 DRIVE COM.	
PIN	WIRE COLOR
1 (S+)	WHITE/ORANGE
2 (S-)	ORANGE
3 (GND)	WHITE/GREEN
4 (R-)	BLUE
5 (R+)	WHITE/BLUE
6 (GND)	GREEN
7 (GND)	WHITE/BROWN
8 (GND)	BROWN

PART OF P-MP BOARD
COM2
DRIVE PORT
JPRS
RJ45, CAT5E CABLE
LEFT SIDE PIN 1 LOCKING CLIP FACING DOWN
STANDARD 568-B WIRING

PART OF P-MP-IO BOARD
DSAF DSAF (SP1, SP2)
DSAF JMDV-1 24VDC
DCOM JMDV-2
ESCO1 SP1, ESCO2 SP2
E-SLOWDOWN COMMAND
ESCO JMDV-3
DON JMDV-4
3 JMDV-5
6 JMDV-6
4A JPMP-4
3 JPMP-3
6 JPMP-2
50 JPMP-1
DON JSMP-8
3 4A (120VAC) 6 (24VDC) 50 (24VDC)

PART OF P-PDB BOARD
4A JPMP-1
3 JPMP-2
6 JPMP-3
50 JPMP-4
DON JSMP-2
4A 3 6 50 DON
PAGE 2
PAGE 4

TP = TWISTED PAIR
1 #4AWG PTL WIRE
2 #6AWG PTL WIRE
3 #10AWG TEFLON WIRE
4 REMOTE RESISTOR ENCLOSURE.
5 ELECTRICALLY ISOLATE BOTH THE ENCODER SHAFT AND CASE FROM HOIST MOTOR
6 GROUND LEAD MUST BE OF EQUAL OR GREATER AMPACITY RATING THAN THE POWER LEADS

PERMANENT MAGNET MOTOR SPECIFICATIONS

HP:	30.7	HP
VOLTAGE:	170	VAC
FLA:	89.2	A
FREQ:	41.6	Hz
FLRPM:	178.3	RPM
# POLES:	28	

ELEVATOR SPECIFICATIONS

SPEED:	350	FPM
CAPACITY:	4,500	LBS
ROPED:	2:1	

VVVF AC DRIVE INTERFACE
JOB NAME: **438 W. 51ST ST SE1**
CUSTOMER: **G-TECH ASSOCIATES, LLC**
ENGINEERED BY: Jason Kirlis
DATE: 10/27/16
REVISION DATE:

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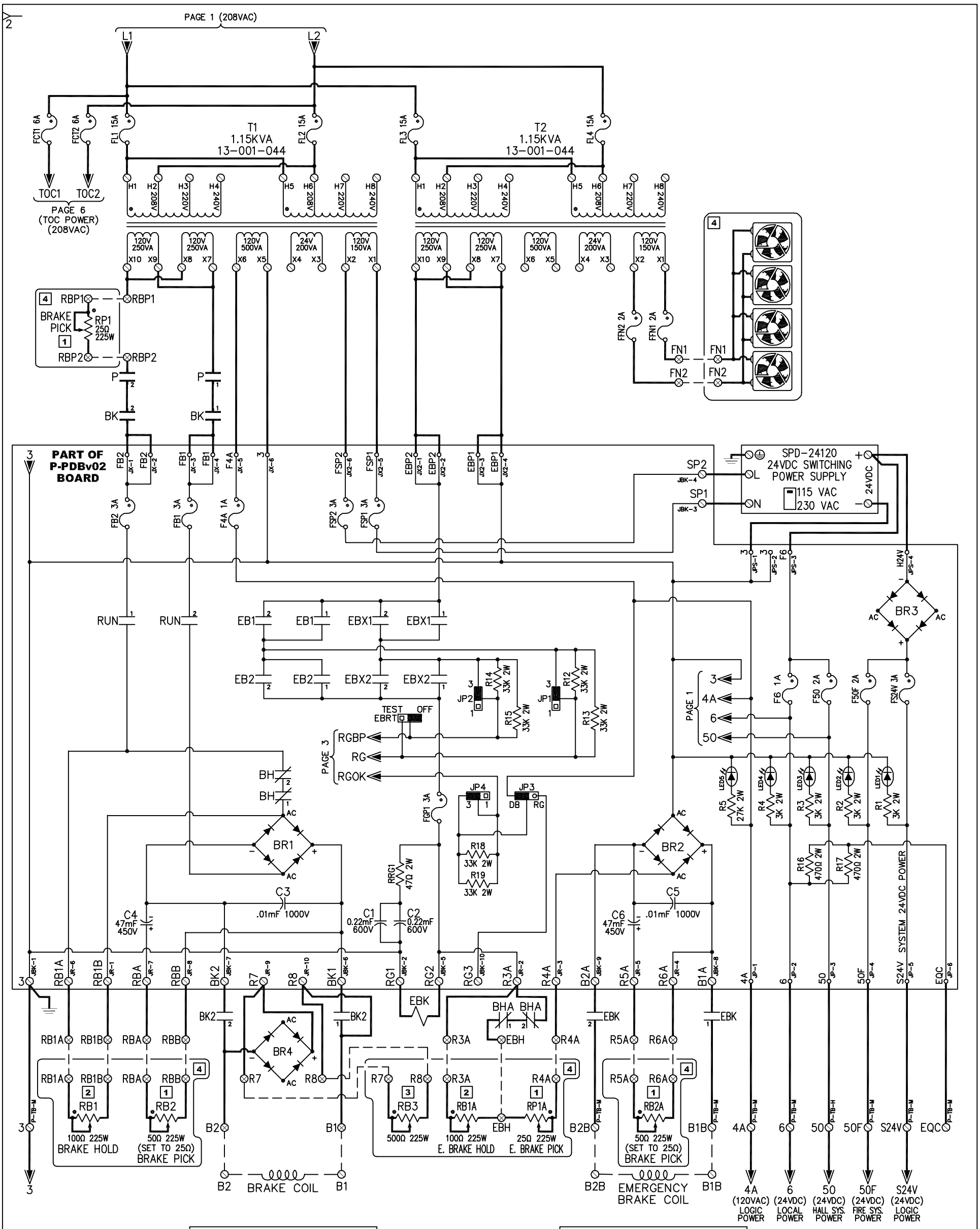
M_PIXEL-1_L1000A.dwg 03/24/16
FILE: J18550_1.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S
JOB NUMBER: 16-18550
CONTROLLER ID: SIMPLEX
PAGE NUMBER: 1



BRAKE SPECIFICATIONS			
BRAKE PICK V:	**104**	VDC	(2.27A)
BRAKE HOLD V:	**52**	VDC	(1.14A)
BRAKE RESIST:	**45.8**	Ω	

EMERGENCY BRAKE SPECIFICATIONS			
BRAKE PICK V:	**104**	VDC	(2.27A)
BRAKE HOLD V:	**52**	VDC	(1.14A)
BRAKE RESIST:	**45.8**	Ω	

1. ADJUST RP1(A) FIRST, THEN IF NECESSARY ADJUST RB2(A) FOR PROPER BRAKE PICKING VOLTAGE
2. ADJUST RB1(A) FOR PROPER BRAKE HOLDING VOLTAGE
3. INITIALLY SET TOTAL CIRCUIT RESISTANCE TO THREE TIMES BRAKE RESISTANCE. FOR FASTER BRAKE DROP TIME, INCREASE RESISTANCE. DO NOT ADJUST TOTAL CIRCUIT RESISTANCE BELOW THREE TIMES BRAKE COIL RESISTANCE VALUE.
4. REMOTE RESISTOR ENCLOSURE.

FUSE LIST

FUSE TYPE	FUSES																	
500V FNQ																		
250V MDA	FL1	FL2	FL3	FL4	FCT1	FCT2	FSP1	FSP2	FB1	FB2	FGP1	FS24V	FFN1	FFN2				
250V AGC	ALL OTHERS																	

CONTROLLER POWER, BRAKE & EMERGENCY BRAKE

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

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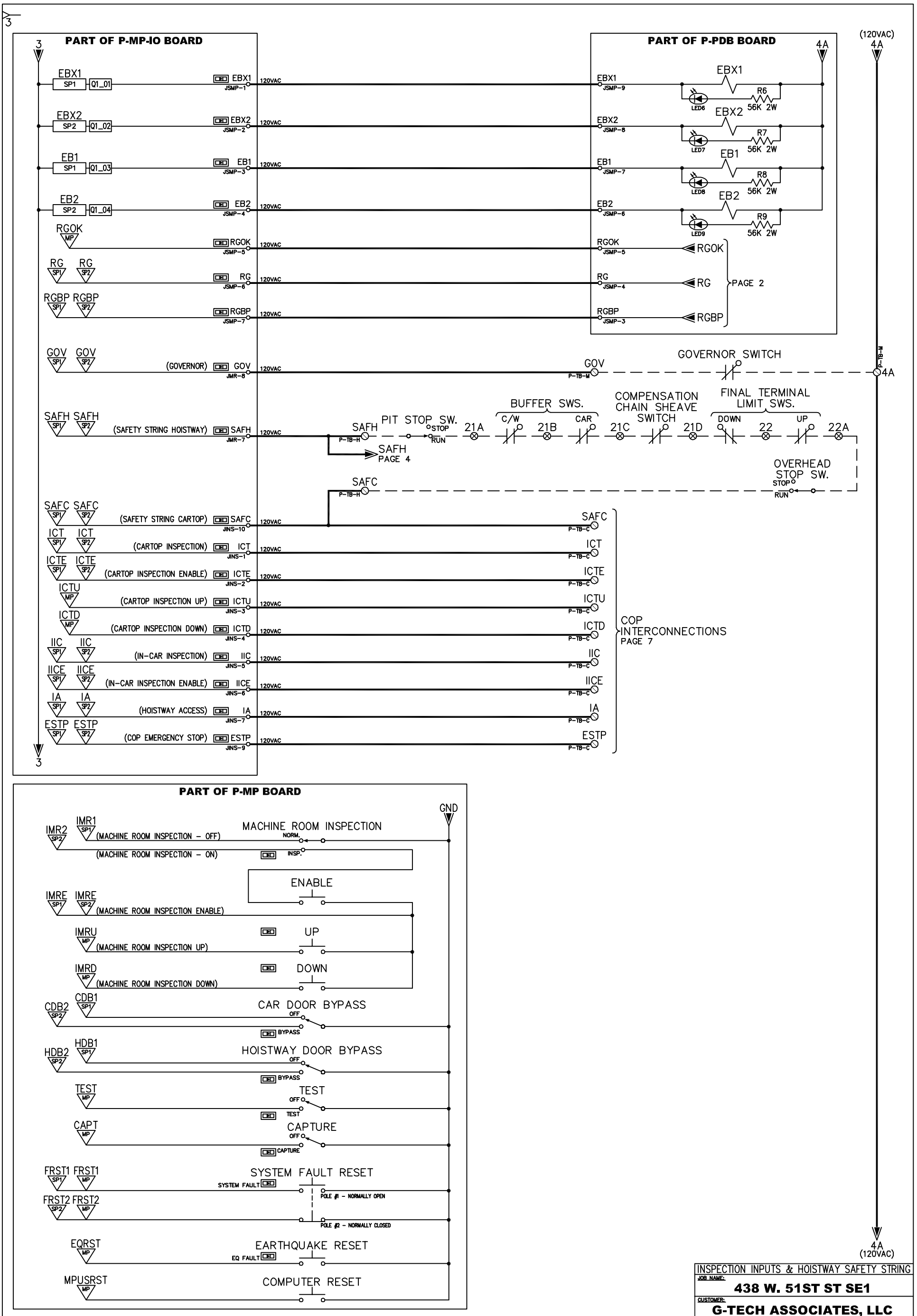
M_PIXEL-2.dwg 10/05/16
FILE: J18550_2.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S
JOB NUMBER: 16-18550
CONTROLLER ID: SIMPLEX | PAGE NUMBER: 2



[1] TERMINAL IS NOT PROVIDED IN CONTROLLER. REFERENCE POINT ONLY.

NOTE: REFER TO PAGE 9 FOR INSPECTION HOISTWAY ACCESS TOP AND BOTTOM DIRECTION SWITCHES

INSPECTION INPUTS & HOISTWAY SAFETY STRING

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY:	DATE:	REVISION DATE:
Jason Kirlis	10/27/16	

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M_PIXEL-3.dwg	09/14/16
FILE: J18550_3.dwg	

CONTROLLER MODEL:	
PIXEL AC VECTOR-MRL-S	
JOB NUMBER:	
16-18550	
CONTROLLER ID:	PAGE NUMBER:
SIMPLEX	3

4

3

PART OF P-MP-IO BOARD

STOP STOP SP1 SP2 — STOP JMR-1 — 120VAC — AA 5

Pin Pin SP1 SP2 — Pin JMR-2 — 120VAC — P 4

AAo2 SP2 Q4 — AAo JMR-3 — 120VAC — AA

AAi AAi SP1 SP2

AAo1 SP1 Q5

Po2 SP2 Q2 — Po JMR-4 — 120VAC

Pi Pi SP1 SP2

Po1 SP1 Q3

BKi BKi SP1 SP2 — BKi JMR-5 — 120VAC — BK 4

BK MP Q1_05 — BK JMR-6

BH MP Q1_06 — BH JSMP-9

CGF CGF SP1 SP2 — CGF (FRONT CAR GATE) JINS-8 — 120VAC

DLAT DLAT SP1 SP2 — DLAT (DOOR LOCK ACCESS TOP) JDL-1 — 120VAC

DLSF DLSF SP1 SP2 — DLSF (FRONT DOOR LOCK STRING) JDL-2 — 120VAC

DLAB DLAB SP1 SP2 — DLAB (DOOR LOCK ACCESS BOTTOM) JDL-3 — 120VAC

3

(120VAC) 4A

SAFH PAGE 3

P

BK

BK2

P 3

AA 6

PART OF P-PDB BOARD

3 JDV-1

6 JDV-2

JDV-3

JDV-4

RUN JDV-5

DON PAGE 1

RUN — R11 56K 2W — LED11

AA JDV-6

BH JSMP-1

BH — R10 56K 2W — LED10

CGF P-TB-C — TOC BOX INTERCONNECTION PAGE 6

DLAT P-TB-H — FRONT TOP DOOR LOCK

DLSF P-TB-H — FRONT INTERMEDIATE DOOR LOCKS

DLAB P-TB-H — FRONT BOTTOM DOOR LOCK

P-TB-H 4A

PART OF P-MP BOARD

RS485 SELECTOR COM.	
PIN	WIRE COLOR
1 (485+)	WHITE/ORANGE
2 (485–)	ORANGE
3 (GND)	WHITE/GREEN
4 (N/C)	BLUE
5 (N/C)	WHITE/BLUE
6 (N/C)	GREEN
7 (N/C)	WHITE/BROWN
8 (N/C)	BROWN

1 8 RJ45 — **SELECTOR PORT** — RJ45 JSEL — 1 — SELECTOR RJ45 P-TB-C 3 — SEL– P-TB-C — SEL+ P-TB-C

CAN_L CAN_H PAGE 5c

CAB CAN COM.	
PIN	WIRE COLOR
1 (CAN1+)	WHITE/ORANGE
2 (CAN1–)	ORANGE
3 (GND)	WHITE/GREEN
4 (N/C)	BLUE
5 (N/C)	WHITE/BLUE
6 (N/C)	GREEN
7 (N/C)	WHITE/BROWN
8 (N/C)	BROWN

1 8 RJ45 — **CAB CAN PORT** — RJ45 JCAN1 — 1 — CAB CAN PAGE 5b

1 — CAB CAN RJ45 P-TB-C 3 — CAN_L P-TB-C — CAN_H P-TB-C

TOC BOX INTERCONNECTIONS PAGE 6

HALL CAN COM.	
PIN	WIRE COLOR
1 (CAN2+)	WHITE/ORANGE
2 (CAN2–)	ORANGE
3 (GND)	WHITE/GREEN
4 (N/C)	BLUE
5 (N/C)	WHITE/BLUE
6 (N/C)	GREEN
7 (N/C)	WHITE/BROWN
8 (N/C)	BROWN

1 8 RJ45 — **HALL CAN PORT** — RJ45 JCAN2 — 1 — HALL CAN RJ45 P-TB-H 50 3 — CL P-TB-H — CH P-TB-H

HOISTWAY INTERCONNECTIONS PAGE 9

RS485 SELECTOR COM.	
PIN	WIRE COLOR
1 (485+)	WHITE/ORANGE
2 (485–)	ORANGE
3 (GND)	WHITE/GREEN
4 (N/C)	BLUE
5 (N/C)	WHITE/BLUE
6 (N/C)	GREEN
7 (N/C)	WHITE/BROWN
8 (N/C)	BROWN

1 8 RJ45 — **GPLS PORT** — RJ45 GPLS

4A (120VAC)

1 ETHERNET CABLE CAT5e TYPE 568–B STANDARD

MAIN & BRAKE CONTACTORS & DOOR LOCKS

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

ELEVATOR CONTROLS
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SACRAMENTO, CA 95826 USA
PHONE:(800)829-8106 FAX:(916)428-1728
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M_PIXEL–4.dwg | 03/24/16
FILE: J18550_4.dwg

CONTROLLER MODEL: PIXEL AC VECTOR–MRL–S

JOB NUMBER: 16–18550

CONTROLLER ID: SIMPLEX | PAGE NUMBER: 4

5

PART OF P-MP-IO BOARD

J7

U8 C.E. ELECTRONICS
(SERIAL P.I. DATA OUTPUT)

PI_DATA JINS-11

3 P-TB-H — 1 (COM)
50 P-TB-H — 2 (+24V)
DU3 P-TB-H — 3 (DATA)

SIMILAR CONNECTIONS FOR C.E.E. SERIAL FIXTURES (MICROCOMM) LOCATED IN THE HALL. REFER TO PAGE 7 FOR COP INTERFACE

(24VDC) 50F, (24VDC) 6, (24VDC) 50

FIRE ALARM INITIATING DEVICES

FRA MP	FRA JIO-1	24VDC	FRA P-TB-M	MAIN FLOOR — (RETURNS CAR(S) TO THE ALTERNATE FIRE RECALL FLOOR)
FRS MP	FRS JIO-2	24VDC	FRS P-TB-M	ALL FLOORS EXCEPT THE MAIN — (RETURNS CAR(S) TO THE MAIN FIRE RECALL FLOOR)
HF1 MP	HF1 JIO-3	24VDC	HF1 P-TB-M	HOISTWAY OR MACHINE ROOM — (RETURNS CAR(S) TO THE MAIN FIRE RECALL FLOOR & FLASHES COP FIRE INDICATOR(S) "85X")
HF2 MP	HF2 JIO-4	24VDC	HF2 P-TB-M	HOISTWAY OR MACHINE ROOM — (RETURNS CAR(S) TO THE ALTERNATE FIRE RECALL FLOOR & FLASHES COP FIRE INDICATOR(S) "85X")

P-TB_M → 50F

(24VDC) S24V

GVT — GOVERNOR TENSION SHEAVE — S24V
(CONTACT CLOSES WHEN TENSION SHEAVE MALFUNCTIONS)

P-MP-IO BOARD CONFIGURABLE I/O

FON2 MP	14 JIOEX-1	24VDC	FON2 P-TB-M 14	ADDITIONAL FIRE RECALL SW. OFF / RECALL (FIRE COMMAND PANEL) → P-TB-H → 50
EPPT MP	13 JIOEX-2	24VDC	EPPT P-TB-M 13	NTE125 NTE125 — EPTC NTE125 NTE125 — EMERGENCY POWER PRE-TRANSFER CONTACT (CLOSE 5-10 SECONDS PRIOR TO TRANSFERING FROM EMERGENCY TO NORMAL POWER)
EPI MP	12 JIOEX-3	24VDC	EPI P-TB-M 12	EMERGENCY POWER CONTACT (OPEN FOR NORMAL POWER & CLOSED FOR EMERGENCY POWER)
BPI MP	11 JIOEX-4	24VDC	BPI P-TB-M 11	CONTACT ON BRAKE — BPIX (CONTACT CLOSES WHEN BRAKE IS PICKED)
				CONTACT ON EMERGENCY BRAKE (CONTACT CLOSES WHEN BRAKE IS PICKED)
BHA MP	04 JIOEX-5		BHA P-TB-M 04	BHA
F102 MP	03 JIOEX-6		F102 P-TB-M 03	FIRE SERVICE (FIRE COMMAND PANEL)
EPRUN MP	02 JIOEX-7		EPRUN P-TB-M 02	EMERGENCY POWER CAR SELECTED TO RUN
EPL MP	01 JIOEX-8		EPL P-TB-M 01	EMERGENCY POWER

SW1 (ON, 1 2 3 4 5 6 7 8 9)

JP_BK (1 2)

JTAG2

JP_SP1 (OFF / ON)

JISP

GOV1 GOV2 SAFC1 SAFC2 — CODE DEMO

3

6 (24VDC) 50 (24VDC)

P-MP-IO BOARD – INPUTS/OUTPUTS

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE: 02/15/2017 JPK

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M_PIXEL-5.dwg 03/24/16
FILE: J18550_5-M1.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S
JOB NUMBER: 16-18550
CONTROLLER ID: SIMPLEX
PAGE NUMBER: 5

5b

3

(24VDC) 6

PAGE 4 CAB CAN

P-CNEX BOARD #1

J19 +V +V –V –V

3

HLF4 MP — T4 HLF4 I16 — FRONT HALL CALL CARD READER LANDING 4 (CLOSE TO SECURE FLOOR)

MP — O16

HLF3 MP — HLF3 I15 — FRONT HALL CALL CARD READER LANDING 3 (CLOSE TO SECURE FLOOR)

MP — O15

HLF2 MP — HLF2 I14 — FRONT HALL CALL CARD READER LANDING 2 (CLOSE TO SECURE FLOOR)

MP — O14

HLF1 MP — HLF1 I13 — FRONT HALL CALL CARD READER LANDING 1 (CLOSE TO SECURE FLOOR)

MP — O13

CMRO MP — T3 CMRO I12 — CAR CALL CARD READER OVERRIDE (OFF / ON)

MP — O12

MCLF7 MP — MCLF7 I11 — FRONT CAR CALL CARD READER LANDING 7 (CLOSE TO SECURE FLOOR)

MP — O11

MCLF6 MP — MCLF6 I10 — FRONT CAR CALL CARD READER LANDING 6 (CLOSE TO SECURE FLOOR)

MP — O10

MCLF5 MP — MCLF5 I9 — FRONT CAR CALL CARD READER LANDING 5 (CLOSE TO SECURE FLOOR)

MP — O9

MCLF4 MP — T2 MCLF4 I8 — FRONT CAR CALL CARD READER LANDING 4 (CLOSE TO SECURE FLOOR)

MP — O8

MCLF3 MP — MCLF3 I7 — FRONT CAR CALL CARD READER LANDING 3 (CLOSE TO SECURE FLOOR)

MP — O7

MCLF2 MP — MCLF2 I6 — FRONT CAR CALL CARD READER LANDING 2 (CLOSE TO SECURE FLOOR)

MP — O6

MCLF1 MP — MCLF1 I5 — FRONT CAR CALL CARD READER LANDING 1 (CLOSE TO SECURE FLOOR)

MP — O5

T1

MP — I4

HCRO MP — HCRO O4 — SYSTEM TROUBLE JEWEL

MP — I3

DCLOF MP — DCLOF O3 — DOOR CLOSE JEWEL

MP — I2

DOLOF MP — DOLOF O2 — DOOR OPEN JEWEL

CTL MP — CTL I1 — CAR TO LOBBY (OFF / ON)

MP — O1

CNEX BOARD CONFIGURABLE I/O

J18 RJ45

J25 V+ V– IN IN

POWER

T5 V+ 24VDC; V– –24VDC; CL; CH; V+ 24VDC; V– –24VDC; CL; CH

CAN_RX CAN_TX

J23 CAN BUS TERMINATION JUMPER (OFF / ON)

RESET SW2

J17 RJ45

RJ45

CN_EX CONFIGURATION SW1 (1 2 3 4 ON)

JTAG

JISP

V+ V+ V– V– J20

3

6 (24VDC)

CAN_L CAN_H PAGE 5c

MP P–CNEX BOARD – EXPANSION I/O

JOB NAME: 438 W. 51ST ST SE1

CUSTOMER: G-TECH ASSOCIATES, LLC

ENGINEERED BY: Jason Kirlis

DATE: 10/27/16

REVISION DATE:

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PHONE: (800)829–8106 FAX: (916)428–1728
www.elevatorcontrols.com

CONTROLLER MODEL: PIXEL AC VECTOR–MRL–S

JOB NUMBER: 16–18550

CONTROLLER ID: SIMPLEX

PAGE NUMBER: 5b

M_PIXEL–5b.dwg 08/23/16

FILE: J18550_5b.dwg

5c

3

(24VDC) 6

PAGE_4 CAB CAN

P-CNEX BOARD #2

J19 V+ V+ V− V−

J18 RJ45

RJ45

J25 V+ V− NC NC

POWER

CAN_RX

CAN_TX

J23 CAN BUS TERMINATION JUMPER

RESET SW2

T5

V+ 24VDC

V− −24VDC

CL

CH

V+ 24VDC

V− −24VDC

CL

CH

3

CNEX BOARD CONFIGURABLE I/O

T4

MP I16 O16 I15 O15 I14 O14 I13 O13

T3

MP I12 O12 I11 O11 I10 O10 I9 O9

T2

MP I8 O8 I7 O7 I6 O6 I5 O5

HMRO MP T1 HMRO I4 O4

HLF7 MP HLF7 I3 O3

HLF6 MP HLF6 I2 O2

HLF5 MP HLF5 I1 O1

HALL CALL CARD READER OVERRIDE OFF ON

FRONT HALL CALL CARD READER LANDING 7

(CLOSE TO SECURE FLOOR)

FRONT HALL CALL CARD READER LANDING 6

(CLOSE TO SECURE FLOOR)

FRONT HALL CALL CARD READER LANDING 5

(CLOSE TO SECURE FLOOR)

J17 RJ45

RJ45

CAN_L

CAN_H

PAGE 4

CN_EX CONFIGURATION

ON 1 2 3 4 SW1

JTAG

JISP V+ V+ V− V−

J20

MP P−CNEX BOARD − EXPANSION I/O

JOB NAME: 438 W. 51ST ST SE1

CUSTOMER: G-TECH ASSOCIATES, LLC

ENGINEERED BY: Jason Kirlis

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M_PIXEL−5b.dwg 08/23/16

FILE: J18550_5c.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

JOB NUMBER: 16−18550

CONTROLLER ID: SIMPLEX

PAGE NUMBER: 5c

6

MAIN FRONT CAR OPERATING PANEL

COP TO TOC HARNESS

TOC & LANDA (AUX) COMMUNICATION (CAB CAN)
- CAN_H — 1
- CAN_L — 1
- CSHLD — 1

TWISTED SHIELDED PAIR

LANDA (MAIN) COMMUNICATION (RS485)
- SEL− — 1
- SEL+ — 1
- SSHLD — 1

TWISTED SHIELDED PAIR

PART OF P-TOC BOARD

JTRAV
- CH
- CL
- SHLD
- SHLD
- SEL−
- SEL+

CAB CAN DRIVER

SEL− / SEL+ → PAGE 6B

JCCB1
- V+ 24VDC
- V− −24VDC
- SHLD
- CL
- CH

JLW
- V+ 24VDC
- V− −24VDC
- LLI — LIGHT LOAD
- HLI — HEAVY LOAD

JINS
- 3
- ICTD
- ICTU

JIOEX
- I1 — MP
- LFCO O1 — LFCO MP — 3
- I2 — MP
- O2 — MP
- I3 — MP
- O3 — MP
- FRO — FRO MP

P-TOC BOARD CONFIGURABLE I/O

LTO

FIRE SERVICE
- V+ J3-3 (P-TB-M)
- J4-3 V+
- BLACK + / − WHITE

24VDC SWITCHING POWER SUPPLY SPD-24120
- 115 VAC / 230 VAC
- − +
- ⏚ N L

FPE 1A
- FPE J4-9 (P-TB-M)
- FPE J3-9 (120VAC)

(GROUND) − 3 — 1 — #18AWG-GREEN (GROUND) — 3 3 3 2 — J5-1 P-TB-M J6-1

(120VAC) − 4A — 1 — #18AWG-RED (120VAC) — 4A 4A 4A 2 — J5-2 P-TB-M J6-2

(CARTOP INSP.) − ICT — 1 — #22AWG-BLUE (CAR TOP INSPECTION) — ICT ICT — J5-3 P-TB-M J6-3
- CARTOP INSPECTION
- INSP. o
- BLUE — NORM. — RED
- 20E P-TB-M J1-4
- CAR HANGING SWITCH #2

(CARTOP INSP. ENABLE) − ICTE — 1 — #22AWG-ORANGE (CAR TOP INSP ENABLE) — ICTE ICTE — J5-4 P-TB-M J6-4
- ENABLE
- ORANGE — RED

(CARTOP INSP. UP) − ICTU — 1 — #22AWG-PURPLE (CAR TOP INSP UP) — ICTU ICTU — J5-5 P-TB-M J6-5
- UP
- PURPLE — RED
- 20D P-TB-M J1-3
- CAR HANGING SWITCH #1

(CARTOP INSP. DOWN) − ICTD — 1 — #22AWG-YELLOW (CAR TOP INSP DN) — ICTD ICTD — J5-6 P-TB-M J6-6
- DOWN
- YELLOW — RED

(SAFETY STRING CARTOP) − 20B — 1 — #22AWG-BROWN (TOC SAFETIES) — 20B 20B — J1-1 P-TB-M J2-1
- CARTOP INSPECTION STOP SW.
- BROWN — o STOP — RUN — GREY
- 20C 20C — J2-2 P-TB-M J1-2
- EMERGENCY EXIT SW. (POLE 1)

ALARM BELL
- B−OUT — 1 — #22AWG-PINK (BELL OUT) — B-OUT B-OUT — J1-5 P-TB-M J2-5
- B−RTN — 1 — #22AWG-GREY (BELL RETURN) — B-RTN B-RTN — J1-6 P-TB-M J2-6
- EMERGENCY BELL (+) (−)
- EMERGENCY EXIT SW. (POLE 2)

(ALARM BATTERY POSITIVE) − BPOS — 1 — #22AWG-RED (BATTERY POSITIVE) — BPOS BPOS — J1-7 P-TB-M J2-7

(CAR GATE FRONT) − CGF — 1 — #22AWG-WHITE (CAR GATE FRONT) — CGF CGF — J1-8 P-TB-M J2-8

(CAR GATE REAR) − CGR — 1 — #22AWG-BLACK (CAR GATE REAR) — CGR CGR — J3-1 P-TB-M J4-1

24VDC POWER SUPPLY
- V+ — 1 — #18AWG-BLACK (+24VDC) — V+ V+ — J3-2 P-TB-M J4-2
- V− — 1 — #18AWG-WHITE (24VDC COM) — V− V− — J3-4 P-TB-M J4-4
- V− V− — J3-5 P-TB-M J4-5

TOC POWER SUPPLY (208VAC)
- TOC1 — 1 — #18AWG-RED (TOC1 POWER) — TOC1 2
- TOC2 — 1 — #18AWG-YELLOW (TOC2 POWER) — TOC2 2

GND 2

115VAC CAB POWER
- WHT — 1 — #14AWG-WHITE — WHT 2 — WHT #14AWG
- BLK — 1 — #14AWG-BLACK — BLK 2 — BLK #14AWG
- GRN — 1 — #14AWG-GREEN — GRN 2 — GRN #14AWG

(CAB/FAN/LIGHT TIMED POWER) − GRY — 1 — #14AWG-GREY (FAN/LIGHT-TIMED) — GRY 2 — GRY #14AWG

CARTOP INSPECTION STATION
- FCIS 15A
- LIGHT OFF / ON
- LTO 2 / LTO 1

115VAC CAB/FAN LIGHT POWER
- LT — 1 — #14AWG-ORANGE (CAB LIGHT) — LT LT — J3-6 P-TB-M J4-6 — CAB LIGHT
- FLO — 1 — #14AWG-RED (FAN LOW) — FLO FLO — J3-7 P-TB-M J4-7
- FHI — 1 — #14AWG-YELLOW (FAN HIGH) — FHI FHI — J3-8 P-TB-M J4-8 — CAB FAN
- SP1 — 1 — #18AWG-BLUE (SPARE #1) — SP1 SP1 — J3-10 P-TB-M J4-10 N/C

FDPF1 4A / FDPF2 4A

GND 2 — DPF1 DPF2 — PAGE 6b (208VAC)

FUSE LIST

FUSE TYPE	FUSES
250V MDA	FCIS, FDPF1, FDPF2
250V AGC	ALL OTHERS

1 TERMINAL LOCATED IN COP (PROVIDED BY COP MANUFACTURER)

2 PANEL MOUNT TERMINAL LOCATED IN THE TOC (CARTOP CABINET)

TRAVELING CABLE TO T.O.C. BOX (TOP OF CAR)

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis — DATE: 10/27/16 — REVISION DATE:

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M_PIXEL-6.dwg 03/14/16
FILE: J18550_6.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

JOB NUMBER: 16-18550

CONTROLLER ID: SIMPLEX — PAGE NUMBER: 6

6b

PART OF P-TOC BOARD

3

24V

JASEL

V+ BROWN (PIN1) UB+

V− BLUE (PIN3) GND

SHIELD

LED5

SELA− MP

SELA+ MP

SELA− BLACK (PIN4) RS485−

SELA+ WHITE (PIN2) RS485+

N/C GRAY (PIN5) NOT USED

LANDA CABLE (EC P/N 24−006−021) 16 FEET

2

LANDA TOP TAPE READER (AUXILIARY)

GREEN YELLOW RED

JMSEL

V+ BROWN (PIN1) UB+

V− BLUE (PIN3) GND

SHIELD

PAGE 6 SEL− SEL+

SEL− BLACK (PIN4) RS485−

SEL+ WHITE (PIN2) RS485+

N/C GRAY (PIN5) NOT USED

LANDA CABLE (EC P/N 24−006−021) 16 FEET

2

LANDA BOTTOM TAPE READER (MAIN)

GREEN YELLOW RED

>>> POS^ 332000

ABSOLUTE POSITION CODED TAPE (STAINLESS STEEL)

>>> POS^ 331000

START POSITION (BOTTOM) − LOWEST POSITIONAL VALUE ON TAPE

JTOC

J3 NC NC V− V+

RJ45

JTOC1

TOC−CAN

V+ 24VDC

V− −24VDC

SHLD

CL2

CH2

SHIELDED PAIR

CROSSHEAD SENSOR SV3000

USB

CAN−L

CAN−H

EMCO LOADWEIGHER UNIT DLCO CAN−OPEN

LOAD CELL 1 2 3 4 5 6 7 8 9 10

24V (24VDC)

PAGE 6 DPF1 DPF2

FRONT DOOR OPERATOR GAL MOVFR

3 1 GND

DPF1 1 L1

DPF2 1 L2

200−230 VAC

COM

HEAVY

OPEN

CLOSE

NUDG

DOOR INPUT SIGNALS

JDRF

DOOR OUTPUT COMMON COMF

3V

DBF MP AQV214E OP1_K4 DOOR BOOST (HEAVY DOOR) DBF

DOF MP AQV214E OP1_K3 DOOR OPEN DOF

DCF MP AQV214E OP1_K2 DOOR CLOSE DCF

NDF MP AQV214E OP1_K1 NUDGING NDF

DPMF MP DOOR POSITION MONITOR DPMF

DCLF MP DOOR CLOSE LIMIT DCLF

DOLF MP DOOR OPEN LIMIT DOLF

V− −24VDC

V+ 24VDC

N.O. COM DOOR POSITION MONITOR

N.C. COM DOOR CLOSE LIMIT

N.C. COM DOOR OPEN LIMIT

CGF P−TB−M, J2−7

4A 1 120VAC

GS1 GS CAR GATE

JSEF

V+ 24VDC

V− −24VDC

SEF MP SEF

PHEF MP PHF

FRONT INFRARED DETECTOR

3 1

POWER SUPPLY 120VAC

FPE P−TB−M, J3−6

3 (GND)

1 PANEL MOUNT TERMINAL LOCATED IN THE TOC (CARTOP CABINET)

2 REFER TO PAGE QR5 FOR LANDA POSITION SYSTEM INSTALLATION INSTRUCTIONS

P−TOC BOARD − FRONT DOOR OPERATOR INTERFACE

JOB NAME: 438 W. 51ST ST SE1

CUSTOMER: G-TECH ASSOCIATES, LLC

ENGINEERED BY: Jason Kirlis

DATE: 10/27/16

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M_PIXEL−6b.dwg 08/23/16

FILE: J18550_6b.dwg

CONTROLLER MODEL: PIXEL AC VECTOR−MRL−S

JOB NUMBER: 16−18550

CONTROLLER ID: SIMPLEX

PAGE NUMBER: 6b

7

MAIN CONTROLLER

TRAVELING CABLE

PART OF MAIN FRONT COP FIXTURES

TERMINAL STRIP IN COP BY COP MANUFACTURER OR CUSTOMER SUPPLIED
MINIMUM 40 TERMINALS REQUIRED

COP PHONE
- T1 — P-TB-C, J4-4
- T2 — P-TB-C, J4-3

LANDA (MAIN) COMMUNICATION (RS485)
- SSHLD — P-TB-C, J6-1
- SEL− — P-TB-C, J6-2
- SEL+ — P-TB-C, J6-3

TOC & LANDA (AUX) COMMUNICATION (CAB CAN)
- CSHLD — P-TB-C, J6-4
- CAN_L — P-TB-C, J6-5
- CAN_H — P-TB-C, J6-6

- (CARTOP INSP.) – ICT — P-TB-C, J2-6
- (CARTOP INSP. ENABLE) – ICTE — P-TB-,C, J2-5
- (CARTOP INSP. UP) – ICTU — P-TB-C,,J2-4
- (CARTOP INSP. DOWN) – ICTD — P-TB-C, J2-3
- (CAR GATE FRONT) – CGF — P-TB-C, J4-9
- (CAR GATE REAR) – CGR — P-TB-C, J4-8
- (GROUND) – 3 — P-TB-C, J2-8
- (SPARE WIRE) – SP1

TWISTED SHIELDED PAIR

T1 / T2 → EMERGENCY TELEPHONE

SSHLD, SEL−, SEL+, CSHLD, CAN_L, CAN_H, ICT, ICTE, ICTU, ICTD, CGF, CGR, 3, SP1 N/C

PART OF MAIN FRONT P-COP BOARD

JCCB — J2 (V−, V+, NC, NC)

JCCB1
- V+ 24VDC
- V− −24VDC
- SHLD
- CL
- CH

CAB−CAN

JISP, JTAG, RESET, PWR, STAT

8M 4M 2M 1M 8L 4L 2L 1L

Automatic ELEVATOR #1
TARGET 005

Hi, I'm Pixel
What would you like me to do?
Install
Adjust
Troubleshoot
07-29-2011 12:00:00 PM

SK-1 SK-2 SK-3 SK-4

HOME HELP

TOUCH & GO KNOB

P-COP

TOC POWER SUPPLY
- TOC1
- TOC2

115VAC CAB POWER
- WHT
- BLK
- GRN

- (SERIAL PI DATA) – DU3 — P-TB-C, J4-5
- (SAFETY STRING CARTOP) – SAFC — P-TB-C, J4-6
- (120VAC) – 4A — P-TB-C, J2-7
- (HOISTWAY ACCESS) – IA — P-TB-C, J4-10
- (IN-CAR INSP.) – IIC — P-TB-C, J2-2
- (IN-CAR INSP. ENABLE) – IICE — P-TB-C, J2-1
- (EMERGENCY STOP) – ESTP — P-TB-C, J4-7

TOC1, TOC2, WHT, BLK, GRN, DU3, SAFC, 4A, IA, IIC, IICE N/C, ESTP

HOISTWAY ACCESS INSPECTION
ACCESS
NORM.

JUMPER

EMERGENCY STOP SW.
STOP
RUN

PART OF TOC BOX (TOP OF CAR)

COP TO TOC HARNESS [1]

ALARM BELL
- B-OUT — P-TB-M, J1-5 — #22AWG-PINK (BELL OUT)
- B-RTN — P-TB-M, J1-6 — #22AWG-GREY (BELL RETURN)

- (ALARM BATTERY POSITIVE) – BPOS — P-TB-M, J1-7 — #22AWG-RED (BATTERY POSITIVE)

24VDC POWER SUPPLY
- V+ — P-TB-M, J3-2 — #18AWG-BLACK (+24VDC)
- V− — P-TB-M, J3-3 — #18AWG-WHITE (24VDC COM)

115VAC CAB/FAN LIGHT POWER
- LT — P-TB-M, J3-4 — #14AWG-ORANGE (CAB LIGHT)
- FLO — P-TB-M, J3-5 — #14AWG-RED (FAN LOW)
- FHI — P-TB-M, J3-6 — #14AWG-YELLOW (FAN HIGH)

- (CAB/FAN/LIGHT TIMED POWER) – GRY — #14AWG-GREY (FAN/LIGHT-TIMED)
- (SAFETY STRING CARTOP) – 20B — P-TB-M, J2-1 — #22AWG-BROWN (TOC SAFETIES)

B-OUT, B-RTN, BPOS, V+, V−, LT, FLO, FHI, GRY, 20B

ALARM
BATTERY 6V OR 12V (− +)

3 DATA
2 24VDC
1 GND

SIMILAR CONNECTIONS FOR C.E.E. SERIAL FIXTURES (MICROCOMM) LOCATED IN THE CAR. REFER TO PAGE 5 FOR HALL INTERFACE

TYPICAL COP FAN & LIGHT SWITCH WIRING

OFF LIGHT ON
LOW FAN OFF HIGH
GRY, BLK, WHT, GRN

20A — SLACK CABLE OR COMP. SWITCH — PLANK SWITCH — 20 — JUMPER

PART OF P-TOC BOARD

PWR, STAT, RESET, JTAG, JISP

JCCB — J2 (NC, NC, V−, V+)

JCCB1
- V+ 24VDC
- V− −24VDC
- SHLD
- CL
- CH

CAB−CAN

8M 4M 2M 1M 8L 4L 2L 1L

Automatic ELEVATOR #1
TARGET 005

Hi, I'm Pixel
What would you like me to do?
Install
Adjust
Troubleshoot
07-29-2011 12:00:00 PM

SK-1 SK-2 SK-3 SK-4

HOME HELP

TOUCH & GO KNOB

P-TOC

[1] THIS PORTION OF THE TOC TO COP HARNESS ALSO APPEARS ON PAGE 6 TO BETTER SHOW DEVICE INTERCONNECTIVITY.

TOC BOX TO COP INTERCONNECTIONS

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

ELEVATOR CONTROLS
6150 WAREHOUSE WAY
SACRAMENTO, CA 95826 USA
PHONE:(800)829-8106 FAX:(916)428-1728
www.elevatorcontrols.com

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

JOB NUMBER: 16-18550

M_PIXEL-7.dwg | 3/24/16
FILE: J18550_7.dwg

CONTROLLER ID: SIMPLEX | PAGE NUMBER: 7

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PART OF P-COP BOARD
MAIN FRONT

1 2 3 4
ON
1 2 3 4 SW2
COP CONFIGURATION

FIRE CAR CALL CANCEL

JFCC
V+
V+
FCC
FCC MP

FIRE PHASE 2
NORMAL
HOLD
FIREMAN SERVICE

JMIN
F20FF
FDHD
FCS
DHD
DBC
DOB
IND
V+ 24VDC

F20FF MP
FDHD MP
FCS MP
DHD MP
DBC MP

FRONT DOOR CLOSE

FRONT DOOR OPEN

INDEPENDENT SERVICE
OFF
ON

JDOB
V+
V+
DOB

JDBC
V+
V+
DBC

JIIC
V+
IICU
V+
IICD

IICU MP
IICD MP
DOB MP
IND MP

JCOP
RJ45
J2
V-
V+
NC
NC

JCOP1
V+ 24VDC
V- -24VDC
SHLD
CL
CH

COP-CAN

JCCB1
V+ 24VDC
V- -24VDC
SHLD
CL
CH

P-COP BOARD CONFIGURABLE I/O

3

JIOEX3
MP 012
MP I12
MP 011
MP I11
MP 010
MP I10
MP 09
CMRO MP
CMRO I9

JIOEX2
EPO MP
EPO 08
MP I8
CF7 MP
CF7L 07
CF7 MP
CF7B I7
CF6 MP
CF6L 06
CF6 MP
CF6B I6
CF5 MP
CF5L 05
CF5 MP
CF5B I5

JIOEX1
CF4 MP
CF4L 04
CF4 MP
CF4B I4
CF3 MP
CF3L 03
CF3 MP
CF3B I3
CF2 MP
CF2L 02
CF2 MP
CF2B I2
CF1 MP
CF1L 01
CF1 MP
CF1B I1

CAR CALL CARD READER OVERRIDE
OFF
ON

EMERGENCY POWER

24VDC
FRONT CAR CALL LANDING 7
FRONT CAR CALL LANDING 6
FRONT CAR CALL LANDING 5
FRONT CAR CALL LANDING 4
FRONT CAR CALL LANDING 3
FRONT CAR CALL LANDING 2
FRONT CAR CALL LANDING 1

J85X
V+
85X
V+

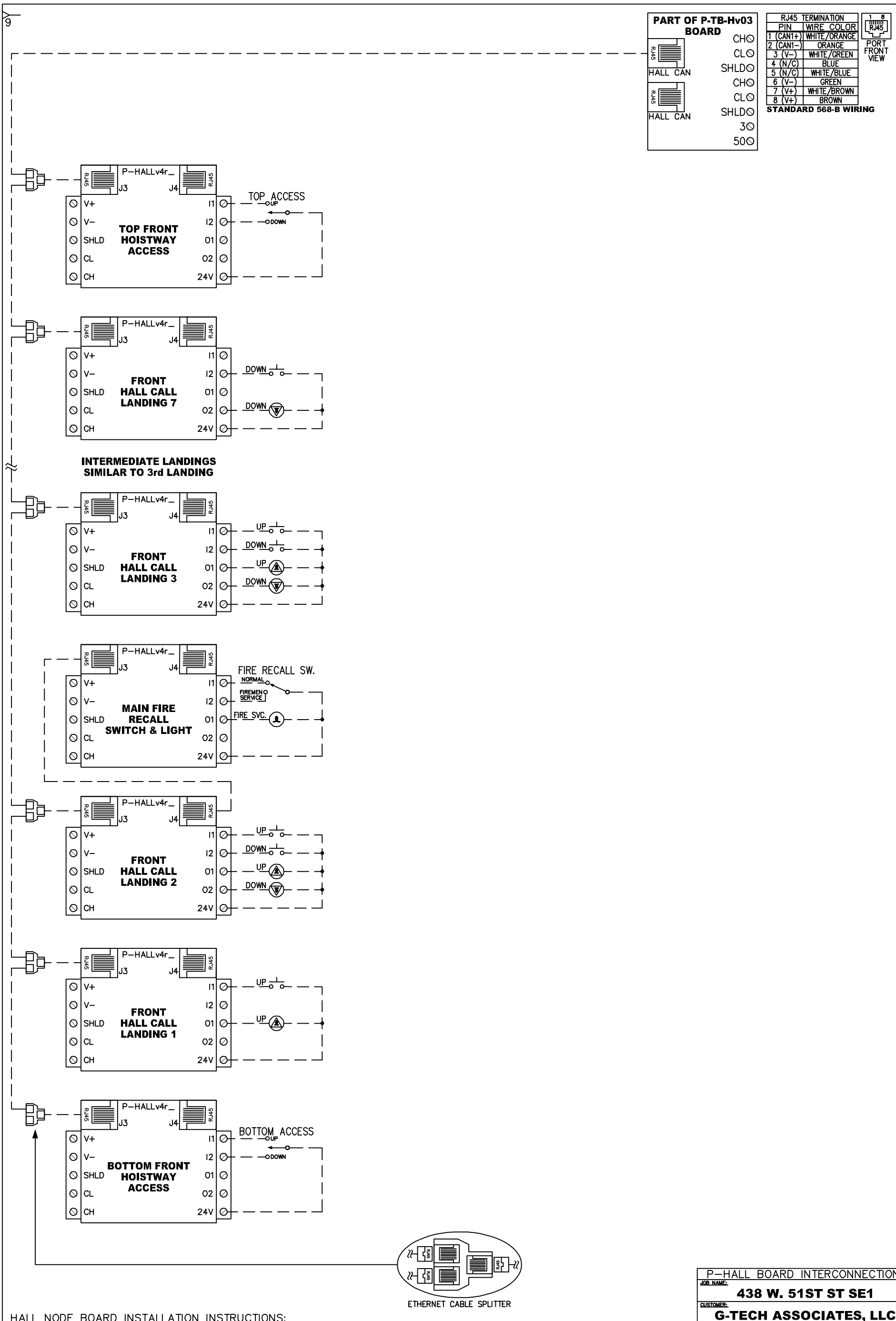
JGE
V+
GEU
V+
GED

JMOUT
GEU MP Q1 GEU
GED MP Q2 GED
PG MP Q3 PG
FWI MP FWI
85X MP 85X
NDB MP NDB

FRONT CAR LANTERN & CHIME
CHIME
FIRE WARNING
BUZZER
FIRE SERVICE
FRONT NUDGING
BUZZER

P-COP BOARD (FRONT) – FIXTURE INTERFACE	
JOB NAME: **438 W. 51ST ST SE1**	
CUSTOMER: **G-TECH ASSOCIATES, LLC**	
ENGINEERED BY: Jason Kirlis	DATE: 10/27/16
REVISION DATE:	
ELEVATOR CONTROLS	CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S
6150 WAREHOUSE WAY SACRAMENTO, CA 95826 USA PHONE:(800)829-8106 FAX:(916)428-1728 www.elevatorcontrols.com	JOB NUMBER: 16-18550
M_PIXEL-8.dwg 08/23/16 FILE: J18550_8.dwg	CONTROLLER ID: SIMPLEX / PAGE NUMBER: 8

9



HALL NODE BOARD INSTALLATION INSTRUCTIONS:

ALL SERIAL HALL FIXTURES MUST BE RATED 24VDC/0.5A MAX. PEAK/0.2A MAX. CONTINUOUS.

ALL HALL CAN COMMUNICATION CABLES ARE CAT5e TERMINATED WITH RJ45 CONNECTOR AND WIRED TO 568–B STANDARDS

1. CONNECT THE HALL CALL FIXTURE TO THE P–HALL BOARD I/O AS SHOWN IN THE EXAMPLE ABOVE.
2. CONFIGURE THE P–HALL BOARD DIP SWITCH SETTINGS FOR THE CORRESPONDING HALL CALL FIXTURE (P–HALL BOARD CONFIGURATION REFERENCE TABLE IS LOCATED ON PAGE QR4b).
3. USE HALL CAN CABLES AND SPLITTERS TO INTERCONNECT THE P–HALL BOARDS AS SHOWN IN THE EXAMPLE ABOVE, THESE CABLES PROVIDE HALL CAN COMMUNICATION & POWER (24VDC/GND) TO EACH P–HALL BOARD.

P–HALL BOARD INTERCONNECTIONS

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

ELEVATOR CONTROLS
6150 WAREHOUSE WAY
SACRAMENTO, CA 95826 USA
PHONE:(800)829–8106 FAX:(916)428–1728
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CONTROLLER MODEL: PIXEL AC VECTOR–MRL–S

JOB NUMBER: 16–18550

CONTROLLER ID: SIMPLEX | PAGE NUMBER: 9

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FILE: J18550_9.dwg

RELAY CONTACT COUNT

RELAY NAME:	RELAY DESCRIPTION:	RELAY TYPE:	COIL AREA:	RELAY POLE NUMBER: 1 NO/NC	2 NO/NC	3 NO/NC	4 NO/NC	5 NO/NC	6 NO/NC
AA	MOTOR CONTACTOR	3	4	1/	1/	1/	1/	/4	4/
BH	BRAKE HOLD	32	4	/2	/2				
BHA	BRAKE HOLD (EMERGENCY BRAKE)	14	5	/2	/2				
BK	BRAKE ENABLE	31	4	2/	2/		/4		
BK2	BRAKE ENABLE #2	16	4	2/	2/				
EB1	EMERGENCY BRAKE 1	32	3	2/	2/				
EB2	EMERGENCY BRAKE 2	32	3	2/	2/				
EBK	EMERGENCY BRAKE	16	2	2/	2/				
EBX1	EMERGENCY BRAKE AUX. 1	32	3	2/	2/				
EBX2	EMERGENCY BRAKE AUX. 2	32	3	2/	2/				
LTO	CAB LIGHT & FAN CONTROL [TOC]	14	6	/6	/6				
P	RUN ENABLE	31	4	2/	2/	4/	/4	1/	
RUN	DRIVE ON SIGNAL	32	4	2/	2/				

PIXEL BOARD NAMES

NAME:	BOARD DESCRIPTION:	EC PART #:
P-PDB	PIXEL POWER DISTRIBUTION BOARD	17-002-129
P-MP	PIXEL MAIN MICROPROCESSOR BOARD	17-002-123
P-MP-IO	PIXEL MAIN MICROPROCESSOR I/O BOARD	17-002-124
P-TOC	PIXEL TOP OF CAR MICROPROCESSOR BOARD	17-002-121
P-COP	PIXEL CAR OPERATING PANEL MICROPROCESSOR BOARD	17-002-119
P-HALL	PIXEL HALL NODE BOARD	17-002-114
P-TB-M	PIXEL TERMINAL BOARD MACHINE ROOM CONNECTIONS	17-002-137
P-TB-C	PIXEL TERMINAL BOARD CARTOP CONNECTIONS	17-002-138
P-TB-H	PIXEL TERMINAL BOARD HOISTWAY CONNECTIONS	17-002-139
P-CNEX	PIXEL EXPANSION I/O BOARD CAN BUS	17-002-116
P-MP-RDOOR	PIXEL P-MP REAR DOOR I/O EXTENDER BOARD	17-002-128
P-HNA	PIXEL HALL NETWORK ADAPTER BOARD	17-002-135

NOTE: AA #4-#6 CONTACTS ARE AUXILARY CONTACTS
P #5 CONTACT IS A AUXILARY CONTACT

RELAY TYPES

#:	MANUFACTURER PART #:	EC PART #:
1	RUS4S-CD-110 4PDT 110VDC	04-001-001
2	TRN/D-0 311 2PDT 110VAC/DC	-
3	C-H XTCE115G00A	12-020-051A
4	RU4S-CA-110 4PDT 120VAC	04-001-005
5	PM17DY-110 4PDT 110VDC	04-002-001
6	PRD-11DHO-1102PDT 110VDC	04-002-002
7	KUP-14D35-1103PDT 110VDC	04-001-002
8	KUP-14A35-1203PDT 120VAC	04-001-006
9	PM17AY120 4PDT 120VAC	-
10	DS2-M-DC48 2PDT 48VDC	-
11	DS2-ML-DC48 2PDT 48VDC(L)	-
12	DS2-M-DC12 2PDT 12VDC	-
13	DS2-ML-DC12 2PDT 12VDC(L)	04-001-009
14	KUP-14D15-24 3PDT 24VDC	04-001-016
15	PT-570-512 4PDT 12VAC	04-001-014
16	PRD-11AHO-120 2PDT 120VAC	04-002-003
17	PT-570-048 4PDT 48VDC	04-001-015
18	PT-570-024 4PDT 24VDC	04-001-003
19	RU4S-A24 4PDT 24VAC	04-001-017
20	REVERSE PHASE RELAY	-
21	EHDB220C-1L 600V 220A 120VAC COIL	12-008-006A
22	KUP-14A35-240 3PDT 240VAC	04-001-008
23	CNS-35-92 TIMER 2PDT	04-005-002
24	EC-100-C TIMER	-
25	V23049-B1012-A122 4P 110VDC	-
26	V23050-A1110-A533 6P 110VDC	04-006-002
27	G5V2 DC48 2PDT	04-001-011
28	CA7-16C-01-110D CONTACTOR	-
29	PT-570-512 4PDT 12VAC	04-001-014
30	CA7-16-01 120VDC COIL	12-020-023
31	CA8-09-01-120 120VAC COIL	12-020-031
32	K10P-11A15-120 120VAC COIL 10A@277VAC	04-001-020
33	PRD-11AHO-240 2PDT 240VAC	04-002-005
34	G5V2 DC12 2PDT	04-001-010
35	-	-
36	-	-

SCHEMATIC SYMBOLS

STANDARD — RELAY COIL — FGR (FORCE GUIDED)
— NORMALLY OPEN CONTACT —
— NORMALLY CLOSED CONTACT —
(NUMBER INDICATES POLE AND FIXED CONTACT)

- EC INTERNAL CONTROLLER WIRING
- PC BOARD TRACE
- FIELD WIRING (BY CUSTOMER)
- HARNESS (IDC) TERMINAL
- SCREW TERMINAL PCB MOUNTED
- PANEL MOUNT SCREW TERMINAL
- HIGH POWER TERMINAL BLOCKS
- MP — MICROPROCESSOR OUTPUT
- SP1 — SAFETY MICROPROCESSOR OUTPUT
- SP2 — SAFETY F.P.G.A .OUTPUT
- Q_ — OUTPUT W/ REPLACEABLE TRANSISTOR
- MP — MICROPROCESSOR INPUT
- SP1 — SAFETY MICROPROCESSOR INPUT
- SP2 — SAFETY F.P.G.A. INPUT
- FUSE (DOT INDICATES TOP OF FUSE)
- RESISTOR
- RESISTOR WITH ADJUSTABLE TAP (DOT INDICATES TOP OR LEFT AS INSTALLED)
- DIODE
- ZENER DIODE
- LED
- AC RATED CAPACITOR
- NON POLAR CAPACITOR
- POLAR CAPACITOR
- MOV (VOLTAGE TRANSIENT SUPPRESSOR)
- DIODE BRIDGE (AC, AC, +, -)
- PC BOARD SLIDE JUMPER ON/OFF (OFF OR ON; JUMPED POSITION)
- PC BOARD DIP SWITCH (9 POSITION) (1 2 3 4 5 6 7 8 9; OFF POSITION; ON POSITION)
- GROUND (EARTH GROUND)
- MECHANICAL OPERATED CAM SWITCH
- VANE SWITCH
- DMO — DRIVING MACHINE OPERATED SWITCH

TYPE KHU POLE ASSIGNMENT (EXT. SOCKET)
1 2 3 4 — OPEN, CLOSED, COIL, COMMON

TYPE KUP POLE ASSIGNMENT (EXT. SOCKET)
1 2 3 — OPEN, CLOSED, COIL, COMMON

TYPE PRD POLE ASSIGNMENT
1 2 — CLOSED, OPEN, COIL, COMMON

CONTACT COUNT & NOMENCLATURE

JOB NAME: **438 W. 51ST ST SE1**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

ELEVATOR CONTROLS
6150 WAREHOUSE WAY
SACRAMENTO, CA 95826 USA
PHONE:(800)829-8106 FAX:(916)428-1728
www.elevatorcontrols.com

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S
JOB NUMBER: 16-18550
CONTROLLER ID: SIMPLEX | PAGE NUMBER: 10

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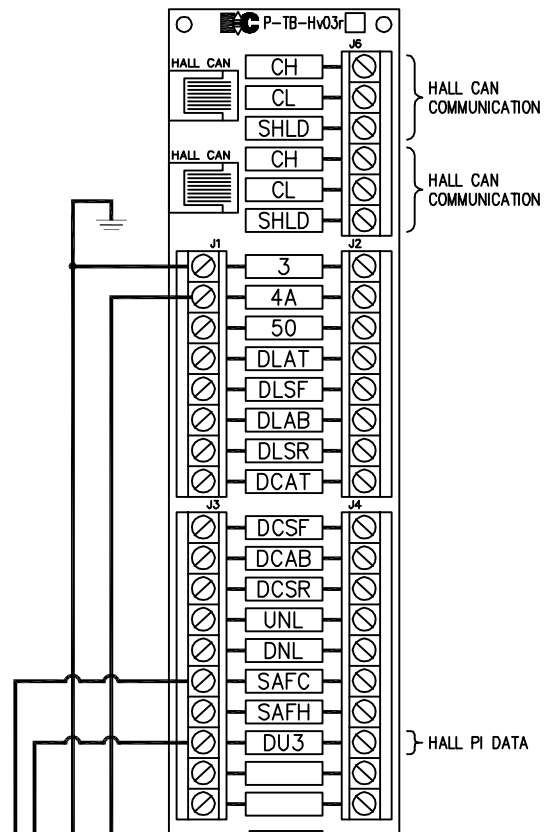
FILE: J18550_10.dwg

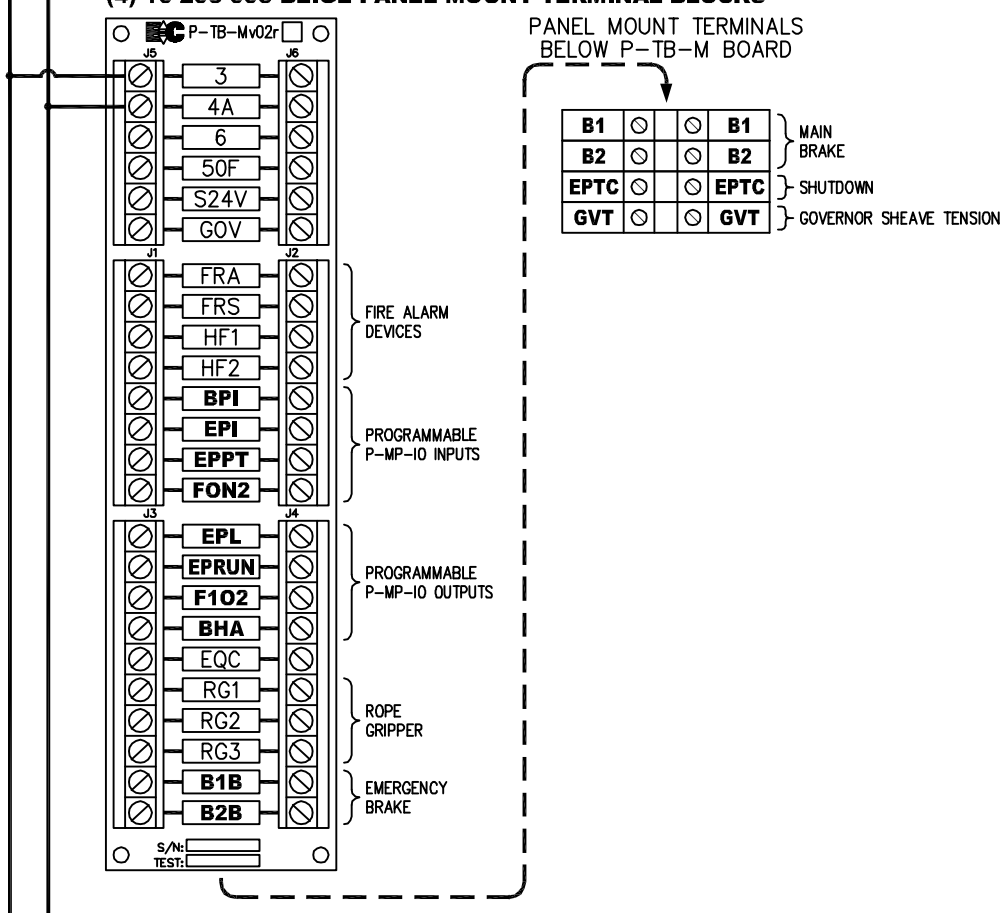
HOISTWAY TERMINALS

(1) 17-002-139v03 PIXEL TERMINAL BLOCK BOARD - HOISTWAY (P-TB-H)



MACHINE ROOM TERMINALS

(1) 17-002-137v02 PIXEL TERMINAL BLOCK BOARD - MACHINE ROOM (P-TB-M)
(4) 10-203-005 BEIGE PANEL MOUNT TERMINAL BLOCKS



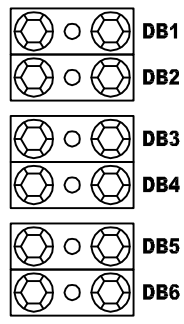
CARTOP TERMINALS FOR TRAVELER CABLE

(1) 17-002-138v03 PIXEL TERMINAL BLOCK BOARD - CARTOP (P-TB-C)
(13) 10-203-005 BEIGE PANEL MOUNT TERMINAL BLOCKS

RESISTOR BOX TERMINALS IN REMOTE CABINET

(15) 10-203-005 BEIGE PANEL MOUNT TERMINAL BLOCKS
(3) 10-201-012 POWER TERMINAL BLOCK 600V 175A 2 POLE

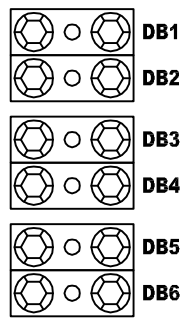
RBP1	⊘		⊘	RBP1
RBP2	⊘		⊘	RBP2
RB1A	⊘		⊘	RB1A
RB1B	⊘		⊘	RB1B
RBA	⊘		⊘	RBA
RBB	⊘		⊘	RBB
R7	⊘		⊘	R7
R8	⊘		⊘	R8
R3A	⊘		⊘	R3A
EBH	⊘		⊘	EBH
R4A	⊘		⊘	R4A
R5A	⊘		⊘	R5A
R6A	⊘		⊘	R6A
FN1	⊘		⊘	FN1
FN2	⊘		⊘	FN2



RESISTOR BOX TERMINALS IN MAIN CONTROLLER

(15) 10-203-005 BEIGE PANEL MOUNT TERMINAL BLOCKS
(3) 10-201-012 POWER TERMINAL BLOCK 600V 175A 2 POLE

RBP1	⊘		⊘	RBP1
RBP2	⊘		⊘	RBP2
RB1A	⊘		⊘	RB1A
RB1B	⊘		⊘	RB1B
RBA	⊘		⊘	RBA
RBB	⊘		⊘	RBB
R7	⊘		⊘	R7
R8	⊘		⊘	R8
R3A	⊘		⊘	R3A
EBH	⊘		⊘	EBH
R4A	⊘		⊘	R4A
R5A	⊘		⊘	R5A
R6A	⊘		⊘	R6A
FN1	⊘		⊘	FN1
FN2	⊘		⊘	FN2



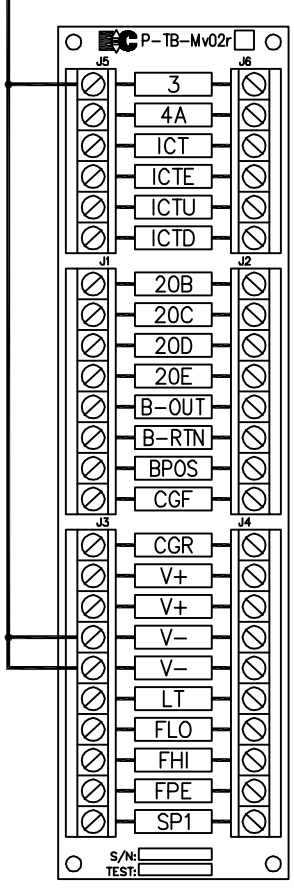
TERMINALS IN MAIN CONTROLLER

(0) 10-203-005 BEIGE PANEL MOUNT TERMINAL BLOCKS

TOC (TOP OF CAR) BOX TERMINALS

(1) 17-002-137v02 PIXEL TERMINAL BLOCK BOARD (P-TB-M)
(12) 10-203-005 BEIGE PANEL MOUNT TERMINAL BLOCKS

3	⊘		⊘	3
4A	⊘		⊘	4A
TOC1	⊘		⊘	TOC1
TOC2	⊘		⊘	TOC2
GND	⊘		⊘	GND
WHT	⊘		⊘	WHT
BLK	⊘		⊘	BLK
GRY	⊘		⊘	GRY
GRN	⊘		⊘	GRN
GND	⊘		⊘	GND
DPF1	⊘		⊘	DPF1
DPF2	⊘		⊘	DPF2



PIXEL CONTROLLER TERMINAL LABELS & ORDER

JOB NAME: **438 W. 51ST ST SE3**

CUSTOMER: **G-TECH ASSOCIATES, LLC**

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

ELEVATOR CONTROLS
6150 WAREHOUSE WAY
SACRAMENTO, CA 95826 USA
PHONE: (800)829-8106 FAX: (916)428-1728
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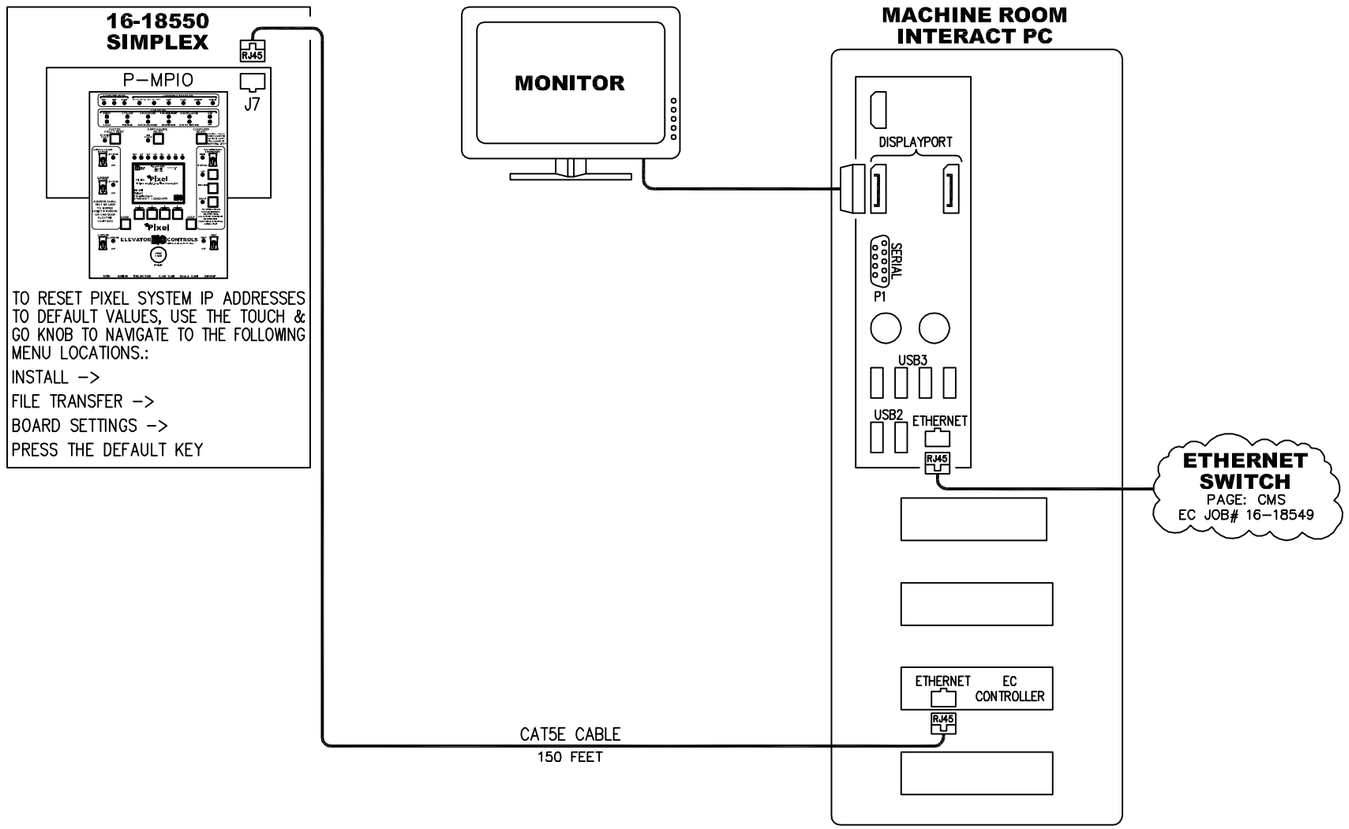
M_PIXEL-TS.dwg | 03/24/16
FILE: J18550_TS.dwg

CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

JOB NUMBER: 16-18550

CONTROLLER ID: SIMPLEX | PAGE NUMBER: TS



EC CONTROLLER PORT NETWORK CARD FACTORY SETTINGS	
IPV4 ADDRESS:	10.10.1.40
SUBNET MASK:	255.255.255.0

MACHINE ROOM INTERACT PC ETHERNET PORT FACTORY SETTINGS	
IP ADDRESS:	192.168.1.102
SUBNET MASK:	255.255.255.0

INTERACT MONITORING SYSTEM PARTS LIST:

QUANTITY	EC PART #	PART DESCRIPTION
2	25-002-017	INTERACT PC (1 SERIAL PORT, KEYBOARD & MOUSE)
	25-002-0XX	INTERACT LAPTOP PC
2	25-002-018	LCD MONITOR DISPLAY (20")
	25-002-0XX	LCD MONITOR DISPLAY (22")
	25-002-005	ULTRA SLIM KEYBOARD (USED WITH THE G900 CABINET)
	25-002-0XX	PRINTER INK JET
	19-001-023-14ft	ETHERNET CABLE CAT5e 14 FEET
1	19-001-023-X	ETHERNET CABLE CAT5e **150** FEET
1	25-002-022	32-BIT 10/100/1000MBPS GIGABIT PCI ADAPTER
	25-002-023	32-BIT 10/100/1000MBPS GIGABIT PCIe ADAPTER
	25-002-024	USB 3.0 TO GIGABIT ETHERNET NETWORK ADAPTER
	25-002-025	8 Port 10/100Mbps Fast Ethernet Switch

INTERACT MONITORING SYSTEM INSTALLATION

JOB NAME:
438 W. 51ST ST SE1

CUSTOMER:
G-TECH ASSOCIATES, LLC

ENGINEERED BY: Jason Kirlis | DATE: 10/27/16 | REVISION DATE:

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CONTROLLER MODEL: PIXEL AC VECTOR-MRL-S

JOB NUMBER: 16-18550

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FILE: J18550_IMS.dwg

CONTROLLER ID: SIMPLEX | PAGE NUMBER: IMS