

X'CALIBUR AUTOMATION

26, "VIDYESH", SENADUTTA PETH,
PUNE - 411 030

PHONE NO.: 020 - 24538284 / 24392381 FAX NO.: 020 - 24536419 E-mail : xcalibur@eth.net
Program Manual P1-1

Parameter Programming manual for
MODEL:220P_DPBB10W/MODEL:220P_DPBB20W
37 steps of the manual written in PLC programme

1. SELT TESTING - WAIT for 5-8 secs [for display to change to see next step 2]
2. +MNUL & WINDOW LEGEND - PRESS Δ & THEN **enter**
NO. OF SOLENOIDS = 10 [here you can change any value from 1-10 other value will show out of range]
.....You will see following..... **ACTION**
3. -MNUL & WINDOW LEGEND
EQUIP. SR. NO. XCL-1010 ∇
4. -MNUL & WINDOW LEGEND
X'CALIBUR AUTOMATION ∇
5. -MNUL & WINDOW LEGEND
26, VIDYESH SENADUTTA ∇
6. -MNUL & WINDOW LEGEND
PETH PUNE 411 030 INDIA ∇
7. -MNUL & WINDOW LEGEND
EML : xcalibur...eth.net ∇
8. -MNUL & WINDOW LEGEND
PH : 020 24538284.... OFF ∇
9. -MNUL & WINDOW LEGEND
MODEL-/220P-DPBB10W/ ∇
10. -MNUL & WINDOW LEGEND
LEFT WINDOW GREEN FL ∇
11. -MNUL & WINDOW LEGEND
MEANS RAV ZSS TRIP ∇
12. -MNUL & WINDOW LEGEND
LEFT WINDOW RED FL ∇
13. -MNUL & WINDOW LEGEND

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Program Manual

P2-2

MEANS TMR NOT PULSING	▽
14. -MNUL & WINDOW LEGEND	
MID WINDOW RED FL	▽
15. +MNUL & WINDOW LEGEND	
MEANS DIFF. PR. HIGH	▽
16. -MNUL & WINDOW LEGEND	
MID WINDOW GREEN FL	▽
17. -MNUL & WINDOW LEGEND	
MEANS DIFF. PR OK	▽
18. -MNUL & WINDOW LEGEND	
MID WINDOW ORANG FL	▽
19. -MNUL & WINDOW LEGEND	
MEANS PR TOO LOW	▽
20. -MNUL & WINDOW LEGEND	
MID WINDOW NO FLASH	▽
21. -MNUL & WINDOW LEGEND	
& RT. WIND RED FL	▽
22. -MNUL & WINDOW LEGEND	
MEANS BAG LEAK/TORN	▽
23. -MNUL & WINDOW LEGEND	
PRESS F1 FOR MANPULS	▽
24. -MNUL & WINDOW LEGEND	
F1 LED FL IN MANPULS	▽
25. -MNUL & WINDOW LEGEND	
+ TIME _ SETTING -	enter
26. -TIME_ SETTING	
PRESS esc FOR PLC msg	▽
27. -TIME_ SETTING	
PLC message LED IS ON	▽
28. -TIME_ SETTING	

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Program Manual

P3-3

FL CURSOR ON OFF LINE	▽
29. -TIME SETTING	
USE ▲ ARROW GO TO LINE 1	▽
30. -TIME SETTING	
SEE ON TIME mSec=100	▽
31. -TIME SETTING	
PRESS ENTER & GO TO VAL	▽
32. -TIME SETTING	
CHANGE mSec USING	▽
33. -TIME SETTING	
NUMERIC KEYPAD & ENT	▽
34. -TIME SETTING	
SCROLL DN USING DOWN	▽
35. -TIME SETTING	
ARROW▽ TO OFF TIME SETG	▽
36. -TIME SETTING	
CHANGE TO REQD VALUE	▽
37. -TIME SETTING	
AS DONE FOR mSec TIME	▽
38. -TIME SETTING	
THE TIME SETG IS OVER	▽
39. -TIME SETTING	
PRES esc NORMAL VIEW	▽

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Program Manual P4-4

ON SCREEN DISPLAY

[When Start ON (After Self Test)]

+MNU & WINDOW LEGEND
ON OFF SOLENOIDS = 10

- 1) + Here Indicates folder for Manual & Window Legend - to go to folder (to open) Press ENT when Cursor on + to open folder & read Instruction by using V (arrow) there 37 total lines which shows What are / & How to do ,
 - 1) Window Legend
 - 2) Time Setting
 - 2) When Cursor on NO OFF Solenoids use **enter** Button & Cursor will go on Sol. Value. Change No. of Solenoids using **Numeric Key Pad**. Any Value = 0 or more than 10 will Show **Over range of range** on top line.
 - 3) Use ∇ to go to next line -
High Set Point 120.0 (Default) Here one can change High Set Point by '**enter**' & go to last Digit of High Set Point Value, Input required value of set point by Using **Numeric Key Pad** say 122. it will be shown as 122.0. Press **enter** to go on line beginning. The Cursor will be line 2 start point
 - 4) Roll down [∇].....will Show
LOW SET POINT 070.00 (Default). Again '**enter**' if Value of LOW SET POINT is to be changed like as shown in Point No. '3'
If not then go to next Para by Scrolling [∇]down.
 - 5) **CRASH TIME SEC = 0**.
This parameter is not used in this application.
 - 6) **TORN BAG = 20.0** (Default) [This is differential pressure for torn bag]
This parameter is useful when Differential Pressure goes below this value meaning Bags are Leak / Torn / Broken
 - 7) **Diff. Pr mmWG =**
Actual value of DP when Bag House is operating. This is non Settable Value (Indication)
 - 8) **SOLENOID ON = 01, 02, 03, 04, 10** [for 10 way max no is 10 & for 20 way max no is 20] This is actual Solenoid ON Number Shown when Timer is Pulsing. When Bag House timer is started These two lines must be kept on to see continuous DP value
- F1:** Pressing Momentary Led will light on & Timer PLC will go in timed mode irrespective of DP set points. Again Pressing Momentary will put it in DP Mode
F3: It is Manual Pulsing mode to check each solenoid Functioning

X'CALIBUR AUTOMATION

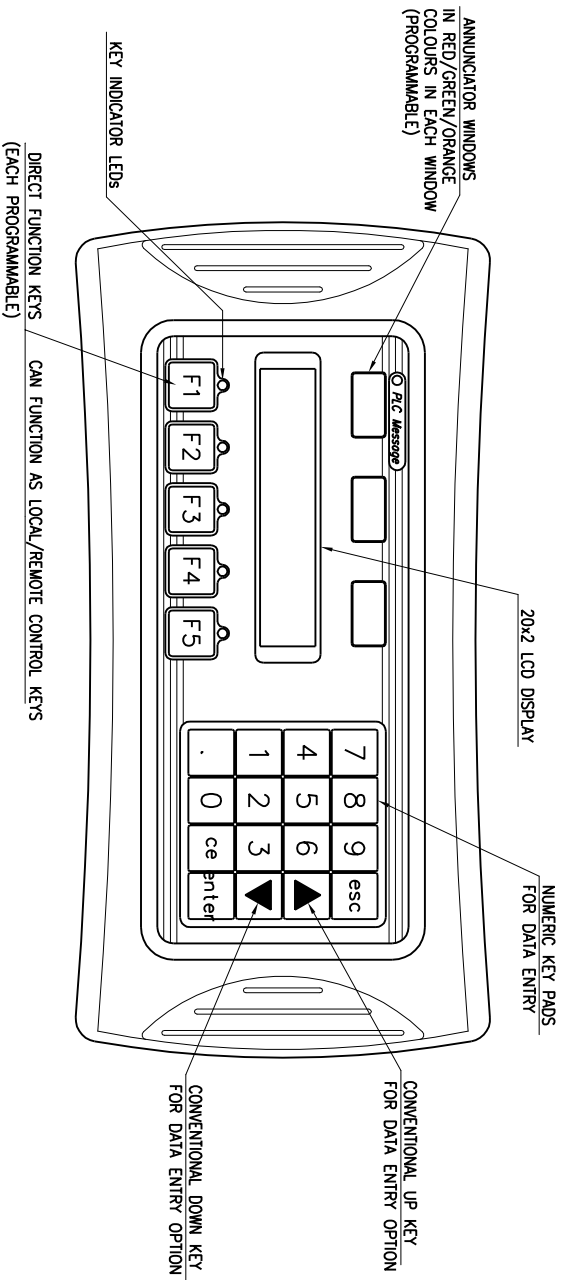
**26, "VIDYESH", SENADUTTA PETH,
PUNE - 411 030**

PHONE NO.: 020 - 24538284 / 24392381 FAX NO.: 020 - 24536419 E-mail : xcalibur@eth.net
Program Manual P5-5

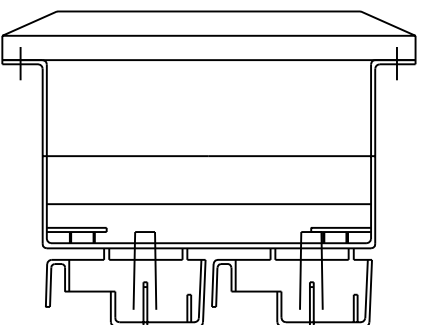
**NOTE : Any Parameter Showing out range means it must be in useful range
Defined in Programme.**

TEST REPORT FOR BAG HOUSE PLC		X'CALIBUR AUTOMATION 26 VIDYESH SENADUTTA PETH PUNE 411 030 (INDIA) 020-24538284 xcalibur@eth.net										SR NO.	1020
MODEL:220P_DPBB20W												Dt:9-1-07	
PLC SPECIFICATIONS													
SR.NO.	PLC MODULE TYPE	MDL ADDR	MDL FNCN	DETAILED PIN/TERMINAL DESCRIPTIONS				FUCTION TESTS		POWER	SR. COMM	TYPE	
1	4ANI-4ANO	M1	ANI	IR1-4-20mA	IR2--	IR3--	IR4--	FROM TRMTR OK	TMTR-24VDC				
2	8DIO	M2	ANO	OR1--	OR2--	OR3--	OR4--						
3	8DIO	M4	I/O	O1-SOL	O2-SOL2	O3-SOL3	O4-SOL4	SOL 230AVC -OK	24VDC				
4	4DI-4DO	M6	I/O	O5SOL5	O6-SOL6	O7-SOL7	O8-SOL8	SOL 230AVC -OK					
5	4DI-4DO	M3	I/O	O9-SOL9	O10-SOL10	O11-SOL11	O12-SOL12	SOL 230AVC -OK	24VDC				
6	SERIAL MODULE		I/O	O13-SOL13	O14-SOL14	O15-SOL15	O16-SOL16	SOL 230AVC -OK					
			I/O	I5-PRXin	I6	I7	I8		24VDC				
			I/O	O17-SOL17	O10-SOL18	O19-SOL19	O20-SOL20	SOL 230AVC -OK	24VDC				
			I/O	I9	I10	I11	I12						
			I/O	O21-CLK	O22-ZSSOP	O23	O24	SOL 230AVC -OK					
								MODBUS MASTER SIM OK	RS485 MODBUS SLAVE 1				
HMI SPECIFICATIONS													
COLOR LEGENDS													
SR.NO. HMI CATA TYPE		ANN WINW	RED	GREEN	ORANGE							RTU	
1	ANN WINDOWS	W1-LEFT	TMR STOP	ZSS TRIP									
	FLASHING	W2-MID	DP>120mm	<120BUT>70	<70BUT>40								
			120,70,40 ARE DEFAULT SET POINTS										
		W3-RIGHT	BAG TORN	OVERRD ON DEMAND									
2	DATA ENTRY K- PAD	NUMERIC	U/D	esc	ent							OK	
	FUNCTIONS		U/D LINE SCROLL	esc PLC TO	ent DATA &							entCOME TO	
			OR INC / DEC DATA	MESSAGE	FLASHING CURSOR								
3	DIRECT FN KEYS	F1	F2	F3	F4	F5							
	FUNCTIONS	OVERRIDE ON DEMAND	NIL	MANUAL PULSING	NIL	NIL						OK	
4	2x20 LCD DISPLAY	LINE 1	LINE 2										
	PLC MESSAGE	ON TIME Msec=100	OFF TIME SEC=15	left hand PLC msg led on								OK	
	LOCAL MESSAGES	LINE1	MNUL & WINDOW LEGENDS FOLDER WITH TIME SETTING INFORMATION										
	[ACCESSED BY SCROLL	LINE 2	NO OF SOLENOIDS=10 [TO BE FIRED MAX=10 MIN=1]										

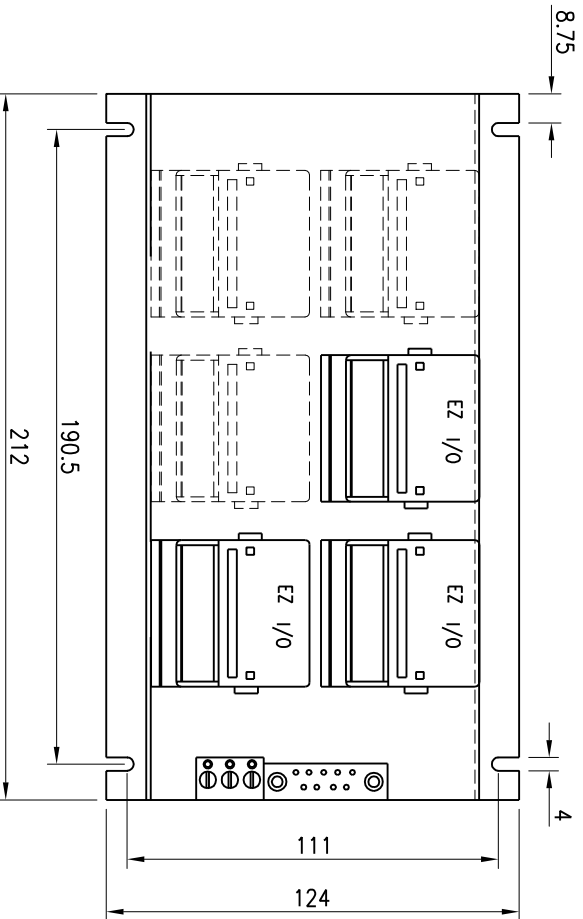
TEST REPORT FOR BAG HOUSE PLC		X'CALIBUR AUTOMATION 26 VIDYESH SENADUTTA PETH PUNE 411 030 (INDIA) 020-24538284 xcalibur@eth.net										SR NO.	1010
MODEL:220P_DPBB10W												Dt:9-1-07	
PLC SPECIFICATIONS													
SR.NO.	PLC MODULE TYPE	MDL ADDR	MDL FNCN	DETAILED PIN/TERMINAL DESCRIPTIONS				FUCTION TESTS		POWER	SR. COMM	TYPE	
1	4ANI-4ANO	M1	ANI	IR1-4-20mA	IR2--	IR3--	IR4--	FROM TRMTR OK	TMTR-24VDC				
			ANO	OR1--	OR2--	OR3--	OR4--						
2	8DIO	M3	I/O	O1-SOL	O2-SOL2	O3-SOL3	O4-SOL4	SOL 230AVC -OK	24VDC				
			I/O	O5SOL5	O6-SOL6	O7-SOL7	O8-SOL8	SOL 230AVC -OK					
3	4DI-4DO	M5	I/O	I5-PRXin	I6	I7	I8		24VDC				
4	SERIAL MODULE		I/O	O9-SOL9	O10-SOL10	O11-CLK	O12-ZSS	SOL 230AVC -OK		485 MODBUS SLAVE 1			
								MODBUS MASTER SIM OK			RTU		
HMI SPECIFICATIONS													
SR.NO.	HMI CATA TYPE	ANN WINW	RED	GREEN	ORANGE	ALL FOLLOWING FUCN & OPERNS ARE OK							
1	ANN WINDOWS	W1-LEFT	TMR STOP	ZSS TRIP									
	FLASHING	W2-MID	DP>120mm	<120BUT>70	<70BUT>40								
		W3-RIGHT	BAG TORN	OVRDR ON DEMAND									
2	DATA ENTRY K- PAD	NUMERIC	U/D	esc	ent	OK							
	FUNCTIONS		U/D LINE SCROLL	esc PLC TO	ent DATA &	entCOME TO							
			OR INC / DEC DATA	MESSAGE	FLASHING CURSOR								
3	DIRECT FN KEYS	F1	F2	F3	F4	F5							
	FUNCTIONS	VERRIDE ON DEMAND	NIL	MANUAL PULSING	NIL	NIL	OK						
4	2x20 LCD DISPLAY	LINE 1	LINE 2										
	PLC MESSAGE	ON TIME Msec=100	OFF TIME SEC=15	left hand PLC msg led on	OK								
	LOCAL MESSAGES	LINE1	MNUL & WINDOW LEGENDS FOLDER WITH TIME SETTING INFORMATION										
	[ACCESSED BY SCROLL	LINE 2	NO OF SOLENOIDS=10 [TO BE FIRED MAX=10 MIN=1]										
	U/D ARROWS]	LINE 1	HIGH SET POINT 120.0										
		LINE 2	LOW SET POINT 070.0										



FRONT VIEW



END VIEW



REAR VIEW

X CALIBUR AUTOMATION
26, 'VIDYESH',
SENADUTTA PETH,
PUNE-411 030

Title: ENCLOSURE FOR PLC

SCALE
NTS

Client: FILE: PLC ENCLOSURE.dwg

SIZE

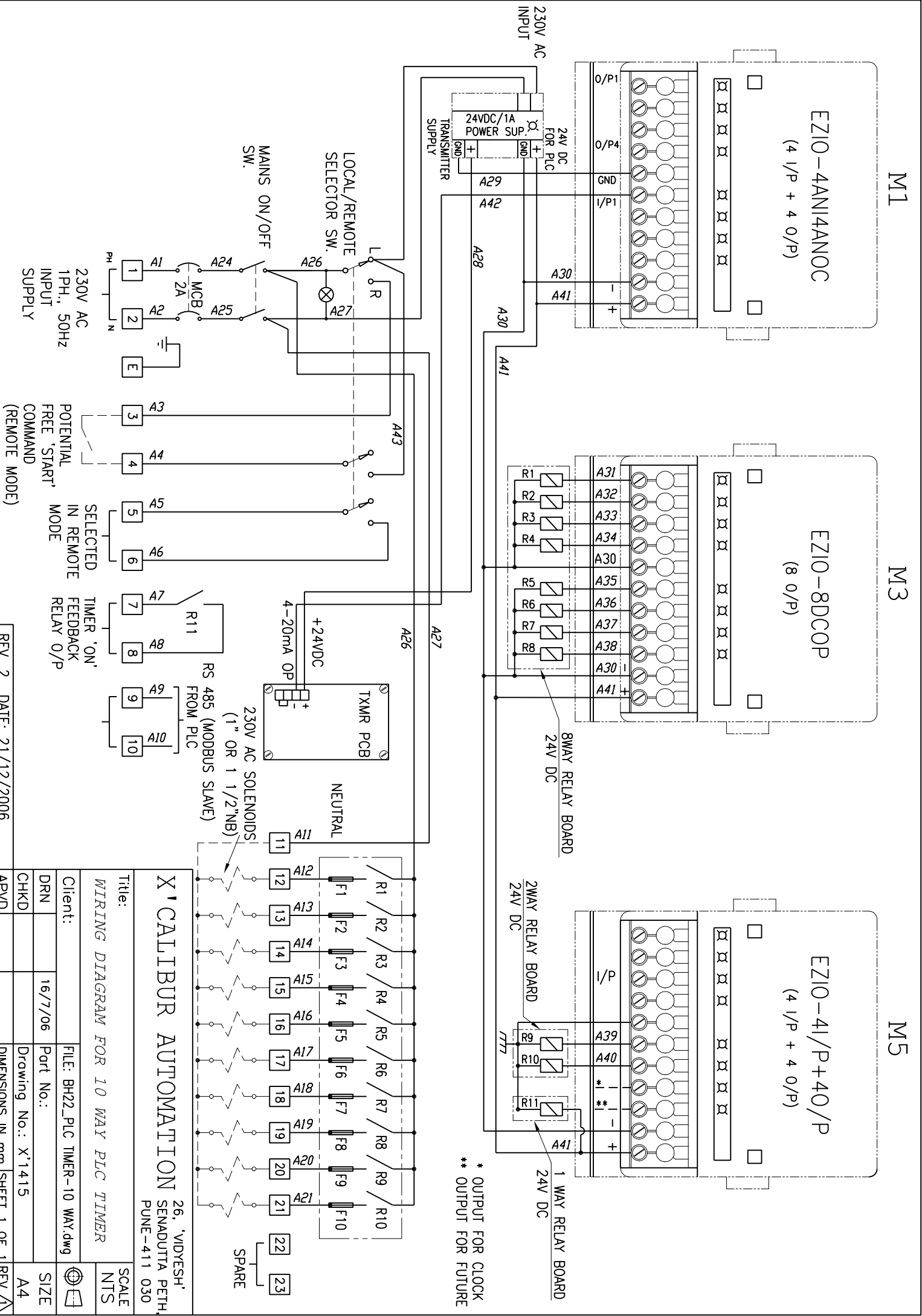
DRN 16/7/06 Part No.:

A4

CHKD Drawing No.: X'1415

SHEET 1 OF 1 REV. 0

APVD DIMENSIONS IN mm SHEET 1 OF 1 REV. 0



230V AC INPUT

24V DC FOR PLC TRANSMITTER POWER SUPPLY

230V AC 1PH, 50Hz INPUT SUPPLY

POTENTIAL FREE 'START' COMMAND (REMOTE MODE)

SELECTED IN REMOTE MODE

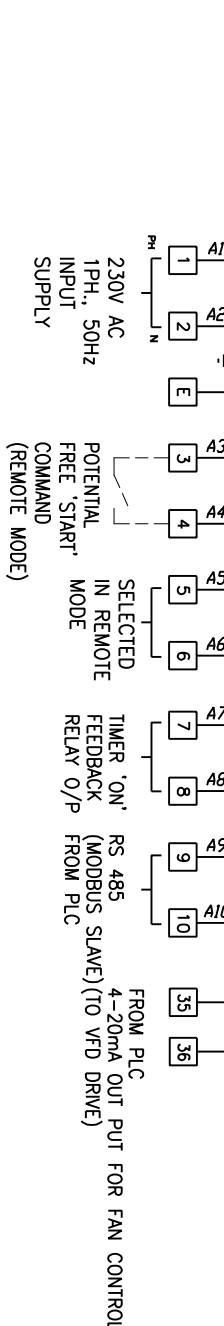
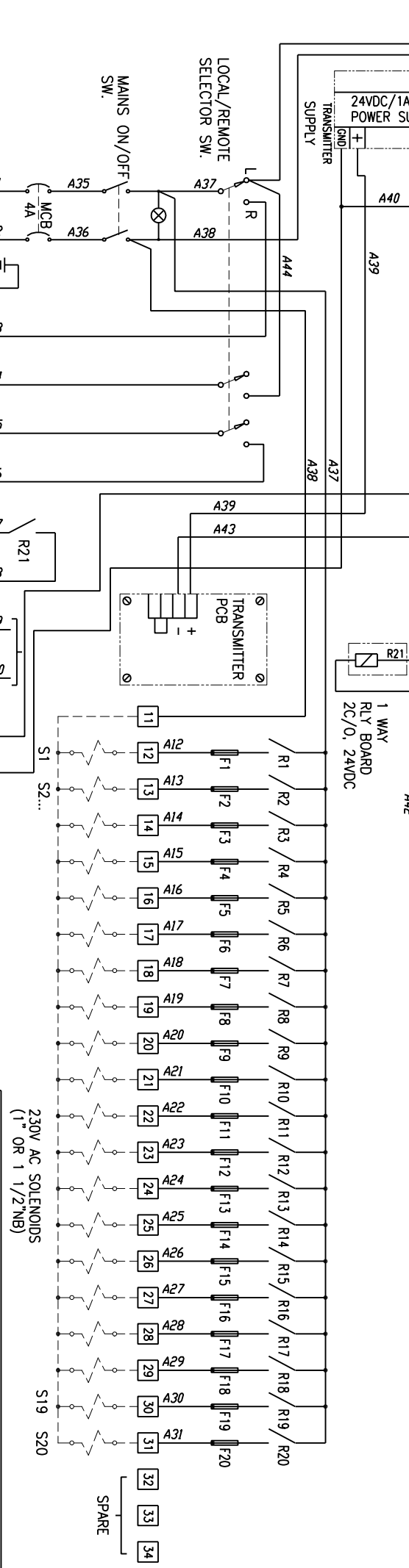
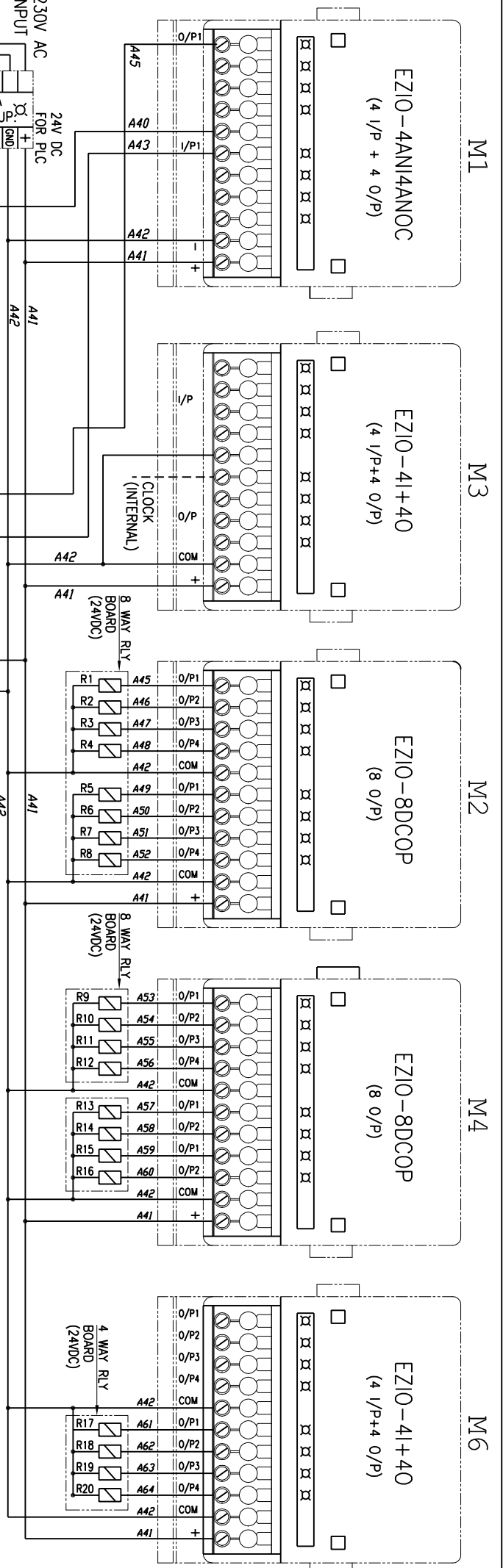
TIMER 'ON' FEEDBACK RELAY O/P

REV. 2 DATE: 21/12/2006

Title:		WIRING DIAGRAM FOR 10 WAY PLC TIMER	
Client:		FILE: BH22_PLC TIMER-10 WAY.dwg	
DRN		16/7/06	
CHKD		Part No.:	
APVD		Drawing No.: X'14115	
SCALE		NTS	
SIZE		A4	
DIMENSIONS IN mm		SHEET 1 OF 1	
REV		A	

X' CALIBUR AUTOMATION
 26. 'VIDYESH'
 SENADUTTA PETH,
 PUNE-411 030

* OUTPUT FOR CLOCK
 ** OUTPUT FOR FUTURE



230V AC INPUT

24V DC FOR PLC

24VDC/1A POWER SUPPLY

LOCAL/REMOTE SELECTOR SW.

MAINS ON/OFF SW.

230V AC 1PH., 50HZ INPUT SUPPLY

POTENTIAL FREE 'START' COMMAND (REMOTE MODE)

SELECTED IN REMOTE MODE

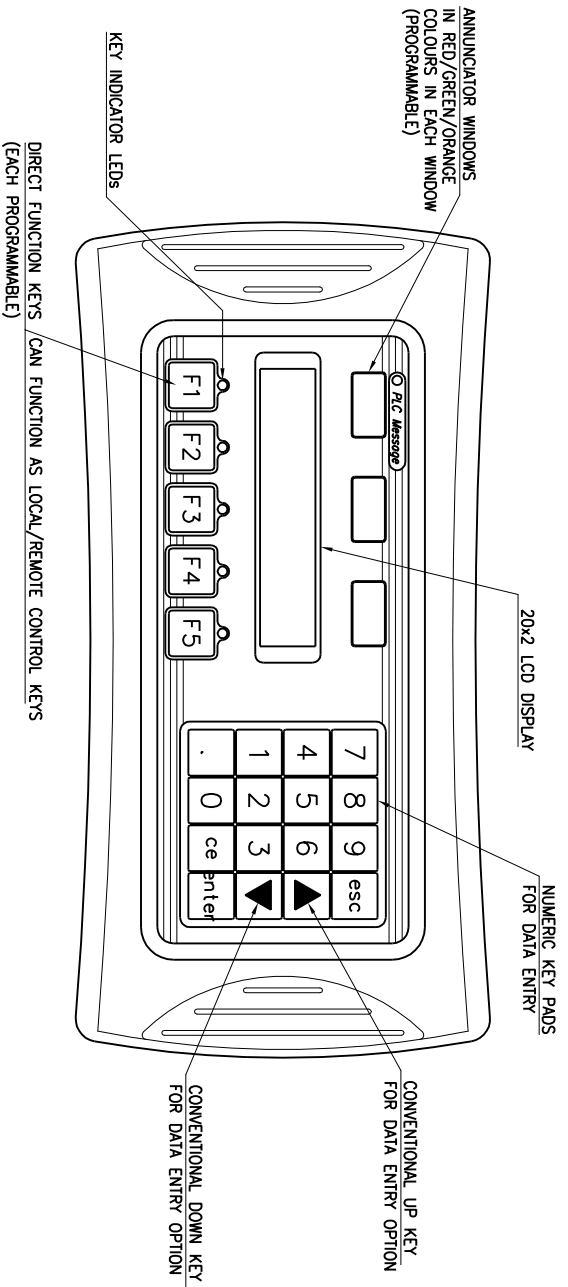
TIMER 'ON' FEEDBACK RELAY O/P FROM PLC

RS 485 (MODBUS SLAVE) TO VFD DRIVE)

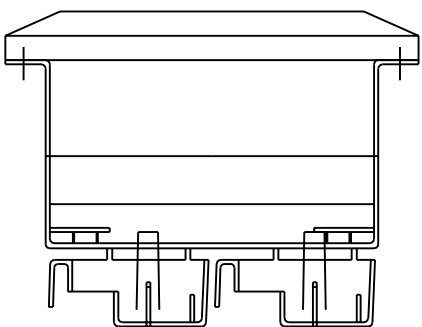
FROM PLC 4-20mA OUT PUT FOR FAN CONTROL

230V AC SOLENOIDS (1" OR 1 1/2"NB)

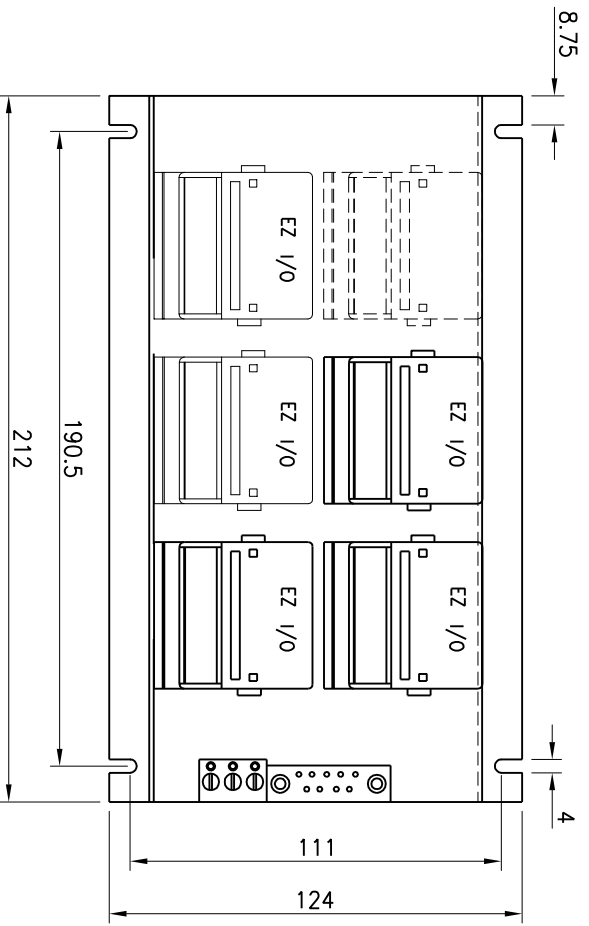
X CALIBUR AUTOMATION 26, 'VIDYESH' SENADUTA PETH, PUNE-411 030	
Title: ELECTRICAL DIAGRAM OF PLC BASED 20 WAY TIMER (RELAY OUTPUT)	
Client: BHA Group/GE	FILE: BH23_PLC_TIMER_20WAY.dwg
DRN	Part No.:
CHKD	Drawing No.: X'1424-03
APVD	DIMENSIONS IN mm SHEET 3 OF 3 REV.
SCALE NTS	SIZE A4



FRONT VIEW

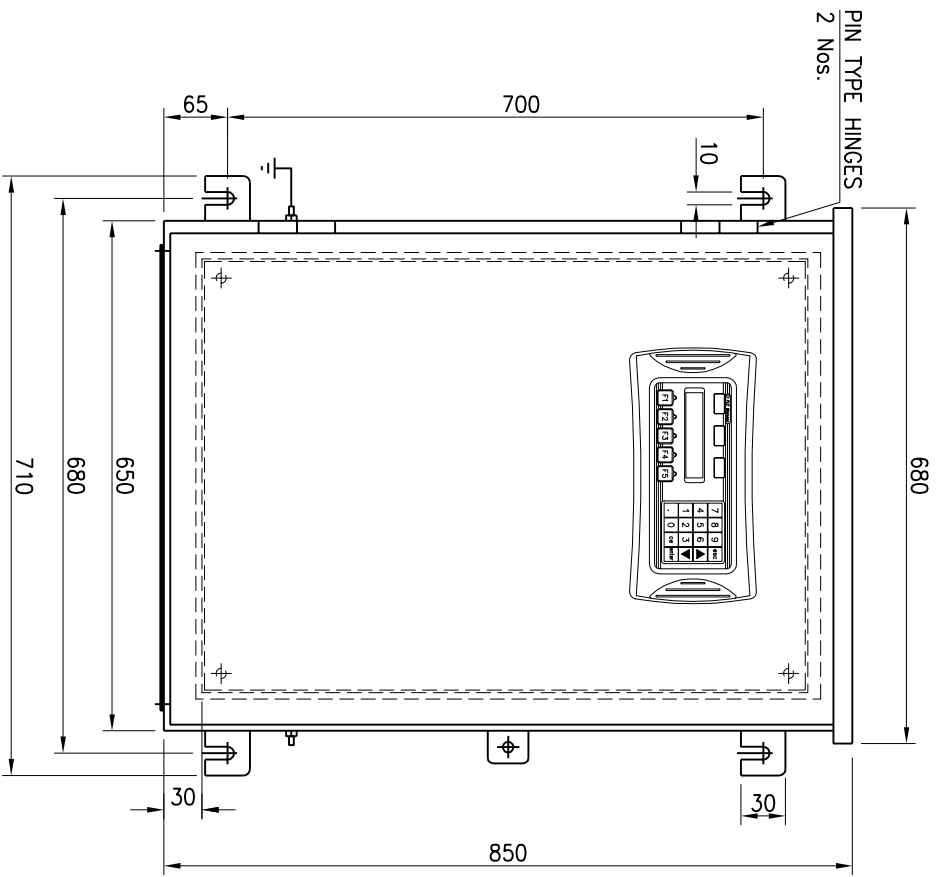


END VIEW

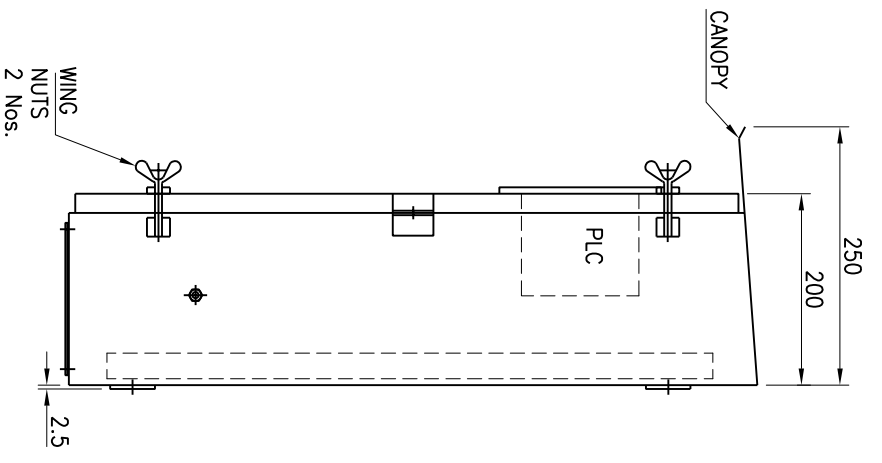


REAR VIEW

Title: G.A.'DRAWING OF PLC FOR 20 WAY TIMER (RELAY OUTPUT)		26. 'VIDYESH' SENADUTTA PETH, PUNE-411 030	
Client: BHA Group/GE	FILE: BH23_PLC TIMER-10WAY.dwg	SCALE NTS	
DRN	20/08/06	Part No.:	SIZE
CHKD		Drawing No.: X'1424-02	A4
APVD		DIMENSIONS IN mm	SHEET 2 OF 3
			REV. 0



FRONT VIEW

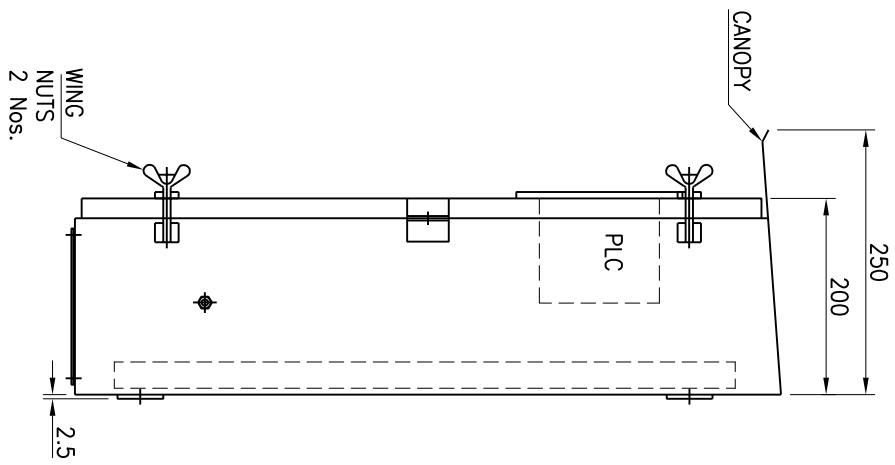
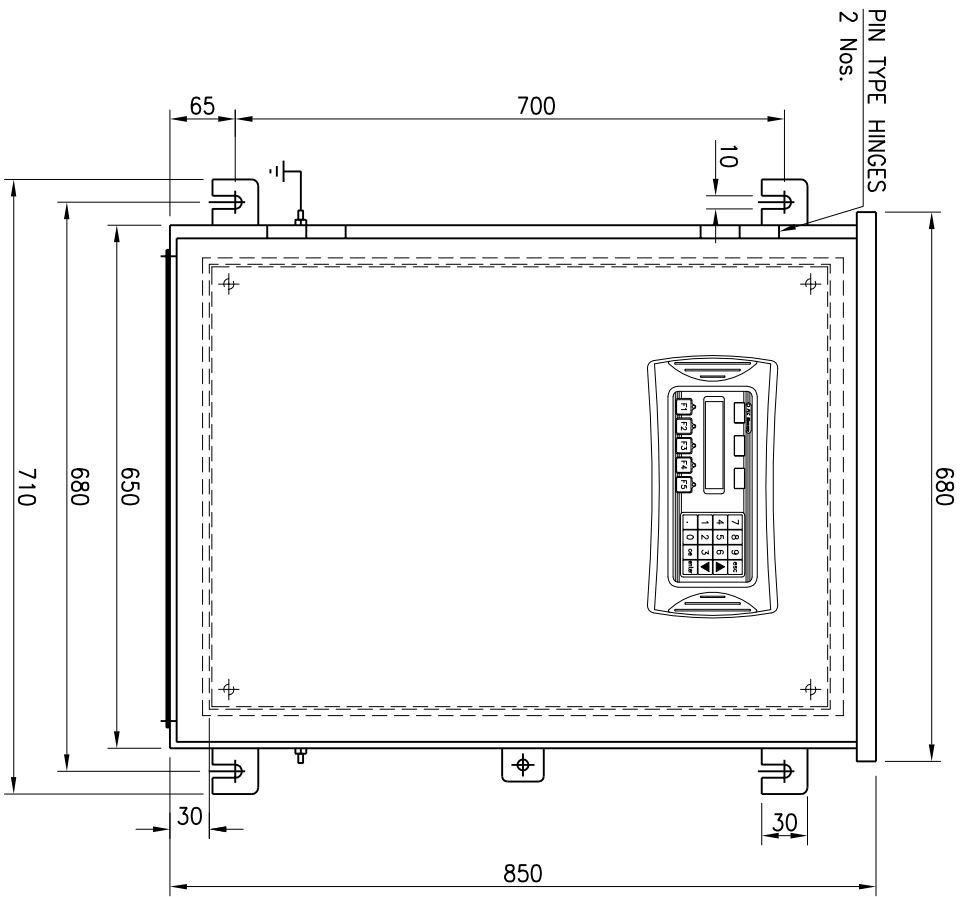


SIDE VIEW

ALL DIMENSIONS ARE IN mm
 M.O.C.: M.S. CRCA SHEET 1.6 mm THICK
 QTY.: 1 No.
 WALL MOUNTING TYPE,
 SIEMENS GREY, POWDER COATED
 CABLE ENTRY FROM BOTTOM

<p>X CALIBUR AUTOMATION 26, 'VIDYESH' SENADUTA PETH, PUNE-411 030</p>		<p>SCALE NTS</p>
<p>Title: G.A. DRAWING OF PLC PANEL FOR 20 WAY TIMER (RELAY OUTPUT)</p>		
Client: BHA Group/GE	FILE: BH23_PLC TIMER-20WAY.dwg	
DRN	20/08/06	
CHKD	Part No.:	SIZE A4
APVD	Drawing No.: X'1424-01	DIMENSIONS IN mm SHEET 1 OF 3 REV. 0

650



ALL DIMENSIONS ARE IN mm
 M.O.C.: M.S. CRCA SHEET 1.6 mm THICK
 QTY.: 1 No.
 WALL MOUNTING TYPE.
 SIEMENS GREY, POWDER COATED
 CABLE ENTRY FROM BOTTOM

X CALIBUR AUTOMATION

26, 'VIDYESH'
 SENADUTTA PETH,
 PUNE-411 030

Title: G.A. DRAWING OF PLC PANEL FOR
 20 WAY TIMER (RELAY OUTPUT)

SCALE
 NTS

Client: BHA Group/GE FILE: BH23_PLC TIMER-20WAY.dwg



DRN 20/08/06 Part No.: SIZE
 A4

CHKD Drawing No.: X'1424-01

APVD DIMENSIONS IN mm SHEET 1 OF 3 REV. 0