Digital Marquee Series

Part # DM-0213-T

Part # DM-0113-T

Part # DM-0220-T

Part # DM-0420-T

Table 4—Input Connector Pinout

Pin Number	Description	Cable Color Code
1	Input #1 Binary Value 1	White
2	+24 Vdc (sensor Power Supply Output)	Brown
3	Input #3 Binary Value 4	Green
4	Input #2 Binary Value 2	Yellow
5	Input #4 Binary Value 8	Grey
6	Input #5 Binary Value 16	Pink
7	Common (24 Vdc GND)	Blue
8	Input #7 Binary Value 64	Red
9	Spare	Orange
10	Input #6 Binary Value 32	Tan
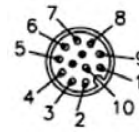
Table 1—Input Binary values

Input	Binary Value
1	1
2	2
3	4
4	8
5	16
6	32
7	64

PRODUCT DESCRIPTION

The Digital Marquee Series is a simple and easy way to display messages on a marquee sign. The user can program up to 128 canned messages into the marquee and use binary inputs to call up the selected message on the marquee. This binary input can come from any digital source such as plc outputs or BCD thumbwheel switches. The Digital Marquee has a built in web server, eliminating the need to install software to program the marquee sign. Setup of the display is as simple as opening a web browser on your computer and entering the IP address of the marquee sign. The Digital Marquee allows the user to configure the messages, connect their binary source, and begin displaying messages based upon the binary value. With no software to install, canned messages, and digital inputs, the Digital Marquee series is the simplest way to display messages on a marquee.

PRODUCT FEATURES

- **NO SOFTWARE TO INSTALL!** Web based setup
- 128 message storage capability in the marquee sign
- Digital inputs (binary) to select message
- Ethernet port for connection with PC
- Network configured over ethernet or IR programmer
- Time/Date settings and configuration over ethernet
- Backup and restore configuration of the marquee sign

PRODUCT SPECIFICATIONS

- 1, 2 and 4 line alphanumeric display
- 13 and 20 tri-color LED character width
- Operating temperature 0-55 C
- 100,000 hour rated LED life
- Metal housing; NEMA 1
- Hand held IR programmer
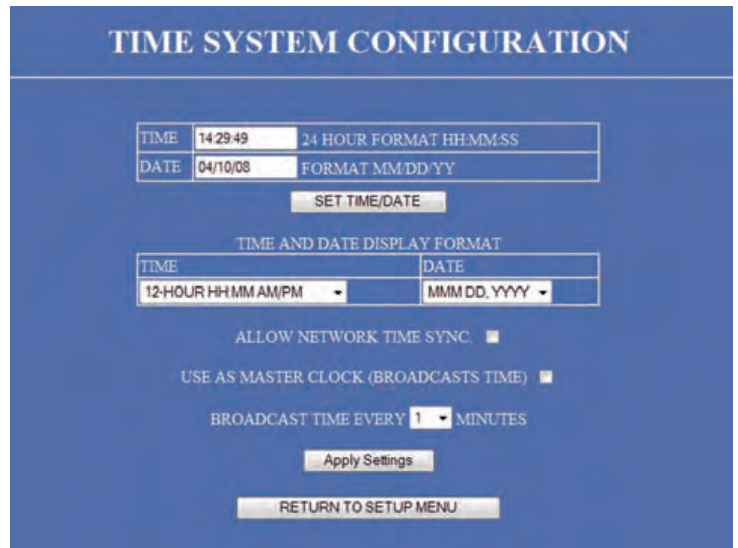- 120 VAC power; 24 VDC (1 line model)

With proper authorization, the user can enter into the marquee sign setup menu. This web page is where the user has access to the marquee configuration pages used to set up the marquee sign.

By selecting the "Edit Marquee Messages" button, the user can set up the message text, font size, color, and functionality of the message to be displayed on the marquee sign.

SETUP MENU
DM-0213-T Version 1.0

EDIT MARQUEE MESSAGES

CONFIGURE NETWORK

TIME/DATE SETUP

BACKUP/RESTORE CONFIGURATION

EXIT SETUP

MESSAGE EDIT PAGE

MSG #	MSG TEXT	FONT	DISPLAY METHOD	COLOR	DISPLAY TIME
0	@T @N @D	2"	1	YELLOW	2 SEC
1	CONVEYOR STOPPED	2"	13	RED	5 SEC
2	PART FAILED - PLEASE RETEST	2"	7	RED	2 SEC
3	SERVO MOTOR # 7 FAULTED	2"	5	GREEN	2 SEC
4	SAFETY DOOR # 5 OPEN	2"	1	YELLOW	2 SEC
5	HIGH TEMP ALARM	4"	37	RED	5 SEC
6	PROCESS FINISHED, INDEX PART	2"	1	RED	2 SEC
7	CYCLE STARTED	2"	23	GREEN	2 SEC
8	CAUTION : MACHINE IN JOG MODE	2"	1	YELLOW	2 SEC
9	MESSAGE # 9	2"	43	RANDOM	10 SEC

APPLY CHANGES | MESSAGES 10-19 | MESSAGES 20-29 | MESSAGES 30-39 | MESSAGES 40-49
MESSAGES 50-59 | MESSAGES 60-69 | MESSAGES 70-79 | MESSAGES 80-89 | MESSAGES 90-99
MESSAGES 100-109 | MESSAGES 110-119 | MESSAGES 120-127

MARQUEE SETUP MENU

By selecting the "Configure Network" button, the user can set the IP address and network settings for the marquee sign. The user ID and Password can also be changed from this page.

By selecting the "Time/Date Setup" button, the user can set the time and date for the marquee sign. The format of the time and date and selecting network time synchronization are entered here.
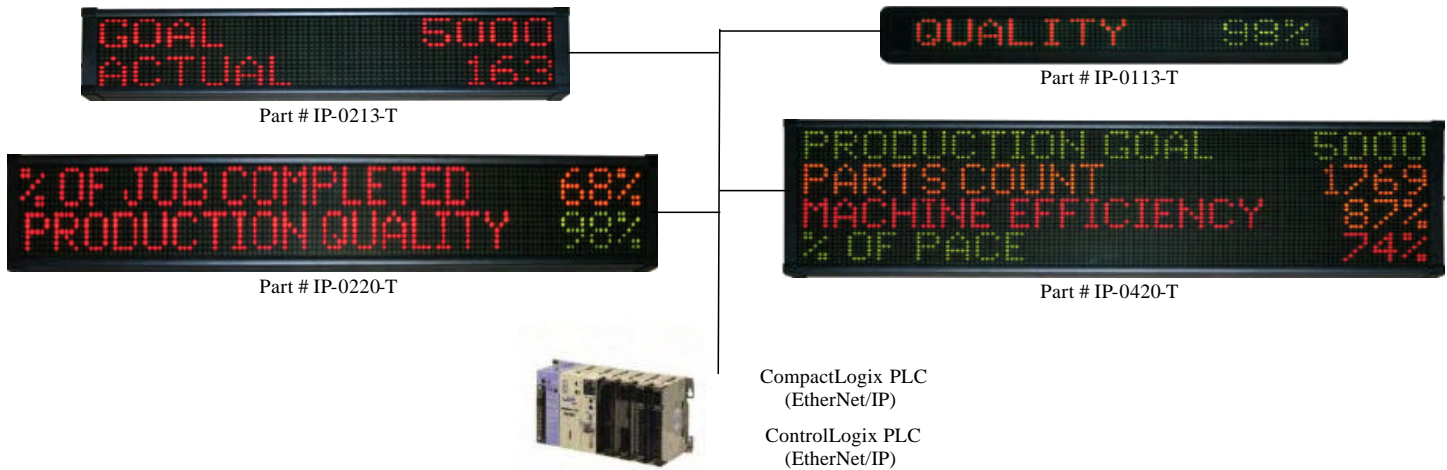
ETHERNET CONFIGURATION

MAIN PAGE TITLE : MAIN DISPLAY PAGE

MAIN PAGE REFRESH RATE 1 Sec

NETWORK SETTINGS

IP ADDRESS	192.168.001.200
SUBNET MASK	255.255.255.000
DEFAULT GATEWAY	000.000.000.000
WEB USER ID	admin
WEB PASSWORD	admin

BROADCAST MESSAGE ON NETWORK :

RECIEVE NETWORK BROADCAST MESSAGES :

APPLY CHANGES

MARQUEE SETUP MENU

TIME SYSTEM CONFIGURATION

TIME	14:29:49	24 HOUR FORMAT HH:MM:SS
DATE	04/10/08	FORMAT MM/DD/YY

SET TIME/DATE

TIME AND DATE DISPLAY FORMAT

TIME	DATE
12-HOUR HH:MM AM/PM	MMM DD, YYYY

ALLOW NETWORK TIME SYNC.

USE AS MASTER CLOCK (BROADCASTS TIME)

BROADCAST TIME EVERY 1 MINUTES

Apply Settings

RETURN TO SETUP MENU

PART NUMBER MODEL (*)	DIMENSIONS (W x H x D)	WEIGHT
DM-0113-T (1 line, 13 character, tricolor)	26.0" x 4.5" x 1.75"	2.8 LBS.
DM-0213-T (2 line, 13 character, tricolor)	25.5" x 6.25" x 3.75"	10.8 LBS.
DM-0220-T (2 line, 20 character, tricolor)	39.75" x 6.25" x 3.75"	17.9 LBS.
DM-0420-T (4 line, 20 character, tricolor)	39.75" x 11.0" x 3.75"	26.2 LBS.

(*) Double sided models available

DATAVISOR MARQUEES

through EXOR ELECTRONIC R&D

ETHERNET IP MARQUEE SERIES (ROCKWELL EtherNet/IP)

Part # IP-0213-T

Part # IP-0113-T

Part # IP-0220-T

Part # IP-0420-T

CompactLogix PLC
(EtherNet/IP)

ControlLogix PLC
(EtherNet/IP)

PRODUCT DESCRIPTION

The Ethernet IP Marquee revolutionizes the industrial market on how a marquee sign should connect and communicate on the Rockwell Ethernet/IP network. The Ethernet IP Marquee has a built in WEB server, eliminating the need to install software to program the marquee sign. Setup of the display is as simple as opening a WEB browser on your computer and entering the IP address of the marquee sign. With its fully integrated package, the Ethernet IP Marquee allows the user to configure and broadcast plc data and message information without programming communication blocks within the ladder logic code of the plc. The product's innovation allows the user to set up the functionality of the marquee sign and simply connect to the Rockwell plc. The messages displayed on the marquee can be alarms, machine performance, or production data. These messages are selected and displayed through internal registers from the plc. The format of these registers can be any combination of bits, words, or strings. The Ethernet IP Marquee has an additional ethernet port built into the marquee sign. This second port gives the marquee the flexibility to broadcast information to any computer on the plant network through the web server. This computer can monitor production data and collect real time information from the plant floor by simply entering the IP address of the marquee. Also, third party spreadsheets can be used to monitor and store the information broadcasted by the marquee sign. With no software to install, the Ethernet IP Marquee stands alone as the new innovative way for a marquee sign to communicate on the Rockwell Ethernet/IP network.

PRODUCT FEATURES

- NO SOFTWARE to INSTALL !!! Web based setup
- EtherNet/IP protocol (CompactLogix, ControlLogix)
- Direct register access to plc from marquee sign
- 2nd ethernet port for data collection to PC
- Monitor plc registers through built-in web browser
- Broadcast alarm messages from the PLC
- Backup and restore configuration of marquee sign
- Collection of real time data from plant floor

PRODUCT SPECIFICATIONS

- 1, 2 and 4 line alphanumeric display
- 13 and 20 character width
- Bright tri-color LED characters
- Operating temperature 0-55 C
- 100,000 hour rated LED life
- Metal housing
- IR programming port
- Mounting hardware included

Upon entering the IP address of the marquee sign from the web browser, the monitor page is displayed. This web page is where user configured process values and variable data can be viewed.
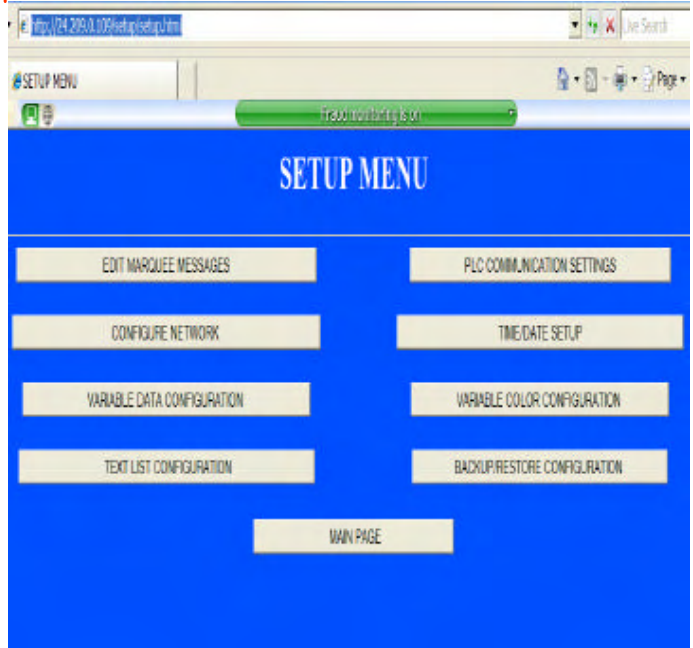
FACTORYplc MARQUEE MONITOR PAGE

PRODUCTION GOAL	5392
PRODUCTION COUNT	3930
DOWNTIME	0
MACHINE EFFICIENCY - OEE	0.0
% COMPLETE	0.0
HISTORICAL PRODUCTION COUNT	0
HISTORICAL DOWNTIME	0
VARIABLE DATA 7	0
VARIABLE DATA 8	0
VARIABLE DATA 9	0

Apply Changes

MARQUEE CONFIGURATION

With proper authorization, the user can enter into the marquee sign setup menu. This web page is where the user has access to the marquee configuration pages used to set up the marquee sign.

SETUP MENU

EDIT MARQUEE MESSAGES	PLC COMMUNICATION SETTINGS
CONFIGURE NETWORK	TIME/DATE SETUP
VARIABLE DATA CONFIGURATION	VARIABLE COLOR CONFIGURATION
TEXT LIST CONFIGURATION	BACKUP/RESTORE CONFIGURATION

MAIN PAGE

By selecting the "Edit Marquee Messages" button, the user can set up the message text, font size, color, and functionality of the message to be displayed on the marquee sign.

MESSAGE EDIT PAGE

MSG #	MSG TEXT	FONT	LINE	COLOR	FLASH	MINIMUM DISPLAY TIME
1	OPERATION COMPLETE - INSERT NEW PART	2"	LINE 1	VD 0	☐	2 SEC
2	CALL MAINTENANCE !!!!!	4"	LINE 1	RED	☑	10 SEC
3	JOB COMPLETED, BATCH COUNT REACHED	2"	LINE 1	VD 1	☐	2 SEC
4	TEMPERATURE NORMAL	2"	LINE 1	GREEN	☐	2 SEC
5	CONVEYOR STOPPED	2"	LINE 1	YELLOW	☐	2 SEC
6	PART JAMMED - RESET MACHINE	2"	LINE 1	RED	☐	2 SEC
7	SAFETY MEETING 2:00 P.M.	2"	LINE 2	GREEN	☐	30 SEC
8	ASSEMBLY STAGE 3	2"	LINE 1	GREEN	☐	2 SEC
9	E-STOP PUSHED - PROCESS STOPPED	2"	LINE 2	RED	☑	5 SEC
10	CRITICAL ALARM - PROCESS HALTED	2"	LINE 2	RED	☐	5 SEC

APPLY CHANGES	MESSAGES 11-20	MESSAGES 21-30	MESSAGES 31-40	MESSAGES 41-50
MESSAGES 51-60	MESSAGES 61-70	MESSAGES 71-80	MESSAGES 81-90	MESSAGES 91-100

MARQUEE SETUP MENU

By selecting the "Variable Data Configuration" button, the user can set up the variable data from the plc to be displayed on the marquee sign. The format of the variable data is entered here.

VARIABLE DATA CONFIGURATION

MAIN PAGE TITLE : FACTORYplc MARQUEE MONITOR PAG

MONITOR PAGE CONFIGURATION

DATA	DATA DESCRIPTION	# DIGITS	PRECISION	FORMAT	JUSTIFY	COLOR	MONITOR DISPLAY
0	PRODUCTION GOAL	5	0	LEADING SPACES	RIGHT	RED	☑
1	PRODUCTION COUNT	5	0	LEADING SPACES	RIGHT	GREEN	☑
2	DOWNTIME	5	0	LEADING SPACES	RIGHT	GREEN	☑
3	MACHINE EFFICIENCY - OEE	3	1	LEADING SPACES	RIGHT	YELLOW	☑
4	% COMPLETE	3	1	LEADING SPACES	RIGHT	FLASH RED	☑
5	HISTORICAL PRODUCTION COUNT	5	0	LEADING SPACES	RIGHT	FLASH GREEN	☑
6	HISTORICAL DOWNTIME	5	0	LEADING SPACES	RIGHT	FLASH YELLOW	☑
7	VARIABLE DATA 7	5	0	LEADING SPACES	RIGHT	RED	☑
8	VARIABLE DATA 8	5	0	LEADING SPACES	RIGHT	RED	☑
9	VARIABLE DATA 9	5	0	LEADING SPACES	RIGHT	RED	☑

Apply Changes

RETURN TO SETUP MENU

PART NUMBER MODEL	DIMENSIONS (HxWxD)	WEIGHT
IP-0113-T (1 line, 13 character, tricolor)	4.5" x 26.0" x 3.75"	2.8 LBS.
IP-0213-T (2 line, 13 character, tricolor)	6.25" x 25.5" x 3.75"	10.8 LBS.
IP-0220-T (2 line, 20 character, tricolor)	6.25" x 39.75" x 3.75"	17.9 LBS.
IP-0420-T (4 line, 20 character, tricolor)	11.0" x 39.75" x 3.75"	26.2 LBS.

DATAVISOR MARQUEES

View Production Data Anywhere in the World

through **EXOR** ELECTRONIC R&D

SOFTWARE

EMBEDDED WEB SERVER

PRODUCTION MARQUEE SERIES

GOAL   5000
ACTUAL   163

PM-0213-T

QUALITY   98%

PM-0113-T

PLANT NETWORK

% OF JOB COMPLETED   68%
PRODUCTION QUALITY   98%

PM-0220-T

PRODUCTION GOAL   5000
PARTS COUNT   1769
MACHINE EFFICIENCY   87%
% OF PACE   74%

PM-0420-T

WEB BROWSER

SPREAD SHEET
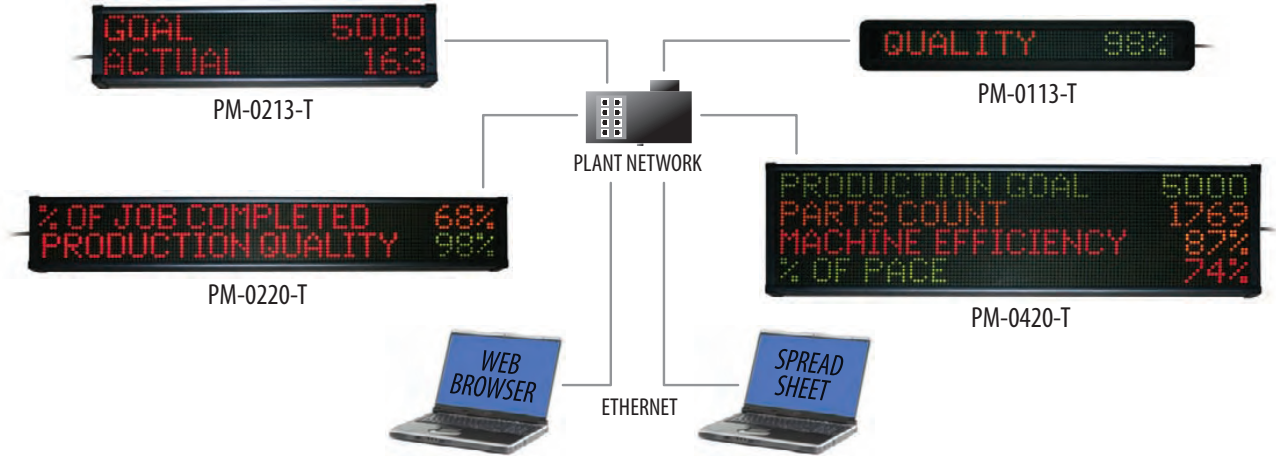
ETHERNET

PRODUCT FEATURES

- NO SOFTWARE REQUIRED! Embedded web server
- Integrated production monitoring system
- Selection menu of 30+ data source input variables
- Monitor production data through web browser
- Collect real time data over ethernet
- Store production data to 3rd party spreadsheets
- Selectable downtime reason codes
- Programmable break and downtime schedules
- Variable event driven color changes
- Machine state text and override messages
- Upgradable firmware (update to new features)
- Backup and restore application/program

PRODUCT SPECIFICATIONS

- 1, 2, and 4 line alphanumeric display
- 13 and 20 character width; tricolor LED
- 6 programmable inputs (24 VDC PNP)
- Dual mode data display (2 and 4 line models)
- Quad mode data display (1 line model)
- 10/100 ethernet communication port
- 100,000 hour rated LED life
- Operating temperature 0-55 C
- Metal housing; NEMA 1
- Hand held IR programmer
- 120 VAC power; 24 VDC (1 line model)
- Sensor power supply (24 VDC @ 1 amp)

PART NUMBER MODEL	DIMENSIONS (W x H x D)	WEIGHT
PM-0113-T (1 line, 13 characters, tricolor)	26.0" x 4.5" x 1.75"	2.8 LBS.
PM-0213-T (2 line, 13 characters, tricolor)	25.5" x 6.25" x 3.75"	10.8 LBS.
PM-0220-T (2 line, 20 characters, tricolor)	39.75" x 6.25" x 3.75"	17.9 LBS.
PM-0420-T (4 line, 20 characters, tricolor)	39.75" x 11.0" x 3.75"	26.2 LBS.

Production Marquee Series
Set Up and Functionality

CONFIGURATION SETUP MENU

BACKUP / RESTORE	MONITOR PAGE
BREAK AND DOWN TIMES	NETWORK SETTINGS
COUNT / RATE / TAKT TIMER / DOWNTIME	STATE TEXT AND OVERRIDE MESSAGES
EVENT DRIVEN COLOR CHANGES	TIME BASED RESET
INPUTS	TIME SYSTEM SETTINGS
JOBS SETTINGS PAGE	WEB DATA
MESSAGE DISPLAY AND DATA SOURCE	

RETURN TO MONITOR PAGE

MESSAGE AND DATA CONFIGURATION

GOAL COUNT PER SHIFT : 100

CHARACTER HEIGHT 2" 2 LINES

MARQUEE DISPLAY LINE CONFIGURATION

LINE #	LINE USAGE	DATA FORMAT	LINE TEXT	TEXT COLOR	DATA SOURCE	DATA COLOR
1	TEXT & DATA	99999	GOAL	GRN	GOAL	GRN
2	TEXT & DATA	99999	ACTUAL COUNT	RED		VARIABLE 1

Data source dropdown list:
TOTAL COUNT
BAD COUNT
GOAL
GOAL-COUNT
% BAD
%COMPLETE
TARGET COUNTER
% OF TARGET COUNTER
HISTORICAL COUNT
DOWNTIME
RUN TIME
SETUP TIME
USER MODE TIME
HISTORICAL DOWNTIME
CURRENT CYCLE TIME
LAST CYCLE TIME
SHORTEST CYCLE TIME
LONGEST CYCLE TIME
AVERAGE CYCLE TIME
RATE / PER SECOND
RATE / PER MINUTE
RATE / PER HOUR
Takt TIME ELAPSED
Takt TIME REMAINING
QUALITY
MACHINE AVAILABILITY
MACHINE PERFORMANCE
OEE
MACHINE STATE
TIME

DUAL MESSAGE DISPLAY MODE CONFIGUR

LINE #	ACTIVE	LINE USAGE	DATA FORMAT	LINE TEXT	TEXT COL	DATA COLOR
1	☑	TEXT & DATA	99999	PACE COUNT	RED	GRN
2	☑	TEXT & DATA	9999	% PACE	RED	VARIABLE 2

MESSAGE CYCLE TIME FOR DUAL MODE (in sec)

Apply Changes

RETURN TO SETUP MENU

OEE (Overall Equipment Effectiveness):
This setup of the marquee uses several of the data sources to configure this calculation. Using Machine Availability (runtime/total time), Machine Performance (average cycle time/expected cycle time), and Quality (good parts/total parts) calculates the OEE of your process.

KPI's (Key Performance Indicators):
This setup of the marquee displays production data and process information. Total Count, Bad Count, Rate, Cycle Time, and Downtime are several of the selectable KPI's to display on the marquee. KPI's help address your production problems immediately saving setup time, reducing downtime, and producing a higher quality part. Machine operators and plant management can view, monitor, and collect real time KPI's that inform and motivate from the marquee.

Real Time KPI's with Message Call Inputs:
In addition to displaying KPI's, this setup of the marquee utilizes inputs to broadcast an "override" message on a selected line of the marquee. Downtime, maintenance, and setup messages can be displayed on the marquee when the corresponding input becomes active. An elapsed timer is also displayed to show how long the manufacturing process has been in this condition.

Event Driven Color Changes:
This setup of the marquee allows the data source to control color change within the marquee based on percentages of that selected data source. All 30+ production data sources inputs have this capability. Displayed data sources can be shown in green when on pace, yellow when falling behind, or blinking red when below the required target.

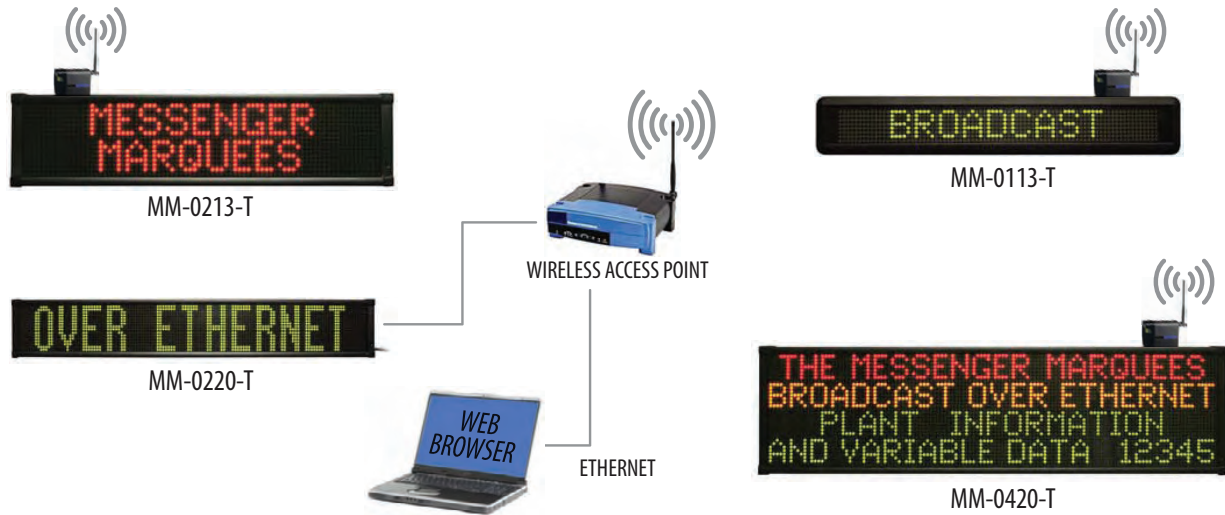### Takt Time (Target Counter) Pace Tool:
This setup of the marquee is used to help machine operators understand the environment of their manufacturing process. The target counter, an actual count, a remaining or elapsed takt timer, percent of target counter, and the daily goal are all calculated to display the real time process data for both the operator and production supervisor to view on the plant floor.

MESSENGER MARQUEE SERIES

MM-0213-T

WIRELESS ACCESS POINT

MM-0113-T

OVER ETHERNET

MM-0220-T

WEB BROWSER

ETHERNET

MM-0420-T

PRODUCT FEATURES

- NO SOFTWARE REQUIRED! Embedded web server
- Selection of 25+ display message modes
- Web based message editor and controller
- 10/100 ethernet communication port
- UDP message functionality
- Serial communication port (RS232/RS485)
- Receive data/alarms from EXOR UniOP HMI
- Broadcast company information & lost time data
- Display variable data from ERP systems
- Display 3rd party spreadsheet data to marquee

PRODUCT SPECIFICATIONS

- 1, 2, and 4 line alphanumeric display
- Bright tricolor LED
- Display 2", 3", or 4" character height
- 13 and 20 character width
- 100,000 hour rated LED life
- Operating temperature 0-55 C
- Metal housing; NEMA 1
- Hand held IR programmer
- 120 VAC power; 24 VDC (1 line model)
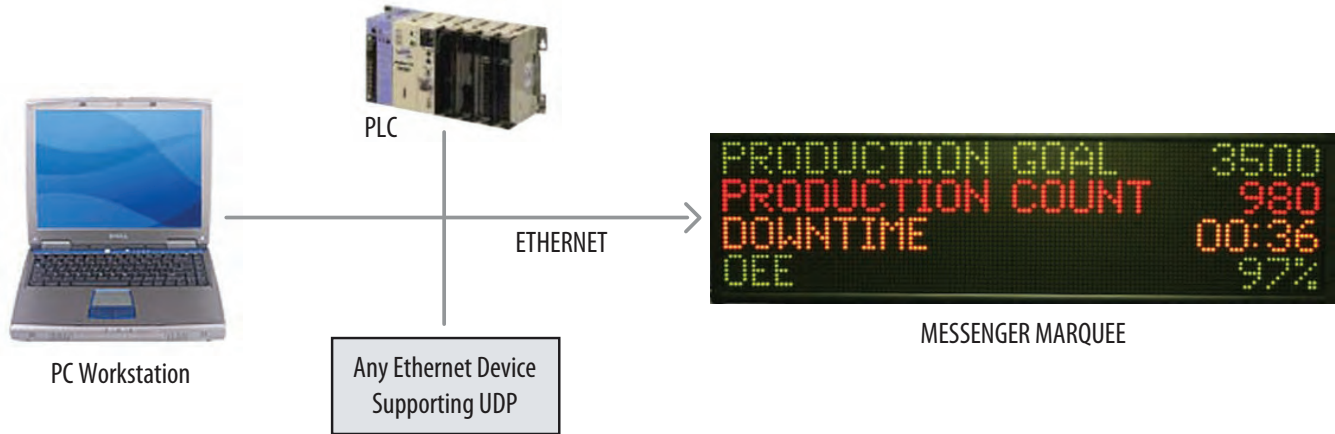- Upgradable firmware (update to new features)

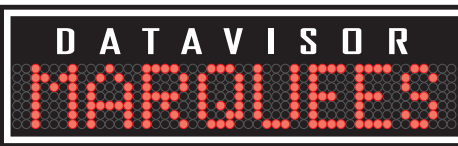| PART NUMBER MODEL	DIMENSIONS (W x H x D)	WEIGHT
MM-0113-T (1 line, 13 characters, tricolor)	**26.0" x 4.5" x 1.75"**	**2.8 LBS.**
MM-0213-T (2 line, 13 characters, tricolor)	**25.5" x 6.25" x 3.75"**	**10.8 LBS.**
MM-0220-T (2 line, 20 characters, tricolor)	**39.75" x 6.25" x 3.75"**	**17.9 LBS.**
MM-0420-T (4 line, 20 characters, tricolor)	**39.75" x 11.0" x 3.75"**	**26.2 LBS.**

Sold & Serviced By:

ELECTROMATE

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sales@electromate.com

C O N N E C T I V I T Y   S O L U T I O N S

ETHERNET CONFIGURATION

PLC

ETHERNET

PC Workstation

Any Ethernet Device
Supporting UDP

PRODUCTION GOAL   3500
PRODUCTION COUNT   980
DOWNTIME   00:36
OEE   97%

MESSENGER MARQUEE

SERIAL CONFIGURATION

PLC

RS232 / RS485

PC Workstation

Any Serial Device
Supporting RS232/RS485

PRODUCTION GOAL   3500
PRODUCTION COUNT   980
DOWNTIME   00:36
OEE   97%

MESSENGER MARQUEE

EXOR HMI CONFIGURATION

200+ PLC Drivers

EXOR HMI

% OF JOB COMPLETED   68%
PRODUCTION QUALITY   98%

MESSENGER MARQUEE

Production Panel Meter Series

Part # PPM-0106-LED

Part # PPM-0216-VF

Part # PPM-0216-LCD

PRODUCT DESCRIPTION

The The Production Panel Meter series displays production information on the plant floor PLUS broadcasts this real time production data over ethernet to any computer on the plant network. With a built-in web server, the Production Panel Meter requires no software to install to program the functionality of the meter. Remote setup and monitoring of production data is as simple as opening a WEB browser and entering the IP address of the meter. The Production Panel Meter has four selectable digital inputs to provide the source for the 35+ production variables. You can select such variables as Counts, % Complete, Pace, Cycle Times, % of Target, Downtime, and OEE to display, monitor, and collect. These production variables are built into the product requiring no code to program or formulas to write. This real time production data can also be collected by 3rd party spreadsheets. Production goals reached, machine performance monitored, and plant floor production data collected are all benefits of the Production Panel Meter. Network your plant equipment and measure your **OEE (Overall Equipment Effectiveness)** today by installing the Production Panel Meter. No Software, No Programming, No Ethernet Cards

PRODUCT FEATURES

- **NO SOFTWARE TO INSTALL!** Web based setup
- Integrated production monitoring solution
- Selection of 35+ data source input variables
- Monitor production data through web browser
- Collect real time data over ethernet
- Store production data to 3rd party spreadsheets
- Built in Modbus TCP server
- Programmable break and downtime scheduler
- Machine state text and override messages

PRODUCT SPECIFICATIONS

- 1/8 DIN panel size, Nema 12
- 2 line x 16 character vacuum fluorescent display
- 2 line x 16 character liquid crystal display
- 1 line x 6 digit tri-color LED display
- 4 programmable PNP inputs
- 1 programmable SSR 1 amp output
- 10/100 ethernet communication port
- Operating temperature 0-55 C
- 24 VDC power requirement

OEE = Availability x Performance x Quality

MACHINE #1   MACHINE #2   MACHINE #3   MACHINE #4   MACHINE #5

PLANT NETWORK

SOFTWARE

Display, Monitor, and Collect Production Data without Installing any Software

PRODUCTION LINE # 1

PRODUCTION TARGET	100
PRODUCTION COUNT	55
% COMPLETE	55%
HISTORICAL COUNT	28
PACE	61
% OF PACE	90%
DOWNTIME	00:00:51
RUNTIME	00:02:07
PRODUCTION RATE	0
OEE	17%

MARQUEE CONFIGURATION

DATA SOURCE

GOAL

TOTAL COUNT
BAD COUNT
GOAL
GOAL-COUNT
% BAD
%COMPLETE
TARGET COUNTER
% OF TARGET COUNTER
HISTORICAL COUNT
DOWNTIME
RUN TIME
SETUP TIME
USER MODE TIME
HISTORICAL DOWNTIME
CURRENT CYCLE TIME
LAST CYCLE TIME
SHORTEST CYCLE TIME
LONGEST CYCLE TIME
AVERAGE CYCLE TIME
RATE / PER SECOND
RATE / PER MINUTE
RATE / PER HOUR
Takt TIME ELAPSED
Takt TIME REMAINING
QUALITY
MACHINE AVAILABILITY
MACHINE PERFORMANCE
OEE
MACHINE STATE
MODBUS/TCP reg. 40131

**Production Data Variables
"No Code to Program"
"No Formulas to Write"**

Production Line # 1

TIME	DATE	GOAL	ACTUAL	TARGET	% OF TARGET	% COMPLETE	RUN TIME	DOWN TIME	CYCLE TIME	OEE	STATE
3:15:54 PM	05/30/08	100	18	15	120%	18%	0:01:54	0:00:32	11.09	78%	RUN
3:16:09 PM	05/30/08	100	18	16	112%	18%	0:02:08	0:00:32	26.02	80%	RUN
3:16:09 PM	05/30/08	100	18	16	112%	18%	0:02:09	0:00:32	26.66	80%	RUN
3:16:24 PM	05/30/08	100	18	18	100%	18%	0:02:24	0:00:32	41.14	81%	RUN
3:16:24 PM	05/30/08	100	18	18	100%	18%	0:02:24	0:00:32	41.14	81%	RUN
3:16:39 PM	05/30/08	100	18	19	94%	18%	0:02:38	0:00:32	55.71	78%	RUN
3:16:39 PM	05/30/08	100	18	19	94%	18%	0:02:39	0:00:32	56.34	78%	RUN
3:16:54 PM	05/30/08	100	18	21	85%	18%	0:02:53	0:00:32	70.82	71%	RUN
3:16:55 PM	05/30/08	100	18	21	85%	18%	0:02:54	0:00:32	71.99	71%	RUN
3:17:08 PM	05/30/08	100	18	22	81%	18%	0:03:07	0:00:32	85.24	68%	RUN
3:17:09 PM	05/30/08	100	18	22	81%	18%	0:03:08	0:00:32	86.4	68%	RUN
3:17:23 PM	05/30/08	100	18	24	75%	18%	0:03:22	0:00:32	100.37	64%	RUN

Production Line # 1

		STATE	RUN
PRODUCTION GOAL	100	ACTUAL PRODUCTION	18

Actual vs Target — TARGET, 31 / ACTUAL, 18

Downtime vs Runtime
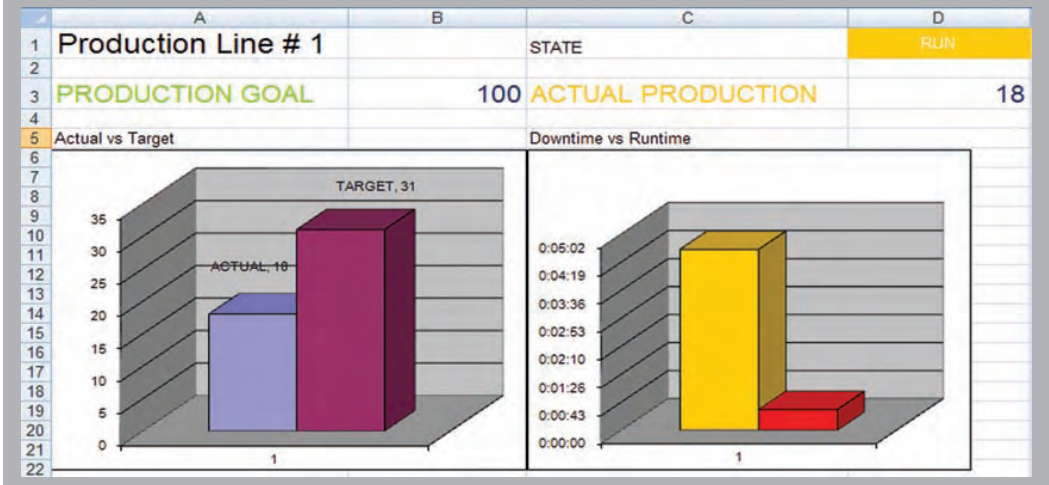
Production Data Collected and Analyzed with 3rd Party Spreadsheet

PART NUMBER MODEL	DISPLAY TYPE	DIMENSIONS (W x H x D)
PPM-0106-LED (1 line, 6 digit)	**Tri-Color LED**	**96mm x 48mm x 125mm**
PPM-0216-LCD (2 line, 16 character)	**Liquid Crystal**	**96mm x 48mm x 125mm**
PPM-0216-VF (2 line, 16 character)	**Vacuum Fluorescent**	**96mm x 48mm x 125mm**

Modbus MARQUEE SERIES (Modbus TCP)

Part # MB-0213-T

Part # MB-0113-T

Part # MB-0220-T

Part # MB-0420-T

Modbus PLC or Controller
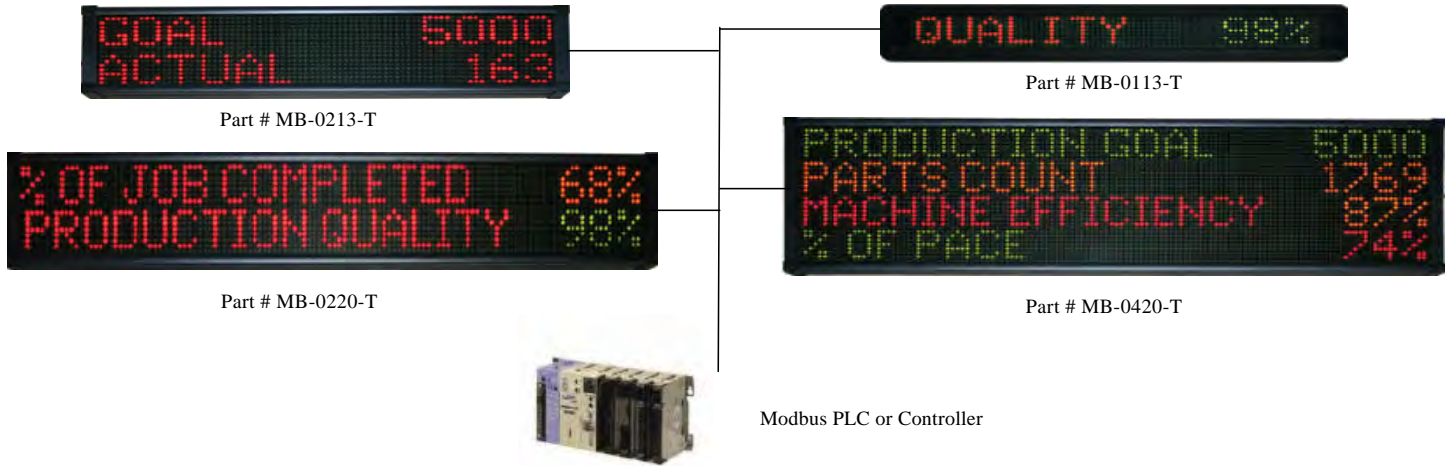
PRODUCT DESCRIPTION

The Modbus Marquee revolutionizes the industrial market on how a marquee sign should connect and communicate on the Mobus network. The Modbus Marquee has a built in WEB server,
eliminating the need to install software to program the marquee sign. Setup of the display is as simple as opening a WEB browser on your computer and entering the IP address of the marquee sign. With its fully integrated package, the Modbus Marquee allows the user to configure and broadcast plc data and message information without programming communication blocks within the ladder logic code of the plc. The product's innovation allows the user to set up the functionality of the marquee sign and simply connect to a Modicon PLC. The messages displayed on the marquee can be alarms, machine performance, or production data. These messages are selected and displayed through internal registers from the PLC. The format of these registers can be any combination of bits, words, or strings. The Modbus Marquee has an additional ethernet port built into the marquee sign. This second port gives the marquee the flexibility to broadcast information to any computer on the plant network through the web server. This computer can monitor production data and collect real time information from the plant floor by simply entering the IP address of the marquee. Also, third party spreadsheets can be used to monitor and store the information broadcasted by the marquee sign. With no software to install, the Modbus Marquee stands alone as the new innovative way for a marquee sign to communicate on the Modbus network.

PRODUCT FEATURES

- NO SOFTWARE to INSTALL !!! Web based setup
- Mobus TCP protocol
- Direct register access to plc from marquee sign
- 2nd ethernet port for data collection to PC
- Monitor plc registers through built-in web browser
- Broadcast alarm messages from the PLC
- Backup and restore configuration of marquee sign
- Collection of real time data from plant floor

PRODUCT SPECIFICATIONS

- 1, 2 and 4 line alphanumeric display
- 13 and 20 character width
- Bright tri-color LED characters
- Operating temperature 0-55 C
- 100,000 hour rated LED life
- Metal housing
- IR programming port
- Mounting hardware included

Upon entering the IP address of the marquee sign from the web browser, the monitor page is displayed. This web page is where user configured process values and variable data can be viewed.

FACTORYplc MARQUEE MONITOR PAGE

PRODUCTION GOAL	5392
PRODUCTION COUNT	3930
DOWNTIME	0
MACHINE EFFICIENCY - OEE	0.0
% COMPLETE	0.0
HISTORICAL PRODUCTION COUNT	0
HISTORICAL DOWNTIME	0
VARIABLE DATA 7	0
VARIABLE DATA 8	0
VARIABLE DATA 9	0

Apply Changes

MARQUEE CONFIGURATION

With proper authorization, the user can enter into the marquee sign setup menu. This web page is where the user has access to the marquee configuration pages used to set up the marquee sign.

SETUP MENU

EDIT MARQUEE MESSAGES   PLC COMMUNICATION SETTINGS

CONFIGURE NETWORK   TIME/DATE SETUP

VARIABLE DATA CONFIGURATION   VARIABLE COLOR CONFIGURATION

TEXT LIST CONFIGURATION   BACKUP/RESTORE CONFIGURATION

MAIN PAGE

By selecting the "Edit Marquee Messages" button, the user can set up the message text, font size, color, and functionality of the message to be displayed on the marquee sign.

MESSAGE EDIT PAGE

MSG #	MSG TEXT	FONT	LINE	COLOR	FLASH	MINIMUM DISPLAY TIME
1	OPERATION COMPLETE - INSERT NEW PART	2"	LINE 1	VD 0	☐	2 SEC
2	CALL MAINTENANCE !!!!!	4"	LINE 1	RED	☑	10 SEC
3	JOB COMPLETED, BATCH COUNT REACHED	2"	LINE 1	VD 1	☐	2 SEC
4	TEMPERATURE NORMAL	2"	LINE 1	GREEN	☐	2 SEC
5	CONVEYOR STOPPED	2"	LINE 1	YELLOW	☐	2 SEC
6	PART JAMMED - RESET MACHINE	2"	LINE 1	RED	☐	2 SEC
7	SAFETY MEETING 2:00 P.M.	2"	LINE 2	GREEN	☐	30 SEC
8	ASSEMBLY STAGE 3	2"	LINE 1	GREEN	☐	2 SEC
9	E-STOP PUSHED - PROCESS STOPPED	2"	LINE 2	RED	☑	5 SEC
10	CRITICAL ALARM - PROCESS HALTED	2"	LINE 2	RED	☐	5 SEC

APPLY CHANGES	MESSAGES 11-20	MESSAGES 21-30	MESSAGES 31-40	MESSAGES 41-50
MESSAGES 51-60	MESSAGES 61-70	MESSAGES 71-80	MESSAGES 81-90	MESSAGES 91-100

MARQUEE SETUP MENU

By selecting the "Variable Data Configuration" button, the user can set up the variable data from the plc to be displayed on the marquee sign. The format of the variable data is entered here.

VARIABLE DATA CONFIGURATION

MAIN PAGE TITLE : FACTORYplc MARQUEE MONITOR PAC

MONITOR PAGE CONFIGURATION

DATA	DATA DESCRIPTION	# DIGITS	PRECISION	FORMAT	JUSTIFY	COLOR	MONITOR DISPLAY
0	PRODUCTION GOAL	5	0	LEADING SPACES	RIGHT	RED	☑
1	PRODUCTION COUNT	5	0	LEADING SPACES	RIGHT	GREEN	☑
2	DOWNTIME	5	0	LEADING SPACES	RIGHT	GREEN	☑
3	MACHINE EFFICIENCY - OEE	3	1	LEADING SPACES	RIGHT	YELLOW	☑
4	% COMPLETE	3	1	LEADING SPACES	RIGHT	FLASH RED	☑
5	HISTORICAL PRODUCTION COUNT	5	0	LEADING SPACES	RIGHT	FLASH GREEN	☑
6	HISTORICAL DOWNTIME	5	0	LEADING SPACES	RIGHT	FLASH YELLOW	☑
7	VARIABLE DATA 7	5	0	LEADING SPACES	RIGHT	RED	☑
8	VARIABLE DATA 8	5	0	LEADING SPACES	RIGHT	RED	☑
9	VARIABLE DATA 9	5	0	LEADING SPACES	RIGHT	RED	☑

Apply Changes

RETURN TO SETUP MENU

PART NUMBER MODEL	DIMENSIONS (HxWxD)	WEIGHT
MB-0113-T (1 line, 13 character, tricolor)	4.5" x 26.0" x 3.75"	2.8 LBS.
MB-0213-T (2 line, 13 character, tricolor)	6.25" x 25.5" x 3.75"	10.8 LBS.
MB-0220-T (2 line, 20 character, tricolor)	6.25" x 39.75" x 3.75"	17.9 LBS.
MB-0420-T (4 line, 20 character, tricolor)	11.0" x 39.75" x 3.75"	26.2 LBS.