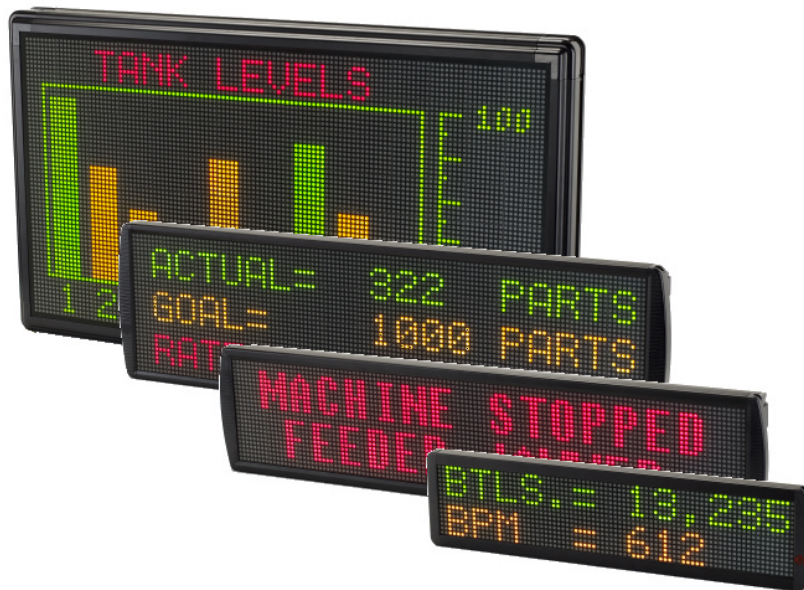


KNOWLEDGE BINDER – PFM – PLANT FLOOR MARQUEE



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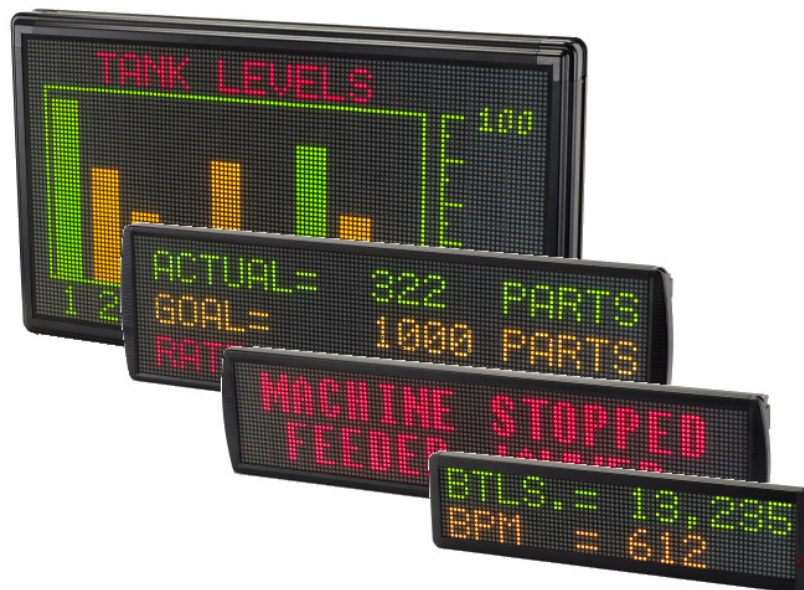
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KNOWLEDGE BINDER – PFM – PLANT FLOOR MARQUEE



WHY SHOULD YOU SELL THE PFM SERIES?

Kaizen, lean manufacturing, six-sigma, total quality management, continuous improvement – All of these terms refer, in some form or another, to the efforts of companies as they strive to become more competitive in a global economy. While various strategies are implemented in order to improve productivity, they all start with the collection of data and the communication of that data to the people who can most affect improvement – the production floor personnel.

INSIGHT ENABLED

Red Lion products are known for their ability to collect, log and communicate information to various levels of an organization. With the introduction of the Plant Floor Marquee (PFM), Red Lion now provides manufacturers and producers with the means to communicate vital performance data across the entire factory floor.

Large LED message boards, or marquees as they're also referred to, will not be a new concept to many of your customers. However, your customers will be surprised at how easy it can be to add useful information displays throughout their facility – with little or no modification to existing equipment.

CONTINUATION OF YOUR \$ALES\$

As many readers will already know, the G3 series HMI, the Data Station Plus and the Modular Controller are products that are capable of communicating with a myriad of automation equipment. These very same products are used to control the PFM displays – simply connect a cable between them to provide a more complete solution to your customers. In other words, you have the unique opportunity to increase your sales volume with very little to learn!

INTRODUCTION

BACKGROUND

Industrial marquees are frequently used to communicate information to plant floor personnel. This information is usually a performance metric, but can also be a simple statement as to the condition of the equipment, e.g. “Conveyor Jammed!”

Metrics that are frequently displayed are...

- ❑ Number of products produced
- ❑ Productivity versus target goals
- ❑ Reasons for line stoppages
- ❑ Preventative maintenance due on the equipment
- ❑ OEE – Overall equipment effectiveness
- ❑ Machine uptime and downtime

This trend started long ago as companies realized the value of information sharing, particularly in regard to *personal* performance. Indeed, studies have shown that productivity improvements can be realized simply by displaying *any* information that an individual can impact, even if they don’t fully understand the metric being displayed.

BUZZWORD WATCH

Other than the obvious terms for an industrial marquee, e.g. “production-line display”, “production scoreboard”, etc. there are several unique terms that you’ll want to familiarize yourself with. These terms are frequently used to describe specific metrics in the production environment, and as a result, you may be asked about them.

OEE – OVERALL EQUIPMENT EFFECTIVENESS

OEE is a metric that indicates the utilization of resources. Production managers are interested in seeing the value of this metric increase, as it indicates more efficient utilization of the available personnel, machinery, etc.

The formula for OEE is $OEE = Availability \times Performance \times Quality$ ¹

ANDON BOARD

Andon is a process of communication that involves the notification of others that a problem exists in a manufacturing line or cell. This communication can be realized in many forms – even simple stack or tower lights are a form of andon display, in that the various colors can be used to represent different conditions – but now it is common to use industrial marquees.

¹ http://en.wikipedia.org/wiki/Overall_Equipment_Effectiveness

PC-BASED SOLUTIONS

Several companies, such as Adaptive, offer displays along with software to control them. The software does allow you to control the displays more effectively than the aforementioned slave displays, even allowing you to include graphics. This sort of solution will require a PC, the software, and any necessary communications drivers in order to talk to a range of automation devices. While powerful, there is a level of complexity that comes with this type of solution.

DEDICATED BOARDS

There are a few players in this market, including Vorne. These products are unique in that they are canned production KPI indicators. Vorne's model includes multiple inputs, as well as a few outputs. The customer simply connects a few sensors, selects the KPIs that he is interested in, and the display does the rest. Vorne's model even has a built in web server.

This type of display does offer ease-of-use, but it is obviously not as scalable and flexible as some customers will require.

THE PLANT FLOOR MARQUEE

POWERFUL, FLEXIBLE *AND* EASY TO USE

Our goal was simple: Provide customers the ability to quickly and easily create their own production monitor, without the need to understand PLC ladder logic or PC-based communications.

How did we achieve this? By leveraging the capabilities of the G3 Series HMI, Data Station Plus and Modular Controller.

QUICK REVIEW



G3 Series HMI



Modular Controller



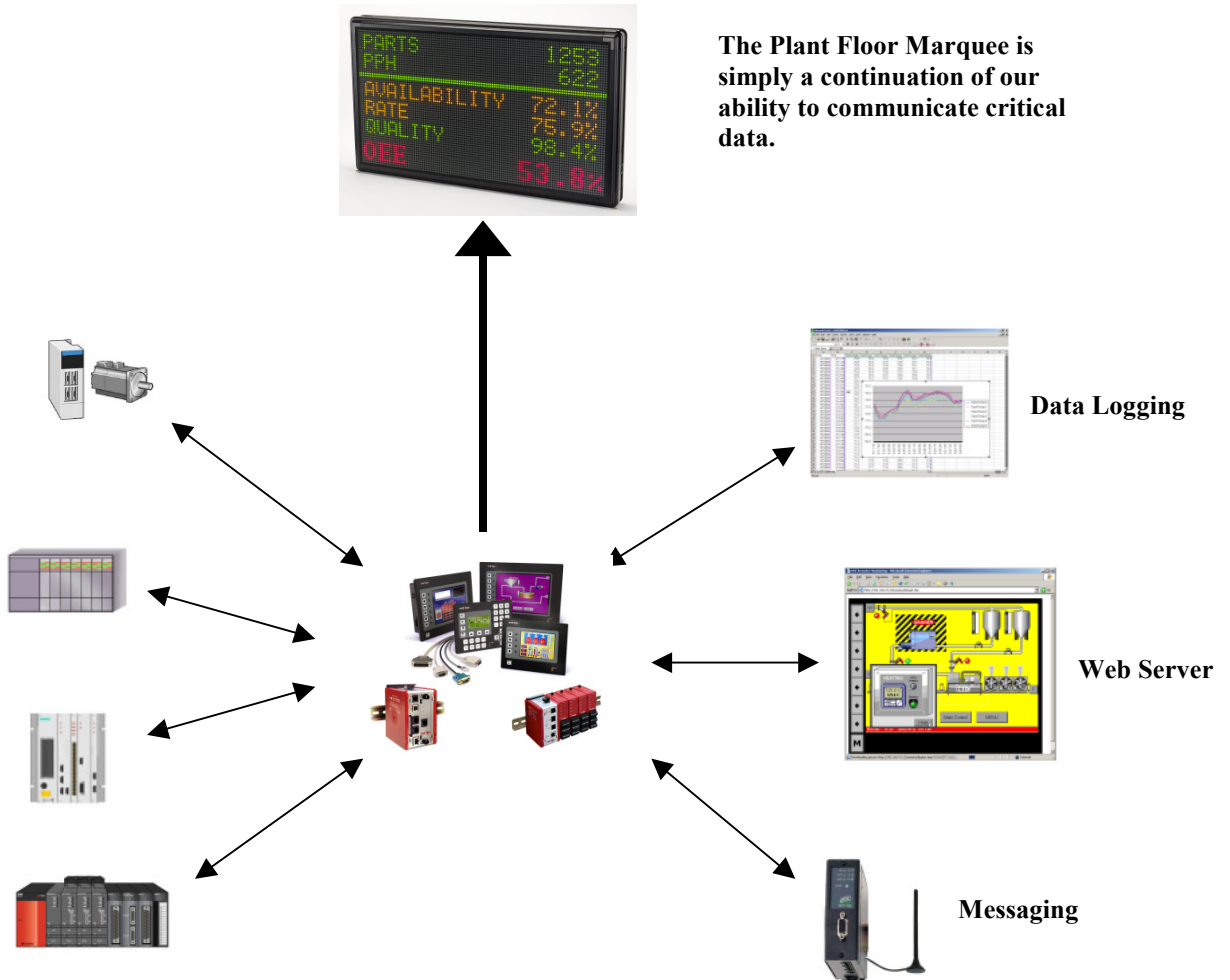
Data Station Plus

The G3 series HMI, Data Station Plus and Modular Controller products are all designed to provide customers with the tools they need to gain insight into their processes...

- ❑ Protocol Conversion – Allows customers to communicate with automation devices from various vendors simultaneously, and to pass data between them with drag and drop data mapping.
- ❑ Data Logger – Log data to “IT-ready” CSV files for later review.
- ❑ Web Server – Built in web server allows customers to monitor and control their processes remotely from any networked PC with Internet Explorer – no software plug-ins required.
- ❑ Messaging Services – Send emails or SMS text messages when problems occur, or in order to prevent problems, such as when preventative maintenance is required.
- ❑ 32-bit Floating Point Math – Our solution allows the customer the ability to perform complex math with the collected data, in order to provide the personnel with meaningful information.

COMPLETING THE SOLUTION

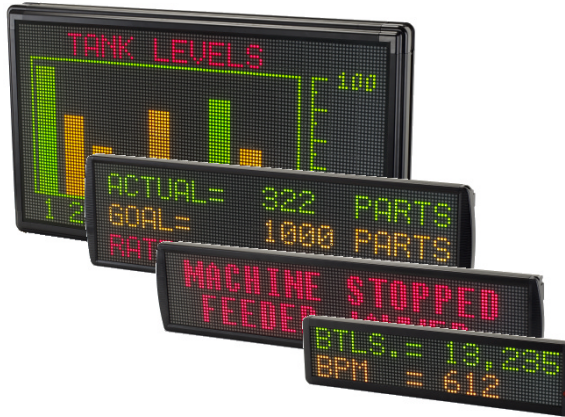
The aforementioned products act as a host to the PFM. Simply format the display (or virtual HMI on the Data Station and Modular Controller), and the data is sent to the PFM. It's that easy!



The Plant Floor Marquee is simply a continuation of our ability to communicate critical data.

MODELS

The PFM series consists of four models of tricolor LED displays. These range in size from a “machine level” display that measures four inches tall and 18 inches wide, to an “area wide” display that’s 36 inches wide and 19 inches tall. Each size is available in 115 or 220 VAC models.



PIXEL RESOLUTION	APPROX. SIZE	POWER	MODEL
80 H x 16 W	26" H x 6.6" W (66.0 x 16.8 cm)	115 VAC	PFM1608A
		220 VAC	PFM1608B
120 H x 24 W	38.5" H x 8.8" W (97.8 x 22.4 cm)	115 VAC	PFM2412A
		220 VAC	PFM2412B
120 H x 32 W	38.8" H x 10.9" W (98.6 x 27.7 cm)	115 VAC	PFM3212A
		220 VAC	PFM3212B
120 H x 64 W	39.3" H x 22.5" W (99.8 x 57.2 cm)	115 VAC	PFM6412A
		220 VAC	PFM6412B

WHAT ABOUT THE BFD?

Some will wonder “What happened to the BFD - Big Flexible Display?” The BFD still exists, but many customers were disappointed that it was available only with a red monochrome display. Couple that with the fact that we only offered it in one size (which was heavy and difficult to take along on demos) and you can see why it wasn’t a huge success.

Now that we’re offering a family of product, we think that the BFD sales will increase. It is afterall, available with a bullet-proof² NEMA 4 housing, perfect for wash down environments for which the PFM wasn’t designed.

² “Bullet-proof” used only as a figure of speech. Red Lion makes no claims, express or implied, in the ability of the BFD housing to stop even the smallest caliber rounds.

SOFTWARE

The PFMs don't really require any programming, as they are slaves to the aforementioned host products. The only adjustable parameter is the drop number, which can be adjusted via a utility within Crimson[®] 2.0 software.

FEATURES/BENEFITS

PROTOCOL CONVERSION

Protocol conversion isn't a feature that customers will be expecting when they're searching for a production monitor, but it comes free with every host.

Our solution was designed to be able to answer the majority of applications requirements – applications in which there might be a PLC, a drive, a barcode scanner, etc., all from different manufacturers. In order to communicate with all of these disparate devices, our solution offers multiple serial and Ethernet ports, and can communicate with up to nine protocols simultaneously.

Once all of this data is in the host, it's a simple matter of “drag and drop” in order to map registers from one device to another.

ETHERNET

Most providers of industrial marquees offer “Ethernet”, but what they are offering is simply a means to connect their display to their host, which is frequently a computer. There really isn't much of an advantage to their Ethernet solution at all. If the customer doesn't have the Ethernet cable already installed, it might as well be RS-485, RS-232, etc.

Our solution, on the other hand, allows the customer to communicate directly to Ethernet based automation devices via four simultaneous protocols, in the native language of the device. Oh, it can also talk to computers as well, just like our competitors.

DATA LOGGING

Anyone interested in monitoring their process will certainly be interested in logging the data for later review. Our solution includes the ability to log data and events in “IT-ready” CSV file format. For more information, refer to the G3, Data Station or Modular Controller Knowledge Binders.

WEB SERVER

What's better than having data displayed automatically throughout a facility on large displays? (The ability to monitor it from every PC as well.)

The hosts' built-in web server allows any networked PC to access and control the system. For more information, refer to the G3, Data Station or Modular Controller Knowledge Binders.

FLOATING POINT MATH

If you're going to display KPIs (Key Performance Indicators), you need the ability to perform mathematical equations on the available data. Each of the aforementioned host products allows the customer to churn data into useful KPIs via formula tags, or for more advanced applications, the custom User Programs function can be used. Either way, we've got it covered!

BESPOKE SYSTEM DESIGN

With our solution, the customer can decide how to build his system to meet his needs. If he wants automatic data collection and a display, the PFM coupled with a Data Station is a perfect choice.

If the operator needs to be able to manually enter some of the data being shown on the display, the G3 HMI is the appropriate choice for the PFM's host.

Lastly, if the application has variables that need to be measured, and there's no PLC collecting the data, the Modular Controller and its data acquisition modules provide the means to create the ideal solution.

PFM COMPARISON

	Red Lion	EZAutomation	Vorne	Allen Bradley
	Plant Floor Marquee 	EZMarquee 	XL 	Inview Displays
TRI COLOR	Yes	Yes	Yes	Yes
DISPLAY FORMAT	Graphic	Text	Graphic	Difficult support for graphics
NEMA 4/4X	No	Yes	??	Some models
COMMUNICATION	170 protocols via host product	Serial, optional Ethernet Profibus ,DeviceNet	Serial/Ethernet	AB protocols (requires modules)
DISPLAY CREATION	WYSIWYG	Output commands from PLC must also include format commands	Software	Various methods
OTHER	Flexible, scalable, easy to use	Serial slave displays, cheap	Powerful canned manufacturing KPI solution, built-in web server	AB friendly only, stores messages, expensive
APPROX. PRICE RANGE (FOR COMPARABLE SIZES & SPECS)	\$799-\$3999	\$489-\$2028	\$1000-\$6990	\$3000-\$8700

SELLING TOOLS

Various tools are provided in order to help you sell the PFM series. Because the series is always being enhanced, some of the support items fall slightly behind. We are doing our best to keep them up to date; check this space often!

COLLATERAL

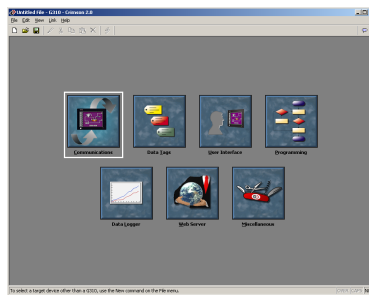
BROCHURE



Our current brochure is part number ADLD0092, and may be ordered from the factory. It may also be viewed on the web at...

<http://www.redlion.net/News/PFMweb.pdf>

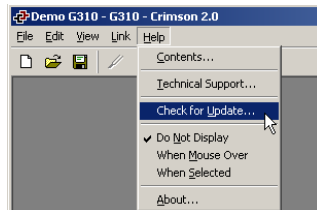
SOFTWARE



Crimson is available as a free download from...

<http://www.redlion.net/Support/Downloads/SoftwareLibrary/Crimson2.html>

If you already have Crimson 2.0 installed, and your computer has access to the Internet, you can make sure you always have the latest released build by clicking Help – Check for Updates.



BULLETINS

Hardware bulletins on the various PFMs, as well as the BFD and other products, are available at...

<http://www.redlion.net/Support/Literature.html>

SUPPORT

Our main support page is located at...

<http://www.redlion.net/Support.html>

...and offers various resources to support the PFM and BFD series.

TECH NOTES

A growing list of Tech Notes is provided to assist with a variety of applications at...

<http://www.redlion.net/Support/VirtualHelpDesk/TechNotes.html>

TECH SUPPORT

The Interface & Control Team at Red Lion currently has three full time members, which may be reached Monday through Friday, 8:00 AM to 5:00 PM EST at...

717-767-6511, or via email...

Will Weyant willw@redlion.net

Jeremy Howell jeremyh@redlion.net

Dan Yost dany@redlion.net

SELLING SCRIPT

PREPARATION

Make sure you take the time to collect the following for a successful sales call...

PFM

Probably the smallest one, but if you do need to show a customer the biggest model, you may have to call your local factory representative. Don't forget the power cord!

A HOST

Any of the following can be used as a host device...

- G3 HMI
- G3 Kadet HMI
- Data Station Plus – as long as it's an SX or GT model
- Modular Controller Master – as long as it's an SX or GT model

DC POWER SUPPLY

Make sure that you have your DC power supply pre-wired for the host.

DOWNLOAD CABLE

The download cable being used depends on the host device type.

PFM COMMS CABLE AND ADAPTERS

You'll need a PFM communications cable, and possibly some adapters if you're connecting it to a G3 Kadet. See our website for more details.

CRIMSON 2.0

Make sure that you have a recent copy of Crimson 2.0 on your laptop.

GOOD LUCK, AND GOOD SELLING!