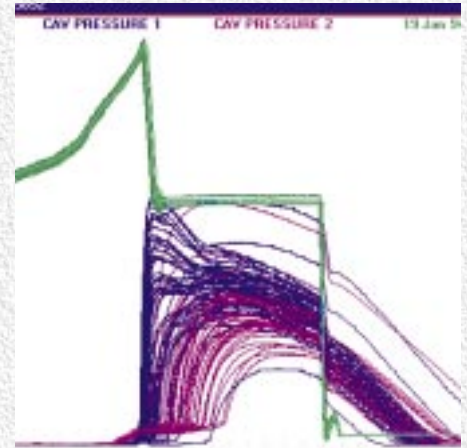


# 1746-MPM Mold Pressure Module

*Provides Mold Cavity Pressure Monitoring Control  
in Injection Molding Processes*



## Product Profile



### Introduction

Allen-Bradley is proud to introduce the 1746-MPM module. One of the newest Allen-Bradley specialty modules for injection molding applications, the 1746-MPM module offers the most advanced features in the marketplace.

The 1746-MPM module is based on the Allen-Bradley Small Logic Controller (SLC™) architecture, extending field-proven capabilities of the SLC platform and providing a space saving solution with its compact form factor.

### Product Description

The 1746-MPM module is an intelligent specialty module that offers OEMs and end-users the following benefits:

- Accuracy
- Repeatability
- Compatibility
- Flexibility

### Accurate Control

The 1746-MPM module allows molders to transfer the machine's injection sequence, based on plastic pressure measured in the mold. This technique provides more accurate and consistent control by triggering machine action before it crosses the threshold.

In most injection molding applications, transfer from injection to pack and hold occurs based on time, hydraulic pressure, or injection ram position. With this module, users can be more accurate in controlling their process by using mold cavity pressure as the trigger to transition from hydraulic flow control to pressure control.

### Repeatable Set-Ups

The 1746-MPM module doubles as a monitoring interface to a personal computer allowing data collection and graphic display of processing parameters of each cycle including hydraulic pressure, screw position, and mold pressure. This ensures repeatable

set-ups and simplified troubleshooting.

It also offers molders the ability to set alarm limits around process criteria and establish statistical process control of any injection molding process.

### Reduces Scrap

The 1746-MPM module collects real-time data samples every 10ms. It calculates summary information for various stages of the machine cycle and checks for alarm conditions based on time or pressure. This early detection feature allows preventive actions to be taken before any chance of production process disruptions. This in turn eliminates or reduces scrap parts.

## Flexible Levels

The 1746-MPM module provides two analog inputs capable of measuring high-level, current level and low level transducers. One of these inputs is typically used to monitor a strain gauge transducer located in the mold cavity. The second analog input can be used to monitor either a second mold pressure sensor, or hydraulic injection pressure.

## Compatible with RJG

1746-MPM module is fully compatible with mold cavity products marketed by RJG Technologies, Inc., for example DARTWin, DARTNet and pressure sensors. DARTWin software is especially useful during module setup.

## Complements Pro-Set™ 200

When the latest mold cavity pressure techniques provided by the 1746-MPM module are combined with Pro-Set 200 injection molding control, they provide an ideal control solution for further improving

the product quality. The Pro-Set 200 control is based on a special SLC processor that is pre-loaded with state-of-the-art hydraulic logic required for precise injection molding machine control. The logic is configurable, permitting Pro-Set 200 controls to be adapted to a wide range of machines.

Pro-Set 200 is pre-configured to accept cavity pressure transfer signals as an external input to trigger transition from velocity to pressure control.

## Specifications

Electrical	
backplane current	0.3A @ 5V
backplane power	1.5W
number of input channels	2
A/D conversion method	12-bit successive approximation
common-mode rejection	115db @ 500 gain
dynamic response	200KHz @ 500 gain
Inputs	
input types lo-level	2, 6, 9mV/V strain gauge 4 – 20mA self-powered
input types hi-level	0 – 10V dc
gain settings	1, 100, 250, 450
excitation voltage	10.000Vdc ± 0.002V dc
Environmental	
operating temperature	0°C to 60°C
storage temperature	-40°C to 85°C
relative humidity	5% to 95% non-condensing

## Agency Certification



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