Retrofitting from the Watlow® SERIES F4 to the F4T®

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(abcimg://F4T%20pid%20controller%20thumbnail)

There are many periods in life that are naturally stressful but upgrading your process controller (/en/products/controllers/temperature-and-process-controllers) needn't be one of them. For industrial heaters (/en/products/heaters), the process controller is the hub of the operation. So, any issues with this essential piece of equipment and everything shuts down.

Luckily, transitioning to a new process controller does not need to be an arduous process. Watlow® has created the F4T® (/en/products/controllers/temperature-and-process-controllers/f4t-integrated-controller) with retrofitting in mind. This means you can be back up and running in as little time as possible.

Transitioning from the SERIES F4 to the new F4T

For years now, the SERIES F4 temperature controllers have been the go-to choice for countless industries and applications. Its rugged construction has ensured reliable thermal performance in numerous industries, from semiconductor manufacturing to plastics processing and packaging. Part of what made the SERIES F4 great is the fact that it came equipped with embedded software for quick, guess-free compatibility. It also has an accuracy calibration of +/- 0.1% of span.

The new F4T builds on the great foundation of the rugged and reliable F4. It then enhances the experience with advanced data logging, batch processing and graphical trend charts, and it's all viewable from the new full-color 4.3-inch color, graphical touch panel display. The F4T has also been created with easy retrofitting in mind.

Thanks to its modular, field configurable I/O and integrated PID controller, users have been upgrading to the new F4T in droves. It also benefits from a data logger, limit controller, solid state relay, timer, counter, PLC math and logic, panel switch and lights.

Retrofitting the Watlow® F4T

Retrofitting the F4T into an F4 slot is also remarkably easy. The F4T was designed from the start for easy conversion and upgrade within a ¼ DIN slot. Watlow's COMPOSER® programming software (/en/products/controllers/software/composer-software) makes upgrades and set up easy through an intuitive, drag and drop user interface.

Watlow has created handy retrofit guides (/en/resources-and-support/technical-library/retrofit-guides) for a wide range of its products, including the F4 to F4T. These guides allow you to search for your current model number and ensure you have the information you need for a seamless install. The SERIES F4 to F4T retrofit guide (https://www.watlow.com/-/media/documents/retrofit-guides/series-f4-retrofit-guide-03092015.ashx) also alerts you to any deviations between your current model and the new F4T. These include base differences, flex modules, language, wiring, board support, 500-ohm RTD support, programming and communication, process output differences and more.

If your model number is not listed, the controller may be customized. Model numbers having an 11th and 12th digit other than RG, AA, AC or AJ have custom firmware. For custom models. or if you cannot find your model number, please contact Watlow's technical support team at 1-800-WATLOW2.

Before retrofitting, it is important to remember the following:

Follow safety procedures

Ensure all redundant safety equipment is in place and working when retrofitting equipment. Retrofitting without the proper safety equipment that is correctly installed can lead to more serious issues such as invalidating warranties, damaging equipment or even harmful accidents. Proper caution should always be taken.

Understand your application

It is important to be aware of the temperature range and sensor type you are working with. Is the sensor and power-switching device (/en/products/controllers/power-switching-devices) upgradeable, if required?

Be aware of any additional input and output requirements, such as secondary sensors for heating and cooling, controls and alarms. Make sure you know the operating voltage of the controller and if a safety limit device is required, as well as any mounting requirements.

Know your temperature process controller

Be aware of the number and type of inputs that the controller offers, as well as its functions and features. Know the alarms it offers and the output types. Understand its communications requirements, including the configuration, its operations and the devices it can connect to.

Remember to use all available documentation when selecting a replacement controller. Always consult the user manual and fitting guide before proceeding. All applications require close examination of all inputs, outputs and control modes. If you still have questions or are uncertain about any upgrade steps, please consult Watlow's technical support team (/en/contact-us) for additional assistance. This will ensure your new controller functions properly for years to come.