

Product End of Life Notice

Rev 3/2017

TCU and TSC PID Controllers to Newer PID Controllers



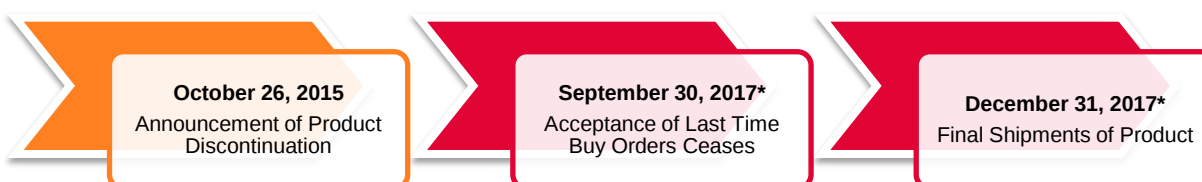
Introduction

The Temperature Control Unit (TCU) and Temperature Setpoint Controller (TSC) were introduced as Red Lion's first foray into the PID controller market. Released over two decades ago, these devices were designed for controlling temperature in applications like hardening metal for tools. Red Lion has since introduced new controller products with advanced features, designed to take the place of the TCU and TSC in applications requiring PID control.

This document describes the alternatives available and provides information on how their features compare with one another.

Timing

Red Lion Controls intends to honor the standard warranty obligation for this product when ordered and delivered in accordance with the following transition schedule:



October 26, 2015

- Announcement to customers
- Red Lion begins accepting non-cancellable, non-returnable last time buy orders
- Orders may be scheduled for delivery between now and December 31, 2017

September 30, 2017

- General availability of the product ceases
- Acceptance of last time buy orders concludes

December 31, 2017

- Shipment of the product stops

*Dates may be subject to change depending on product sales

TCU and TSC PID Controllers to Newer PID Controllers

Why is this transition taking place?

The PXU and PAX2C PID Controllers offer new features and functions that represent significant improvements over the TCU and TSC products. In 2015, Red Lion determined it was appropriate to discontinue the products in favor of newer technology.

What happens to my current investment in TCU and TSC PID Controllers?

Maintaining excellent compatibility for easy and cost-effective transition is an important design criterion when designing next generation products. Red Lion Controls recommends the PXU and PAX2C Series as replacements for the TCU and TSC PID controllers. The PXU provides many of the basic features for PID control at an economic price. The PAX2C offers advanced features and functionality, including field installable option cards, ramp/soak capability, heater current monitoring and support for additional PID control.

All TCU and TSC part numbers, as well as the three (3) option cards that accompany them, are affected by this announcement. The option card part numbers are OMD00000, OMD00001 and OMD00003.

Refer to the following for more information:

- Appendix A: Comparison of TCU PID Controllers to PXU and PAX2C PID Controllers
- Appendix B: Comparison of TSC PID Controllers to PAX2C PID Controllers
- Appendix C: Product Cross Reference Guide

TCU and TSC PID Controllers to Newer PID Controllers

Appendix A

Comparison of TCU PID Controllers to PXU and PAX2C PID Controllers

The chart below compares the features of the 3 products.



Series	TCU	PXU	PAX2C
Power	115/230 VAC	100 to 240 VDC, 24 VDC Model Dependent	40 to 250 VAC, 21.6 to 250 VDC
Input	0 to 10 VDC, 0 (4) to 20 mA	Thermocouple, RTDs and Process Signals	Thermocouple, RTDs and Process Signals
Auto-tune	Yes	Yes	Yes
Analog Output	0 to 10 VDC, 4 to 20 mA Model Dependent	0 to 10 VDC, 4 to 20 mA Model Dependent	0 to 10 VDC, 4 to 20 mA Field Installable Option Card
Setpoint Output	Relay, Solid State and Triac Modules	Relay and Solid State, Model Dependent	Relay, Solid State and Triac, Field Installable Option Cards
Communication	RS485 Model Dependent	RS485 Model Dependent	Modbus Standard, RS232, RS485, DeviceNet and Profibus, Field Installable Option Card
2nd Analog Input	Model Dependent	N/A	Yes, Field Installable Option Card
Motorized Valve Positioner	Model Dependent	N/A, Contact Tech Support	N/A, Contact Tech Support
Front Panel Rating	NEMA4X/IP65 Model Dependent	IP65	NEMA4X/IP65
Pricing	Model Dependent	Model Dependent	Model Dependent

TCU and TSC PID Controllers to Newer PID Controllers

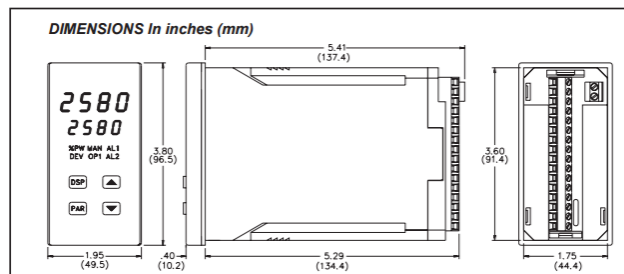
Appendix B

Comparison of TSC PID Controllers to PAX2C PID Controllers

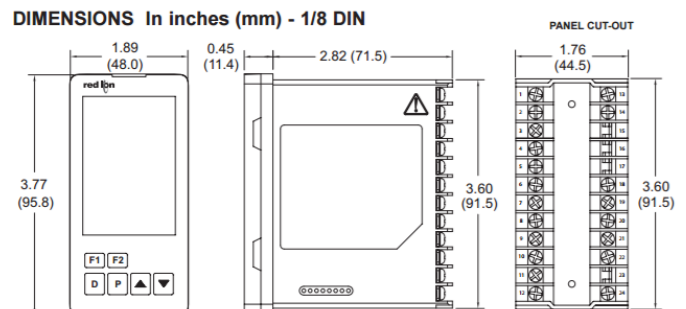
The chart below compares the features of the 2 products.



Series	TSC	PAX2C
Power	115/230 VAC	40 to 250 VAC, 21.6 to 250 VDC
Input	0 to 10 VDC, 0 (4) to 20 mA	Thermocouple, RTDs and Process Signals
Auto-tune	Yes	Yes
Analog Output	0 to 10 VDC, 4 to 20 mA Model Dependent	0 to 10 VDC, 4 to 20 mA Field Installable Option Card
Setpoint Output	Relay, Logic and Triac Modules	Relay, Solid State and Triac, Field Installable Option Cards
Communication	RS485 Model Dependent	Modbus Standard, RS232, RS485, DeviceNet and Profibus, Field Installable Option Card
2nd Analog Input	Model Dependent	Yes, Field Installable Option Card
Ramp/Soak Capability	Yes	Yes
Motorized Valve Positioner	Model Dependent	N/A, Contact Tech Support
Front Panel Rating	NEMA4X/IP65 Model Dependent	NEMA4X/IP65
Pricing	Model Dependent	Model Dependent



TCU and TSC Dimensions



PXU Dimensions

TCU and TSC PID Controllers to Newer PID Controllers

Appendix C

Product Cross Reference Guide

The TCU and TSC PID controllers require plug-in modules for full operation – the OMD00000, OMD00001, and OMD00003. To determine the appropriate PXU or PAX2C (PX2C below) replacement, start by finding the TCU or TSC part number in the first column. Then, go to the column with the appropriate option card in the heading in order to find a recommended replacement.

Example

Currently using: TCU11000 with OMD00003

Recommended replacement: PX2CVR00 with PAXCDS50 and PAXCDL10

Please note that some of the newer products are modular in construction, meaning it may take more part numbers to achieve the same operation. If there are any questions, please contact Tech Support at support@redlion.net.

PID Controller	with OMD00000	with OMD00001	with OMD00003
TCU00000	PX2CVR00 + PAXCDS20	PX2CVR00 + PAXCDS50	PX2CVR00 + PAXCDS50
TCU00001	PX2CVR00 + PAXCDS20	PX2CVR00 + PAXCDS50	PX2CVR00 + PAXCDS50
TCU00002	PX2CVR00 + PAXCDS20	PX2CVR00 + PAXCDS50	PX2CVR00 + PAXCDS50
TCU00004	PX2CVR00 + PAXCDS20	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10
TCU00005	PX2CVR00 + PAXCDS20	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10
TCU00104	PX2CVR00 + PAXCDS20 + PAXCDC10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA00
TCU00204	PX2CVR00 + PAXCDS20 + PAXCDC10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA10
TCU00205	PX2CVR00 + PAXCDS20 + PAXCDC10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA10
TCU00307	Contact Tech Support	Contact Tech Support	Contact Tech Support
TCU01000	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU01001	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU01002	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU01004	PX2CVR00 + PAXCDS20 +	PX2CVR00 + PAXCDS50 +	PX2CVR00 + PAXCDS50 +

TCU and TSC PID Controllers to Newer PID Controllers

PID Controller	with OMD00000	with OMD0001	with OMD0003
	PAXCDL10	PAXCDL10	PAXCDL10
TCU01005	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU01108	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA00
TCU01208	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10
TCU01209	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10
TCU01306	Contact Tech Support	Contact Tech Support	Contact Tech Support
TCU02000	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU02001	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU02002	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU02004	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TCU02005	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TCU02108	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA00
TCU02208	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10
TCU02209	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10
TCU02306	Contact Tech Support	Contact Tech Support	Contact Tech Support
TCU10000	PX2CVR00 + PAXCDS20	PX2CVR00 + PAXCDS50	PX2CVR00 + PAXCDS50
TCU10001	PX2CVR00 + PAXCDS20	PX2CVR00 + PAXCDS50	PX2CVR00 + PAXCDS50
TCU10002	PX2CVR00 + PAXCDS20	PX2CVR00 + PAXCDS50	PX2CVR00 + PAXCDS50
TCU10004	PX2CVR00 + PAXCDS20 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10

TCU and TSC PID Controllers to Newer PID Controllers

PID Controller	with OMD00000	with OMD0001	with OMD0003
TCU10005	PX2CVR00 + PAXCDS20 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10
TCU10104	PX2CVR00 + PAXCDS20 + PAXCDC10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA00
TCU10204	PX2CVR00 + PAXCDS20 + PAXCDC10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA10
TCU10205	PX2CVR00 + PAXCDS20 + PAXCDC10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDC10 + PX2FCA10
TCU10307	Contact Tech Support	Contact Tech Support	Contact Tech Support
TCU11000	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU11001	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU11002	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU11004	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU11005	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU11008	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA00
TCU11208	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10
TCU11209	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10
TCU11306	Contact Tech Support	Contact Tech Support	Contact Tech Support
TCU12000	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU12001	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU12002	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TCU12004	PX2CVR00 + PAXCDS20 +	PX2CVR00 + PAXCDS50 +	PX2CVR00 + PAXCDS50 +

TCU and TSC PID Controllers to Newer PID Controllers

PID Controller	with OMD00000	with OMD0001	with OMD0003
	PAXCDL10 + PAXCDC10	PAXCDL10 + PAXCDC10	PAXCDL10 + PAXCDC10
TCU12005	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TCU12008	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA00	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA00
TCU12208	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10
TCU12209	PX2CVR00 + PAXCDS20 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PX2FCA10
TCU12306	Contact Tech Support	Contact Tech Support	Contact Tech Support
TSC0004	PX2CVR00 + PAXCDS20 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10
TSC0005	PX2CVR00 + PAXCDS20 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10
TSC01001	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TSC01002	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TSC01004	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TSC01005	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TSC02001	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TSC02002	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TSC02004	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TSC02005	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TSC10004	PX2CVR00 + PAXCDS20 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10
TSC10005	PX2CVR00 + PAXCDS20 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10

TCU and TSC PID Controllers to Newer PID Controllers

PID Controller	with OMD00000	with OMD0001	with OMD0003
TSC11001	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TSC11002	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TSC11004	PX2CVR00 + PAXCDS20 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDC10
TSC11005	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TSC12001	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TSC12002	PX2CVR00 + PAXCDS20 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10	PX2CVR00 + PAXCDS50 + PAXCDL10
TSC12004	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10
TSC12005	PX2CVR00 + PAXCDS20 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10	PX2CVR00 + PAXCDS50 + PAXCDL10 + PAXCDC10