

Getting started

When shipping the controller, the backshell is in a configuration that will allow the device to be powered up by a standard 115 VAC.

Overview

Model numbers are explained in Table I. The UDC2800 can be configured for digital or analog outputs as well as 24VDC or 115VAC.

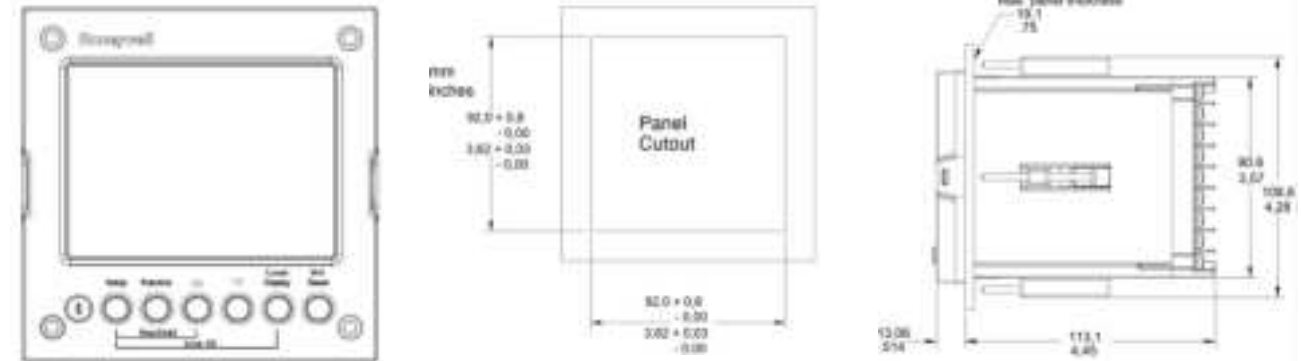
1. To download the UDC2800 Product Manual, click on the link below to download the manual.
<https://www.honeywell.com/us/en/products/industrial-control-systems/udc2800>
2. To get the manual, click on the UDC2800 Product Manual (#J1-J2-25-157) and click the manual link.
3. To get the manual, click on the UDC2800 Product Manual (#J1-J2-25-157) and click the manual link.
4. To get the manual, click on the UDC2800 Product Manual (#J1-J2-25-157) and click the manual link.

Model Number Interpretation

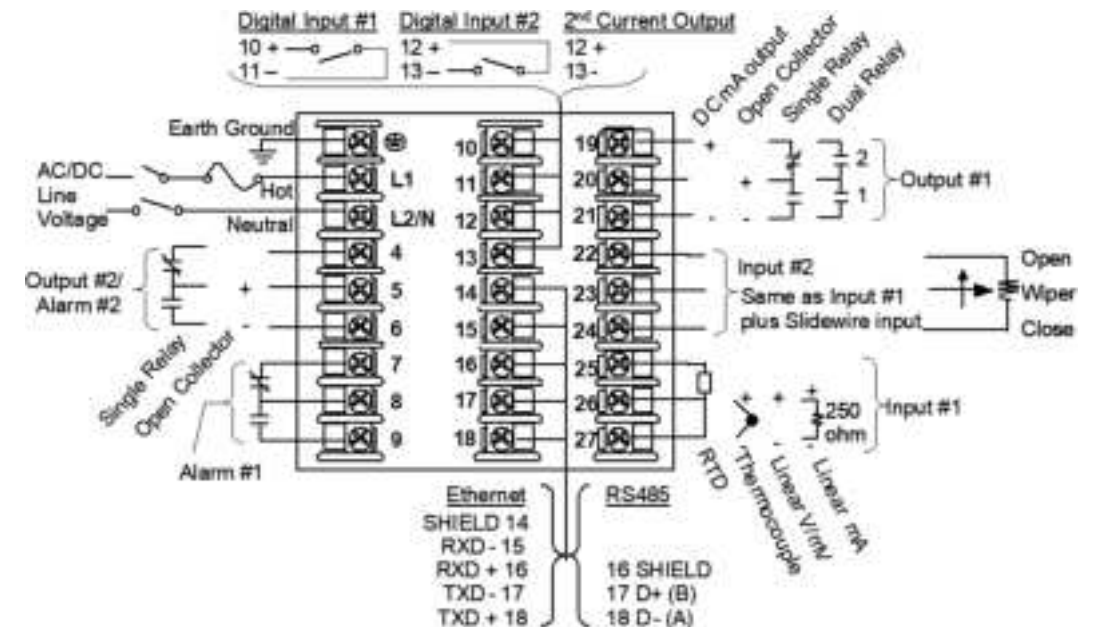
Model numbers are explained in Table I. The UDC2800 can be configured for digital or analog outputs as well as 24VDC or 115VAC.

Instructions			
- Select the desired key number. The arrow to the right marks the selection available. - Make the desired selections from Tables I through VI using the column below the proper arrow. A dot (*) denotes availability.			
Key Number	I	II	III
KEY NUMBER			
Description			
Digital Controller for use with 100 to 240VAC Power			
Digital Controller for use with 24VAC/DC Power			
TABLE I - Specify Control Output and/or Alarms			
Output #1	Current Output (4 to 20mA, 0 to 20 mA) Electro Mechanical Relay (5 Amp Form C) Open Collector transistor output Dual 2 Amp Relays (Both are Form A) (Heat/Cool Applications)	C E T R	* * * *
Output #2 and Alarm #1 or Alarms 1 and 2	No Additional Outputs or Alarms One Alarm Relay Only E-M Relay (5 Amp Form C) Plus Alarm 1 (5 Amp Form C Relay) Open Collector Plus Alarm 1 (5 Amp Form C Relay)	0 B E T	* * * *
TABLE II - Communications and Software			
Communications	None Auxiliary Output/Digital Inputs (1 Aux and 1 DI or 2 DI) RS-485 Modbus Plus Auxiliary Output/Digital Inputs 10/100M Base-T Ethernet (Modbus RTU) Plus Auxiliary Output/Digital Inputs	0 1 2 3	* * * *
Software	Limit Controller Standard Software Dual Loop and Internal Cascade Control Standard S/W and Set Point Programming	L S D F	e * * *
Future Options	None	0	* *
TABLE III - Input 1 and Input 2			
Input 1 (Note 1)	TC, RTD, mV, 0-5V, 1-5V, 0-10V TC, RTD, mV, 0-5V, 1-5V, 0-10V, 0-20mA, 4-20mA	1 2	* *
Input 2	None TC, RTD, mV, 0-5V, 1-5V, 0-10V TC, RTD, mV, 0-5V, 1-5V, 0-10V, 0-20mA, 4-20mA Slidewire Input for Position Proportional (Requires 2 Relay Outputs) Carbon, Oxygen or Dewpoint (Provides 2 Inputs)	00 10 20 40 50	* * * a b
Note 1: Input 1 can be changed in the field using external resistors.			
TABLE IV - Options			
Approvals	CE (Standard) CE, UL, and CSA	0 1	* *
Tags	None Stainless Steel Customer ID Tag - 3 lines w/22 characters/line	0 T	* *
Future Options	None	0	* *
TABLE V - Documentation			
Documents	Quick Start Guide - English	0	* *
Certificate	None Certificate of Conformance (F3391)	0 C	* *
TABLE VI - Extended Warranty			
Extended Warranty	None Extended Warranty Additional 1 year Extended Warranty Additional 2 years	0 1 2	* * *

Dimensions and Mounting



Wiring



Attention: The wiring diagram shows the typical wiring for the UDC2800. The actual wiring may vary depending on the configuration and the specific application.

Configuration Procedure

Step	Operation	Press	Result
1	Enter Setup Mode	Setup key	Enter the Setup Mode.
2	Set the Output Type	Output key	Set the Output Type. Press the Output key to set the Output Type. Press the Output key to set the Output Type. Press the Output key to set the Output Type.
3	Set the Input Type	Input key	Set the Input Type. Press the Input key to set the Input Type. Press the Input key to set the Input Type. Press the Input key to set the Input Type.
4	Set the Relay Output	Relay key	Set the Relay Output. Press the Relay key to set the Relay Output. Press the Relay key to set the Relay Output. Press the Relay key to set the Relay Output.
5	Set the Relay Output	Relay key	Set the Relay Output. Press the Relay key to set the Relay Output. Press the Relay key to set the Relay Output. Press the Relay key to set the Relay Output.
6	Set the Relay Output	Relay key	Set the Relay Output. Press the Relay key to set the Relay Output. Press the Relay key to set the Relay Output. Press the Relay key to set the Relay Output.

Configuration Record Sheet

Enter the value or selected function shown on the display screen. Do not enter a number or letter if the function is not applicable.

Group Prompt	Function Prompt	Value or Selection	Factory Setting	Group Prompt	Function Prompt	Value or Selection	Factory Setting
Alarm On	Alarm On		0	Alarm On	Alarm On		0
	Alarm On		1		Alarm On		0
	Alarm On		2		Alarm On		0
	Alarm On		3		Alarm On		0
	Alarm On		4		Alarm On		0
	Alarm On		5		Alarm On		0
	Alarm On		6		Alarm On		0
	Alarm On		7		Alarm On		0
In 1	In 1		0	In 2	In 2		0
	In 1		1		In 2		0
	In 1		2		In 2		0
	In 1		3		In 2		0
	In 1		4		In 2		0
	In 1		5		In 2		0
	In 1		6		In 2		0
	In 1		7		In 2		0
	In 1		8		In 2		0
	In 1		9		In 2		0
	In 1		10		In 2		0
	In 1		11		In 2		0
	In 1		12		In 2		0
	In 1		13		In 2		0
	In 1		14		In 2		0
	In 1		15		In 2		0
	In 1		16		In 2		0
	In 1		17		In 2		0
	In 1		18		In 2		0
	In 1		19		In 2		0
	In 1		20		In 2		0
	In 1		21		In 2		0
	In 1		22		In 2		0
	In 1		23		In 2		0
	In 1		24		In 2		0
	In 1		25		In 2		0
	In 1		26		In 2		0
	In 1		27		In 2		0
	In 1		28		In 2		0
	In 1		29		In 2		0
	In 1		30		In 2		0
	In 1		31		In 2		0
	In 1		32		In 2		0
	In 1		33		In 2		0
	In 1		34		In 2		0
	In 1		35		In 2		0
	In 1		36		In 2		0
	In 1		37		In 2		0
	In 1		38		In 2		0
	In 1		39		In 2		0
Output	Output		0	Output	Output		0
	Output		1		Output		0
	Output		2		Output		0
	Output		3		Output		0
	Output		4		Output		0
	Output		5		Output		0
	Output		6		Output		0
	Output		7		Output		0
	Output		8		Output		0
	Output		9		Output		0
	Output		10		Output		0
	Output		11		Output		0

Group Prompt	Function Prompt	Value or Selection	Factory Setting	Group Prompt	Function Prompt	Value or Selection	Factory Setting
Alarm On	Alarm On		0	Alarm On	Alarm On		0
	Alarm On		1		Alarm On		0
	Alarm On		2		Alarm On		0
	Alarm On		3		Alarm On		0
	Alarm On		4		Alarm On		0
	Alarm On		5		Alarm On		0
	Alarm On		6		Alarm On		0
	Alarm On		7		Alarm On		0
	Alarm On		8		Alarm On		0
	Alarm On		9		Alarm On		0
	Alarm On		10		Alarm On		0
	Alarm On		11		Alarm On		0
	Alarm On		12		Alarm On		0
	Alarm On		13		Alarm On		0
	Alarm On		14		Alarm On		0
	Alarm On		15		Alarm On		0
	Alarm On		16		Alarm On		0
	Alarm On		17		Alarm On		0
	Alarm On		18		Alarm On		0
	Alarm On		19		Alarm On		0
Alarm On	Alarm On		0	Alarm On	Alarm On		0
	Alarm On		1		Alarm On		0
	Alarm On		2		Alarm On		0
	Alarm On		3		Alarm On		0
	Alarm On		4		Alarm On		0
	Alarm On		5		Alarm On		0
	Alarm On		6		Alarm On		0
	Alarm On		7		Alarm On		0
	Alarm On		8		Alarm On		0
	Alarm On		9		Alarm On		0
	Alarm On		10		Alarm On		0
	Alarm On		11		Alarm On		0
	Alarm On		12		Alarm On		0
	Alarm On		13		Alarm On		0
	Alarm On		14		Alarm On		0
	Alarm On		15		Alarm On		0
	Alarm On		16		Alarm On		0
	Alarm On		17		Alarm On		0
	Alarm On		18		Alarm On		0
	Alarm On		19		Alarm On		0
Alarm On	Alarm On		0	Alarm On	Alarm On		0
	Alarm On		1		Alarm On		0
	Alarm On		2		Alarm On		0
	Alarm On		3		Alarm On		0
	Alarm On		4		Alarm On		0
	Alarm On		5		Alarm On		0
	Alarm On		6		Alarm On		0
	Alarm On		7		Alarm On		0
	Alarm On		8		Alarm On		0
	Alarm On		9		Alarm On		0
	Alarm On		10		Alarm On		0
	Alarm On		11		Alarm On		0
	Alarm On		12		Alarm On		0
	Alarm On		13		Alarm On		0
	Alarm On		14		Alarm On		0
	Alarm On		15		Alarm On		0
	Alarm On		16		Alarm On		0
	Alarm On		17		Alarm On		0
	Alarm On		18		Alarm On		0
	Alarm On		19		Alarm On		0

Group Prompt	Function Prompt	Value or Selection	Factory Setting	Group Prompt	Function Prompt	Value or Selection	Factory Setting
Alarm	AI 01 Test		None	Alarm Monitor	AI 01 Test Function		Initials
	AI 01 Status		OK		AI 01 Test Fail	Indefinite	0.000/0.000
	AI 01 Mode		High Alarm		AI 01 Test VAD Alarm	Indefinite	25.000/25.000
	AI 01 Reset		End of Alarm		Alarm Monitor Off		Initials
	AI 01 Delay		0		Setpoint Actions		1
	AI 01 Feedback		OK		Setpoint Error		100%
	AI 01 Test		None		Temperature Alarm		1
	AI 01 Status		OK		Temperature High		High Off
	AI 01 Mode		Low Alarm		Temperature Alarm		10000
	AI 01 Reset		End of Alarm		Current VAD Alarm		25.000/25.000
	AI 01 Delay		0		Setpoint Error		Calculated
	AI 01 Feedback		OK		Setpoint Function		Initials
	AI 01 Test		None		Setpoint High		0
	AI 01 Status		OK		Setpoint VAD		Low Mode
	AI 01 Mode		High Alarm		Setpoint Error		10.000/10.000
	AI 01 Reset		End of Alarm		Temperature 1 Off		Engineered Off
	AI 01 Delay		0		Temperature 1 Error		1
	AI 01 Feedback		OK		Temperature 1 High		0
	AI 01 Test		None		Temperature 1 Error		1
	AI 01 Status		1		Temperature 1 High		0
	AI 01 Mode		Low Alarm		Setpoint Error		Initials
	AI 01 Reset		End of Alarm				
	AI 01 Delay		0				
	AI 01 Feedback		OK				
	Alarm Monitor 1		None/Initials				
	Alarm Monitor 2		Initials				
	AI 01 Delay		Initials				
Alarm Monitor with External VAD Alarm Monitor Setup and/or Heater Reset	AI 01 Test Function		Initials	Alarm Monitor with External VAD Alarm Monitor Setup and/or Heater Reset	AI 01 Test Function		Initials
	AI 01 Test Fail	Indefinite	0.000/0.000		AI 01 Test Fail	Indefinite	0.000/0.000
	AI 01 Test VAD Alarm	Indefinite	25.000/25.000		AI 01 Test VAD Alarm	Indefinite	25.000/25.000
	Alarm Monitor Off		Initials		Alarm Monitor Off		Initials
	Setpoint Actions		1		Setpoint Actions		1
	Setpoint Error		100%		Setpoint Error		100%
	Temperature Alarm		1		Temperature Alarm		1
	Temperature High		High Off		Temperature High		High Off
	Temperature Alarm		10000		Temperature Alarm		10000
	Current VAD Alarm		25.000/25.000		Current VAD Alarm		25.000/25.000
	Setpoint Error		Calculated		Setpoint Error		Calculated
	Setpoint Function		Initials		Setpoint Function		Initials
	Setpoint High		0		Setpoint High		0
	Setpoint VAD		Low Mode		Setpoint VAD		Low Mode
	Setpoint Error		10.000/10.000		Setpoint Error		10.000/10.000
	Temperature 1 Off		Engineered Off		Temperature 1 Off		Engineered Off
	Temperature 1 Error		1		Temperature 1 Error		1
	Temperature 1 High		0		Temperature 1 High		0
	Setpoint Error		Initials		Setpoint Error		Initials
Alarm	Alarm Monitor 1	Indefinite		Alarm	Alarm Monitor 1	Indefinite	
	Alarm Monitor 2	Indefinite			Alarm Monitor 2	Indefinite	
	Alarm Monitor 3	Indefinite			Alarm Monitor 3	Indefinite	
	Alarm Monitor 4	Indefinite			Alarm Monitor 4	Indefinite	

Start Up Procedure for Operation

1. To start the controller, the unit is powered up and the power on screen appears. The screen displays the unit's status. The screen displays the unit's status. The screen displays the unit's status.

Step	Operation	Press	Result
1	Press the Enter key	Yes/No key	Press the Enter key with the screen displaying the unit's status. The screen displays the unit's status.
2	Press the Enter key	Yes/No key	Press the Enter key with the screen displaying the unit's status. The screen displays the unit's status.
3	Press the Enter key	Yes/No key	Press the Enter key with the screen displaying the unit's status. The screen displays the unit's status.
4	Press the Enter key	Yes/No key	Press the Enter key with the screen displaying the unit's status. The screen displays the unit's status.
5	Press the Enter key	Yes/No key	Press the Enter key with the screen displaying the unit's status. The screen displays the unit's status.

Setpoints

Setpoints are the values that the controller uses to control the process.

- AI 01 Setpoint
- AI 02 Setpoint
- AI 03 Setpoint
- AI 04 Setpoint
- AI 05 Setpoint

Changing the Setpoints

Step	Operation	Press	Result
1	Press the Enter key	Yes/No key	Press the Enter key with the screen displaying the unit's status. The screen displays the unit's status.
2	Press the Enter key	Yes/No key	Press the Enter key with the screen displaying the unit's status. The screen displays the unit's status.

Switching between Setpoints

Setpoints are the values that the controller uses to control the process.

Attention: The unit's setpoint values are not stored in the controller.

Task List between Setpoints

- AI 01 Setpoint
- AI 02 Setpoint
- AI 03 Setpoint
- AI 04 Setpoint
- AI 05 Setpoint

Attention: The unit's setpoint values are not stored in the controller.

- AI 01 Setpoint
- AI 02 Setpoint
- AI 03 Setpoint
- AI 04 Setpoint
- AI 05 Setpoint

showed that the proposed model is more accurate than the existing models.

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