



DN33 Universal Electronic Controllers

Models Available

- DN33V7LR20** 1 Relay NTC/PTC/PT1000
- DN33V9MR20** 1 Relay Universal Input
- DN33W7LR20** 2 Relay NTC/PTC/PT1000
- DN33W9MR20** 2 Relay Universal Input
- DN33Z7LR20** 4 Relay NTC/PTC/PT1000
- DN33Z9MR20** 4 Relay Universal Input
- DN33A7LR20** 4 SSR NTC/PTC/PT1000
- DN33A9MR20** 4 SSR Universal Input

Product Features

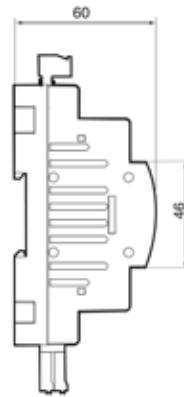
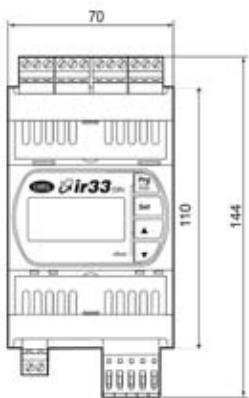
- Temperature input or universal input
- Relay or SSR output versions
- 2 independent control loops
- Auto-tuning PID control
- Real time clock
- Infrared receiver and buzzer
- Transformers available for 110V or 230V
- Plug-in terminals

The DN33 universal electronic controllers replace the IRDR range, offering additional features such as auto-tuning PID control and real time clock for managing working cycles and logging alarms. Temperature only versions are available with NTC, PTC or PT1000 inputs, whilst the universal versions can also accept PT100, J and K type thermocouples, DC Voltage and DC mA inputs.

The controllers feature a simple user interface, two independent control loops and are housed in a compact DIN rail mounting enclosure. All versions can be connected to a network for monitoring and programming, using the optional RS-485 serial interface. The DN33 controllers are powered from 12 to 24Vac/dc and optional transformers are available for powering the controllers from 110Vac or 230Vac.

For digital temperature or process monitoring and control

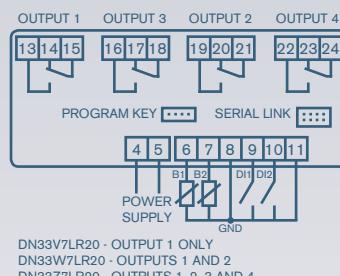
Dimensions



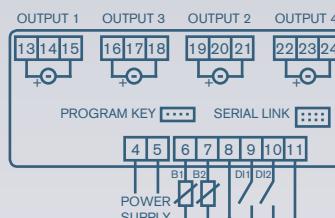
Panel cutout 70mm x 46mm (-0.0/+0.5)

Connections

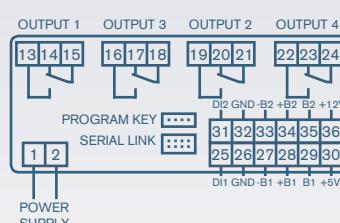
DN33V7LR20 / DN33W7LR20 / DN33Z7LR20



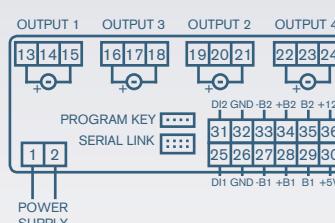
DN33A7LR20



DN33V9MR20 / DN33W9MR20 / DN33Z9MR20



DN33A9MR20



Ordering information

Model	Code	Description
DN33V	1	Relay Output Digital Controller
DN33W	2	Relay Output Digital Controller
DN33Z	4	Relay Output Digital Controller
DN33A	4	SSR Output Digital Controller

Input	Code	Description
7	NTC (-50 to 90°C) NTC-HT (-40 to 150°C) PTC (-50 to 150°C) PT1000 (-50 to 150°C)	
9	All above inputs and in addition: PT1000 (-199 to 800°C) PT100 (-199 to 800°C) J/K Type Thermocouples DC Voltage 0-1V, -0.5 to +1.3V, 0-10V, 0-5V ratiometric DC Current 0-20mA, 4-20mA	

Auxiliary Power	Code	Description
LR20	12 to 24Vac, 12 to 30Vdc	
MR20	24Vac/dc	

Options	Code	Description
TRA12UNI11	110/12Vac Transformer	
TRA12UNI00	240/12Vac Transformer	
TRA2400001	240/24Vac Transformer	
IRTRUES000	Remote control for IR33 universal	
IROPZKEY00	Programming key with battery	
IROPZKEYA0	Programming key with 230V power supply	
IROPZ485S0	RS485 serial communication interface	

Example	DN33V7LR20

Options**Temperature Probes**

A range of NTC, PTC, PT100 and thermocouple temperature probes are available to suit the DN33 controllers.

Remote Control

The infrared remote control allows access to all the main functions and configuration parameters for easy set up of all DN33 controllers from a distance.

Programming Key

All DN33 controllers can be programmed quickly using the optional programming key, even when not powered, reducing the risk of errors.

Specification**Accuracy:**

- ±0.5% of scale range

Power Supply Voltage:

- LR: 12 to 24Vac (±10%), 12 to 30Vdc
- 110Vac with TRA12UNI11 transformer
- 230Vac with TRA12UNI00 transformer
- MR: 24Vac/dc
- 230Vac with TRA24000001 transformer

Frequency:

- 50/60Hz

Burden:

- <3VA

Inputs:

- NTC / PTC / PT1000
- PT100, J/K, V, mA (universal model only)

Digital Inputs:

- 2 voltage free contacts
- Contact resistance <10ohms
- Closing current 6mA

Relay Output:

- 1, 2 or 4 pole relay contacts
- 8A at 250Vac (resistive)
- 4A at 250Vac (inductive, $\cos\theta = 0.6$)
- 100,000 operations

SSR Output:

- Maximum output 12V/20mA
- Maximum output resistance 600 ohms

Operating Temperature & Humidity:

- -10°C to 50°C
- <90% rH (non-condensing)

Enclosure Code:

- Case front IP40

Weight:

- DN33V: 300g
- DN33W: 320g
- DN33Z: 340g
- DN33A: 300g

Markings:

- CE marked (meets EN61010-1 low voltage and EN50081-1/50082-1 EMC directives)

Specification subject to change without notice.

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