# Siemens 6DR2104-4

## 01 SIPART DR21 Continuous Controller / system role

### Product function and operating context

Siemens 6DR2104-4 compares process and setpoint signals and delivers a continuous manipulated-variable signal for a configured single-loop process.

Two standard analog current inputs accept 0/4–20 mA signals through 248-ohm input loads. The control calculation runs on a 100 ms cycle, with the operating configuration determining how process value, setpoint and auxiliary inputs are used.

### Functional path

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|---|---|---|---|
| Process transmitter | Configured DR21 input | Control calculation | Continuous current output |

| | |
|---|---|
| Configuration | 24 V UC supply execution |
| Interface | Two standard 0/4–20 mA inputs |
| Operating feature | 100 ms control cycle |

The analog output can be configured for 0–20 mA or 4–20 mA operation. Output loading, field-loop polarity and the selected control action must agree with the receiving actuator or signal conditioner.

# 6DR2104-4

## 02 Technical operating envelope

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|---|---|
| Controller execution | K-controller, continuous output |
| Nominal power supply | 24 V UC |
| AC supply range | 20–28 V AC |
| DC supply range | 20–35 V DC |
| Standard analog inputs | 2 current inputs, AI1 and AI2 |
| Input signal range | 0/4–20 mA |

| | |
|---|---|
| Input resistance | 248 Ω ±1% |
| Input filter time constant | 10 ms |
| Analog output range | 0–20 mA or 4–20 mA |
| Control cycle | 100 ms |
| Digital-input low state | ≤4.5 V or open |
| Digital-input high state | ≥13 V |

The 6DR2104 K-controller configuration uses the 24 V UC supply option. Optional modules and S-controller relay ratings are not assumed.

### Operating interpretation

Use the K-controller and 24 V UC configuration for this exact reference.

### Configuration boundary

Restore input/output ranges, optional modules and control action before closing the process loop.

### Can the analog output of 6DR2104-4 be set to a live-zero range?

Yes. It supports 4–20 mA as well as 0–20 mA. The receiving device and controller scaling must use the same selection.

# 6DR2104-4

## 03 System integration and applications

### Continuous process regulation

A configured current-input loop drives a continuous manipulated-variable output.

### External setpoint operation

The second standard current input can serve the function assigned by the retained controller configuration.

### Analog actuator interfacing

A 0–20 or 4–20 mA output connects the controller to a compatible actuator input.

### Legacy loop maintenance

The retained DR21 configuration can be checked through input, output and control-direction tests during replacement.

### System and supply context

Siemens 6DR2104-4 operates within the following defined system context. Confirm the K-controller execution and -4 power-supply selection.

### Application boundary

The 6DR2104 K-controller configuration uses the 24 V UC supply option. Optional modules and S-controller relay ratings are not assumed.

### Does 6DR2104-4 provide continuous or three-position control output?

The 6DR2104 execution is a K-controller with continuous analog output. Relay-output ratings associated with S-controller executions must not be transferred to it.

# 6DR2104-4

## 04 Engineering selection decisions

### Is 6DR2104-4 intended for a 230 V AC supply?

No. Its -4 selection is the 24 V UC version, accepting 20–28 V AC or 20–35 V DC. Do not apply the mains-voltage ratings of a different DR21 version.

### What burden does each standard current input of 6DR2104-4 present?

AI1 and AI2 have a 248-ohm input resistance with ±1% tolerance. Include that burden in the transmitter-loop voltage budget.

### Which input voltage is a definite high on 6DR2104-4?

A digital input is high at 13 V or above; it is low at 4.5 V or below or when open. Use the specified input range and the correct common reference.

### What should be compared before restoring automatic control on 6DR2104-4?

Compare input scaling, setpoint source, control action, output range and retained tuning. Check the output direction under controlled conditions before releasing the loop to automatic operation.

# 6DR2104-4

## 05 Configuration boundary and references

### Lifecycle and support

The current manufacturing and factory-support phase of 6DR2104-4 is unconfirmed. Apter Power availability is assessed separately from manufacturer lifecycle status.

### Replacement assessment

Restore input/output ranges, optional modules and control action before closing the process loop.

### Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains selection and system context. The separate installation guide covers preparation, connection, tests and handover; use it together with the applicable manufacturer instructions.

### Technical basis

Siemens SIPART DR21 Manual, C73000-B7476-C143-08.

### Related product navigation

- Siemens 6ES7214-1AG40-0XB0
- Siemens 6ES7214-1BD23-0XB0

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries