

Temperature Controls Pty Ltd



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ISO9001:2000

Lic: 14412

THERMOCOUPLES * RTD SENSORS * THERMOWELLS * EXTENSION CABLES * LEVEL SWITCHES

Literature 1164

Tuesday, December 16, 2008

**Temperature Controls –
Shinko Reference quote 356-08**

RE: Temperature Indicator application with data logging

We are able to offer a temperature indicator / controllers to indicate ambient / actual temperature and supply you with software to data log the temperature measurement on your computer.
No other equipment is necessary provided your computer has an excel program.

Please find the following quotation for your consideration.

- 1 x Shinko Temperature Controller Model: JCS-33A-R or S/M-C5 **Price: \$286.50 each net**
or
1 x Shinko Temperature Controller Model: DCL-33A-R or S/M-C5 **Price: \$288.00 each net**

C5 option gives an output of RS 485 communications.

Generally when connecting to a computer the input required is RS 232, therefore when interfacing with a computer the following option is required.

- 1 x Adam Multidrop converter (required when using pc with RS 232 input)
TCADAM4520, RS485 to RS232
TCADAM4561, RS485 to USB
Price: \$274.00 each net

Software: Software is required for the computer to understand the input from the controller.

The software we offer is

- 1 x Shinko Monitoring software (for use with up to 40 controllers)
Model: SWM-JC001M
Price: \$119.00 each net

MELBOURNE OFFICE: PHONE (03) 9687 0000 FAX: (03) 9687 1900
PROUDLY MANUFACTURING IN AUSTRALIA

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Accessories:

Power supply for the Adam Converter, Between 10 ~ 30 V DC.

Sometimes you will need the following accessory to suit your computer.

Dick Smith RS232 Serial Port Adaptor

Temperature Sensors

Shinko Controllers are suitable for thermocouples, RTD's and 4-20mA input

DELIVERY TIME:	1 week
DELIVERY CHARGE:	\$12.00
VALIDITY:	This quotation is valid for a period of 30 days.
GST:	Prices exclude GST and will be charged at 10% for the total amount including freight charges.
QUALITY ASSURANCE:	Temperature Controls work in accordance to the requirements contained in AS/NZS ISO 9001:2000

Temperature Controls P/L is a quality-endorsed company with Quality Assurance Services

Certificate number QEC 14412 AS /NZS ISO 9001:2000 Quality Management Systems.

We thank you for the opportunity to submit this quotation and look forward to being of service.

Yours sincerely

Michael Donnelly

Director

We attach the following:

- Shinko literature
- Shinko configuration example
- Data logging by time
- Data logging by graph
- Technical information **RS-232 to RS-485**

Data logging with shinko temperature controllers

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(Included in your quotation) with C5 output. Models DC, FC, HC, JC, PC, & JIR Series.

Using an excel program and your standard computer and appropriate software you can data log temperature over time.

This is an example of 2 channels recording every 10 seconds.

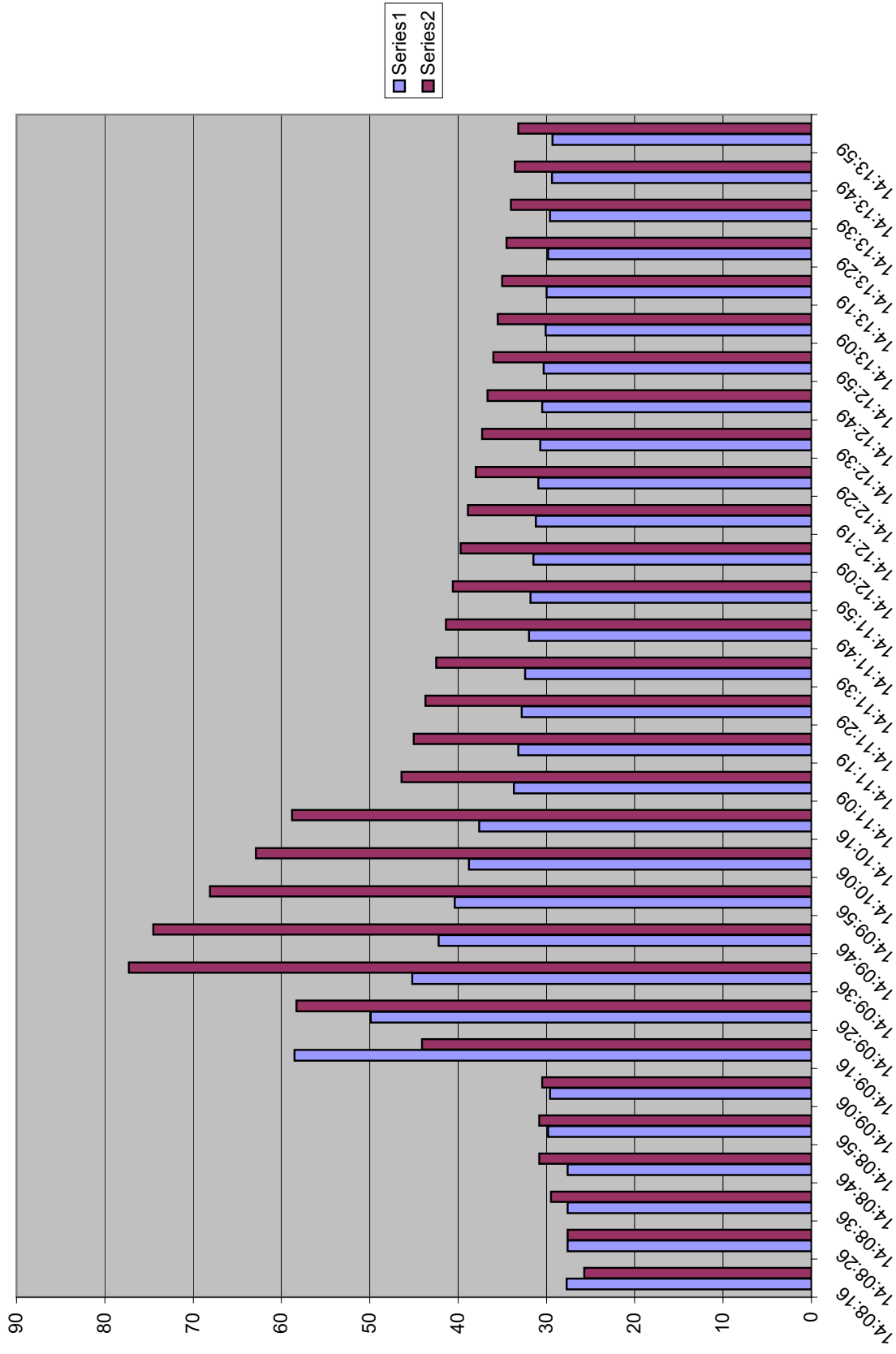
- Recording can be over any period (as selected), and stored in your computer forever.
- The software is suitable for 1 – 40 channels – no additional charge.
- The excel program allows you to data log in many forms including charts (see attached)

Process variable data			
Date :	Time :	JCS L3	JCS L5
23/01/04	14:08:16	27.7	25.7
23/01/04	14:08:26	27.6	27.6
23/01/04	14:08:36	27.6	29.5
23/01/04	14:08:46	27.6	30.8
23/01/04	14:08:56	29.8	30.8
23/01/04	14:09:06	29.6	30.5
23/01/04	14:09:16	58.5	44.1
23/01/04	14:09:26	49.9	58.3
23/01/04	14:09:36	45.2	77.3
23/01/04	14:09:46	42.2	74.5
23/01/04	14:09:56	40.4	68.1
23/01/04	14:10:06	38.8	62.9
23/01/04	14:10:16	37.6	58.8
23/01/04	14:11:09	33.7	46.4
23/01/04	14:11:19	33.2	45
23/01/04	14:11:29	32.8	43.7
23/01/04	14:11:39	32.4	42.5
23/01/04	14:11:49	32	41.4
23/01/04	14:11:59	31.8	40.6
23/01/04	14:12:09	31.5	39.7
23/01/04	14:12:19	31.2	38.9
23/01/04	14:12:29	30.9	38
23/01/04	14:12:39	30.7	37.3
23/01/04	14:12:49	30.5	36.7
23/01/04	14:12:59	30.3	36

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PROUDLY MANUFACTURING IN AUSTRALIA

TEMPERATURE CONTROLS
SHINKO LOGGING TEST

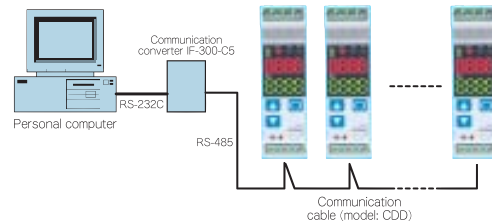
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Configuration example

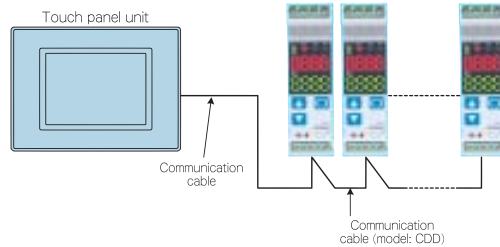
When a PC monitors multiple DCL-33A units

By connecting to the PC, up to 40 points of temperature control can be monitored using a communication converter.
 (If PC's communication specification is RS-485, it is not necessary to use a communication converter.)
 As a communication converter, Shinko IF-300-C5 is provided.
 SWM-JC001M is also available as monitoring software.



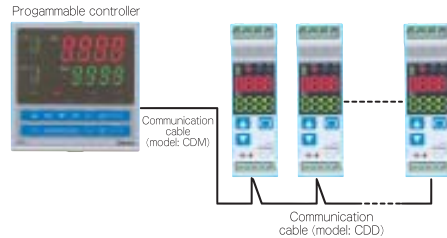
When a touch panel unit monitors plural DCL-33A units

A maximum of 31 points of temperature control and monitoring can be carried out by connecting DCL-33A to the touch panel unit.
 The following touch panel units are available.
 Digital Electronics Corp.: GLC series, GP series
 Hakko Electronics CO., LTD.: V7 series, V6 series
 (For the communication cable, use Shinko's exclusive cable.)



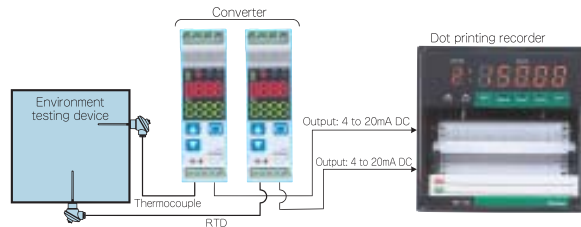
When using DCL-33A units as a programmable controller

By using Shinko programmable controller PCD-33A or PC-935 (with option SVTC) as a program setter in combination with DCL-33A (with option C5), DCL-33A can also be used as a programmable controller for a maximum of 31 positions.



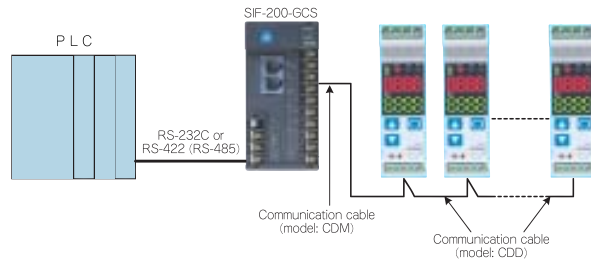
When using DCL-33A units as a converter

Various process signal inputs are converted to 4 to 20mA DC output. The input of process signal, the output of 4 to 20mA DC and power source for DCL-33A are isolated from one another.
 By connecting 4 to 20mA DC output to multi-point indicating recorder, process variable at multiple positions can be monitored.
 (Use DC current output type DCL-33A.)



When using max. 50 DCL-33A units with the PLC

By connecting to the PLC via PLC interface unit SIF-200-GCS, a maximum of 50 DCL-33A units can be connected.
 Please make inquiries concerning the PLC compatible with SIF-200-GCS to us or our agency.



- This catalog is as of August, 2003 and its contents are subject to change without notice.
- If you have any inquiries, please consult us or our agency.



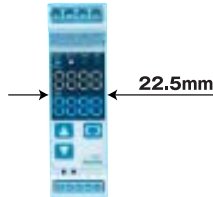
SHINKO TECHNOS CO., LTD. OVERSEAS DIVISION

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Features

Compact and expandable controller and converter in one

Compact controller



The DCL-33A can be installed in narrow spaces. (Width: 22.5mm, Height: 75mm, Depth: 100mm)

Conforms to Modbus protocol

Shinko protocol and Modbus are provided as a serial communication (C5) protocol (For Modbus protocol, RTU mode and ASCII mode are available). Therefore, the DCL-33A can be connected to Modbus compatible instruments without using a communication converter.

Can be used as a setting value digital receiver

By using Shinko programmable controller (with option SVTC) as a program setter in combination with DCL-33A (with option C5), the DCL-33A can also be used as a programmable controller for multiple positions. (A maximum of 31 units of DCL-33A can be connected.)

Multi-input

Total 18 input types [thermocouple (10 types) RTD (2 types), DC current (2 types) and DC voltage (4 types)] allow you to deal with various processes.

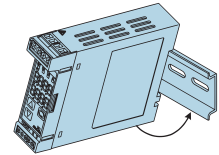
Both a controller and converter are available

For DC current output type, the DCL-33A can be used as a controller or converter by simple keypad operation. If the DCL-33A is used as a converter, thermocouple input, RTD input and DC input signals are converted to isolated 4 to 20mA DC output.

It is also possible to change the scale freely.

Easy mounting and removal

Hook the upper part of the DCL-33A to the DIN rail and fit the lower part of it to the DIN rail. Fixed DCL-33A is resistant to vibration, and easy to maintain. To remove the DCL-33A from the DIN rail, release the hook at the lower part of the DCL-33A by sliding it downward with a flat bladed screwdriver.



Possible to expand control points

From one to max. 31 spots of measurement control can be carried out through serial communication (RS-485). It is very easy to connect DCL-33A units by using the exclusive communication cable (CDD) between them. (When connecting more than 31 units of DCL-33A, please consult us)

Safety standard

UL/CSA and CE marking

Specifications

Model name		Series name: DCL-33A (W22.5 x H75 x D100mm)
Control output (OUT)	R S A	Relay contact: 1a Non-contact voltage (for SSR drive): 12 ⁺ 5V DC DC current: 4 to 20mA DC
Input	M	Multi-input
Supply voltage	1	24V AC/DC (*1)
Options	W (5A)	Rated current: 5A
	W (10A)	Rated current: 10A Heater burnout alarm
	W (20A)	Rated current: 20A (*2)
	W (50A)	Rated current: 50A
	C5	Serial communication (Based on EIA RS-485)

Please designate the specification from the □, □□□ columns. When adding an option, enter it punctuated by a comma.

(*1): For the power supply, 100 to 240V AC is standard. However, when ordering 24V AC/DC, enter "1" after the input.

(*2): For DC current output type, the option W cannot be applied.

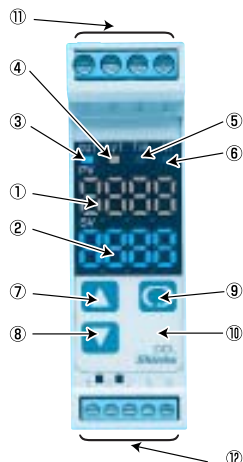
Rated scale

Input types		Scale	
Thermo-couple	K	-200 to 1370 °C	-320 to 2500 °F
		-199.9 to 400.0 °C	-199.9 to 750.0 °F
	J	-200 to 1000 °C	-320 to 1800 °F
		0 to 1760 °C	0 to 3200 °F
	S	0 to 1760 °C	0 to 3200 °F
		0 to 1820 °C	0 to 3300 °F
	E	-200 to 800 °C	-320 to 1500 °F
		-199.9 to 400.0 °C	-199.9 to 750.0 °F
	T	-199.9 to 400.0 °C	-199.9 to 750.0 °F
		-200 to 1300 °C	-320 to 2300 °F
RTD	Pt100	0 to 1390 °C	0 to 2500 °F
		0 to 2315 °C	0 to 4200 °F
	JPt100	-200 to 850 °C	-300 to 1500 °F
		-199.9 to 850.0 °C	-199.9 to 999.9 °F
DC current	4 to 20mA		
	0 to 20mA		
DC voltage	0 to 1V		-199.9 to 999.9
	0 to 5V		-19.99 to 99.99
	1 to 5V		-1.999 to 9.999
	0 to 10V		

* For DC current and DC voltage inputs, scaling and decimal point place change are possible.

* For DC current input, 50 Ω shunt resistor (sold separately) has to be externally installed.

Name and functions of the sections



- ① PV display: Indicates the input value (PV). Indicates characters during setup.
- ② SV display: Indicates the setting value. Indicates the setting value of each setting item during setup.
- ③ OUT indicator: Lights when control output (OUT) is ON. (For DC current output type, this blinks in a 0.25 second cycle corresponding to the output manipulated variable.)
- ④ EVT indicator: Lights when Alarm, Loop break alarm or Heater burnout alarm (option) is ON.
- ⑤ T/R indicator: Blinks when responding to the command from the host computer during serial communication.
- ⑥ AT indicator: Blinks while PID auto-tuning or PD auto-reset is being performed.
- ⑦ Increase key: Sets or selects each setting item value (Increases the numeric value).
- ⑧ Decrease key: Sets or selects each setting item value (Decreases the numeric value).
- ⑨ Mode key: Changes the setting mode or registers the setting value.
- ⑩ Sub-mode key: Brings up setting item in combination with a Increase or Decrease key.
- ⑪ Power terminals, control output (OUT) terminals
- ⑫ Input terminals, EVT output terminals

ADAM-4510/4510S RS-422/485 Repeater

ADAM-4520

Isolated RS-232 to RS-422/485 Converter

ADAM-4521

Addressable RS-422/485 to RS-232 Converter



ADAM-4510/4510S



ADAM-4520



ADAM-4521



Specifications

- **Input** RS-485 (2-wire) or RS-422 (4-wire)
- **Output** RS-485 (2-wire) or RS-422 (4-wire).
Speed (bps): 1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K, RTS control and RS-422 mode (switchable)
- **RS-422/485 Interface Connector** Plug-in screw terminal
- **Isolation Voltage** 3000 V_{DC} (ADAM-4510S only)
- **Power Consumption** 1.4 W @ 24 V_{DC}

Specifications

- **Input** RS-232 (4-wire)
- **RS-232 Interface Connector** female DB-9
- **Output** RS-485 (2-wire) or RS-422 (4-wire).
Speed (bps): 1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K, RTS control and RS-422 mode (switchable)
- **RS-422/485 Interface Connector** Plug-in screw terminal
- **Isolation Voltage** 3000 V_{DC}
- **Power Consumption** 1.2 W @ 24 V_{DC}

Specifications

- **Built-in microprocessor and watchdog timer**
- **RS-232 and 485 can be set to different baudrates**
- **RS-485 surge protection and automatic RS-485 data flow control**
- **Software configurable to either addressable or non-addressable mode**
- **Transmission Speed (bps)** 300, 600, 1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K (software configurable)
- **RS-232 Interface Connector** female DB-9
- **RS-422/RS-485 Interface Connector** Plug-in screw terminal
- **Power Consumption** 1.0 W @ 24 V_{DC}

Ordering Information

- **ADAM-4510** RS-422/RS-485 Repeater
- **ADAM-4510S** Isolated RS-422/RS-485 Repeater

Ordering Information

- **ADAM-4520** Isolated RS-232 to RS-422/RS-485 Converter

Ordering Information

- **ADAM-4521** Addressable RS-422/485 to RS-232 Converter