

7c-182

**18 Channels Thyristor
Digital Switch Power Pack**

User's Manual

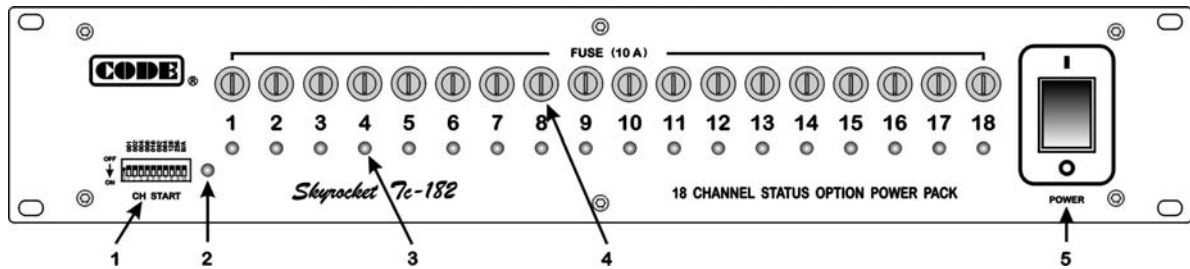
CODE ELECTRONIC CO., LTD.

Welcome to use *CODE Tc-182* Thyristor Digital Switch Power Pack. *CODE Tc-182* meets DMX-512/1990 standard digital control signal. It is suited for using with a console which generates DMX-512/1990 control signal reliably and safely.

1.1 Specifications

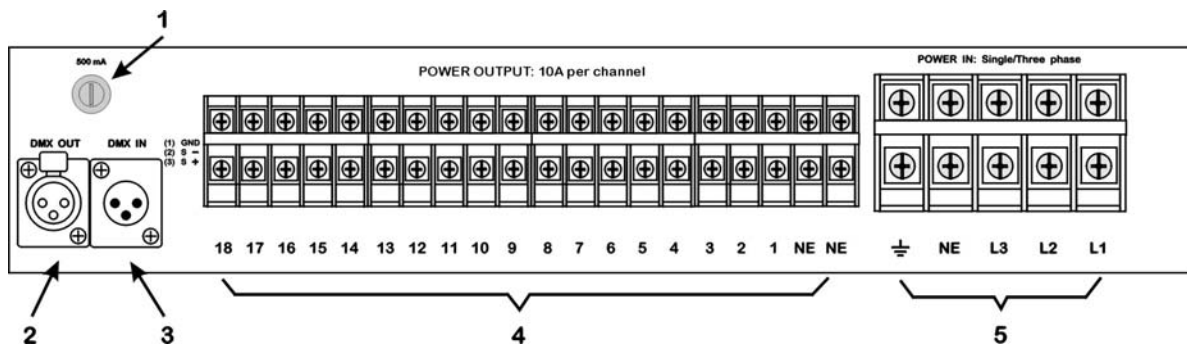
Control Channel:	18 Channels
Load Power:	2kW max. per channel (phase voltage 220Vrms)
Control Signal:	DMX-512/1990 standard digital signal
Output Control Specification	Channel off: DMX512 control value < 127 Channel on: DMX512 control value ≥ 127
Power Supply:	Three phase/single phase (220V, 50Hz)
Standby Wasting:	27 Watts approx
Volume:	480mm (W) x 90mm(H) x 290mm(D) (19"standard, 2U)
Weight:	6.1kg approx

1.2 *CODE Tc-182* Front Panel Device



1. DIP encoder (setup DMX-512 inception address number/select data memory mode)
2. DMX-512 signal input pilot light
3. Channel output state pilot light
4. 10A Fuses for output channels
5. Switch for operation power

1.3 CODE Tc-182 Rear Panel Device



1. Fuse for operation power supply
2. Connector for DMX-512 digital signal output, XLR-D3F (bypass)
3. Connector for DMX-512 digital signal input, XLR-D3M
4. Terminals for 18-channel lamp loads
5. Terminals for power supply net input (3-phase 4-wire and earth)

CONNECTION & OPERATION

2.1 Contents Checking

One *CODE Tc-182* set and one User's Manual in the package.

2.2 Power Supply Connecting

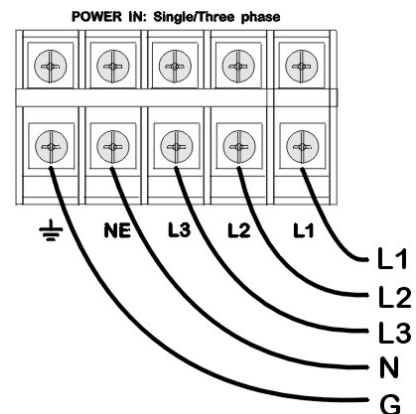
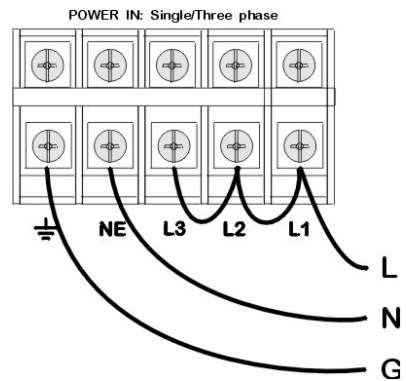
This set is suitable to three phase or single phase Power supply.

2.2.1 Single Phase Power Supply Connecting

Connect the "live wire" of single phase power supply to "L1", "L2" and "L3" all together; connect the "neutral wire" to "NE"; and connect the "safe earth" to "GND".

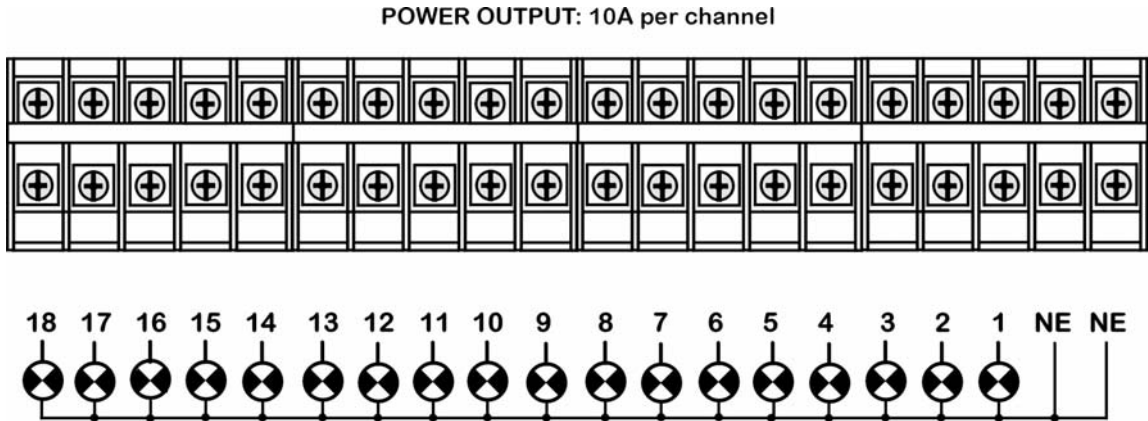
2.2.2 Three Phase Power Supply Connecting

Connect the "A/B/C live wire" of three phase power supply to "L1", "L2" and "L3" respectively; connect the "neutral wire" to "NE"; and connect the "safe earth" to "GND".



2.3 Lamp Loads Connecting

Connect the “live wire” of every lamp circuit to the output terminal of *CODE Tc-182* respectively; connect the “neutral wires” of the circuits to “NE” terminals of this set. The connection mode is as follow sketch map.

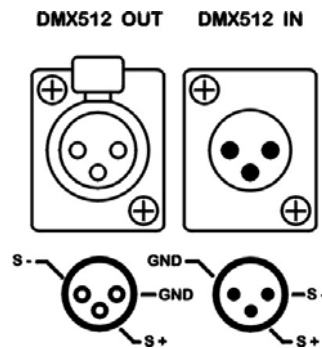


2.4 Connecting With A Console

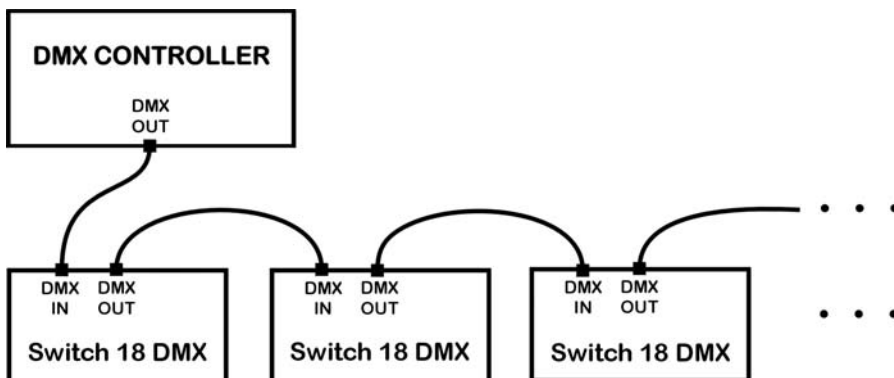
CODE Tc-182 Thyristor Digital Switch Pack can be controlled by a console which generates DMX-512 digital signal. The control signal connection mode is as follow sketch maps:

2.4.1 DMX signal connectors

Pin No.	Connection
1	GND
2	S- (Signal -)
3	S+ (Signal +)



2.4.2 Connecting With A Console



2.5 Front Panel Operation

2.5.1 Output Circuit Over-current Protecting

A fuse is in every output circuit of *CODE Tc-182*. The fuses are 10Amp.

2.5.2 Setup DMX-512 Address Code and output Control memory Mode

The DIP encoder on the front panel of *CODE Tc-182* takes on double-duty functions:

- Confirming the local inception address number by binary encoding;
- Confirming output control memory mode.

2.5.2.1 Confirming DMX-512 Local Inception Address Number

“Local Inception Address number” is confirmed by 1~9bit switches of DIP encoder. No. 1 bit is LSB, No. 9 bit is MSB. In all the address number is 512. The “Inception Address number” is the channel number code of DMX signal which is accepted by the first channel of this set, the second channel accepts DMX signal code of “Inception Address number” + 1, the third channel accepts DMX signal code of “Inception Address number” + 2, etc. (If Local Inception Address number is “0”, then the first channel of this set accepts No.1 channel code of DMX signal.) The relation between bit value of DIP encoder and DMX channel code keeps to the formula below:

$$\text{The sum value of 1~9bit switches of DIP encoder} + 1 = \text{DMX inception address number}$$

DIP switch's position function: “ON”, obtains its bit value; “OFF”, its bit value is “0”.

Bit value of DIP switches

DIP bit	1	2	3	4	5	6	7	8	9
Value	1	2	4	8	16	32	64	128	256

Example 1: DMX inception address number is “19”

Setup No.2bit and No.5bit “ON”, the others “OFF”.

The sum value of 1~9bit of DIP encoder is 2+16.

Then, DMX inception address number is 19.

namely: $[2 + 16] + 1 = 19$



CH START

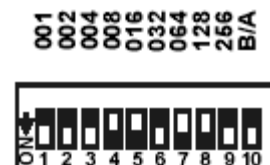
Example 2: DMX inception address number is 217

Setup No.4bit, No.5bit, No.7bit, and No.8bit “ON”, the others “OFF”.

The sum value of 1~9bit of DIP encoder is 8+16+64+128.

Then, DMX inception address number is 217.

namely: $[8+16+64+128] + 1 = 217$



CH START

2.5.2.2 Confirming Output State Memory Mode

Confirming the output state memory mode of *CODE Tc-182* by No.10bit switch of DIP encoder. While the position of No.10bit switch is "A"(moved at upside), this set is in data memory state. It means of DMX-512 control signal broken off abruptly, the current output state of every channel is not changed. Whereas, the position of No.10bit switch is "B"(moved at downside), The data memory function is closed.

2.5.3 DMX-512 Signal Input Pilot Light

The pilot light is twinkling while receiving normal DMX-512 signal. Otherwise, it is blank.

2.5.4 Channel Output Sate Pilot Light

The Pilot lights are luminous while their channels are turn on. Otherwise, they are blanking.

2.5.5 Operation Power Switch

The switch turns on or turns off the operation power supply which powers for MPU unit of *CODE Tc-182* Thyristor Digital Switch Pack. (I: turn on, O: turn off)

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