Portacode™ Electronic Keypad Multi-Output Models

Electrical Wiring Schematics

ELEC/INST/K3

NORALSY
MASTERING ACCESS CONTROL™

RELAYS

Relay/output no. 1	=	Terminals 5 + 6 in conjunction with jumper setting SW1
Relay/output no. 2	=	Terminals 7 + 8 in conjunction with jumper setting SW2
Latching relay/output no. 3	=	Terminals 9 + 10 in conjunction with jumper setting SW3
Anti-tamper/Alarm circuit	=	Terminals 11 + 12 (Closed contact when unit in situ).

JUMPER SETTINGS SW1, SW2 & SW3

Common - NOR	=	Relay closes (makes circuit) when keypad code entered. This setting is used when operating a fail secure (locked) - power to unlock electric release.
Common - INV	=	Relay opens (breaks circuit) when keypad code entered. This setting is used when operating a fail safe (open) - power to lock electro-magnet or electric release.

VARISTORS RV1, RV2 & RV3

RV1 relates to relay no. 1 and jumper setting SW1.
RV2 relates to relay no. 2 and jumper setting SW2.
RV3 relates to relay no. 3 and jumper setting SW3.
Any relay connected to an automation system must have its corresponding RV cut-out.

NOTES:

1. SW5 is the programming switch used only to set initial master code on installation.

2. EX1, EX2 = Door release button sited internally. (Normally Open Contact)

3. TR, TR1, TR2 = Trades Button controlled via a time clock. (Normally Open Contact)

4. EMEX = Emergency break glass exit device. (Normally Closed Contact)

5. D1, D2 = Diode IN4001
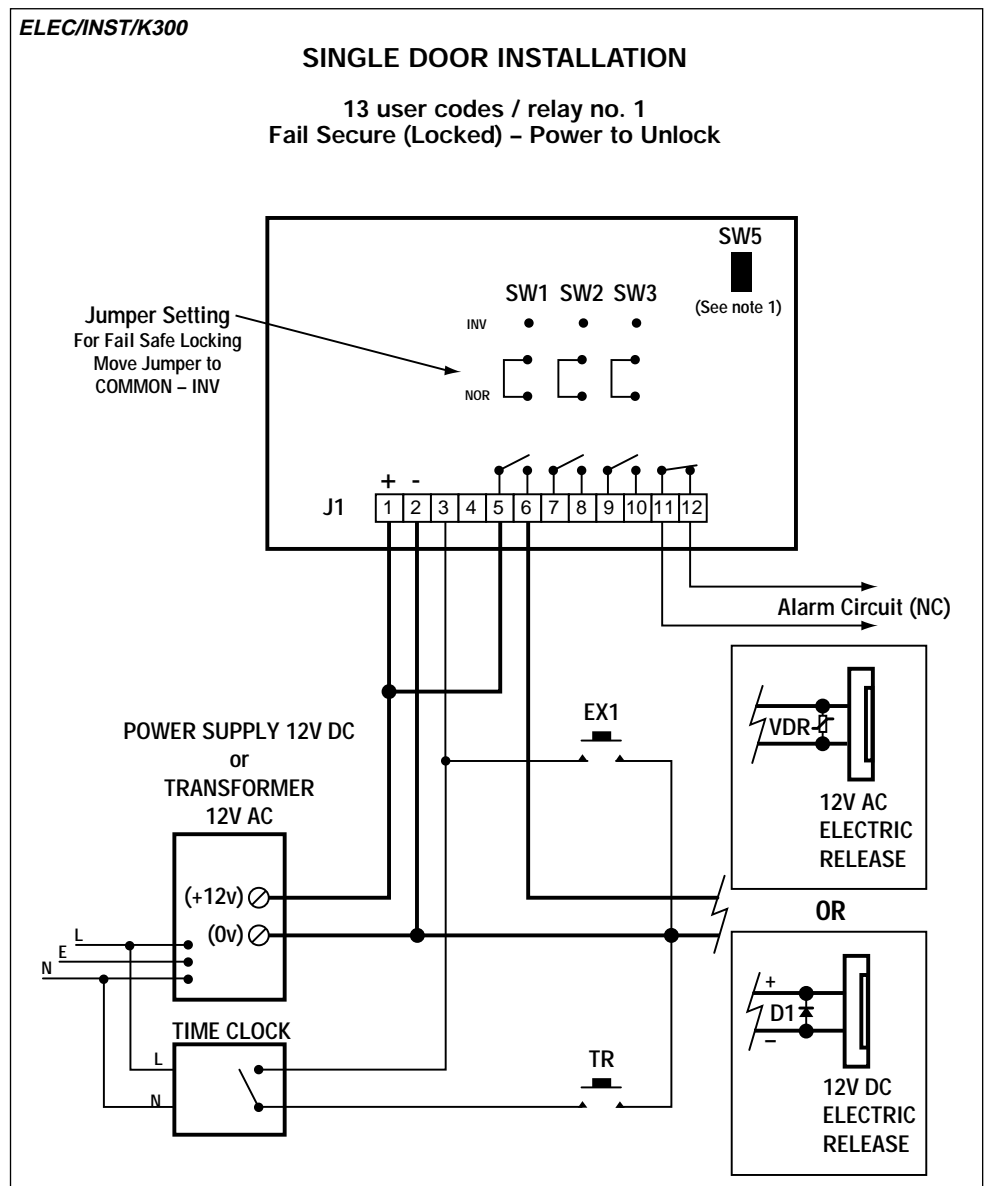
6. VDR = Varistor

RECOMMENDED WIRING

Use 8 core (12 core if application demands) stranded alarm cable, rated 1amp/core.
In the event of no timed output to the lock, wire the relevant + terminals of block J1 directly to 12V+ of power supply.

MODEL DGP ONLY

Facia LEDs:

Green	=	Illuminates when valid code entered
Red	=	Illuminated continuously when unit is powered
Orange	=	Flashes when latching relay "ON"

ELEC/INST/K300

SINGLE DOOR INSTALLATION

**13 user codes / relay no. 1
Fail Secure (Locked) – Power to Unlock**

SW5
(See note 1)

SW1 SW2 SW3
INV
NOR

Jumper Setting
For Fail Safe Locking
Move Jumper to
COMMON – INV

J1 + -
1 2 3 4 5 6 7 8 9 10 11 12

Alarm Circuit (NC)

POWER SUPPLY 12V DC
or
TRANSFORMER
12V AC

(+12v)
(0v)
L
E
N

TIME CLOCK
L
N

EX1

TR

VDR

12V AC
ELECTRIC
RELEASE

OR

D1
+
−

12V DC
ELECTRIC
RELEASE

BASIC PROGRAMMING

NORALSY
MASTERING ACCESS CONTROL™

TOP POINTS TO REMEMBER
- Master (Engineer) Code is always stored in Slot 30.
- User Codes are stored in Slots 01, 02, 03, 04..........26.
- Relay no. 1 is controlled by the User Codes stored in Slots 01 - 13.
- Relay no. 2 is controlled by the User Codes stored in Slots 14 - 26.

TIP - WHEN YOU ARE IN PROGRAMMING
Enter the numbers in quick succession after a beep. Do not wait more than 2-3 seconds in between entering numbers. If you have correctly programmed, you will hear a rapid series of beeps.

SET-UP ON INSTALLATION
Wire up according to appropriate electrical schematic for your installation, then power up the keypad. Flick Programming Switch SW5 and wait for the Portacode™ keypad to start beeping every 3 seconds.

STEP 1

Decide Now......for how many seconds do you want the door to open when:

- Valid User Code is entered
- Internal exit button is pressed
- Tradesbutton is pressed

Example
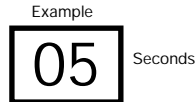
| 05 | Seconds

After a beep enter   *00 <u>05</u> 05*

The 2no. digits shown as underlined set the door open time in seconds (for relay no.1). The last 2no. digits set the door open time for relay no.2. A rapid series of beeps indicates that you have programmed successfully.

You must set the relay/lock command time for relay no. 2 even if you are not using relay no. 2. If you have linked relays 1 & 2 together, you must set the same open times for both.

STEP 2

Now set the Master Code of your choice.   This is the code that allows you to access programming mode without having to open up the keypad and flicking switch SW5.

The Master Code is always stored in Slot 30.   The Master Code can be any length of digits/characters/symbols - minimum 3, maximum 8.

After a beep enter on the keypad:

Slot No. ⌐ *30 4 2901* ⌐ Master Code
Length of Code   Itself

if you want your Master Code to be 2901

or

Slot No. ⌐ *30 5 67678* ⌐ Master Code
Length of Code   Itself

if you want the Master Code to be 67678

These are examples only. SET THE MASTER CODE OF YOUR CHOICE

A rapid series of beeps indicates that you have programmed successfully.

STEP 3

Turn off programming switch SW5. You can now secure the front of the keypad to its housing on the wall.

STEP 4   PROGRAMMING/ADDING USER CODES

User codes can be any length of digits/characters/symbols - minimum 3, maximum 8.

User codes are stored in Slots 01-26. Example: 01, 02, 03… 26.

Enter the Master Code you set in STEP 2 and wait for the beeps.

After a beep enter on the keypad:

Slot No. ⌐ *01 3 494* ⌐ User Code
Length of Code

..............to programme User Code 494 into Slot 01

A rapid series of beeps indicates that you have programmed successfully.

Slot No. ⌐ *02 4 5519* ⌐ User Code
Length of Code

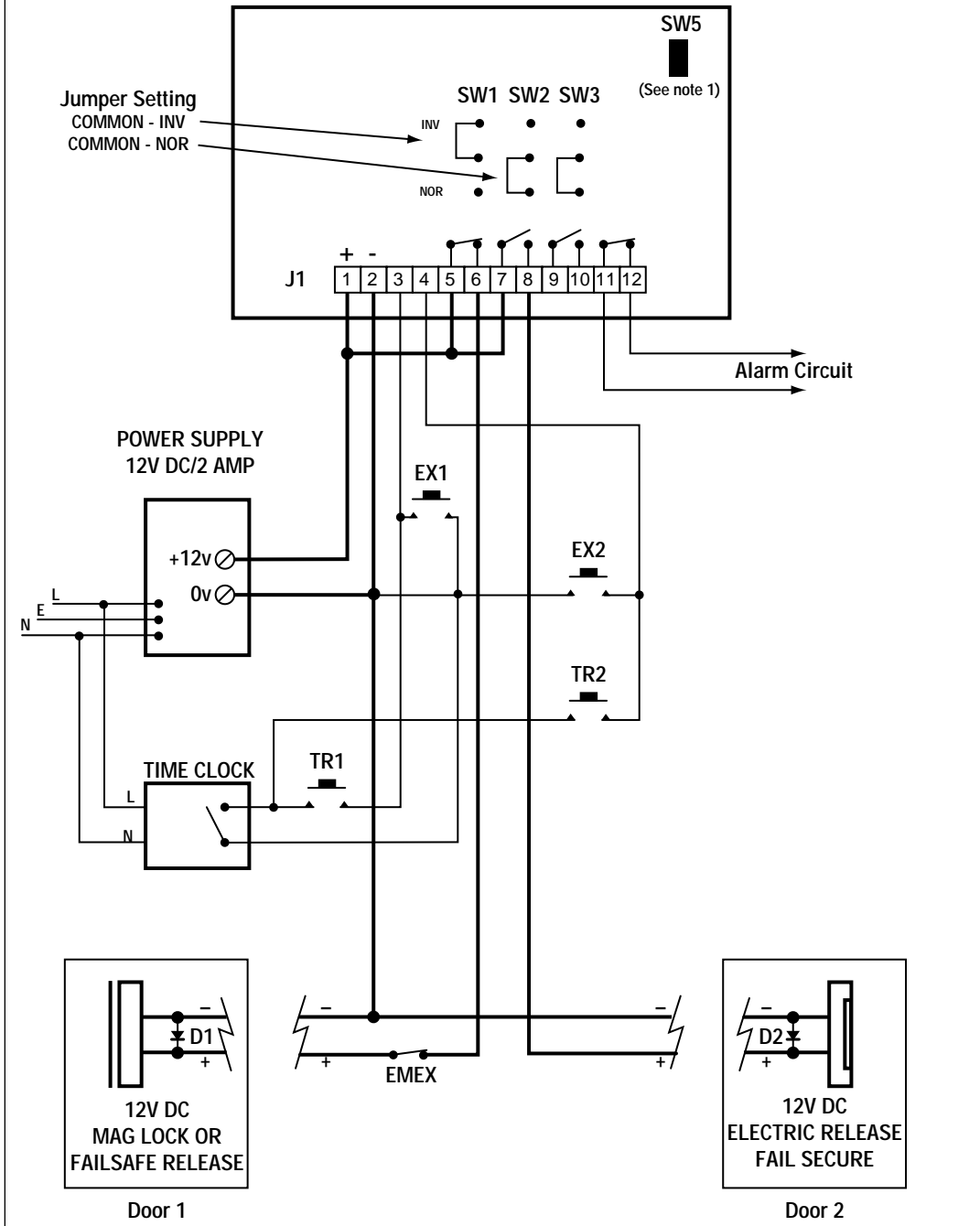.............to programme User Code 5519 into Slot 02

A rapid series of beeps indicates that you have programmed successfully.

Now press B or # to escape from programming.

Two Door Installation

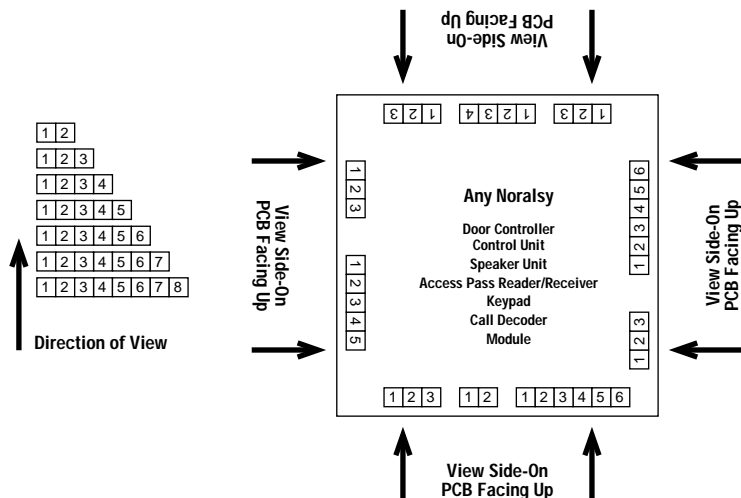13 user codes / relay no.1 ➔ Locking = Fail Safe/Open - Power to Lock

13 user codes / relay no. 2. ➔ Locking = Fail Secure/Locked - Power to Unlock

SW5
(See note 1)

Jumper Setting
COMMON - INV
COMMON - NOR

INV

NOR

SW1 SW2 SW3

J1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12

Alarm Circuit

POWER SUPPLY
12V DC/2 AMP

EX1

EX2

TR2

+12v

0v

L
E
N

TIME CLOCK

TR1

D1

12V DC
MAG LOCK OR
FAILSAFE RELEASE

EMEX

D2

12V DC
ELECTRIC RELEASE
FAIL SECURE

Door 1

Door 2

General Information

Standardisation of Terminal Numbering

Place Noralsy unit on a flat surface with PCB facing skywards. View terminal blocks from the outside looking in. Terminal No. 1 is always the first on the left of every terminal block strip.

1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5 6
1 2 3 4 5 6 7
1 2 3 4 5 6 7 8

Direction of View

View Side-On
PCB Facing Up

View Side-On
PCB Facing Up

Any Noralsy

Door Controller
Control Unit
Speaker Unit
Access Pass Reader/Receiver
Keypad
Call Decoder
Module

View Side-On
PCB Facing Up

View Side-On
PCB Facing Up

ADVANCED PROGRAMMING

NORALSY
MASTERING ACCESS CONTROL™

REMEMBER

Slot Numbers	01 - 13	= Relay no. 1
Slot Numbers	14 - 26	= Relay no. 2
Slot Number	27	= Relay no. 1 & Relay no. 2 simultaneously
Slot Number	28	= Latching Relay no. 3 "ON"
Slot Number	29	= Latching Relay no. 3 "OFF"
Slot Number	30	= Master (Engineer) Code

DELETING USER CODES
As all User Codes are stored in Slots, it is easy to delete a code from the keypad:

Enter the Master Code and wait for the beeps.
After a beep enter on the keypad:

01 A or *
Slot No. ─┘ └── Delete Command

or

17 A or *
Slot No. ─┘ └── Delete Command

To delete the User Code stored in Slot 01   To delete the User Code stored in Slot 17

A rapid series of beeps indicates that you have deleted successfully.
Now press B or # to escape from programming.

OVERWRITING / CHANGING USER CODES
You do not have to delete a User Code in order to change it. By programming a new User Code into a Slot that is currently in use, you automatically erase the old User Code.

Enter the Master Code and wait for the beeps.
After a beep enter on the keypad:

01 6 700028
Slot No. ─┘ │ └── User Code
Length of Code

The new User Code in Slot 01 is 700028. Whatever was in Slot 01 before has been erased.

Note: You change the Master Code in exactly the same way.

30 7 7767110   ....to programme Master Code 7767110 into Slot 30
Slot No. ─┘ │ └── Master Code
Length of Code   Itself

Now press B or # to escape from programming.

SETTING RELAY/LOCK OPEN TIME
Relay operating time (Relay no. 1 & Relay no. 2) can be programmed for 0.2 seconds or, any duration between 01 - 99 seconds.

Enter the Master Code and wait for the beeps.
After a beep enter on the keypad:

00 10 05   Relay no. 1 for 10 secs, Relay no. 2 for 05 secs.
Set Timer ─┘ │ └── Time for   (Scenario = Main door with relay no. 2 not used)
Command   Time for   relay No. 2
           Relay No. 1

or

00 00 00   Relay no. 1 for 0.2 secs, Relay no. 2 for 0.2 secs.
Set Timer ─┘ │ └── Time for   (Scenario = Automation)
Command   Time for   relay No. 2
           Relay No. 1

Now press B or # to escape from programming.

LATCHING RELAY
The code stored in Slot 28 acts as the "ON" for Latching Relay no. 3.
The code stored in Slot 29 acts as the "OFF" for Latching Relay no. 3.

If you do not store a different code in Slot 29 to that stored in Slot 28, entering the code stored in Slot 28 will act first as "ON" and then as "OFF", then "ON" etc.

EMERGENCY CODE
The code stored in Slot 27 operates both Relay no. 1 and Relay no. 2 at the same time.

ANTI-TAMPER
An anti-tamper circuit (terminals 11 + 12 of J1) provides a normally closed contact, once the Portacode™keypad is secured to the wall.
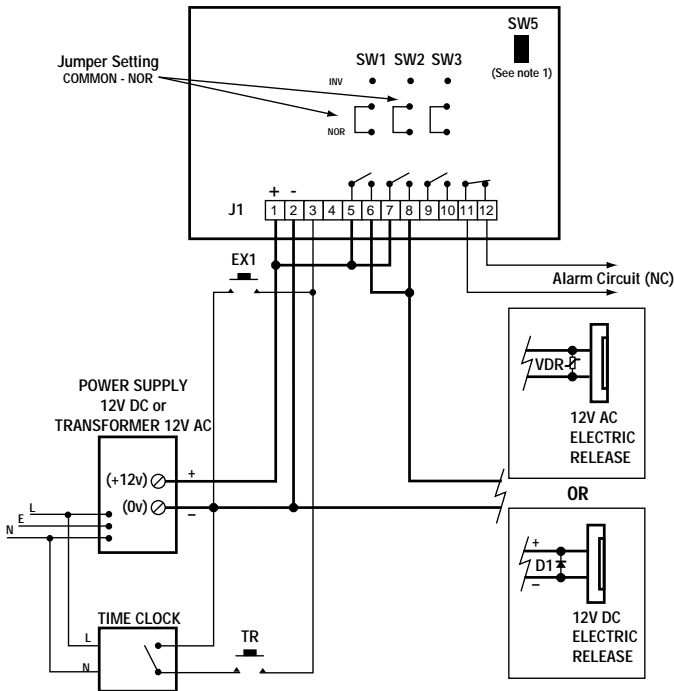
AUTOMATIC TIME-OUT - whenever programming accessed via Master Code
If you do not press B or # to escape from programming, Portacode™will automatically revert to normal mode after 20 seconds.

Single Door Installation

26 user codes / relay nos 1 & 2 in parallel.
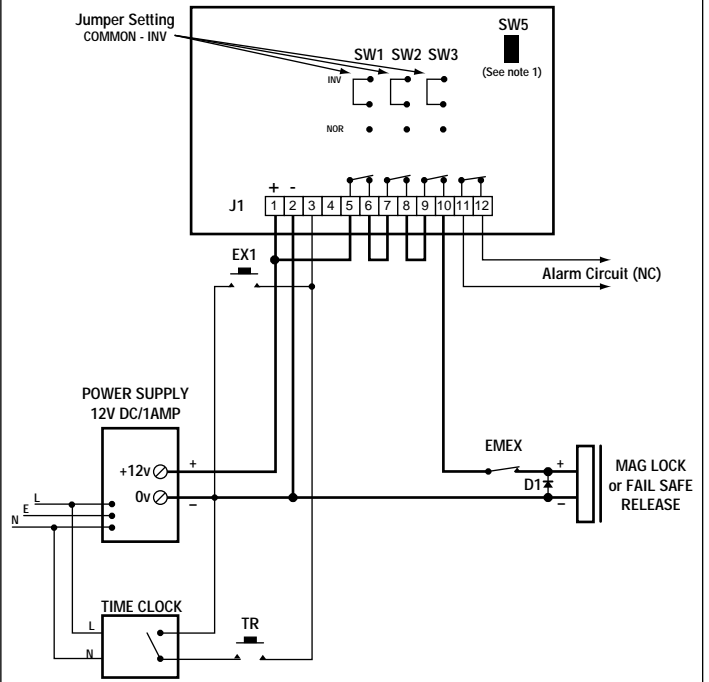
Fail Secure (Locked) - Power to Unlock

ELEC/INST/K301

Single Door Installation with Hold Open

26 user codes / relay nos 1 & 2 in series
plus
Relay no. 3 in series for "Hold-Open Code"
Fail Safe (Open) - Power to Lock

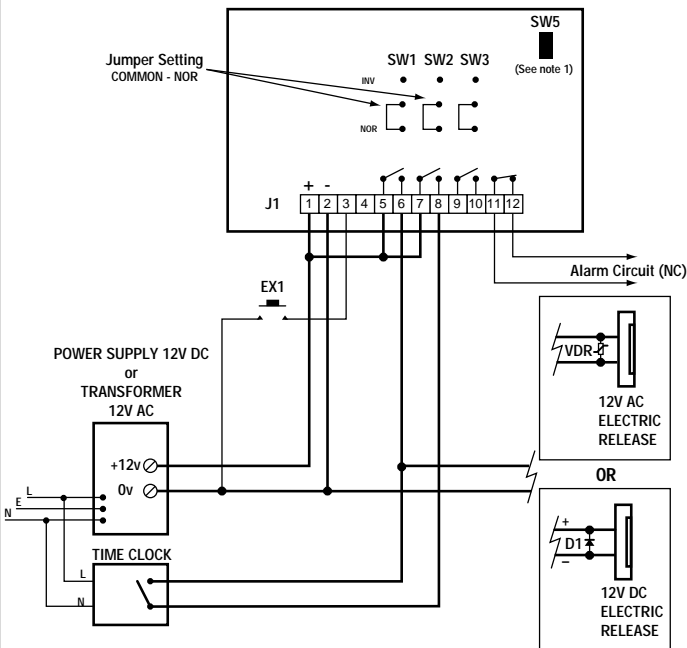A code can be entered which will keep the door in the unlocked position whenever required.

ELEC/INST/K302

Single Door Installation – with Time Period Control

13 user codes / relay no.1 ➜ valid 24hrs/day
13 user codes / relay no.2 ➜ selected time period valid only

**Fail Secure (Locked) – Power to Unlock**

Time clock contact to be CLOSED during time period(s) when codes stored in slots 14-26 ie. relay no. 2 (K2) terminals 7+8, required to be operational.

Time clock contact to be OPEN during time period(s) when codes stored in slots 14-26 ie. relay no. 2 (K2) terminals 7+8, required to be invalid.

ELEC/INST/K303

Automation Control

13 user codes / relay no.1 , 13 user codes / relay no. 2.
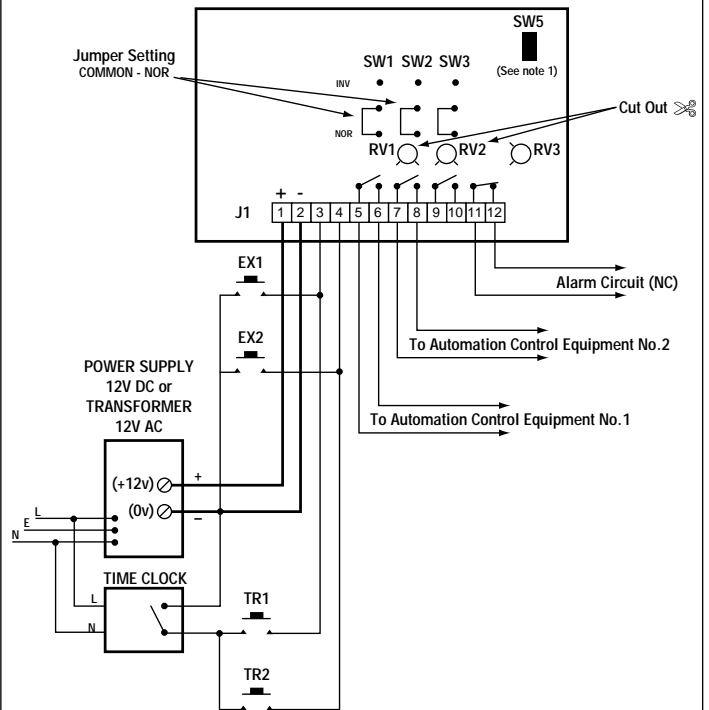
Gate/Barrier Automation Control No. 1 = Main Gate (for example)
Gate/Barrier Automation Control No. 2 = Pedestrian Gate (for example)

Cut-out varistor RV1 or RV2 if its corresponding relay is controlling an automation system.

Latching relay no. 3 (terminals 9-10) can be used to hold open an automated gate/barrier etc. In this instance only, cut-out varistor RV3.

ELEC/INST/K304

GENERAL INFORMATION

- 1 Master (Engineer) code
- 26 Keypad User Entry codes maximum for single door
- 2 time programmable relay/lock commands

What can the Portacode™ Keypad be used for ?
The Portacode™ keypad can control doors, gates, barriers, roller shutters, automation systems, perimeter beams, alarms etc.

What is a Master Code ?
The Master Code is a code which allows you to enter into programming mode without having to open up the keypad itself. It can be any combination of digits/characters/symbols - minimum 3, maximum 8.

Should I keep a record of the Master Code ?
Yes. Without the Master Code, you cannot enter into programming mode.

What happens if I lose or forget the Master Code ?
Don't worry ! If you have the security tool supplied with the Portacode™ keypad, you can open up the keypad and set a new Master Code. This will automatically overwrite the previous Master Code.

What is a User Code ?
A User Code is any combination of digits/characters/symbols - minimum 3, maximum 8. Entering this particular combination on the keypad opens the door.

How many User Codes can I have at any one time ?
If you are controlling only 1no. door, you can have a maximum of 26no. User Codes at any one time.
If you are controlling 2no. doors, you can have a maximum of 13no. User Codes per door.

Why do I need more than 1no. User Code ?
Would you like to have your own personal code which is not affected by changes to other codes ? Would you like to give staff a common code which you change every week ? Would you like to give a code to certain contractors which you then delete when they leave ? There are many ways you can benefit from the multi-code feature of Portacode™ keypads.

What happens if I lose or forget the User Codes programmed into my Portacode™ ?
Don't worry ! Because all User Codes are stored in Slots ie. Slot 01, Slot 02 etc., you can delete or simply overwrite them at will.

		Date_____	Date _____	Date _____	Date _____	Date _____	Date_____
Master Code Slot 30							
User Code slot 01							
User Code slot 02							
User Code slot 03							
User Code slot 04							
User Code slot 05							
User Code slot 06	RELAY No.1						
User Code slot 07							
User Code slot 08							
User Code slot 09							
User Code slot 10							
User Code slot 11							
User Code slot 12							
User Code slot 13							
User Code slot 14							
User Code slot 15							
User Code slot 16							
User Code slot 17							
User Code slot 18							
User Code slot 19	RELAY No.2						
User Code slot 20							
User Code slot 21							
User Code slot 22							
User Code slot 23							
User Code slot 24							
User Code slot 25							
User Code slot 26							
User Code slot 27 **(Relays No.1 & No.2 together)**							
User Code slot 28 **Latching Relay "ON"**							
User Code slot 29 **Latching Relay "OFF"**							

Please leave instruction manual with customer.