



surf-k & surf-km

LTE Primary Alarm Communicators

DSC Alarm Panels Installation Guide

V1.6

Firmware V1.0

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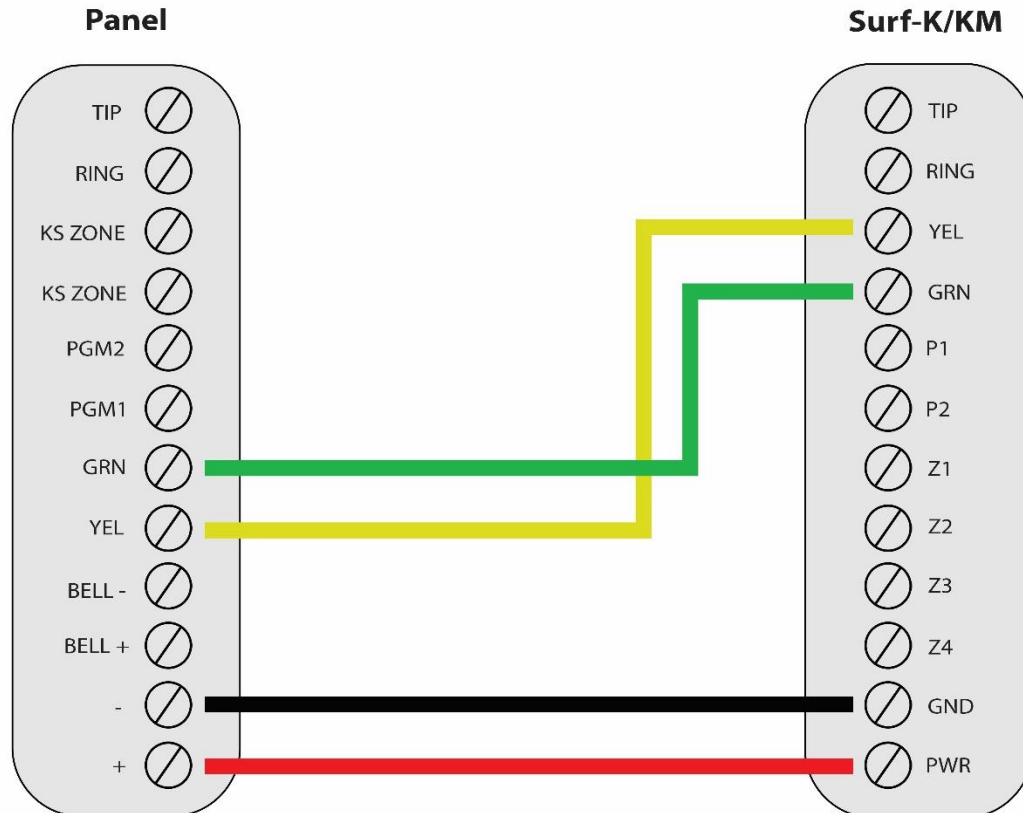
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1. DSC PowerSeries Alarm Panels

a. Keybus Monitoring

DSC PowerSeries alarm panels can be connected to Surf-K/KM via keybus terminals to monitor and control the alarm system remotely. All keybus functionalities are also available for users on the app.

i. Wiring Diagram



**Colours are for demonstration purposes only*

ii. Programming Instructions

Make sure to disable communications and program the alarm panel as a local system. No further programming is required for keybus monitoring of DSC PowerSeries panels.

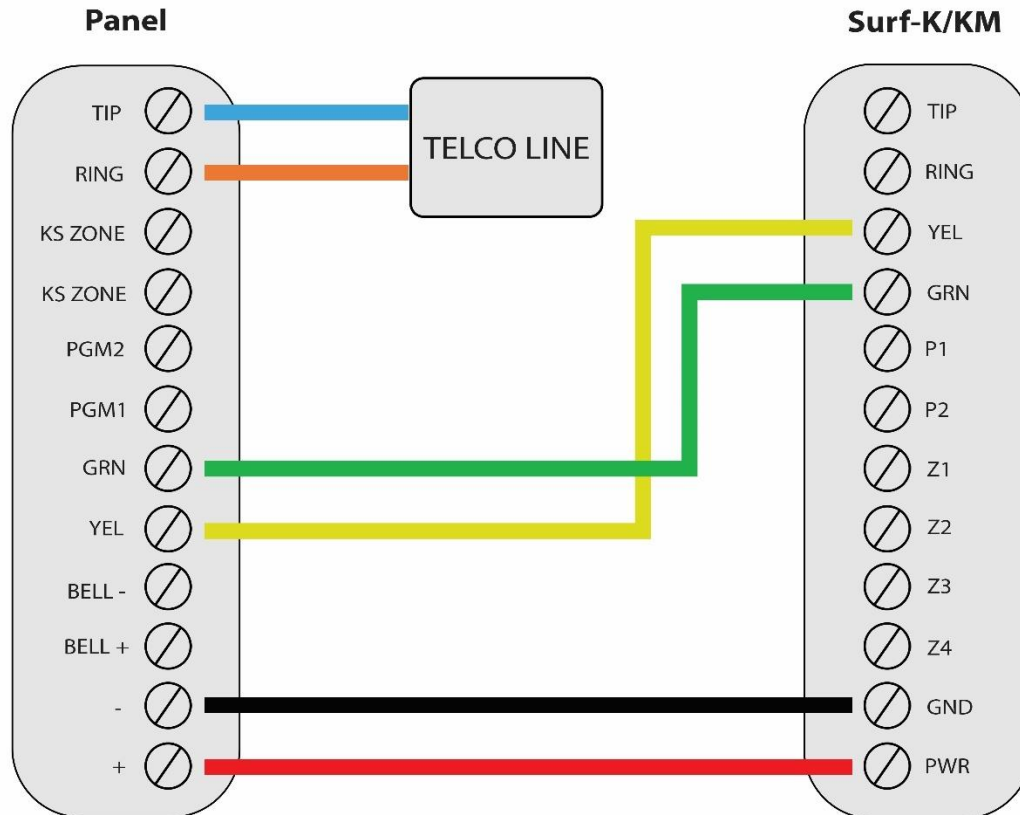
Keybus-compatible DSC Power Series alarm panels:

PC1864, PC1832, PC1616, PC5020, PC5010, PC1575, PC1565, PC1555, PC585, PC580

b. Keybus & Digital Account Monitoring

When DSC PowerSeries alarm panels are connected to Surf-K/KM via keybus, a digital account with phone line can co-exist providing a backup communication to monitor and control the system remotely.

i. Wiring Diagram



**Colours are for demonstration purposes only*

ii. Programming Instructions

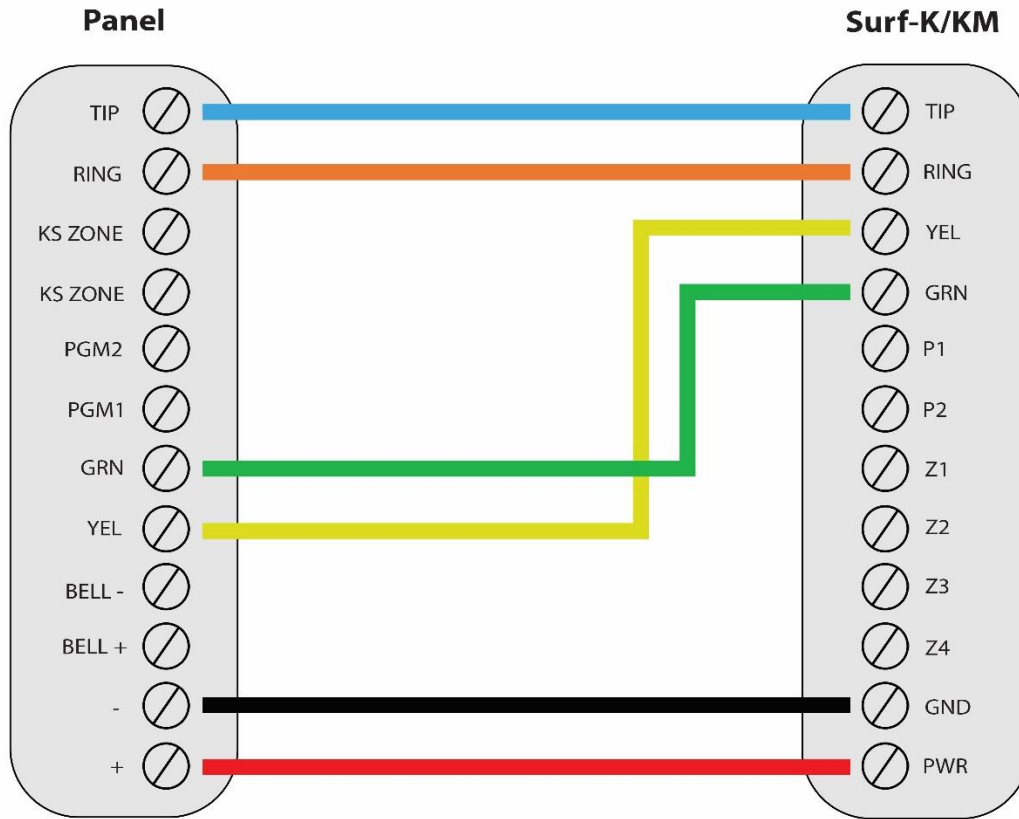
If the DSC PowerSeries alarm panel is connected to a land line via Tip/Ring, connect the Surf-K/KM using the 4-wire configuration above. Program the panel for digital account.

c. Keybus & Dial Capture (Tip/Ring) Monitoring

PowerSeries alarm panels connected to keybus can also be connected to Tip/Ring on Surf-K/KM for monitoring. Wiring and programming instructions are described below.

i. Wiring Diagram

1. PC1864/1832/1616/5010/5020/1575/1565/1555/585/580



**Colours are for demonstration purposes only*

ii. Programming Instructions

1. PC1864/1832/1616

Section	Description
[015]	Turn option 4 on, to enable quick arming, and options 7 and 8 off, to disable TLM.
[301]	Enter any phone number.
[310]	Enter a system account number.
[311] - [318]	Enter an account number for each partition if SIA format is not being used.

[350]	Enter 03 or 04 for CID or SIA reporting, respectively.
[351] - 358]	Turn option 1 on for each partition alarm/restore reporting.
[367]- [374]	Turn option 1 on for each partition open/close reporting.
[380]	Turn option 1 on to enable communicator for digital monitoring. Option 4 must be off.
[381]	Options 3 and 7 must be off for automatic SIA and CID reporting.

2. PC5010

If CID format is used, CID codes need to be programmed manually.

Section	
[015]	Turn option 4 on, to enable quick arming, and options 7 and 8 off, to disable TLM.
[301]	Enter any phone number.
[310]-[311]	Enter an account number for each partition if SIA format is not being used.
[360]	Enter 03 for CID reporting or 04 for SIA.
[361]-[362]	Turn option 1 on for each partition alarm/restore reporting.
[365]-[366]	Turn option 1 on for each partition open/close reporting.
[380]	Turn option 1 on to enable communicator for digital monitoring. Option 4 must be off.
[381]	Option 3 must be off for automatic SIA reporting.

3. PC5020

Section	Description
[015]	Turn option 4 on, to enable quick arming, and options 7 and 8 off, to disable TLM.
[301]	Enter any phone number.
[310]	Enter a system account number.
[311]-[317]	Enter an account number for each partition if SIA format is not being used.
[350]	Enter 03 for CID reporting or 04 for SIA.
[351]-[358]	Turn option 1 on for each partition alarm/restore reporting.
[367]-[374]	Turn option 1 on for each partition open/close reporting.
[380]	Turn option 1 on to enable communicator for digital monitoring. Option 4 must be off.
[381]	Options 3 and 7 must be off for automatic SIA and CID reporting.

4. PC1575

Section	Description
[08]	Turn options 5 and 6 off to disable TLM.
[10]	Turn option 6 on to enable quick arming.
[31]	Enter any phone number.
[34]	Enter a system account number.
[36]-[46]	Set reporting codes for all desired events (when using CID).
[50]	Enter 03 for CID reporting or 04 for SIA.
[51]	Turn on option 1 for alarm/restore reporting.
[53]	Turn option 1 on for open/close reporting.
[60]	Turn on options 1 and 2 to enable communicator for digital monitoring. Option 3 must be off.
[61]	Option 6 must be off for automatic SIA reporting codes.

5. PC1565/1555

Section	Description
[015]	Turn option 4 on, to enable quick arming, and options 7 and 8 off, to disable TLM.
[301]	Enter any phone number.
[310]	Enter a system account number.
[360]	Enter 03 for CID reporting or 04 for SIA.
[361]	Turn option 1 on for alarm/restore reporting.
[365]	Turn option 1 on for open/close reporting.
[380]	Turn option 1 on to enable communicator for digital monitoring. Option 4 must be off.
[381]	Options 3 and 7 must be off for automatic SIA and CID reporting.

6. PC585/580

Section	Description
[015]	Turn option 4 on, to enable quick arming, and options 7 and 8 off, to disable TLM.
[301]	Enter any phone number.

[310]	Enter a system account number.
[360]	Enter 03 for CID reporting or 04 for SIA.
[361]	Turn option 1 on for each partition alarm/restore reporting.
[365]	Turn option 1 on for each partition open/close reporting.
[380]	Turn option 1 on to enable communicator for digital monitoring. Option 4 must be off.
[381]	Options 3 and 7 must be off for automatic SIA and CID reporting.

2. DSC Alarm Panels

a. Dial Capture (Tip/Ring) Monitoring & Keyswitch

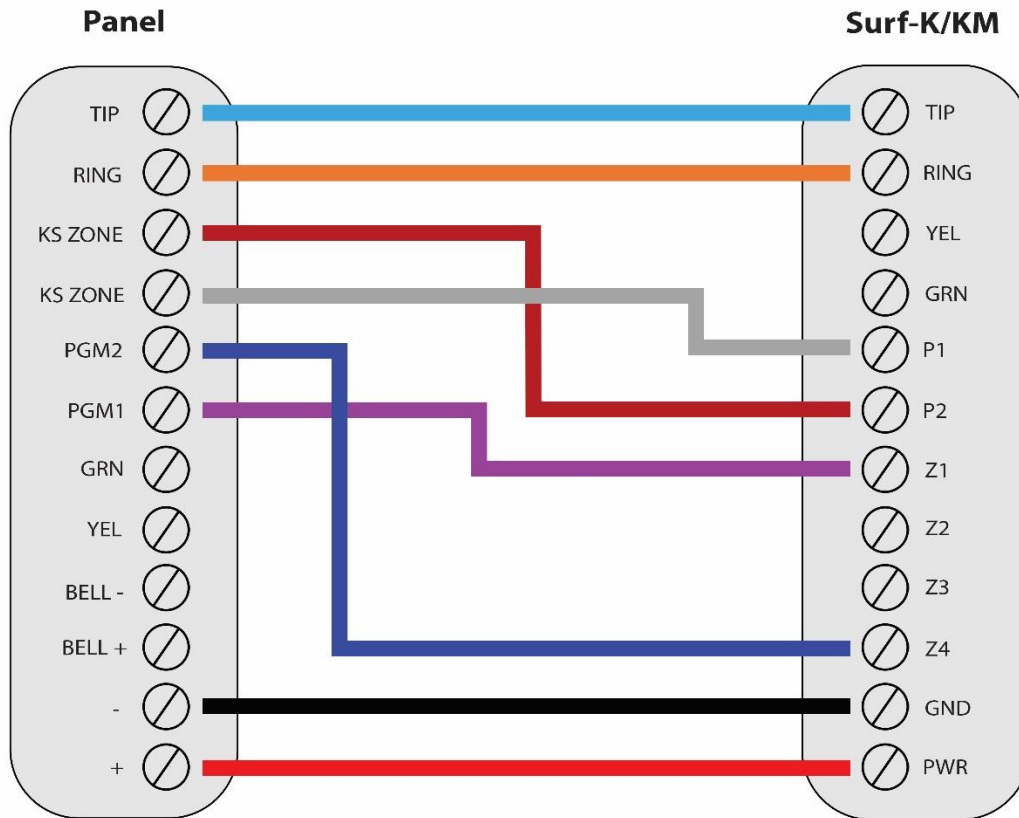
For DSC panels that do not support keybus use Tip/Ring and keyswitch to monitor and control your system remotely.

After installation, for proper partition mapping onto Aryo cloud and keyswitch arming, follow the instructions below:

- *Partition mapping*: Operate on the alarm panel and send signals from each partition. Then, wait for the corresponding event on Aryo cloud, before initiating the next signal.
- *Keyswitch arming*: Enable keyswitch arming for the intended partitions via Aryo cloud settings. Arm/disarm each partition (if applicable) from the user app. Then, wait for confirmation events on Aryo cloud before initiating subsequent actions.

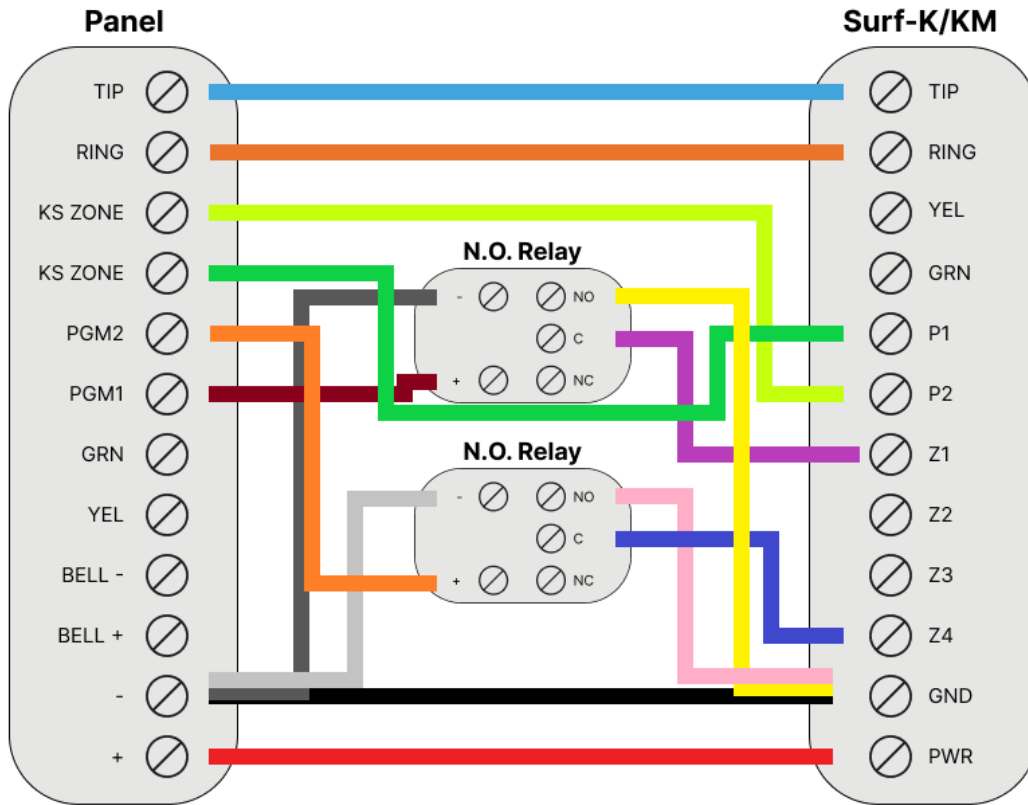
i. Wiring Diagram

1. ALEXOR, IMPASSA, NEO, SCW9045/9047



**Colours are for demonstration purposes only*

2. PC4020 MAXSYS



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ii. Programming Instructions

To monitor DSC alarm panels with dial capture, program your system as described below. Instructions in *italics* are for optional remote arming with keyswitch. PGMs on Surf-K/KM can be connected to any zone programmed as keyswitch for remote arming functionality.

1. ALEXOR (PC9155)

Section	Description
[015]	Turn option 4 on, to enable quick arming, and option 7 off, to disable TLM.
[301]	Enter any phone number.
[310]	Enter a system account number.
[350]	Enter 03 for CID reporting or 04 for SIA.
[351]	Turn option 1 on for alarm/restore reporting.

[367]	Turn option 1 on for open/close reporting.
[380]	Turn option 1 on to enable communicator for digital monitoring.
[381]	Options 3 and 7 must be off for automatic SIA and CID reporting.
[001]	<i>Set a zone to 22 for keyswitch arm.</i>
[009]	<i>Set PGM1 to 05 for partition armed status monitoring.</i>
[023]	<i>Turn on option 8 for keyswitch to arm in Away mode.</i>
[501]	<i>Option 3 must be on to enable true output.</i>

2. IMPASSA (SCW9055/9057)

Section	Description
[015]	Turn option 4 on, to enable quick arming, and option 7, to disable TLM.
[301]	Enter any phone number.
[310]	Enter a system account number.
[350]	Enter 03 for CID reporting or 04 for SIA.
[351]	Turn option 1 on for alarm/restore reporting.
[367]	Turn option 1 on for open/close reporting.
[380]	Turn option 1 on to enable communicator for digital monitoring.
[381]	Options 3 and 7 must be off for automatic SIA and CID reporting.
[001]	<i>Set a zone to 22 for keyswitch arm.</i>
[009]	<i>Set PGM1 to 05 for partition armed status monitoring.</i>
[023]	<i>Turn on option 8 for keyswitch to arm in Away mode.</i>
[501]	<i>Option 3 must be on to enable true output.</i>

3. NEO (HS2016/2032/2064/2128)

Section	Description
[015]	Turn option 4 on, to enable quick arming, and options 7 and 8 off, to disable TLM.
[301]	Enter any phone number.
[308]	Program all event reporting.

[310]	Enter a system account number (first entry) and an account number for each active partition.
[311]-[318]	Turn on option 1 for each partition alarm/restore (first entry) and open/close (third entry) reporting.
[350]	Enter 03 for CID reporting or 04 for SIA.
[380]	Turn option 1 on to enable communicator for digital monitoring. Option 4 must be off.
[001]	<i>Set a zone to 66 for keyswitch arm on partition 1 (set another for partition 2).</i>
[007]	<i>Assign PGM1 to partition 1 (PGM2 for partition 2).</i>
[009]	<i>Set PGM1 to 115 for partition 1 armed status monitoring (set PGM2 for partition 2).</i>
[010]	<i>Option 1 must be on for both 001 (PGM1) and 002 (PGM2) subsections, to enable true output.</i>
[022]	<i>Turn on option 8 for keyswitch to arm in Away mode.</i>

4. PC4020 MAXSYS (V3.5)

Section	Description
To Program using reference numbers	Enter installer's programming ([*][8][Installer's Code]). Then, press and hold the [A]uxiliary key until the keypad displays the following message: "Enter Ref # then *."
[0004000000]	Enter any phone number.
[0004000001]	Enter 04 for CID or 05 for SIA format.
[00040003]	Enter a system account number. Substitute the HEX digit "A" for the zero (0).
[01000100]-[01000800]	Enter an account number for each active partition.
[000401]	Enable "DTMF Dialing", "SIA 1 Account#", "AutoReport SIA", and "Auto Contact ID" options, and disable "TLM Enabled" option.
[0004000002]	Enable alarm/restore and open/close reporting.
[000700]- [000701]	<i>A relay must be used for each partition,</i> <i>Normally open relay</i> <i>For partition 1, Program 06 (armed status) for PGM1.</i> <i>(For partition 2, Program 06 (armed status) for PGM 2.)</i> <i>Normally close relay</i> <i>For partition 1, Program 07 (inverted armed status) for PGM1.</i> <i>(For partition 2, Program 07 (inverted armed status) for PGM 2.)</i>
[0100010300]- [0100020300]	<i>Set a zone to 26 for momentary keyswitch arm on partition 1 (set another for partition 2)*.</i>

*Need to set to 25 for momentary keyswitch, if the version is 3.0. Refer to the corresponding manuals for other versions.

5. SCW9045/9047

Section	Description
[015]	Turn option 4 on, to enable quick arming, and option 7, to disable TLM.
[301]	Enter any phone number.
[310]	Enter system account number.
[350]	Enter 03 for CID or 04 for SIA.
[351]	Turn option 1 on for alarm/restore reporting.
[367]	Turn option 1 on for open/close reporting.
[380]	Turn option 1 on to enable communicator for digital monitoring.
[381]	Options 3 and 7 must be off for automatic SIA and CID reporting codes.
[001]	<i>Set a zone to 22 for keyswitch arm.</i>
[009]	<i>Set PGM1 to 05 for partition armed status monitoring.</i>
[023]	<i>Turn on option 8 for keyswitch to arm in Away mode.</i>
[501]	<i>Option 3 must be on to enable true output.</i>

3. DSC Legacy Alarm Panels

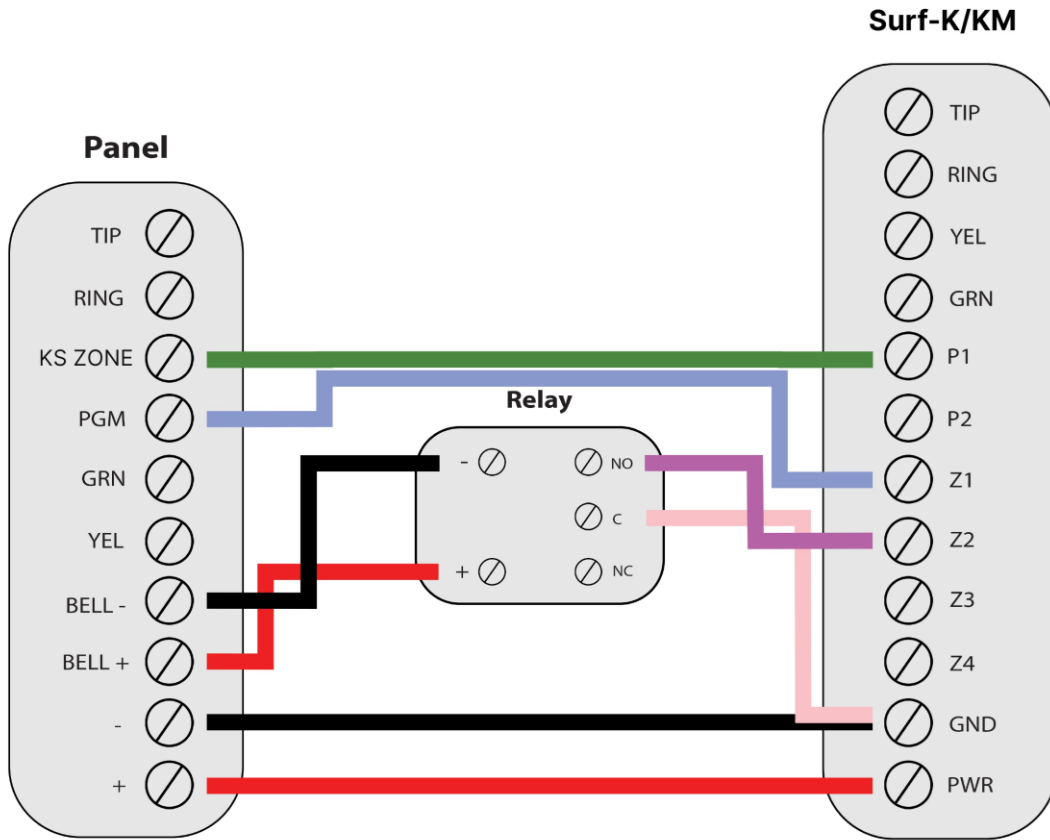
a. With Keyswitch

For DSC alarm panels without CID or SIA format communications, a relay is required to monitor alarms. Connect the relay as described below for fire/burglary monitoring and keyswitch remote arming.

After installation, for proper partition mapping onto Aryo cloud and keyswitch arming, follow the instructions below:

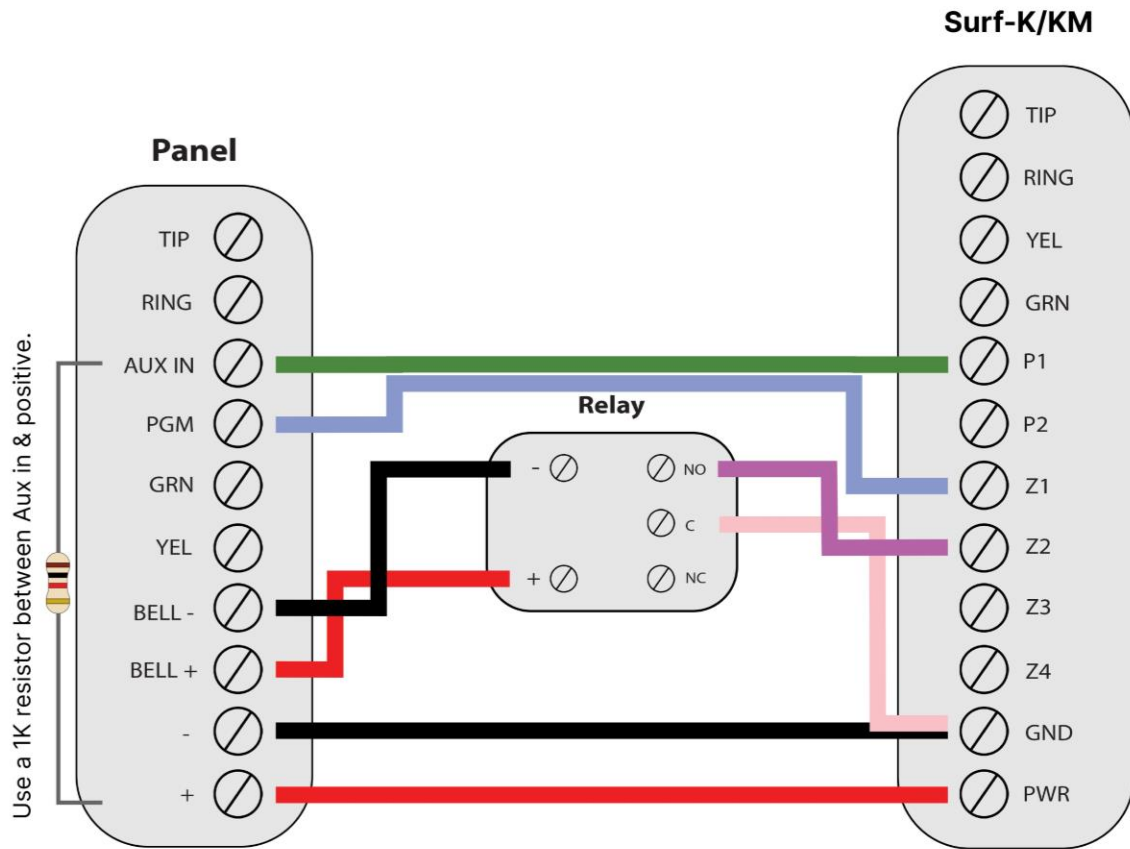
- *Partition mapping:* Operate on the alarm panel and trigger the fire/burglary signal transmitted through Surf-K/KM zone 2. Then, wait for the corresponding event on Aryo cloud, before initiating the next signal.
- *Keyswitch arming:* Arm/disarm the partition from the user app. Then, wait for confirmation events on Aryo cloud before initiating subsequent actions.

i. Wiring Diagram
1. PC2525



**Colours are for demonstration purposes only*

2. PC2550/3000



*Colours are for demonstration purposes only

ii. Programming Instructions

To monitor legacy DSC alarm panels that do not support CID or SIA format, program your system as described below. Instructions in *italics>* are for optional remote arming with keyswitch. PGMs on Surf-K/KM can be connected to any zone programmed as keyswitch for remote arming functionality.

1. PC2525

Section	Description
[10]	Turn option 4 on to turn panic audible.
[11]	Turn options 7 and 8 on to disable TLM.
[46]	Turn option 1 on to disable communication.

[01]	Set a zone to 9 for keyswitch arm.
[06]	Set PGM to 04 for armed status monitoring.

2. PC2550

Section	Description
[15]	Turn options 1 and 6 on to disable communication and turn panic audible, respectively.
[16]	Turn options 5 and 7 on to disable TLM.
[30]	Set AUX input (first entry) to 3 for momentary keyswitch and PGM (second entry) to 7 for armed status monitoring.

3. PC3000

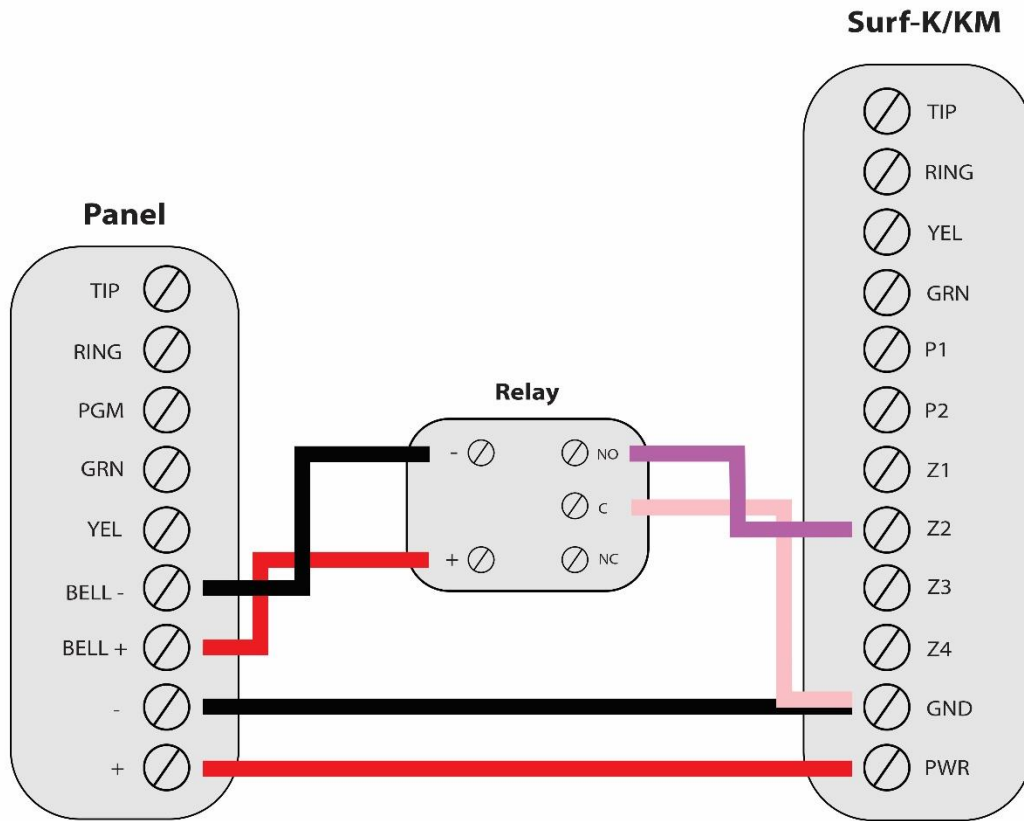
Section	Description
[18]	Turn options 1 and 6 on, to disable communication and turn panic audible, respectively.
[19]	Turn options 5 and 7 on to disable TLM.
[51]	Turn option 4 off to turn panic buzzer audible.
[28]	Set AUX input to 3 for keyswitch (first entry) and PGM (second entry) to 7 for armed status monitoring.

b. Without Keyswitch

For DSC legacy panels without keyswitch, connect a relay as described below for fire/burglary monitoring.

To accurately map alarm panel partition onto Aryo cloud, operate on the alarm panel and trigger the fire/burglary signal transmitted through Surf-K/KM zone 2. Then, wait for the corresponding event on Aryo cloud, before initiating the next signal.

i. Wiring Diagram
1. PC1550/1500



**Colours are for demonstration purposes only*

ii. Programming Instructions

1. PC1550/1500

Section	Description
[12]	Turn options 1 and 6 on, to disable communication and turn panic audible, respectively.
[32]	Turn options 2 and 6 on, to disable the bell during auto-arm and enable standard fire, respectively.