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April 25, 2019

D-PK-NGPAN-12059.00001





NetGuardian 864 Hinged Back Panel

Revision History

Initial Release

April 25, 2019

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1 NetGuardian 864A Hinged Surge Panel Overview



The Hinged Surge Panel for the NetGuardian 864 attaches behind a NetGuardian 864 for easy alarm termination. The back panel features pluggable barriers that allow convenient termination access to the Discrete alarms, Controls and Analog inputs. This is ideal for uses where rack space is at a premium. The back panel hinges open for easy access to the data (serial) ports, LAN, phone and power connections of the NetGuardian. The panel mounts to the rear side of a relay rack.

Benefits of the NetGuardian 864A Hinged Surge Panel:

- Protects NetGuardian 864A from electrical surges.
- Easy connect alarms, controls, and analogs.
- Hinged for access to ports on the back of your NetGuardian.
- Designed to conserve rack space.
- Easy installation.
- No power to the panel necessary.

2 Shipping List

While unpacking the NetGuardian 864 Hinged Back Panel please make sure that all of the following items are included. If some parts are missing, or if you ever need to order new parts, please refer to the part numbers listed and call DPS Telecom at (800) 622-3314.







Small Connector for Sensor Output 2-820-00812-02





Cable Ties (Sixteen with hinged panel)



Pads 2-015-00030-00

Optional Items



15 ft. 50 Pin Male Amphenol Open End Cable D-PR-957-10A-15

3/4-Amp GMT Accessory Fuses 2-741-00250-00

3 Specifications

Recommended wire gauge range:

24-26 gauge for Alarm/Analog/Relay, 16-20 gauge for sensor power.

Connector Types:

50 Pin Amphenol, 2 Pin small and large for sensor power.

Physical Dimensions:

12.5" wide, 6.4" deep, 1.75" tall.

4 Hardware Installation

4.1 Tools Needed

To install the NetGuardian 864 Hinged Back Panel, you'll need the following tools:



Phillips No. 2 Screwdriver



Small Standard No. 2 Screwdriver



Wire Strippers/Cutter



Punch Down Tool (if 66 blocks are used)



Wire Wrap Gun (if hinged wire wrap panel is used)

4.2 Pinout of NetGuardian 864A



Alarm and control relay connectors

The NetGuardian 864's discrete alarm inputs, control relay outputs, and first six analog alarm inputs are connected through the two 50-pin connectors labeled "Discretes 1–24" and "Analogs 1–6/Discretes 25–32/Relays 1–8" on the back panel. Analog alarm inputs 7 and 8 are connected through the four-pin connector labeled "Analogs 7–8."

4.2.1 Alarm and Control Relay Connector Pinout Table

Discretes 1–48					Discretes 49-64, Relays 1-8, Analogs 1-6					
ALM	PIN		ALM	PIN	ALM	PIN		Relays 1-8		
1	26		26	13	49	26		RLY 1	9	34
2	1		27	39	50	1		RLY 2	10	35
3	27		28	14	51	27		RLY 3	11	36
4	2		29	40	52	2		RLY 4	12	37
5	28		30	15	53	28		RLY 5	13	38
6	3		31	41	54	3		RLY 6	14	39
7	29		32	16	55	29		RLY 7	15	40
8	4		33	42	56	4		RLY 8	16	41
9	30		34	17	57	30		FUSE	17	42
10	5		35	43	58	5		ADC	+	-
11	31		36	18	59	31		ADC 1	19	44
12	6		37	44	60	6		ADC 2	20	45
13	32		38	19	61	32		ADC 3	21	46
14	7		39	45	62	7		ADC 4**	22	47
15	33		40	20	63	33		ADC 5**	23	48
16	8		41	46	64	8		ADC 6**	24	49
17	34		42	21				GND	25	
18	9		43	47				GND/RTN*	50	
19	35		44	22						
20	10		45	48						
21	36		46	23						
22	11		47	49						
23	37		48	24						
24	12		GND	25						

Analogs 7-8				
ADC	+	-		
7	В	Α		
8**	В	Α		

 Table 7.B. Alarm and relay connection pinouts for NetGuardian 864

RTN* is the alarm return pin. Alarms on standard units are dry closure or ground closure. Most units will have RTN internally tied to GND. However, special hardware assemblies may have RTN isolated from GND.

ADC^{**} channels 4, 5, 6, and 8 may be unavailable for external use. These analog channels are sometimes configured in hardware for monitoring A and B power feeds, internal temperature, and external temperature.

4.2.2 Discretes 1-48 Connector Pinout Diagram

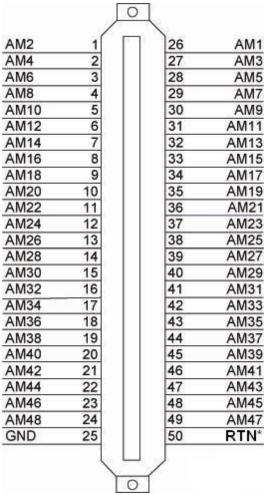
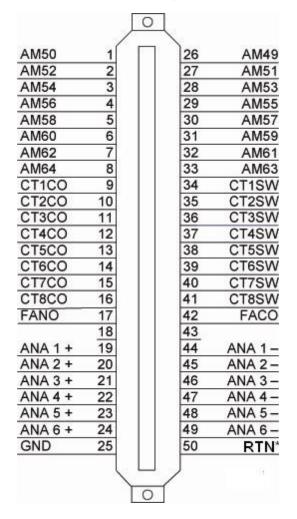


Fig. 6.6.5.1 - Pinout Diagram for Discretes 1-48 Connector

RTN^{*} is the alarm return pin. Standard configurations have this pin tied to GND. While it is possible to change this configuration to utilize different types of alarms (i.e. TTL, Open Collector, Battery Closure), the hardware must be ordered in that configuration. It is **NOT** field-adjustable.

4.2.3 Analogs 1-6/Discretes 49-64/Relays 1-8 Connector Pinout Diagram



Pinout Diagram for Analogs 1-6/Discretes 49-64/Relays 1-8 Connector

RTN^{*} is the alarm return pin. Standard configurations have this pin tied to GND. While it is possible to change this configuration to utilize different types of alarms (i.e. TTL, Open Collector, Battery Closure), the hardware must be ordered in that configuration. It is **NOT** field-adjustable.

4.3 Pinout of Hinged Surge Panel

4.3.1 Connector Pinout Diagram (4 Amphenols)

ALM 1

ALM 2

ALM 3

ALM 4

ALM 5

ALM 6

ALM 7

ALM 8

ALM 9

ALM 10

ALM 11

ALM 12

ALM 13 ALM 14

ALM 15

ALM 16

ALM 17

ALM 18

ALM 19

ALM 20 ALM 21

ALM 22

ALM 23

ALM 24

GND

Hinged Surge Panel (front) to External Equipment.

Discretes 1-24:

Discretes 25-48:

RTN 1	1		26
RTN 2	2		27
RTN 3	2 3		28
RTN 4	4		29
RTN 5	5		30
RTN 6	6		31
RTN 7	7		32
RTN 8	8		33
RTN 9	9		34
RTN 10	10		35
RTN 11	11		36
RTN 12	12		37
RTN 13	13		38
RTN 14	14		39
RTN 15	15		40
RTN 16	16		41
RTN 17	17		42
RTN 18	18		43
RTN 19	19		44
RTN 20	20		45
RTN 21	21		46
RTN 22	22		47
RTN 23	23		48
RTN 24	24		49
GND	25		50
	l		
		0	

RTN 1	1
RTN 2 RTN 3	2
	3
RTN 4	4
RTN 4 RTN 5 RTN 6 RTN 7 RTN 8	2 3 4 5 6 7 8 9 10
RTN 6	6
RTN 7	7
RTN 8	8
RTN 9	9
RTN 10	10
RTN 11 RTN 12	11
RTN 12	11 12 13
RTN 13	13
RTN 14	14 15 16 17
RTN 15	15
RTN 16 RTN 17	16
RTN 17	17
RTN 18	18 19 20
RTN 19 RTN 20	19
	20
RTN 21	21
RTN 22	22
RTN 23	21 22 23 24
RTN 24	
GND	25

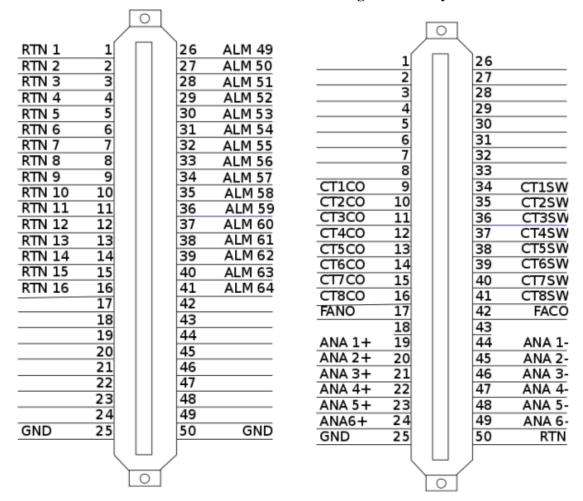
0			
_			
		26	ALM 25
		27	ALM 26
		28	ALM 27
		29	ALM 28
		30	ALM 29
		31	ALM 30
		32	ALM 31
		33	ALM 32
		34	ALM 33
		35	ALM 34
		36	ALM 35
		37	ALM 36
		38	ALM 37
		39	ALM 38
		40	ALM 39
		41	ALM 40
		42	ALM 41
		43	ALM 42
		44	ALM 43
		45	ALM 44
		46	ALM 45
		47	ALM 46
		48	ALM 47
		49	ALM 48
		50	GND
	/	,	

0

Hinged Surge Panel (front) to External Equipment.

Discretes 49-64:

Analogs 1-6 / Relays 1-8:



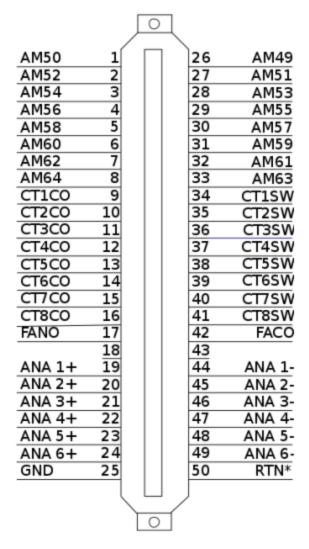
4.3.2 Connector Pinout Diagram (2 Amphenols)

Hinged Surge Panel (rear) to NetGuardian 864A.

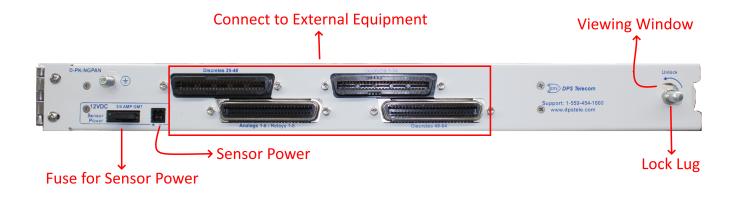
Discretes 1-48:

Analogs 1-6/ Discretes 48-64/ Relays 1-8:

	Ţ			
AM2	1	\square	26	AM1
AM4	2		27	AM3
AM6	1 2 3 4		28	AM5
AM8			29	AM7
AM10	5		30	AM9
AM12	6 7		31	AM11
AM14			32	AM13
AM16	8		33	AM15
AM18	9		34	AM17
AM20	10		35	AM19
AM22	11		36	AM21
AM24	12		37	AM23
AM26	13		38	AM25
AM28	14		39	AM27
AM30	15		40	AM29
AM32	16		41	AM31
AM34	17		42	AM33
AM36	18		43	AM35
AM38	19		44	AM37
AM40	20		45	AM39
AM42	21		46	AM41
AM44	22		47	AM43
AM46	23		48	AM45
AM48	24		49	AM47
GND	25		50	RTN*
	\backslash			



4.4 Hinged Surge Front Panel



4.5 Hinged Surge Rear Top/Rear Bottom Panel



4.6 Instructions for installing the Hinged Surge Panel

How to install the Hinged Pluggable Panel:

The Hinged Surge Panel allows for upgrades from a NetGuardian 864A without having to change out the existing wiring. The original amphenol cables from the NetGuardian 864 are now connected to the back of the Hinged Surge Panel.



Fig.6.12.1 - Silk screen on the Hinged Pluggable Back Panel indicates which way to turn the black swivel to lock and unlock the gate.



1. To begin installing the hinged pluggable back panel, the NetGuardian 864A should be removed from rack if already mounted in rack. Remove rack ears as well.



2. Install Hinged Surge Panel Ears onto NetGuardian 864A



3. Attach Hinged Surge Panel onto rear of 864A, the side with 2-50 pin connectors will face the 864A, the 4-50 pin connectors will face outward to connect to external equipment.



4. Place entire unit into equipment rack. Insert all 4 rack screws to secure equipment.

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