

Job Name/Location:

Tag #:

Date:

For: ☐ File ☐ Resubmit

PO No.:

☐ Approval ☐ Other _____

Architect:

GC:

Engr:

Mech:

Rep:

(Company)

(Project Manager)



PGNFB17C1

ACP IV BACnet® Gateway



Electrical:

Power Supply	24 VAC 60 Hz
Power Consumption	22 VA

40 VA transformer recommended.

Surrounding Conditions:

Operating Temperature	-4 - 140°F
Storage Temperature	-4 - 176°F
Humidity	0-95% (non-condensing)

Unit Data:

Dimensions	10-11/16" W x 6-3/16" H x 2-5/8" D
Maximum Number of Devices	256 (64 per V-Net ¹)
Maximum Number of Outdoor Units	64 (16 per V-Net)

Standard Features:

- Integrates Multi V and select Mini and Multi Split systems² with third party building management systems.
- BTL certified (ASHRAE 135-2004) BACnet® Application Specific Controller (B-ASC)
- Supports registration as a foreign device
- 20 x 4 character LCD
- Indoor unit control/monitoring by groups/indoor units
- Web access with user access control
- Operation and error history log
- Forced off digital input
- Nine digital inputs and four digital outputs for device interlocking

Basic Unit Functions

- Operation – On/Off
- Mode – Auto/Cool/Dry/Heat/Fan Only
- Setpoint
- Fan Speed – Auto/Low/Med/High/Power
- Louver Swing

Advanced Unit Functions:

- Two Setpoint Auto-Changeover
- Two Setpoint Setback
- 200 Programmable Schedule Events with control of setpoint, On/Off, Mode, Fan Speed, Controller Lock, and Louver Swing
- Temperature Setpoint Range Limit
- Remote Controller Lock (All, Setpoint, Mode, Fan Speed)
- Run Time Limit (Unoccupied Override)
- Software Device Interlocking
- Peak Control
- Visual Floorplan Navigation
- Power Distribution Indicator (PDI) (optional)

Notes:

1. When combined with AC Smart Premium or PDI, 128 max devices per V-Net.
2. PI-485 adapter required. Contact Engineering for a list of compatible systems.
Must follow installation instructions in the applicable LG installation manual.

Optional Accessories (sold separately)

- ☐ Power Distribution Indicator (PDI) - PQNUD1S41
- ☐ PI-485 V-Net Interface Adapter for DFS - PMNFP14A0

Connectivity:

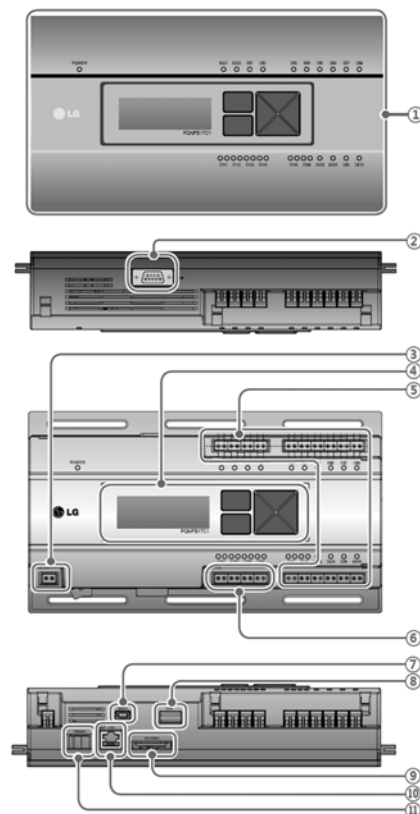
LG Communications	4 Channel/RS-485 V-Net
BMS Communications	BACnet/IP (Annex-J)
Ethernet	10/100 BASE-T

Communications Cabling Specifications (V-Net):

Type	2-conductor, stranded, shielded copper cable/PVC or vinyl jacket
Size	AWG 18 x 2
Maximum Length	3,280 ft (end to end)

AWG - American Wire Gauge

Description:



- | | |
|---|----------------------|
| 1 Cover | 6 RS-485 V-Net Ports |
| 2 RS-232 Console Port | 7 Mini USB Port |
| 3 24 VAC Power Terminals | 8 USB Port |
| 4 Buttons and LCD Display | 9 SD Card Slot |
| 5 Digital I/O and RS-485 Expansion Port | 10 Ethernet Port |
| | 11 Power Switch |

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Indoor Unit Integration Points

	✓	Function	Object Type	Description
Control		On/Off	BO	StartStopCommand
		Lock	BO	LockCommand
		Filter Sign reset	BV	FilterSignReset
		Operation Mode	MO	AirConModeCommand
		Swing	BO	SwingCommand
		Fan Speed	MO	FanSpeedCommand
		Set Upper Temperature	AV	TempRangeUpperLimitCommand
		Set Lower Temperature	AV	TempRangeLowerLimitCommand
		Mode Lock	BO	ModeLockCommand
		Fan Lock	BO	FanLockCommand
		Occupancy *	BO	OccupancyCommand
		2Set Cooling Set Temperature *	AV	2SetCoolingTempCommand
		2Set Heating Set Temperature *	AV	2SetHeatingTempCommand
		2Set Cooling Upper Temperature *	AV	2SetCoolingUpperLimitCommand
		2Set Heating Upper Temperature *	AV	2SetHeatingUpperLimitCommand
		2Set Cooling Lower Temperature *	AV	2SetCoolingLowerLimitCommand
Monitor		Set Temperature	AI	SetTempStatus
		Accumulator Power Distribution	AI	Accumulated power(100 Watt)
		Lock	BI	LockStatus
		Operation Mode	MI	AirConModeStatus
		Set Upper Temperature	AI	TempRangeUpperLimitStatus
		Set Lower Temperature	AI	TempRangeLowerLimitStatus
		Filter Sign	BI	FilterSign
		Swing	BI	SwingStatus
		On/Off	BI	StartStopStatus
		Fan Lock	BI	FanLockStatus
		Fan Speed	MI	FanSpeedStatus
		Occupancy *	BI	OccupancyStatus
		Set Room Temperature	AV	SetRoomTemp
		2Set Cooling Set Temperature *	AI	2SetCoolingTempStatus
		Room Temperature	AI	RoomTemp
		2Set Heating Set Temperature *	AI	2SetHeatingTempStatus
		Alarm	BI	Alarm
		2Set Cooling Upper Temperature *	AI	2SetCoolingUpperLimitStatus
		Error Code	AI	MalfunctionCode
		2Set Heating Upper Temperature *	AI	2SetHeatingUpperLimitStatus
		Mode Lock	BI	ModeLockStatus
		2Set Cooling Lower Temperature *	AI	2SetCoolingLowerLimitStatus

*Available in Generation 4 equipment only

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Outdoor Unit Integration Points

Monitor	✓	Function	Object Type	Description
		Compressor Operation Status	BI	CompOperStatus
		Refrigent Type	MI	RefrigentType
		Inverter Fan 1 frequency	AI	InverterFanFreq
		High Pressure	AI	HighPressure
		Low Pressure	AI	LowPressure
		Suction Temperature	AI	SuctionTemp
		Liquid Pipe Temperature	AI	LiquidPipeTemp
		Heat Exchanger Temperature	AI	HexTemp
		Outdoor EEV	AI	OutdoorEEV
		Subcool EEV	AI	SubCoolEEV
		Hot Gas Valve	BI	HotgasValue
		Inverter Discharge Temperature	AI	InverterDischargeTemp
		Outdoor Temperature	AI	OutdoorTemp
		Operation Mode	MI	OperationMode

Hydrokit Integration Points

Control	✓	Function	Object Type	Description
		Run/Stop	BO	StartStopCommand
		Lock	BO	LockCommand
		Operation Mode	MO	ModeCommand
		Set Room Temperature	AO	SetRoomTempCommand
		Set Hot Water Temperature	AV	SetHotWaterTempCommand
		Set PipeOut Water Temperature	AV	SetPipeOutWaterTempCommand
Monitor		HotWater On/Off	BO	HotWaterCommand
		Lock	BI	LockStatus
		Set Room Temperature	AI	SetRoomTempStatus
		Run/Stop	BI	StartStopStatus
		Set Hot Water Temperature	AI	SetHotWaterTempStatus
		Operation Mode	MI	ModeStatus
		Set PipeOut Water Temperature	AI	SetPipeOutWaterTempStatus
		Setting Temperature Reference (Air/Water)	BI	AirWaterFlag
		Hot Water Only Mode	BI	HotWaterOnlyFlag
		Current Room Temperature	AI	RoomTemp
		Alarm Event	BI	Alarm
		Malfunction Code	AI	MalfunctionCode
		HotWater On/Off	BI	HotWaterStatus
		Pipe Inlet Temperature	AI	PipeInTempStatus
		Water Tank Temperature	AI	TankTempStatus
		Solar Temperature	AI	SolarTempStatus
		Pipe Outlet Temperature	AI	PipeOutTempStatus

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Air Handler Unit Integration Points

	√	Function	Obj Type	Description
Control		On/Off	BO	StartStopCommand
		Lock	BO	LockCommand
		Filter Sign reset	BV	FilterSignReset
		Operation Mode	MO	AirConModeCommand
		Set Room Temperature	AV	SetRoomTemp
		FireAlarm	BO	FireAlarmCommand
		Humidify	AV	SetHumidityCommand
		Humidify	AV	SetHumidityCommand
		Humidify ON/OFF	BO	HumidifyCommand
		Auto Ventilation ON/OFF	BO	AutoVentilCommand
		Cooling OA Damper	AV	OADamperCoolCommand
		Cooling EA Damper	AV	EADamperCoolCommand
		Cooling Mix Damper	AV	MixDamperCoolCommand
		Heating OA Damper	AV	OADamperHeatCommand
		Heating EA Damper	AV	EADamperHeatCommand
		Heating Mix Damper	AV	MixDamperHeatCommand
		FAN OA Damper	AV	OADamperFanCommand
		FAN EA Damper	AV	EADamperFanCommand
Monitor		Humidify	AI	SetHumidityStatus
		Operation Mode	MI	AirConModeStatus
		Humidify ON/OFF	BI	HumidifyStatus
		Lock	BI	LockStatus
		Auto Ventilation ON/OFF	BI	AutoVentilStatus
		Supply Unit Temperature	AI	SupplyTempStatus
		Outdoor Unit Temperature	AI	OutdoorTempStatus
		Mix Unit Temperature	AI	MixTempStatus
		Supply Unit Humidity	AI	SupplyHumidifyStatus
		Outdoor Unit Humidity	AI	OutdoorHumidifyStatus
		Ventilation Unit Humidity	AI	VentilHumidifyStatus
		CO2 Value	AI	CO2ValueStatus
		Humidity Unit ON/OFF	BI	HumidifyUnitStatus
		Heating Unit ON/OFF	BI	HeaterUnitStatus
		Ventilator FAN ON/OFF	BI	VentilFanStatus
		Supply Unit FAN ON/OFF	BI	SupplyFanStatus
		Current OA Damper	AI	CurrOADamperStatus
		Current EA Damper	AI	CurrEADamperStatus
		Current Mix Damper	AI	CurrMixDamperStatus
		Room Temperature	AI	RoomTemp
		Cooling OA Damper	AI	OADamperCoolStatus
		Alarm	BI	Alarm
		Cooling EA Damper	AI	EADamperCoolStatus
		Error Code	AI	MalfunctionCode
		Cooling Mix Damper	AI	MixDamperCoolStatus
		Set Temperature	AI	SetTempStatus
		Heating OA Damper	AI	OADamperHeatStatus
		Filter Sign	BI	FilterSign
		Heating EA Damper	AI	EADamperHeatStatus
		FireAlarm	BI	FireAlarmStatus
		Heating Mix Damper	AI	MixDamperHeatStatus
		On/Off	BI	StartStopStatus
		FAN OA Damper	AI	OADamperFanStatus

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Ventilator Integration Points

	✓	Function	Object Type	Description
Control		Lock	BO	LockCommand
		On/Off	BO	StartStopCommand
		Filter Sign reset	BV	FilterSignReset
		Operation Mode	MO	AirConModeCommand
		Fan Speed	MO	FanSpeedCommand
		User Mode	MO	UserModeCommand
		AC Operation Mode	MO	UserModeAcCommand
		AC ON/OFF	BO	UserModeAcOperCommand
		AC Humidify	BO	HumidifierOperCommand
Monitor		Operation Mode	MI	AirConModeStatus
		Lock	BI	LockStatus
		Fan Speed	MI	FanSpeedStatus
		Alarm	BI	Alarm
		Error Code	AI	MalfunctionCode
		Filter Sign	BI	FilterSign
		User Mode	MI	UserModeStatus
		On/Off	BI	StartStopStatus
		AC Operation Mode	MI	UserModeAcStatus
		AC ON/OFF	BI	UserModeAcOperStatus
		AC Humidify	BI	HumidifierOperStatus

General Integration Points

	✓	Function	Object Type	Description
Control		All Unit Run/Stop *	BO	AllStartStopCommand
		All Unit Set Room Temperature *	AV	AllSetRoomTempCommand
		All Unit Temperature Lock *	AV	AllTempLockCommand
		Peak Control Operation *	BO	PeakStartStopCommand
		Peak Shift Time*	AV	PeakShiftTimeCommand
		Peak Target Ratio*	AV	PeakTargetCommand
		Remote Shutdown*	BO	RemoteShutDownCommand
		Temperature Unit Setting *	BO	TempUnitCommand
Monitor		Total Accumulated Power *	AI	TotalAccumulatedPower
		Peak Shift Time*	AI	PeakShiftTimeStatus
		Peak Control Operation *	BI	PeakStartStopStatus
		Peak Target Ratio*	AI	PeakTargetStatus
		Peak Current Running Ratio*	AI	PeakCurrentStatus
		Temperature Unit Setting *	BI	TempUnitStatus

*Available in Generation 4 equipment only