

Contact CONTROL

LG-LONDDC(VDQ-00QB2)

LG-LONDDC (for the use in LonWorks)

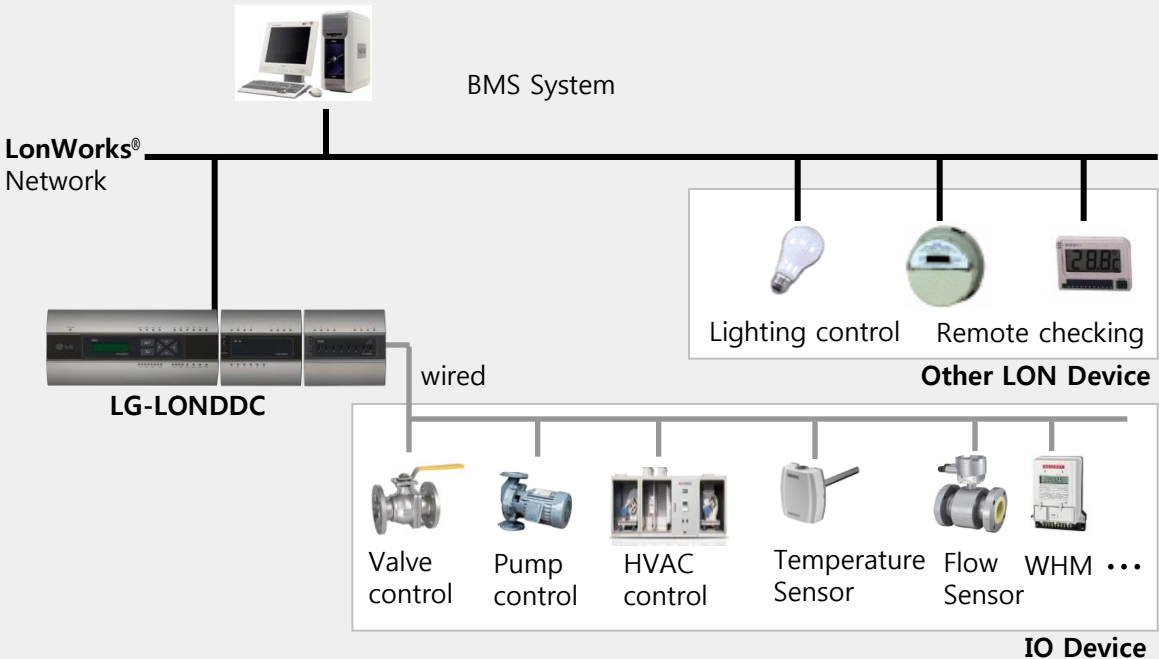
- Easy interface between BMS and LG DDC with building facility connected to analogue or digital IO port
 - LonWorks Device for building facility
 - Very widely applicable protocol(LonTalk® protocol)



Features

- LonMark® interoperability Guidelines Version 3.4 Compliance.
- LonWorks DDC Using LonMark/LonTalk® protocol .
- Process ability
 - Max 30 Modules(Expansion IO)
 - Max 64 Function Blocks
 - Max 424 physical data points and 2318 pseudo data points
 - Max 2754 NVs supported for LonWorks integration
- Flexible configuration
 - Free point change function with expansion module addition and replacement according to site equipment and usage
 - NV name and SNVT type change function through various I/O Port type settings
 - FB composition change function
 - XIF and Program ID change function
- Programmable Logic
 - Programming function using the company's logic installer
 - Control composition function for company's LonWorks Gateway and third party LonWorks devices
- Useful Functions
 - Alarm, Schedule, Time synchronization, Firmware upgrade, Data backup/restore(USB/SD memory card)
- LCD Interface
 - Setting value verification and setting through external LCD button

System Configuration



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Technical Specifications

Index	Details
Dimension(WxHxD)	270mm X 155mm X 64.8mm
DIN Rail	TS35 X 7.5
Communication Port	LonWorks FT-10 Connector(connects to BMS) Ethernet port
Ethernet	10/100 BASE-T
LonWorks	FT-10 Free Topology channel
Port	USB(Firmware Upgrade, Data Backup/Restore) Mini USB Device(Debug) SD card
LED	Serial, Lonwork, Ethernet, Power, Run
LCD	20 X 4 Character
Power	AC 24V, 3.3A, 15.6W max
Operating Temperature	0 ~ 40 ℃

IO Port

IO type			Min. Value	Max. Value
DO	Digital Output	Binary(Dry contact)	-	-
DI	Digital Input	Binary(Dry contact)	-	-
		Count(Open Collector)	-	-
AO	Analog Output	DC(Voltage)	0V	10V
		DC(Current)	0mA	20mA
UI	Analog Input	NTC 10k	0.68 kΩ	177 kΩ
		PT 1000	803 Ω	1573 Ω
		Ni 1000	871.7 Ω	1675.2 Ω
		DC(Voltage)	0V	10V
		DC(Current)	0mA	20mA
	Digital Input	Binary(Dry contact)	-	-

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Changeable Networks Interface Program ID

You can change Program ID (the last byte) without firmware change through LG Lon Installer.
When you perform factory initialization of LG-LONDDC, Program ID(the last byte value) is changed to 0.

External Network Interface File (XIF)

LG_Lon_Installer will create a XIF (External Interface File) for each application engineered.
This file contains the interface description required by a LonWorks network management tool for installation and binding.
The following file formats are provided :

- One file in binary format for download into the controller's Neuron chip for later upload from the controller's Neuron chip by LonMaker for Windows, when the controller is online and the application is running.
- A device template for commissioning LonWorks controllers can be created either by uploading from the controller.

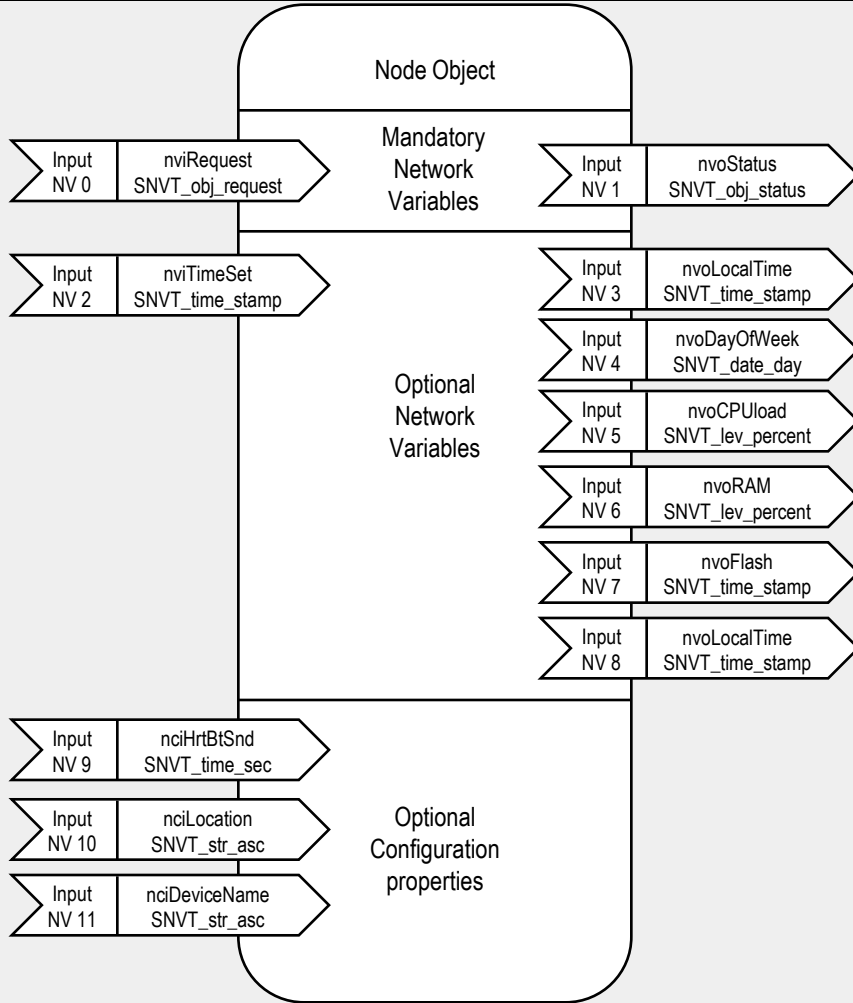
The maximum number of different XIF files per LonWorks network is 255.

Support SNVTs

SNVT index	SNVT name	Units
8	SNVT_count	Event count
15	SNVT_flow	Liters per second
27	SNVT_power	Watts
28	SNVT_power_kilo	Kilowatts
29	SNVT_ppm	Parts per million
39	SNVT_temp	Degrees celsius
51	SNVT_count_f	Dimensionless
57	SNVT_power_f	Watts
59	SNVT_press_f	Pascals
63	SNVT_temp_f	Degrees Celsius
64	SNVT_time_f	Seconds
76	SNVT_freq_hz	Hertz
81	SNVT_lec_percent	% of full-scale
88	SNVT_alarm	Alarm
92	SNVT_obj_request	Structured
93	SNVT_obj_status	Structured
95	SNVT_switch	Structured
105	SNVT_temp_p	Degrees celsius
107	SNVT_time_sec	Seconds
109	SNVT_occupancy	Occupancy mode names
123	SNVT_time_min	Minutes
124	SNVT_time_hour	Hours
139	SNVT_amp_ac	Amperage

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List of Node Object NV in Functional Block #1



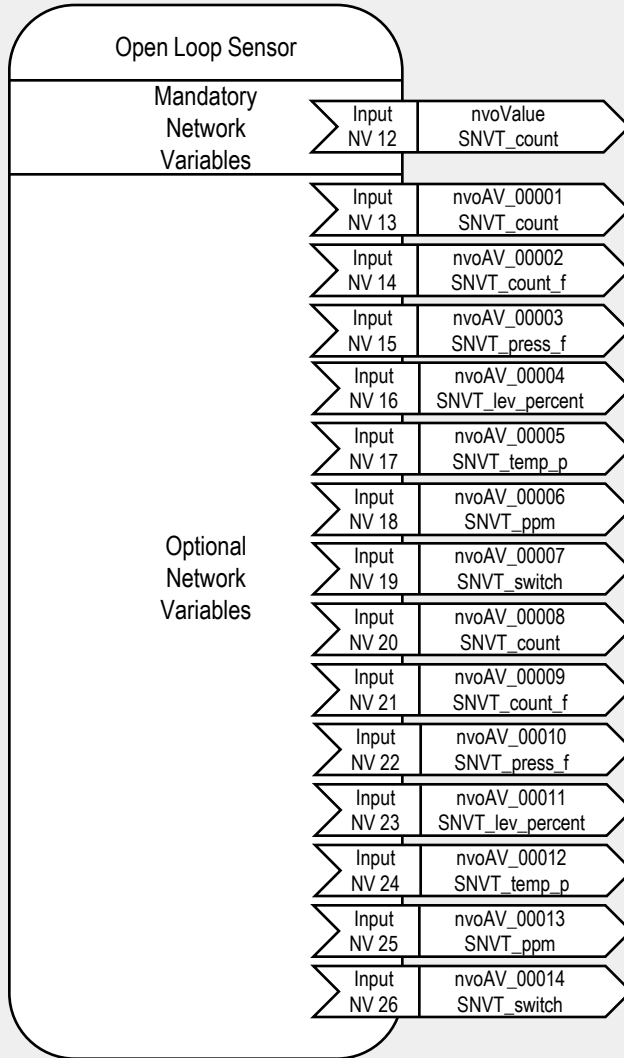
Node Object (Node Object FB[0])

NV index	SNVT Type	Name
0	SNVT_obj_request	nviRequest
1	SNVT_obj_status	nvoStatus
2	SNVT_time_stamp	nviTimeSet
3	SNVT_time_stamp	nvoLocalTime
4	SNVT_date_day	nvoDayOfWeek
5	SNVT_lev_percent	nvoCPUload
6	SNVT_lev_percent	nvoRAM
7	SNVT_lev_percent	nvoFlash
8	SNVT_switch	nvoEthernet
9	SNVT_time_sec	nciHrtBtSnd
10	SNVY_str_asc	nciLocation
11	SNVY str asc	nciDeviceName

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List of I/O NV in Functional Block #2

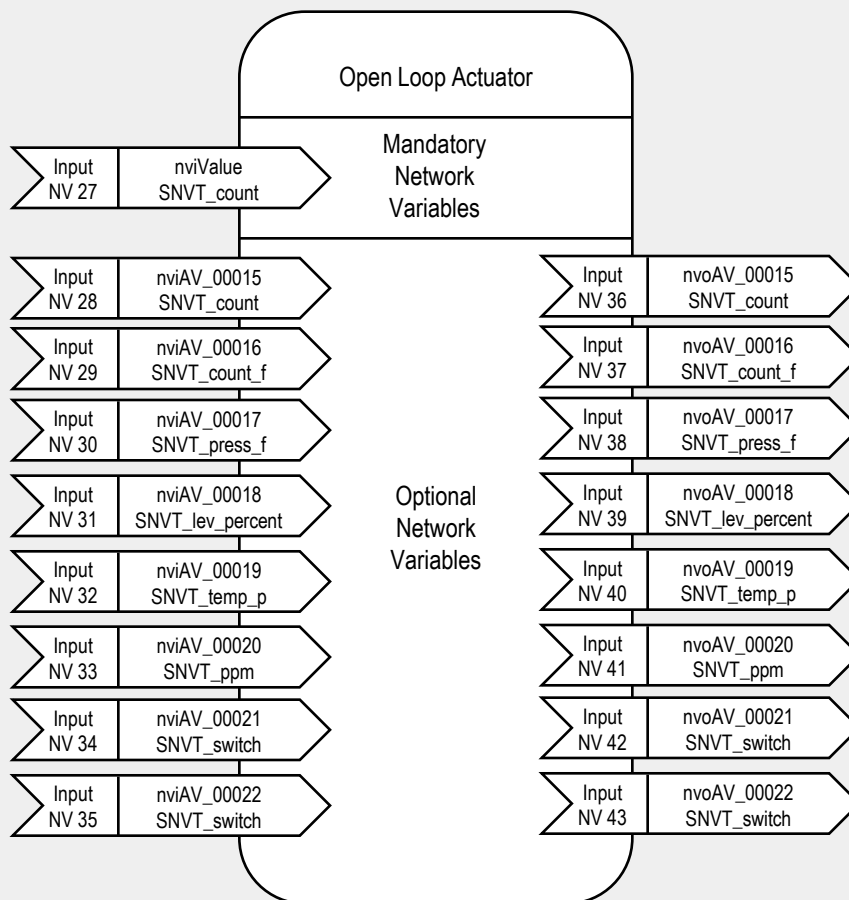


UI Functional Block (OpenLoopSensor FB[1])

NV index	SNVT Type	Name
12	SNVT_count	nvoValue
13	SNVT_count	nvoAV_00001
14	SNVT_count_f	nvoAV_00002
15	SNVT_press_f	nvoAV_00003
16	SNVT_lev_percent	nvoAV_00004
17	SNVT_temp_p	nvoAV_00005
18	SNVT_ppm	nvoAV_00006
19	SNVT_switch	nvoAV_00007
20	SNVT_count	nvoAV_00008
21	SNVT_count_f	nvoAV_00009
22	SNVT_press_f	nvoAV_00010
23	SNVT_lev_percent	nvoAV_00011
24	SNVT_temp_p	nvoAV_00012
25	SNVT_ppm	nvoAV_00013
26	SNVT_switch	nvoAV_00014

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List of I/O NV in Functional Block #3



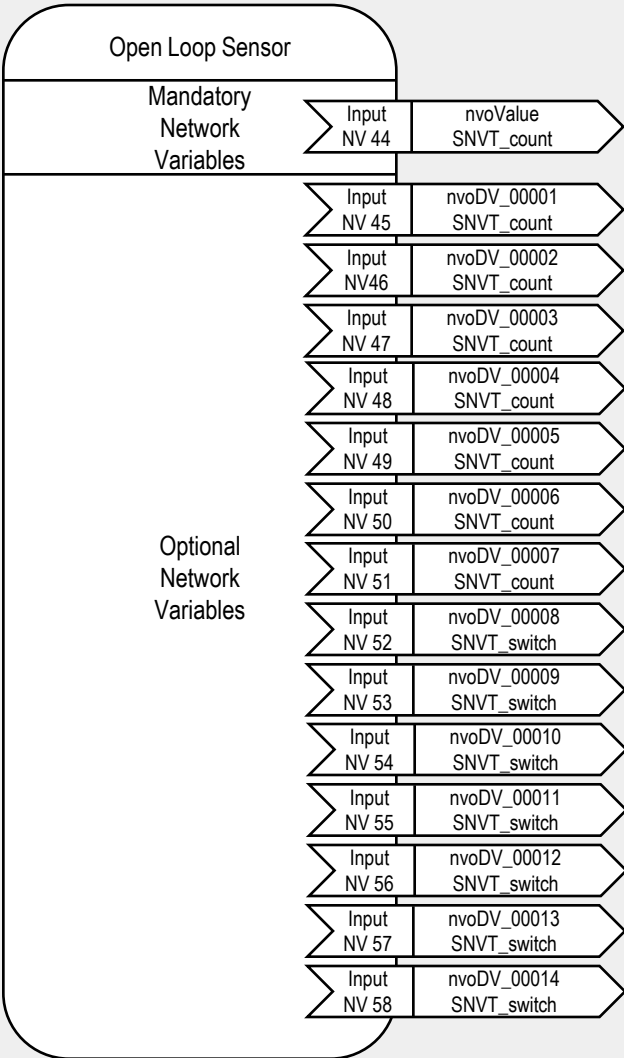
AO Functional Block (OpenLoopActuator FB[3])

NVT index	SNVT Type	Name
27	SNVT_count	nviValue
28	SNVT_count	nviAV_00015
29	SNVT_count_f	nviAV_00016
30	SNVT_press_f	nviAV_00017
31	SNVT_lev_percent	nviAV_00018
32	SNVT_temp_p	nviAV_00019
33	SNVT_ppm	nviAV_00020
34	SNVT_switch	nviAV_00021
35	SNVT_switch	nviAV_00022
36	SNVT_count	nvoAV_00015
37	SNVT_count_f	nvoAV_00016
38	SNVT_press_f	nvoAV_00017
39	SNVT_lev_percent	nvoAV_00018
40	SNVT_temp_p	nvoAV_00019
41	SNVT_ppm	nvoAV_00020
42	SNVT_switch	nvoAV_00021
43	SNVT switch	nvoAV_00022

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List of I/O NV in Functional Block #4

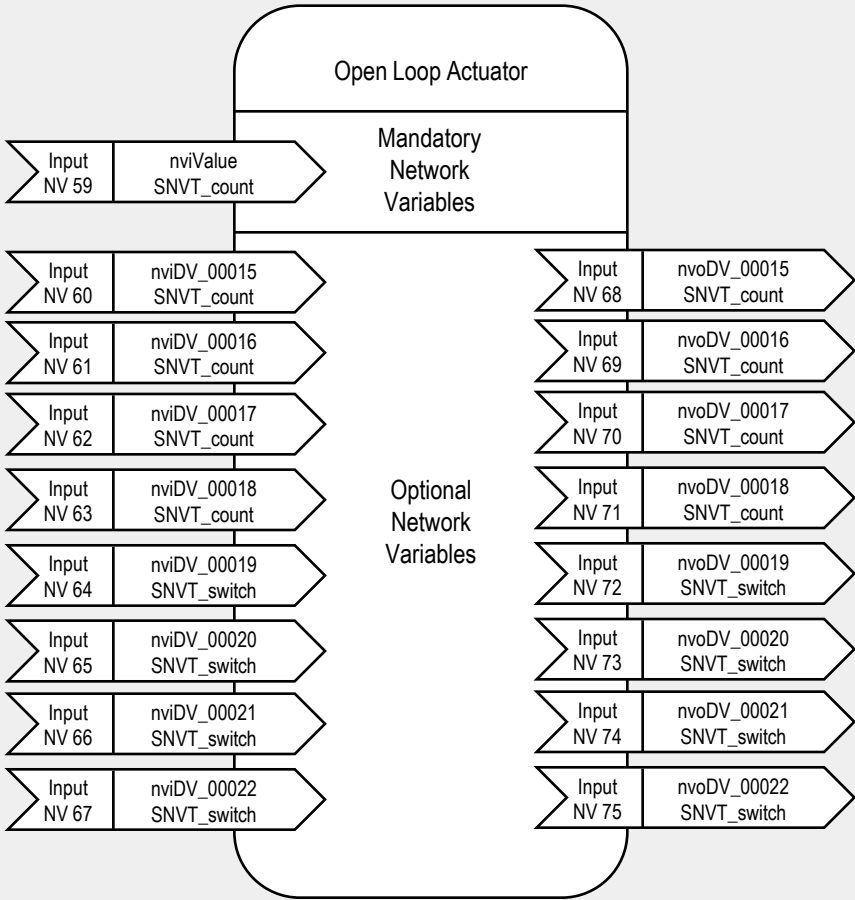


DI Functional Block (OpenLoopSensor FB[1])

NV index	SNVT Type	Name
44	SNVT_count	nvoValue
45	SNVT_count	nvoDV_00001
46	SNVT_count	nvoDV_00002
47	SNVT_count	nvoDV_00003
48	SNVT_count	nvoDV_00004
49	SNVT_count	nvoDV_00005
50	SNVT_count	nvoDV_00006
51	SNVT_count	nvoDV_00007
52	SNVT_switch	nvoDV_00008
53	SNVT_switch	nvoDV_00009
54	SNVT_switch	nvoDV_00010
55	SNVT_switch	nvoDV_00011
56	SNVT_switch	nvoDV_00012
57	SNVT_switch	nvoDV_00013
58	SNVT_switch	nvoDV_00014

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List of I/O NV in Functional Block #5

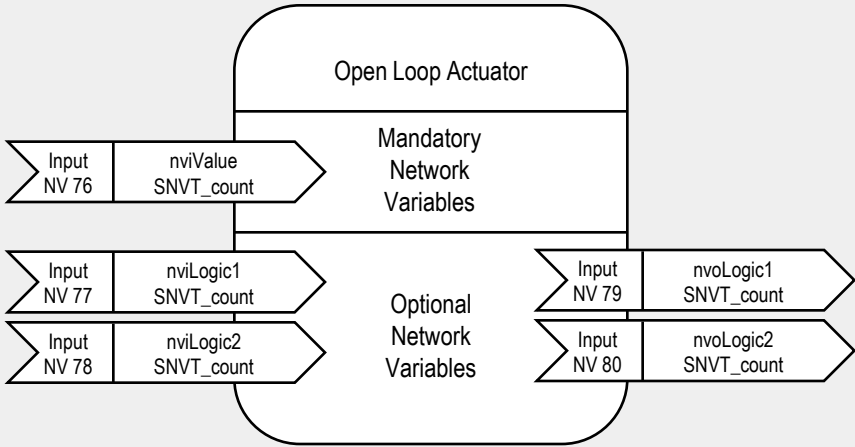


DO Functional Block (OpenLoopActuator FB[3])

NV index	SNVT Type	Name
59	SNVT_count	nviValue
60	SNVT_count	nviDV_00015
61	SNVT_count	nviDV_00016
62	SNVT_count	nviDV_00017
63	SNVT_count	nviDV_00018
64	SNVT_switch	nviDV_00019
65	SNVT_switch	nviDV_00020
66	SNVT_switch	nviDV_00021
67	SNVT_switch	nviDV_00022
68	SNVT_count	nvoDV_00015
69	SNVT_count	nvoDV_00016
70	SNVT_count	nvoDV_00017
71	SNVT_count	nvoDV_00018
72	SNVT_switch	nvoDV_00019
73	SNVT_switch	nvoDV_00020
74	SNVT_switch	nvoDV_00021
75	SNVT_switch	nvoDV_00022

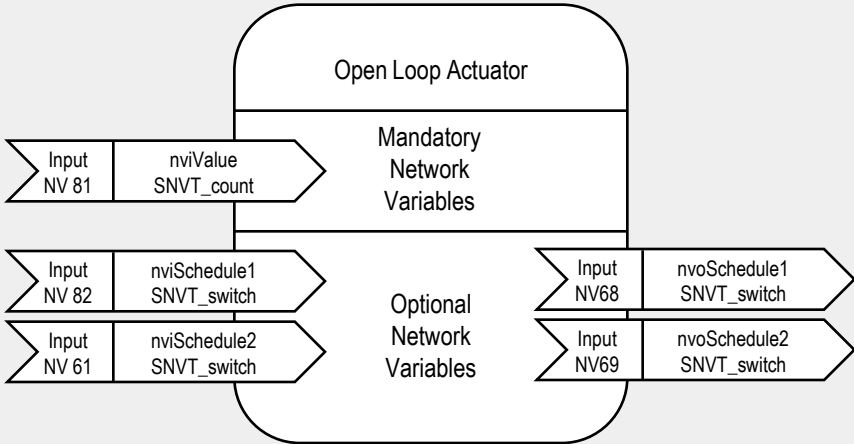
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List of I/O NV in Functional Block #6



LOGIC Functional Block (OpenLoopActuator FB[3])

NV index	SNVT Type	Name
76	SNVT_count	nviValue
77	SNVT_count	nviLogic1
78	SNVT_count	nviLogic2
79	SNVT_count	nvoLogic1
80	SNVT_count	nvoLogic2

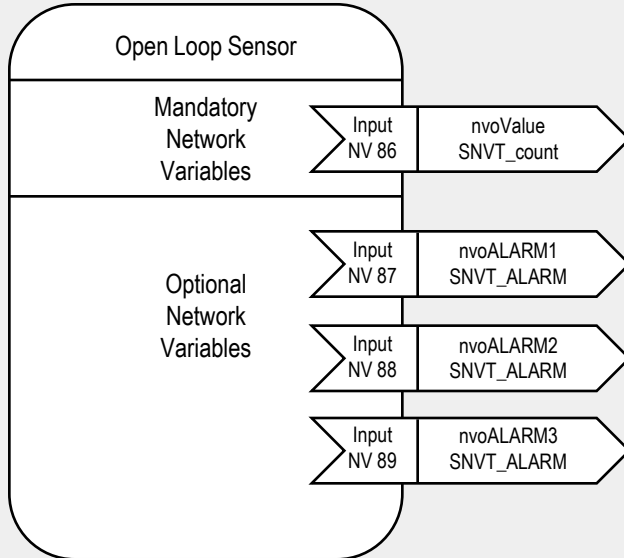


SCH Functional Block (OpenLoopActuator FB[3])

NV index	SNVT Type	Name
81	SNVT_count	nviValue
82	SNVT_switch	nviSchedule1
83	SNVT_switch	nviSchedule2
84	SNVT_switch	nvoSchedule1
85	SNVT_switch	nvoSchedule2

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List of I/O NV in Functional Block # 7



ALARM Functional Block (OpenLoopSensor FB[1])

NV index	SNVT Type	Name
86	SNVT_count	nvoValue
87	SNVT_ALARM	nvoALARM1
88	SNVT_ALARM	nvoALARM2
89	SNVT_ALARM	nvoALARM3

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LG-Lon DDC Installer

You can use DDC Installer to add/modify or delete Functional Block and NV

- Main Functions

1. Addition/Modification/Deletion of Function Block and NV in DDC for each module
2. Alarm setting
3. Virtual control point addition/modification/deletion

