

PolyGard® DGC-05 - LON Coupler

DESCRIPTION

Coupler for the connection of the DGC-05 system to a LNS LON network via LON interoperable nodes.

APPLICATION

The RS485 LON coupler is employed for the transmission of the data to an open building visualization or facility system using LNS 2 or LNS 3 standard database systems (LONMaker, Neuron NL220, etc.).



FEATURES

- LON interoperable
- 56 SNVT for measuring points
- 6 SNVT for 6 relay groups with 5 relays each
- 12 SNVT for 12 analog outputs



SPECIFICATIONS

Electrical	
Power supply	20- 28 VDC (reverse polarity protected)
Power consumption	80 mA
LON® interface	Standard network variables, SNVT according to LON Mark® Application Layer Interoperability Guideline version 3.1
Environmental	
Humidity	15 - 85% RH non condensing
Working temperature	-5 °C to + 40 °C (23 °F to 104 °F)
Storage temperature	-20 °C to + 40 °C (-4 °F to 104 °F)
Physical	
Enclosure	Plastic housing
Mounting	Snap fit for TS 35
Dimensions (W x H x D)	106 x 86 x 56 mm (4.1 x 3.4 x 2.2 in.)
Protection	IP 40
Weight	Weight 0.3 kg (0.66 lbs.)
Guidelines	EMC Directive 89/336/EEC EN 61010-1:2010 ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1
Warranty	One year / material

ORDERING INFORMATION

The LON coupler modules differ in the number of possible SNVT.

- DA: 56 SNVT measured values of the on-board sensors (addresses MP01 – MP56)
4 SNVT relay groups, 2 SNVT analog outputs
- DB: 42 SNVT measured values of the on-board sensors (addresses MP57 – MP98)
6 SNVT relay groups, 12 SNVT analog outputs
- NLA: 28 SNVT measured values of the on-board sensors (addresses MP01.1 – MP28.1)
28 SNVT measured values of external transmitters (addresses MP01.2 – MP28.2)
4 SNVT relay groups, 2 SNVT analog outputs
- NLB: 20 SNVT measured values of the on-board sensors (addresses MP29.1 – MP48.1)
20 SNVT measured values of external transmitters (addresses MP29.2 – MP29.2)
6 SNVT relay groups, 12 SNVT analog outputs

DGC-05-RS-485-LON DA300

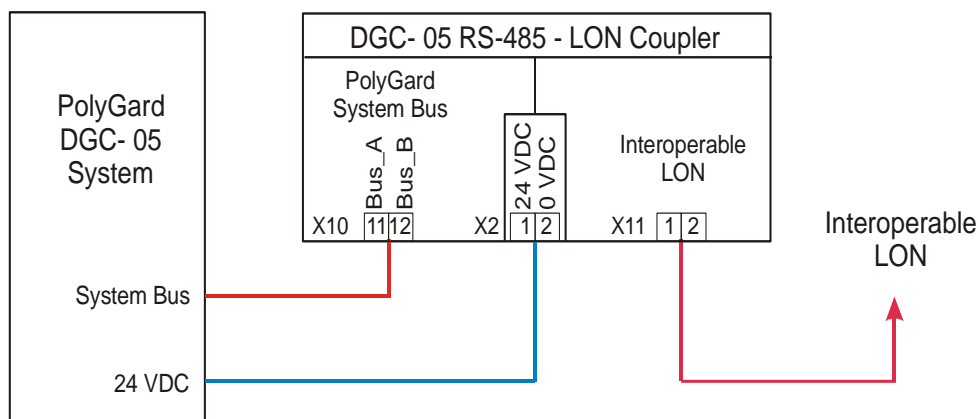
Versions	
DA300	Measuring range 300 ppm
DB300	Measuring range 300 ppm
NLA300	Measuring range 300 ppm / 100 %
NLB300	Measuring range 300 ppm / 100 %
DA250	Measuring range 250 ppm
DB250	Measuring range 250 ppm
NLA250	Measuring range 250 ppm / 100 %
NLB250	Measuring range 250 ppm / 100 %
DA100	Measuring range 100 %
DB100	Measuring range 100 %
NLA100	Measuring range 100 % / 100 %
NLB100	Measuring range 100 % / 100 %

Order No. in DGC-05 datasheet DGC-X5-XX-X-X-XX-XXXXXX_XX

Example: RS 485-LON Coupler for 45 on-board sensors and 45 external Ex transmitters with measuring range 300 ppm / 100 % LEL

Order No.: DGC-05-RS-485-LON NLA300 + DGC-05-RS-485-LON NLB300

WIRING CONFIGURATION



LONMARK PRODUCT DETAILS

Product Datasheet (PDF)	PolyGard DGC-05- RS 485-LON Coupler
Device category	Gas concentration
Communication	TP/FT-10
LonMark version	3.2
LonMark object	0000 - Node Object 0001 – Open Loop Sensor Object to 00054 – Open Loop Sensor Object
Standard program ID	49:4F:50:2D:44:00:00:00

STANDARD NETWORK AND CONFIGURATION VARIABLES

Node Object

	nvi00Request	obj_Request
	nvo00Status	obj_Status
	nvoAlarm	Alarm
	nci_minSend	SNVT_Time_sec

If one device is missing, the values will be set to the maximum presentable values:

nvo01:TOX 65535

nvo_Alarm 255 means: All bits are ON.

Changes of parameters are not admitted for safety reasons; therefore the data direction is clearly defined from the warning system to the open LON side! Retroaction is not possible.

MEASURED VALUES INDICATION

-Type DA

Sensor MP01	nvo01_TOX[0]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Sensor MP02	nvo01_TOX[1]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Sensor MP56	nvo01_TOX[55]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)

Relay group 01	nvo_Alarm[0]	SNVT_count bit0=Rel1bit4=Rel5
Relay group 02	nvo_Alarm[1]	SNVT_count bit0=Rel6bit4=Rel10
Relay group 03	nvo_Alarm[2]	SNVT_count bit0=Rel11bit4=Rel15
Relay group 04	nvo_Alarm[3]	SNVT_count bit0=Rel16bit4=Rel20

Relay group 01	nvo_an_out[0]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Relay group 02	nvo_an_out[1]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)

-Type DB

Sensor MP57	nvo01_TOX[0]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Sensor MP58	nvo01_TOX[1]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Sensor MP98	nvo01_TOX[41]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)

Relay group 01	nvo_Alarm[0]	SNVT_count bit0=Rel1bit4=Rel5
Relay group 02	nvo_Alarm[1]	SNVT_count bit0=Rel6bit4=Rel10
Relay group 03	nvo_Alarm[2]	SNVT_count bit0=Rel11bit4=Rel20
Relay group 06	nvo_Alarm[5]	SNVT_count bit0=Rel26bit4=Rel30

Analog output 01	nvo_an_out[0]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Analog output 12	nvo_an_out[11]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)

GAS ALARM SYSTEMS

-Type NLA

Sensor MP01.1	nvo01_TOX[0]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Sensor MP01.2	nvo02_COMB[0]	SNVT_lev_percent (0-100 %, 0,05 % step)
Sensor MP28.1	nvo01_TOX[27]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Sensor MP28.2	nvo02_COMB[27]	SNVT_lev_percent (0-100 %, 0,05 % step)

Relay group 01	nvo_Alarm[0]	SNVT_count bit0=Rel1bit4=Rel5
Relay group 02	nvo_Alarm[1]	SNVT_count bit0=Rel6bit4=Rel10
Relay group 03	nvo_Alarm[2]	SNVT_count bit0=Rel11bit4=Rel15
Relay group 04	nvo_Alarm[3]	SNVT_count bit0=Rel16bit4=Rel20

Analog output 01	nvo_an_out[0]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Analog output 02	nvo_an_out[1]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)

-Type NLB

Sensor MP29.1	nvo01_TOX[0]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Sensor MP29.2	nvo02_COMB[0]	SNVT_lev_percent (0-100 %, 0,05 % step)
Sensor MP48.1	nvo01_TOX[27]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Sensor MP48.2	nvo02_COMB[27]	SNVT_lev_percent (0-100 %, 0,05 % step)

Relay group 01	nvo_Alarm[0]	SNVT_count bit0=Rel1bit4=Rel5
Relay group 02	nvo_Alarm[1]	SNVT_count bit0=Rel6bit4=Rel10
Relay group 03	nvo_Alarm[2]	SNVT_count bit0=Rel11bit4=Rel16
Relay group 06	nvo_Alarm[5]	SNVT_count bit0=Rel26bit4=Rel30

Analog output 01	nvo_an_out[0]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)
Analog output 12	nvo_an_out[11]	SNVT_ppm Concentration (0-XXX ppm, 1ppm step)

