

Basic format: NMEA-0183.

Dataformat: 4800,N,8,1

Transmit frequency: One telegram every 1000ms

No telegram over 1000ms

If "communication fault" then all individual nodes shall report null-code.

Status telegram:

Field	Talker	type S (orK)	Panel 1 (or2)	ID	comm.	PWR	node1	node2	node3	node4	node5	node..	node27	node28	node29	node30	node31	node32	*	Chk	Chk	CrLf
	\$PLPL	S	1	NL	B	B	:	:	6	3	C	0	<null>	D	:	:	:	G	*	x	x	<crLf>
Meaning:	Proprietary Lopolight	Status telegram	Panel (1 or 2) default: 1	Navigation Light control	Comm status: B=ok, C=fault	Pwr. status B=ok, C=fault	node 01 ON	Node02 ON	Node03 dimmed to 6	Node04 dimmed to 3	Node05 Err	node 06-26 off	Node27 not present	Node28 on + de-ice	Node29 ON	Node30 ON	Node31 ON	Group32 ON	Checksum delimiter	Xor MSB	Xor LSB	End
Exempel 1:	\$PLPL,S,1,NL,B,B;,:;6,3,C,0,D,;,:;G*xx<crLf>					Panel 1 status:	1-2=on, 3= dimmed to 6, 4= dimmed to 3, 5= fault, 6-26= off, 27= not present, 28= heat on.															
Exempel 2:	\$PLPL,S,2,NL,B,B,C,0,0,6,0,:;0,C,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,,,,,,,*xx<crLf>					Panel 2 status:	1= fault, 4= dimmed to 6, 6= on 100%, 7= off, 8= fault, 9-20= off, 21-28= not present.															

xx=denotes checksum
Null: no char
Comm og Power status:
B=ok w=Fault

- Ex 1 - Alarm tel: \$NLALR,105,A,A,NL105-fault*xx<crLf>
- Ex 2 - Alarm tel: \$NLALR,201,A,A,NL201-fault*xx<crLf>
- Ex 2 - Alarm tel: \$NLALR,208,A,A,NL208-fault*xx<crLf>

Node status: "1" to ":" dimming level (normally ":" is used for LMR ON). C=failure, D=on or dimmed + heat

ALR - Alarm telegram ex1 Sent as every second telegram only if fault is detected. Fault details can be found in preceding status telegram

Talker	node	Al. Cond	buzzer	Text	delimiter	XorMSB	XorLSB
\$NLALR	118	A	V	NL118-FAULT	*	X	X
Navigation light alarm	node 18, panel 1	Node alarm condition	Buzzer condition	node 18 fault (panel 1) "anytext"		checksum	checksum

Buzzer cond:
A: Buzzer active
V: Buzzer silenced

Alarm cond:
A: Alarm active
V: No alarm

- Example1: Node 18 fault & buzzer silenced: \$NLALR,118,A,V,NL118-fault*xx<crLf>
- Example2: Node 2 fault & buzzer active: \$NLALR,102,A,A,NL102-fault*xx<crLf>
- Example 3: Alarm no more present: \$NLALR,102,V,V,NL102-fault*xx<crLf>

ALR - Alarm telegram ex2 (pwr) Sent as every second telegram only if fault is detected. Fault details can be found in preceding status telegram

Talker	node	Al. Cond	buzzer	Text	delimiter	XorMSB	XorLSB
\$NLALR	1P (or 1C)	A	V	NLPWR-fault	*	X	X
Navigation light alarm	power fail panel 1	Node alarm condition	Buzzer condition	power fault (panel 1) "anytext"		checksum	checksum

Example4: Power fault & buzzer active: \$NLALR,1P,A,A,NLPWR-fault*xx<crLf>

"node" field:

P: Power
 C: Communication
 number: node

ACK - Silence buzz. tel. The following telegram shall silence the buzzer, but keep alarm-state on the individual lamp.

Talker	ID	delimiter	XorMSB	XorLSB
\$aaACK	id	*	X	X
Any talker	alarm ID		checksum	checksum

aa is talker id. The talker ID is disregarded by the NLC,
 id is alarm number ID. The ID is disregarded by the NLC

example that will silence buzzer: \$aaACK,id*xx<crLf>

Q -Query telegram: Relevant dimming information shall be returned upon reception of a query telegram.

Exampel:

Talker	Listener	Query	Display dim	delimiter	XorMSB	XorLSB
\$aa	NL	Q	DDC	*	X	X
Any talker	nav light controller	Query command	Display Dimming Control		checksum	checksum

example: \$--NLQ,DDC*xx<crLf>

Answer to dimming query:

Talker	DIM	(preset)	Dim level	Color palette	Sentence s	delimiter	XorMSB	XorLSB
\$NL	DDC	a	xx	a	R	*	X	X
Any talker	Dim query reply	Ignore this	00 to 99% (0-10 steps)	Ignore this	Reply. Always R		checksum	checksum

example, 40%: \$NLDCC,,40,,R*xx<crLf>

DDC Dimming command: (Overrules pot-meter setting, until next time pot-meter is activated by operator)

Talker	DIM	(preset)	Dim level	Color palette	Sentence s	delimiter	XorMSB	XorLSB
\$aa	DDC	a	xx	a	C	*	X	X

checksum	checksum	Command. Always C	Ignore this	00 to 99% (0-10 steps)	Ignore this	Dim setting (always DDC)	Any talker
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example, 55%: \$--DDC,,55,,C*xx<crLf> (Set dim level to level 6) [55 round up to 6]

Remote control via RS-232:

Command telegram:

Field	Receiver	type K	Panel 1 (or2)	ID	comm.	PWR	node1	node2	node3	node4	node5	node..	node27	node28	node29	node30	node31	node32	*	Chk	Chk	CrLf
	\$PLPL	K	1	NL	Y	Y	:	:	6	3	0	0	<null>	D	:	:	:	G	*	x	x	<crLf>
Meaning:			Panel (1 or 2) Normally: 1	Navigation Light control (always NL)	disregarded (anychar)	disregarded (anychar)	node 01 ON	Node02 ON	Node03 dimmed to 6	Node04 dimmed to 3	Node05 off	node 06-26 off	Node27 not present	Node28 on + deice	Node29 ON	Node30 ON	Node31 ON	Group32 ON	Cheksun delimeter	Xor MSB	Xor LSB	End

Exampel 1: \$PLPL,K,1,NL,Y,,:,,6,3,0,D,,:,,G*xx<crLf> Panel 1 set to: 1-2 =on, 3= dimmed to 6, 4= dimmed to 3, 5= fault, 6-26= off, 27= not present, 28= on.

results in: \$PLPL,S,1,NL,B,B,,:,,6,3,0,D*xx<crLf> Panel 1 status: 1-2 =on, 3= dimmed to 6, 4= dimmed to 3, 5-26= off, 27= not present, 28= heat on.
 ..that will be sent via COM1 to LMR/NPC/MTG..