# Dupline® Plug & Play Master Module Interface for Lucky Goldstar PLC Type G 3496 0001





- Lucky Goldstar master
- Plug and play: Automatic communication with specific PLC/Controllers
- Built-in normal Dupline® Channel Generator
- 128 I/O's and DC power supply on 3 wires
- RS232/RS422/RS485 port for interfacing to control system
- Split-I/O mode selectable (128 inputs and 128 outputs)
- LED-indications for supply, Dupline® carrier and Comport Tx
- Galvanically isolated Com-port supplied by internal DC/ DC converter

# **Product Description**

G 3496 0001 is designed as a cost-effective Plug & Play solution for interfacing Dupline® I/O's to a Lucky Goldstar PLC. It performs three functions: Dupline® channel generator, power supply synchronization (enables 3-wire system with supply) and RS232/RS422/RS485 interface.

Ordering Key	G 3496 0	001 700
Type: Dupline®		
H4-Housing ————		
Combined module ———		
Interface type ————		
DC supply —		

#### **Type Selection**

Supply PLC Interface type		Ordering no.	
20-30 VDC	Lucky Goldstar K-serie	G 3496 0001 700	

#### **Input/Output Specifications**

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Power output Output voltage Output current Short circuit protection Output voltage drop	20-30 VDC (pulsating) < 3.0 A @ 50°C 4 A quick acting fuse < 1.0 V
Dupline® carrier Output voltage Current Short circuit protection Scan time 128 channels 64 channels	8.2 V (pulsating) < 60 mA Yes 132.2 ms 69.8 ms
Communication port Standard Split I/O mode Normal Dupline mode Connection Dielectric voltage Com-port Dupline® Protocol  Baud rate Data bits Start bit Stop bit Parity Flow-control	RS232/RS422/RS485 Yes, selectable Yes, selectable 9 pole female Sub-D 1 kVAC (rms) LG Serial Communication Standard 19200 8 1 1 None None

#### **Input/Output Specifications (Cont.)**

Pin assignment 2-wire RS 485	
S/R Data line + (B)	Pin 3
S/R Data line - (A)	Pin 8
GND	Pin 5
4-wire RS 485/RS 422	
R Data line + (B)	Pin 3
R Data line - (A)	Pin 8
S Data line + (B)	Pin 2
S Data line - (A)	Pin 7
Direction	Pin 4
	(Connect to GND pin 5
	when using 4-wire
DO 000	communication)
RS 232	D: 4
TX	Pin 1
RX	Pin 9
GND	Pin 5

## **Supply Specifications**

**Note:** Use individual power supplies for all G349600xx700, as the input are not galvanic isolated from each other.



### **General Specifications**

Power ON delay	2 s
Indication for Com-port Tx Supply ON	LED, red LED, green
Dupline® carrier	LED, yellow
Environment Pollution degree Operating temperature Storage temperature	3 (IEC 60664) 0° to +50°C (+32° to +122°F) -50° to +85°C (-58° to +185°F)

Humidity (non-condensing)	20 to 80%
Mechanical resistance	
Shock	15 G (11 ms)
Vibration	2 G (6 to 55 Hz)
Dimensions	H4-Housing
Weight	100 g

### **Mode of Operation**

The Dupline® Master Module (DMM) controls a 3-wire bus with signal, DC-power and common GND. The DMM is connected to a standard DC-supply, which it synchronizes with the Dupline® carrier signal before it is output to supply. The synchronization is necessary in order to enable the Dupline® and DC-supply to share the GND-wire.

The Dupline® Master Module is a Dupline® Channel Generator with the function of a master. This means that the 128 Dupline® I/O's will be read/written by the DMM and then sent to the PLC.

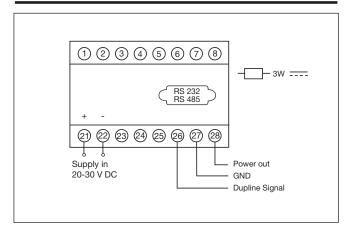
The DMM can run in two different modes – Normal mode and split I/O mode. In Normal mode, Dupline® operates as a peer-to-peer system, where the channel generator automatically establishes a connection between Dupline® inputs and Dupline® outputs which are coded to the same Dupline® address. If e.g. an

input coded for B5 is activated, the output(s) coded for B5 will also be activated.

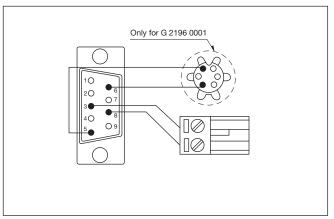
Consequently, a Dupline®-output can either be activated through the output-data received on DMM or by an active Dupline® input coded for the same Dupline®-address. In "Split I/O" mode, the channel generator treats the Dupline® inputs and Dupline® outputs independently. If e.g. an input coded for B5 is activated, the DMM will make the informa-

tion available for the PLC (like in normal mode), but it will not automatically activate the Dupline® output(s) coded to B5. The Dupline® outputs are controlled exclusively through the output data received from the PLC. In this mode, up to 128 Dupline® inputs and 128 Dupline® outputs are available, since an input and an output coded to the same Dupline® address can operate independently.

## **Wiring Diagram**



### **Pin Assignment**



### **Dip-Switch Setting**

Sw.4 On: Split I/O Channel Generator Mode (See "Mode of Operation")
Off: Normal Dupline® Monostable Channel Generator Mode
Sw.5 On: 64 Dupline® channels
128 Dupline® channels

#### **Installation Hints**

No TX-LED
Hardware fault Check the wiring.
No Dupline® Carrier-LED
Short circuit Short circuit between the two Dupline® wires.

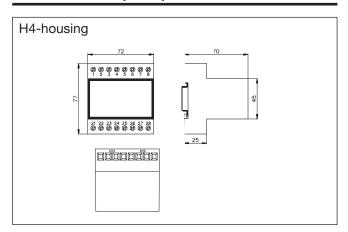


# **Memory Mapping**

#### Table of the memory mapping

Dupline® Channel	Lucky 0	Goldstar	Dupline® Channel	Lucky C	Goldstar
	Read	Write		Read	Write
A1	M000	M080	E1	M020	M100
A2	M001	M081	F1	M028	M108
A3	M002	M082	G1	M030	M110
A4	M003	M083	H1	M038	M118
A5	M004	M084	l1	M040	M120
A6	M005	M085	J1	M048	M128
A7	M006	M086	K1	M050	M130
A8	M007	M087	L1	M058	M138
B1	M008	M088	M1	M060	M140
B8	M00F	M08F	N1	M068	M148
C1	M010	M090	01	M070	M150
D1	M018	M098	P1	M078	M158

# **Dimensions (mm)**



## **Additional Information**

#### Scope of supply

1 x Master Module G3496 0001 700

#### **Accessories**

Cable for Communication port RS485-CAB