

Dupline® Industrial

Channel generators/interfaces

Types	G3490	G3496	G3800
			
Dimensions (mm)	77 x 72 x 70	77 x 72 x 70	77 x 144 x 70
Functions	Standard channel generator	Plug & Play RS232/RS485 Interface with built-in protocols for specific PLC brands and Modbus	Controller and Modbus Interface with built-in GSM Modem (option) or external Radio Modem Logger (option)
Housing type	DIN-Rail, H4	DIN-Rail, H4	DIN-Rail, H8
Electrical specifications			
Number of channels	Selectable	Selectable	Selectable
Features/Signal types		Possibility for 3-wire operation with DC-power on the 3 rd wire	4 x Contact/PNP input +4 x PNP 10-30 VDC output 2 x RS232+1 x RS485. Possibility for alarms, monitoring and control via SMS messages
Power supply	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC 824 = 15-30 VDC	700 = 20-30 VDC	800 = 10-30 VDC 230 = 115-230 VAC
General specifications			
Degree of protection	IP 20	IP 20	IP 20
Operating temperature	-20°C to +50°C	0°C to +50°C	0°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +85°C	-20°C to +85°C
Remarks		Built-in protocol for specific PLC brands for easy interfacing	Up to 32 controllers can be networked together via RS485 or Ethernet via converter module
References			
Channel Generator	G3490 0000		
Optolink		G3496 0000	
LG		G3496 0001	
GE-Fanuc		G3496 0002	
Mitsubishi		G3496 0003	
Omron		G3496 0004	
Modbus		G3496 0005	
Allen-Bradley		G3496 0006	
Schneider		G3496 0007	
Koyo		G3496 0008	
Matsushita		G3496 0009	
Siemens		G3496 0010	
Toshiba		G3496 0011	
IDEC		G3496 0012	
-GSM Modem, -RS485			G3800 0015
+GSM Modem, -RS485			G3800 1015
-GSM Modem, +RS485			G3800 0016
+GSM Modem, +RS485			G3800 1016
-GSM Modem, +RS485, +Logging			G3800 0036
+GSM Modem, +RS485, +Logging			G3800 1036

Fieldbuses

CARLO GAVAZZI Automation Components. Specifications are subject to change without notice. Illustrations are for example only.

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Dupline® Industrial				
	Channel generators/interfaces		Digital input modules	
Types	G3891	GTI50	G3410 5501	G3420
				
Dimensions (mm)	77 x 144 x 70	55 x 70 x 15 mm	77 x 72 x 70	77 x 72 x 70
Functions	Gateways to Fieldbus systems (Profibus-DP, DeviceNet etc.)	Dupline® Modbus RTU Interface module for Text Displays and Touch screens	Dupline® powered transmitter with 8 monostable volt-free contacts	Input module for external supply with optoisolated input
Housing type	DIN-Rail, H8	Closed plastic housing with 25p male sub-D	DIN-Rail, H4	DIN-Rail, H4
Electrical specifications				
Number of channels	Selectable		8	8
Features/Signal types		Supports Modbus RTU function code 3 and code 16	Volt-free input contacts	Contact/NPN Voltage (6-265 VAC/DC)
Power supply	230 = 115/230 VAC	Powered by RS485 port	Powered by Dupline®	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC 800 = 10-30 VDC
General specifications				
Degree of protection	IP 20	IP 20	IP 20	IP 20
Operating temperature	0°C to +50°C	-20°C to +60°C	-20°C to +50°C	-20°C to +50°C
Storage temperature	-20°C to +85°C	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C
Remarks			Low power consumption	
References				
	GTI50			
Profibus-DP with C. G.	G3891 0020			
Profibus-DP analogue output multiplex	G3891 0021			
DeviceNet	G3891 0050			
Lonworks	G3891 0051			
Modbus / TCP	G3891 0052			
Profibus-DP passive	G3891 0120			
8 channel	G3410 5501			
Contact/NPN	G3420 5501			
Voltage	G3420 5502			

Dupline® Industrial

Digital input modules

Types	G4420 7401	G5010	G6391 0240	G8810 2201
				
Dimensions (mm)	36 x 85 x 58	49 x 22.5 x 56	34.2 x 37.5 x 36.8	28 x 14 x 10
Functions	Input module for counting of pulses from energy meters, item detectors etc	Dupline powered single input Module	Plug-in module to EM4 or WM22 with 2 S0 input contacts for measuring water, gas etc	Small-sized 2-channel monostable transmitter
Housing type	DIN-Rail, H2	DIN-Rail, Mini-E	Plug-in	Plug-in
Electrical specifications				
Number of channels	4	1	2	2
Features/Signal types	Contact input (DIN 43 864). Max. count frequency: 14 Hz	Contact input	Reads actual internal value of total energy and/or reactive energy from EM4/WM22 and transmits to Dupline®. 2 x S0 contact input	2 contact inputs for push buttons
Power supply	230 = 230 VAC 724 = 15-30 VDC	Powered through the Dupline® network	Powered through the Dupline® network and EM4/WM22	Supplied by Dupline®
General specifications				
Degree of protection	IP 40	IP 20	IP 20	IP 65
Operating temperature	-20°C to +60°C	-20°C to +50°C	0°C to +50°C	-40°C to +70°C
Storage temperature	-20°C to +85°C	-50°C to +85°C	-20°C to +85°C	-40°C to +70°C
Remarks	Decentral counting. Counter values stored in non-volatile memory			Address coding by GAP 1605
References				
4 channel Counter	G4420 7401			
1 channel		G5010 1106		
2 channels		G5010 2206		G8810 2201
2 channel plug-in module			G6391 0240	

Dupline® Industrial				
	Digital I/O modules		Digital output modules	
Types	G3440 4443	G3440 5543	G3430 / G3830	G34305545
				
Dimensions (mm)	77 x 72 x 70	77 x 72 x 70	77 x 72 x 70 77 x 144 x 70 (H8)	77 x 72 x 70
Functions	Combined I/O module for external supply with optoisolated inputs and relay outputs	I/O module for digital signals	Output modules for external supply with isolated outputs	Central relay module with 8 x SPST relays for resistive loads
Housing type	DIN-Rail, H4	DIN-Rail, H4	DIN-Rail, H4 DIN-Rail, H8 (G3830 5543)	DIN-Rail, H4
Electrical specifications				
Number of channels	4	6	1, 2, 4, 8	8
Features/Signal types	2 x 6-265 VAC/DC inputs + 2 x SPST relay outputs	4 opto isolated inputs and 2 SPST relay outputs	10 A SPDT relay 5 A SPST relay 0.7 A NPN transistor 0.7 A PNP transistor	8 x 16 A/250 VAC relays Inrush current: <130 A
Power supply	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC 824 = 15-30 VDC	230 = 230 VAC	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC 800 = 10-30 VDC 824 = 15-30 VDC	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC
General specifications				
Degree of protection	IP 20	IP 20	IP 20	IP 20
Operating temperature	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-5°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C
Remarks	Total module load max. 32 A			
References				
2 input + 2 output SPST	G3440 4443			
4 input + 2 output SPST	G3440 5543			
1 x 10 A SPDT	G3430 1149			
2 x 10 A SPDT	G3430 2249			
4 x 5 A SPST	G3430 4443			
4 x 16 A SPST	G3430 4445			
8 x 5 A SPST	G3830 5543			
8 x 0.7 A NPN	G3430 5511			
8 x 0.7 A PNP	G3430 5521			
8 x 16 A SPST (Max. 32 A)	G3430 5545			

Dupline® Industrial

	Digital output modules	Analogue input modules		
Types	G8830 1143	G3429 6470	G3210 1161	G3210 1111
				
Dimensions (mm)	26 x 39 x 17	77 x 72 x 70	77 x 36 x 70	77 x 36 x 70
Functions	Decentral relay module with 1 x SPST relay for control of lights	Universal analogue input module for external supply	Analogue input module powered from Dupline® and input signal	Dupline®- powered Analogue input module for Pt100 temperature sensor
Housing type	Compact regular, with solid cables. For decentral installation	DIN-Rail, H4	DIN-Rail, H2	DIN-Rail, H2
Electrical specifications				
Number of channels	1	Selectable	1	1
Features/Signal types	1 x 13 A/250 VAC relay Inrush current: <130 A	4 x isolated analogue input. Input type individually configurable (0-20 mA, 4-20 mA, 0-10 VDC)	1 x 4-20 mA input	1 x Pt100 3-wire input Ranges: (-50°C to +40°C) (+30°C to +120°C) (-10°C to +100°C)
Power supply	Powered through the Dupline® network	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC 800 = 10-30 VDC	Powered through the Dupline® network and 4-20 mA input signal	Powered through the Dupline® network
General specifications				
Degree of protection	IP 20	IP 20	IP 20	IP 20
Operating temperature	0°C to +50°C	0°C to +50°C	0°C to +50°C	0°C to +50°C
Storage temperature	-50°C to +85°C	-20°C to +85°C	-50°C to +85°C	-50°C to +85°C
Remarks	Recommended minimum load 100 mA / 12 V	Protocol freely selectable (Analink, Multiplexed BCD or 8-bit)	Uses Analink 8-bit protocol	Uses Analink 8-bit protocol. Built-in cable compensation
References				
Universal analogue output	G3429 6470			
Dupline powered analogue input	G3210 1161			
-50°C to +40°C	G3210 1111			
+30°C to +120°C	G3210 1112			
-10°C to +100°C	G3210 1113			
1 x 13 A SPST	G8830 1143			

Dupline® Industrial				
	Analogue output modules	Decentral analogue input modules		
Types	G3439 6470	G8810 6265	G8810 6311	G8810 6312
				
Dimensions (mm)	77 x 72 x 70	50 X 30 X 18	50 X 30 X 18	50 X 30 X 18
Functions	Universal analogue output module for external supply	Decentral analogue module with 3 x 0-10 VDC inputs designed for HVAC systems	Decentral analogue module with 2 x 0-10 VDC, 1 x thermistor and 1 x variable resistor inputs designed for HVAC systems	Decentral analogue module with 1 x thermistor and 1 x variable resistor inputs designed for HVAC systems
Housing type	DIN-Rail, H4	Compact housing for de-central installation	Compact housing for de-central installation	Compact housing for de-central installation
Electrical specifications				
Number of channels	Selectable	3	4	2
Features/Signal types	4 x analogue outputs. Output type configurable for 0-20 mA, 4-20 mA or 0-10 VDC	3 x 0-10 VDC input	2 x 0-10 VDC input 1 x thermistor 10k3 input 1 x variable resistor 1 - 11 KΩ input	1 x thermistor 10k3 input 1 x variable resistor 1 - 11 KΩ input
Power supply	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC 800 = 10-30 VDC	Powered from external 15 - 30 VDC	Powered from external 15 - 30 VDC	Dupline® powered
General specifications				
Degree of protection	IP 20	IP 20	IP 20	IP 20
Operating temperature	0°C to +50°C	0°C to +50°C	0°C to +50°C	0°C to +50°C
Storage temperature	-20°C to +85°C	-20°C to +85°C	-20°C to +85°C	-20°C to +85°C
Remarks	Protocol freely selectable (Analink, Multiplexed BCD or 8-bit)	Analink protocol 8 bit resolution	Analink protocol 8 bit resolution	Analink protocol 8 bit resolution
References				
Universal analogue output	G3439 6470			
Decentral 3 x input		G8810 6265		
Decentral 4 x input			G8810 6311	
Decentral 2 x input Bus powered				G8810 6312

Dupline® Industrial

	Digital sensors		Temperature Sensor
Types	G6110 1145	G8910 1101	G8911 1010
			
Dimensions (mm)	M18 x 55	Ø11 x 68	67 x 35 x 15
Functions	Dupline® powered inductive proximity switch	Dupline® powered magnet proximity switch	Temperature sensor for outdoor use. With built-in PT1000 transducer
Housing type	M18	Cylindrical	Flat pack sensor housing
Electrical specifications			
Number of channels	1	1	1
Features/Signal types	Detects proximity of metal objects	Detects proximity of magnet	1 x Analink Range: -30°C to +60°C
Power supply	Powered through the Dupline® network	Powered through the Dupline® network	Powered through the Dupline® network
General specifications			
Degree of protection	IP 67	IP 67	IP 67
Operating temperature	-25°C to +70°C	-20°C to +50°C	-25°C to +70°C
Storage temperature	-30°C to +80°C	-20°C to +70°C	-55°C to +85°C
Remarks	Available with cable or M12 connector. Flush mounting	Available in Ø 11 plastic housing or with M14 metal thread	8-bit resolution
References			
Cable	G6110 1145		
M12 plug	G6110 1145-1		G8911 1010
Ø11		G8910 1101	
M14		G8910 1101-G	

Dupline® Industrial			
Types	Repeater	Optolink interface	
Housing	D3892 0000	G3491 0000	G3491 0090
  			
Dimensions (mm)	77 x 144 x 70	77 x 72 x 70	77 x 72 x 70
Functions	Dupline® signal Repeater for extension of transmission distance	RS232 to fibre optic interface	RS232 to fibre opto-link interface
Housing type	DIN-Rail, H8	DIN-Rail, H4	DIN-Rail, H4
Electrical specifications			
Number of channels	Adjusts automatically	Adjusts automatically	Adjusts automatically
Features/Signal types	All Dupline® signal types. Regenerates the Dupline® signal carrier through channel-generator output	Reads/controls up to 63 Dupline® systems which are networked through optolinks (G3491 0000)	Used as interface between computer or PLC with RS232 and a fibre optic Lan-ring
Power supply	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC
General specifications			
Degree of protection	IP 20	IP 20	IP 20
Operating temperature	0°C to +50°C	0°C to +50°C	0°C to +50°C
Storage temperature	-50°C to +85°C	-50°C to +85°C	-20°C to +85°C
Remarks		Operates with G3491 0090	Operates with G3491 0000
References			
Repeater (Booster)	D3892 0000		
Dupline® fibre interface		G3491 0000	
RS232 to optolink interface			G3491 0090

Dupline® Industrial

	Converters		Display modules	Power supply
Types	G3491 0040	G3492 / G3493	G5460 6606	G3485 0000
				
Dimensions (mm)	77 x 72 x 70	77 x 72 x 70	96 x 96 x 78	77 x 72 x 70
Functions	Private line Modem for long distance transmission of Dupline® signals	Optical repeater for converting Dupline® from electrical to optical transmission media	LED status indicator for 16 Dupline® channels	3-wire power supply, used when multiple Dupline® modules are supplied through a DCbus
Housing type	DIN-Rail, H4	DIN-Rail, H4	Panel mounting	DIN-Rail, H4
Electrical specifications				
Number of channels	Adjusts automatically	Adjusts automatically	16	Selectable
Features/Signal types	Digital, 8-bit analogue, non-multiplexed 3 1/2 digit BCD analogue	All Dupline® signal types	Each of the 16 LED's indicates the status of the digital channels assigned to it	Supply current ≤ 4 A (up to 25°C) or ≥ 3 A (up to 50°C)
Power supply	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC	230 = 115/230 VAC	024 = 24 VAC 115 = 115 VAC 230 = 230 VAC	15-30 VDC
General specifications				
Degree of protection	IP 20	IP 20	IP 40	IP 20
Operating temperature	0°C to +50°C	0°C to +50°C	0°C to +50°C	-5°C to +50°C
Storage temperature	-20°C to +85°C	-20°C to +85°C	-20°C to +60°C	-20°C to +85°C
Remarks	Operates pair-wise	Operates pair-wise. Runs on 0/125, 62.5/125 or 100/140 micro m with STN connectors		Multiple units can be connected in parallel to increase length and size of a Dupline® system
References				
Long distance modem	G3491 0040			
Optical/electrical converter	G3492 0000			
Electrical/optical converter	G3493 0000			
LED indicator for Dupline	G5460 6606			
3-wire power supply	G3485 0000 700			

Dupline® Industrial			
Software			
Types	DUPDATAACC	DUP-SERV-ADD	DUP-SERV-SW
			
Functions	Software package with DDE-driver and ActiveXdriver for G3800. Controller and interface unit	A data logging, visualization and alarm handling software package to be installed in a windows based PC	A data logging, visualization and alarm handling software package to be installed in a windows based PC
Features			
	All Dupline® signal types. Copy and paste of dynamic Dupline links into EXCEL spreadsheets	Works only with G3800 xx36. Log and control energy consumption, analogue values and digital events and alarms	Works only with G3800 xx36. Log and control energy consumption, analogue values and digital events and alarms
References			
DDE-Server	DUPDATAACC		
Dupline-Online One License			DUP-SERV-SW
ADD-License to Dupline-Online		DUP-SERV-ADD	
Dupline-Online two license			DUP-SERV-SW2

Dupline® Industrial			
Accessories			
Types	GAP1605	GTU8	G3282 2002 230
			
Dimensions (mm)	120 x 65 x 22	145 x 90 x 28	77 x 36 x 70
Functions	Dupline® coding device for assigning addresses to Dupline® I/O modules and sensors	Dupline® test unit for monitoring and control of Dupline® channels	Dupline® bus separator
Housing type	Handheld	Handheld	H2 Housing
Electrical specifications			
Number of channels	NA	Adjusts automatically	2
Features/Signal types		Digital, multiplexed BCD, 8-bit analogue signals and split I/O. Also prepared to calibrate sensors in Carpark system	Disconnect the secondary side of the Dupline® bus when a short-circuit is detected
Power supply	9 V battery	Powered through the Dupline® network	230 V
General specifications			
Degree of protection	IP 40	IP 40	IP 20
Operating temperature	0°C to +50°C	0°C to +50°C	0°C to +50°C
Storage temperature	-20°C to +60°C	-20°C to +85°C	-20°C to +85°C
Remarks		Options for latching digital signals and for reading multiplexed BCD values	
References			
Programmer	GAP1605		
Display			
Monitoring and control unit	GTU8		
Bus separator	G3282 2002 230		

Dupline® Industrial				
Accessories				
Types	ADAPT 1605	ANT1	ANT2	D3212 4000
				
Dimensions (mm)	25 x 50 x 100		15 x 35 x 120	36 x 70 x 77
Functions	Codings adaptor between GAP1605 and Dupline® modules without standard connection plug	GSM antenna 900 MHz	Active antenna used for radio controlled clock	Synchronizer module for analogue modules
Housing type	Handheld box		Glued plastic casing	H2 housing
Electrical specifications				
Features/Signal types	4 clip-on terminals for Dupline® modules. Includes a M12 plug for modules like G8911 1010		Input signal is 77.5 kHz	Max. 112 analogue signals with up to 12 bit resolution
Power supply		Powered by G3800 XXXX	Powered by G3800 XXXX	Powered by Dupline®
General specifications				
Degree of protection	IP 20	IP 67	IP 40	IP 40
Operating temperature	0°C to +50°C	-25°C to +60°C	0°C to +50°C	-20°C to +50°
Storage temperature	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-50°C to +85°C
Remarks				Transmits always on A1-A4
References				
Adaptor	ADAPT 1605			
Antenna		ANT1	ANT2	
Synchronizer				D3212 4000

Dupline® Industrial

Accessories

Types	DT01/DT02	ETHCONV 2	ETHCONV 3	ETHCONV 4
				
Dimensions (mm)	17.5 x 70 x 77	22 x 75.2 x 80	22 x 90 x 100.4	29 x 89.2 x 118.5
Functions	Cable termination unit	Ethernet to RS232 converter	Ethernet to RS232 converter	Ethernet to RS485 converter
Housing type	H1 housing	Metal housing	Metal housing	Plast housing
Electrical specifications				
Number of channels		1	2	2
Features/Signal types	Removes distortion caused by reflection	1 port RJ45 10/100 Mbit TCP/IP based ethernet	2 port RJ45 10/100 Mbit TCP/IP based ethernet	2 port RJ45 10/100 Mbit TCP/IP based ethernet
Power supply	No power needed	12-48 VDC/130 mA	12-30 VDC/305 mA	12-30 VDC/305 mA
General specifications				
Degree of protection	IP 20	IP 20	IP 20	IP 30
Operating temperature	-20°C to +50°C	0°C to +55°C	0°C to +55°C	0°C to +55°C
Storage temperature	-50°C to +85°C	-40°C to +75°C	-40°C to +75°C	-40°C to +75°C
Remarks		Automatic dedicated installation tool available	Automatic dedicated installation tool available	Automatic dedicated installation tool available
References				
Standard Dupline®	DT01			
Hi-line Dupline®	DT02			
1 Channel		ETHCONV2		
2 Channels			ETHCONV3	ETHCONV4