Dupline® General purpose

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**

Dupline® General purpose

	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 inputs
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® General purpose

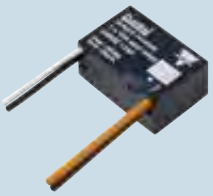
Digital input modules

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® General purpose

	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**

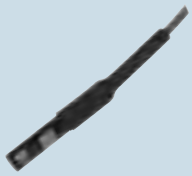
Dupline® General purpose

	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® General purpose

	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® General purpose

	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® General purpose

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® General purpose

	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® General purpose

	Software			
Types	**DUPDATACC**	**DUP-SERV-ADD**	**DUP-SERV-SW**	**DUP-PGS-SWxx**
				
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	A data logging, visualization and alarm handling software package to be installed in a windows based PC
Electrical specifications				
Features/Signal types	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	Client/server program that is developed to the GP34960005 Carpark Master Module together with Moxa RS485/ethernet connectors
References				
DDE-Server	**DUPDATACC**			
Dupline-Online One License			**DUP-SERV-SW**	
ADD-License to Dupline-Online		**DUP-SERV-ADD**		
Dupline-Online two license			**DUP-SERV-SW2**	
Dupline Carpark 250 parking spaces				**DUP-PGS-SW250**
Dupline Carpark 500 parking spaces				**DUP-PGS-SW500**
Dupline Carpark 1000 paing spaces				**DUP-PGS-SW1000**
Dupline Carpark 2000 parking spaces				**DUP-PGS-SW2000**
Dupline Carpark 3000 parking spaces				**DUP-PGS-SW3000**
Dupline Carpark 4000 parking spaces				**DUP-PGS-SW4000**
Dupline Carpark 5000 parking spaces				**DUP-PGS-SW5000**
Dupline Carpark 6000 parking spaces				**DUP-PGS-SW6000**
Dupline Carpark 7000 parking spaces				**DUP-PGS-SW7000**
Dupline Carpark 8000 parking spaces				**DUP-PGS-SW8000**
Dupline Carpark 9000 parking spaces				**DUP-PGS-SW9000**
Dupline Carpark 10000 parking spaces				**DUP-PGS-SW10000**

Dupline® General purpose

	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 signalsand 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® General purpose

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® General purpose

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**