

XG Radio frequency identification

13.56 MHz RFID



Presentation

XG RFID is open to the majority of ISO 18000-3, ISO 15693 and ISO 14443 electronic tags.

XG RFID integrates Modbus RTU, Uni-Telway, Modbus TCP/IP (using Ethernet box XGSZ33ETH) and Profibus DP (with box XGSZ33PDP) protocols.

The XG RFID offer comprises:

- 3 models of 13.56 MHz smart antenna (read/write)
- 12 models of 13.56 MHz electronic tags
- 1 portable RFID diagnostics terminal
- 3 models of network connection boxes plus connection and mounting accessories.

Setting-up

XG RFID smart antenna are simple to set-up:

- Integrated RFID and network Function
- No programming
- Automatic detection of the RFID electronic tags (read or write)
- Automatic setting of the communication parameters (speed, format, parity, protocol, etc.)
- Configuration of the network address (1 to 15) using badge included with the smart antenna
- Low sensitivity to metal environments.

Installation

The XG smart antenna easily integrate in flexible manufacturing production lines:

- quick connection using M12 connector
- screw fixing or clip-on mounting.



Smart antenna, 13,56 MHz		Flat form 40	Flat form 80
Dimensions (mm), W x H x D		40 x 40 x 15	80 x 80 x 26
Nominal sensing distance depending on tag (mm)		18 to 70	20 to 100
Type of associated tag		ISO 15693 and ISO 14443 standard tags. Automatic detection of the type of tag.	
Display		dual colour LED for the communication network, dual colour LED for the RFID communication	
Conformity to standards		CE, EN 301489-1, EN 301489-3, ETS 300330-1 and ETS 300330-2, FCC part 15 - UL	
Degree of protection conforming to IEC 60529		IP67	
Serial link	Type	RS 485	Ethernet (dual port)
	Protocol	Modbus et Uni-Telway	MODBUS TCP/IP et EtherNet/IP
	Speed (Bauds)	9600...115 200 (automatic detection)	10/100MB
Ambient air temperature (°C)		For fonctionnement : - 25...+ 70 °C, for stockage : - 40...+ 85 °C	
Nominal Supply voltage		24 VDC TBTP (Protective Extra Low Voltage)	
Connection		M12, 5-pins male, shielded connector on flying lead. Only for connection to the communication network and the supply	M12 (Ethernet) - M8 4-pins (Supply voltage)
References		XGCS4901201	XGCS8901201 XGCS850C201



Electronic tags		Format flat 40		Badge ISO (1)	Disque (3)	Format flat 26	Cylindrical
Dimensions (mm), W x H x D		40 x 40 x 15		54 x 85,5 x 0,8	Ø 30 x 3	26 x 26 x 13	M18 x 1 x 12
Type of memory		EEPROM	FRAM	EEPROM			
Memory capacity (bytes)		3 408	32 768	256	112	256	256
Nominal sensing distance (Read/Write)	With station XGCS49.	33	25	70	48	40	18
	With station XGCS89.	48	39	100	65	55	20
Time (ms)	Read	9,25 + 0,375 x n (2)	6 + 0,25 x n (2)	12 + 0,825 x n (2)			
	Write	13 + 0,8 x n (2)	6 + 0,25 x n (2)	20 + 11,8 x n (2)	12 + 5,6 x n (2)	20 + 11,8 x n (2)	19 + 4,1 x n (2)
Degree of protection conforming to IEC 60529		IP68		IP65		IP68	
Standard supported		ISO 14443		ISO 15693			
Mounting on metal support		Yes		No		Yes	No
References		XGHB444345	XGHB443245	XGHB90E340	XGHB320345	XGHB221346	XGHB211345

(1) Customised versions on request. (2) n = number of 16-bit words. (3) Also exists in diameter 50.



Connection boxes	Ethernet Modbus TCP/IP box	Profibus box	EtherNet/IP box
Dimensions (mm), W x H x D	130 x 80 x 51	130 x 80 x 51	130 x 80 x 51
Protocols	Modbus TCP/IP	Profibus DP	EtherNet/IP
Supply voltage	24 VDC PELV. M12, 4-pins male, A coding, connector		
Conformity to standards	CE, UL	CE	CE
Station connection	M12, 5-pins female, A coding, connector		
Degree of protection conforming to IEC 60529	IP65		
References	XGSZ33ETH	XGSZ33PDP	XGSZ33EIP



Terminal	Portable 13.56 MHz RFID diagnostics terminal	
Dimensions (mm), W x H x P	78 x 153 x 27	
Function	Read/Write operations on electronic tags	
Operating system	Proprietary OS	
Conformity to standards	CE, FCC classe A, Part 15	
Display	53 x 95 mm colour OLED touchscreen 272 x 480 pixels resolution	
Degree of protection conforming to IEC 60529	IP 40	
Memory	RAM	256 Mb
	Storage	internal 2 GB + USB socket for memory stick
Reference	XGST2422 (battery, battery charger, 2 GB USB memory stick, and carrying case included with terminal). RFID reader to be ordered separately: XGCS4901201 (integrated reader) or XGW4F111 (remote reader)	



Connection accessories						
	for Modbus network		for Ethernet	Pre-wired connector		"T" connector
Description	Modbus connecting cable M12 connectors Male / Female	Pre-wired connector M12 male / Bare wires	Ethernet connecting cable M12 male / RJ 45	Pre-wired supply connector M8 female	Pre-wired supply connector M12 female	Network M12 "T" connector 1 male / 2 female
Application	RS485 connection between a smart antenna and a connection box or between 2 Modbus boxes	Connection between a Modbus box and a Modbus / Uni-Telway network	Connection between an Ethernet box and the Ethernet network	24 VDC supply to Ethernet smart antenna XGCS850C201	24 VDC supply to connection boxes	For chaining of smart antennas on RS485 network
L = 2 m	TCSMCN1M1F2	TCSMCN1F2	XGSZ12E4503 (1)	XZCP0941L5 (3)	XGSZ09L2	TCSCN011M11F
L = 5 m	TCSMCN1M1F5	TCSMCN1F5	XGSZ12E4510 (2)	XZCP0941L2 (4)	XGSZ09L5	

(1) L = 3 m

(2) L = 10 m

(3) L = 5 m

(4) L = 2 m

Field expander

To be associated with a smart antenna XGCS4901201 for conveying and handling applications



50 x 400 mm
XGFEC540



250 x 250 mm
XGFEC2525

RS232/RS485 converter



For connecting a PC to an XG RFID smart antenna

XGSZ24

XG Radio frequency identification

RFID 13,56 MHz, Fixing Ø 22 mm



RFID Stations 13,56 MHz, Fixing Ø 22 mm		Compact station for panel fixing (1)	Compact station for panel fixing with indicator light (1)	Standalone compact station for panel fixing (2)
Dimensions (mm) W x H x D		40 x 40 x 40		
Nominal sensing distance depending on tag (mm)		20 to 70		
Type of associated tag		ISO 15693 to ISO 14443 standard tags. Automatic detection of the type tag.		
Interface	Physical interface	RS485		PNP discrete output 300 mA protected against short-circuits and overloads
	Protocol	Modbus RTU		-
Display	For informing the operator	2 LEDs (7 selectable colors) driven by Modbus requests		
	For the communication	1 dual color LED (Modbus network activity)		1 dual color LED (output/status)
Conformity to standards		EN 301489-1, EN 301489-3, EN 300330-1 et EN 300330-2		
Degree of protection conforming to IEC 60529		IP 65		IP 65
Ambient air temperature (°C)		For function : - 25...+ 70 °C, for storage : - 40...+ 85 °C		For function : - 40...+ 70 °C, for storage : - 40...+ 85 °C
Nominal Supply voltage		24 TBTP (Protective Extra Low Voltage)		
Connection		1 connector M12 male, 5-pins		
References		XGCS490B201	XGCS491B201	XGCS491B201

(1) Delivered with a fixing nut and a configuration badge for the network address.

(2) Delivered with a fixing nut - Configuration kit of badges for access control setup ref. **XGSZCNFAC** to order separately



Electronic tags		EEPROM type memory tag	ISO RFID card	ISO RFID card
Dimensions (mm) W x H x D		40 x 31 x 4,8	54 x 85.5 x 1	
Type of memory		EEPROM		
Memory capacity (bytes)		736	256	736
Nominal sensing distance (Read/Write)	With compact stations, Fixing Ø 22 mm	30 mm	70 mm	30 mm
Degree of protection		IP67	IP65	IP65
Supported standard		ISO 14443	ISO 15693	ISO 14443
Order by multiples of		10		25
Reference		XGHBPB3345	XGHB90E340	XGHB90E341