

6- Active Devices

Name	Device	Function
NR1	Switching power converter	To convert the input power supply (19 to 29 Vdc) in 5 V dc
NR2	Voltage regulator	To provide a variable voltage (3 to 5 Vdc) to the RFID controller for power adjustment on the RFID antenna
IC1	RS485 driver	To adapt signal from and to the serial link when the XGCS station is connected on a RS485 network
IC2	CAN driver	To adapt signal from and to the serial link when the XGCS station is connected on a CAN network (not yet used)
IC3	Micro controller	To control and manage RFID part, serial communication part, and informations to user (Leds)
IC4	RFID controller	To generate signals to the antenna and to receive answer from the tag through the antenna
IC5	Reset	Power monitoring and generation of reset for the micro controller (not wired-replaced by a RC circuit on existing version of stations.

8 – Parts lists

8.1 Main board

Merlin Gerin Modicon Square D Telemecanique		DAS CI - ACTIVITES DHM /EDM Direction Technique			
Document Nomenclature	IED	Référence Article: W816573990111 Désignation: IMPL.XGCS4901201 Indice: A06 Numéro de Note: X72637			
Référence Composant	Suffixe	Désignation Composant	UM	Quantité	Repère Topologiques
HUA10018		MCU8 PIC16F458 85C TQFP44	P	1	IC8
HUA10044		E1/R1 RS485 FAULTPROT S08	P	1	IC1
HUA10048		LED GR 22-10MCDF/10MRA 0606	P	2	DL1 DL2
HUA10053		QZ 40M 50PPM 8.2PF CMS5X3	P	1	Q1
HUA10054		QZ 12M56 100PPM 15PF CMS5	P	1	Q2
HUA10064		REG ADJ 0A5 0.3VDO S08	P	1	NR2
HUA10111		CCOG 0402 8.2PF+-0.25 50V	P	2	C26 C27
HUA10112		CCOG 0402 82PF 2% 50V	P	2	C35 C36
HUA10113		CCOG 0402 100PF 2% 50V	P	2	C33 C34
HUA10116		CT C LZ 100UF 10% 10V	P	1	C6
HUA10155		MP READER CL RC632 S032	P	1	IC4
HUA10212		SELF 22UH 10% 0A2 1R3 SMD	P	1	L1
HUA10213		SELF 1UH 5% 0A3 0R8 SMD12	P	2	L3 L4
HUA10228		CX5R 2220 10UF 10% 50V	P	2	C3 C4
HUA10229		CX5R 0805 3.3UF 10% 10V	P	2	C44 C45
M93631037		COL ACR.MOD TRS TB 30F220	KG	0	
SZ1CC3190		CX7R 0603 10NF 10% 50V	P	1	C5
SZ1DQ1001		DRED 100V 0.8A 25NS SOD87	P	1	D1
W116555430111		BLINDAGE/FE/NFE	P	1	BL1
W816573980111		FLAN IMPR.14XGCS4/89012	P	0,0715	CI1
1CAP003742		CX7R 0603 100NF 10% 16V	P	2	C42 C46
1CAP003742	1	CX7R 0603 100NF 10% 16V	P	2	C37 C43
1CAP003852		CX5R 1206 4.7UF 10% 10V	P	1	C28
1CAP003852	1	CX5R 1206 4.7UF 10% 10V	P	1	C39
1CAP005356		CX7R 0402 330PF 10% 50V	P	2	C8 C9
1CAP005358		CX7R 0402 4.7NF 10% 25V	P	1	C38
1CAP005642		CX7R 0402 47NF 10% 10V	P	3	C23 C25 C47
1CAP005642	1	CX7R 0402 47NF 10% 10V	P	2	C7 C24
1CAP005992		CCOG 0402 22PF 5% 50V	P	2	C29 C32
1CAP006069		CCOG 0603 1NFO 5% 50V	P	1	C1
1CAP009909		CX7R 1206 470NF 10% 50V	P	1	C2
1CAP012927		CCOG 0402 15PF 5% 50V	P	1	C22
1CAP012927	1	CCOG 0402 15PF 5% 50V	P	4	C30 C31 C40 C41
IDDE000032		DSCHOT 35V 1A DO214AC	P	1	D2
IDDE000108		DRED 100V 1A 50NS DO214AC	P	1	D1
IDDE005674		DZEN 8V2 0W2 8% SOD323	P	1	Z2
IDDE007658		DSIG 75V 0.2A 6NS SOD323	P	1	D4
1MAG000785		SELF 4,7UH 0,4A SMD	P	1	L5
1MAG001142		SELF .1MH 20% 0A48 SMD	P	1	L2
1PRT006151		ZNO 30V 4.2J CMS 1812	P	1	RV1
1PRT006831		DECRB 36V 5% 1K5W DO214AB	P	1	Z1
IRES005339		RCM 0402 464R 1% 100PPM	P	1	R46
IRES005341	1	RCM 0402 3K32 1% 100PPM	P	2	R25 R26

<input type="checkbox"/> Merlin Gerin <input type="checkbox"/> Modicon <input type="checkbox"/> Square D <input type="checkbox"/> Telemecanique		DAS CI - ACTIVITES DHM /EDM Direction Technique				
<i>Document Nomenclature</i>	<i>IED</i>	<i>Référence Article:</i> W816573990111 <i>Désignation:</i> IMPL.XGCS4901201 <i>Indice:</i> A06 <i>Numéro de Note:</i> X72637				
1657399 01 A 01	06					
Référence Composant	Suffixe	Désignation Composant	UM	Quantité	Repère Topologiques	
IRES005343		RCM 0402 10K0 1% 100PPM	P	6	R6 R27 R28 R29 R30 R38	
IRES005343	1	RCM 0402 10K0 1% 100PPM	P	2	R36 R39	
IRES005345		RCM 0402 68K1 1% 100PPM	P	1	R3	
IRES005347		RCM 0402 221K 1% 100PPM	P	1	R35	
IRES005354		RSHUNT 0402 0R00 1/16W	P	1	R20	
IRES005637		RCM 0402 22K0 5% 250PPM	P	3	R43 R44 R45	
IRES005816		RCM 0402 47K5 1% 100PPM	P	1	R2	
IRES005822		RCM 0402 475K 1% 100PPM	P	1	R5	
IRES005880		RCM M0207 4R70 1% 50PPM	P	1	R1	
IRES005940		RCM 0402 82K5 1% 100PPM	P	1	R34	
IRES005983		RCM 0402 562R 1% 100PPM	P	4	R31 R32 R41 R42	
IRES005988		RCM 0402 274K 1% 100PPM	P	2	R4 R37	
IRES006773		RCM 0402 825R 1% 100PPM	P	1	R40	
ITRA000177		NPN2 40V 0.1A SOT363	P	1	T1	
28160-26740		REG DEC SD 5V 1,2A S08	P	1	NR1	

8.2 Antenna board

Merlin Gerin	DAS CI - ACTIVITES DHM /EDM				
Modicon	Direction Technique				
Square D					
Telemecanique					
Document Nomenclature 1657406 01 A 01	IED 07	Référence Article: W816574060111 Désignation: IMPL.XGCS4901201BO Indice: A07 Numéro de Note: X72637			
Référence Composant	Suffixe	Désignation Composant	UM	Quantité	Repère Topologiques
HUA10040		C.CMS 200 M 3 YL SN H7	P	1	J1
M93631037		COL ACR.MOD TRS TB 30F220	KG	0	
SZ1CC3089		CCOG 0603 33PF 5% 50V	P	2	R1 R4
SZ1RB6525		RCM 0603 3K30 5% 200PPM	P	2	R2 R3
W816574050111		FLAN IMPR.14XGCS4901201	P	0,0715	CI1
1CAP001086		CCOG 0603 82PF 5% 50V	P	4	C4 C6 C40 C60

7- Tune up procedures

7.1 Frequency

There is no tune of the frequency of the RFID station. The frequency of the electromagnetic signal is driven by a crystal oscillator (13.56 MHz)

7.2 Output power

There is a circuit in the XGCS station for output power adjustment. This function is dedicated to Schneider manufacturing process (not accessible to users).

All EMC tests made by Schneider are done with the maximum output power.