



HEXAGON
MANUFACTURING INTELLIGENCE

HEXAGON S.p.A. PRODUCTS



INTRODUCTION TO DC241 CONTROLLER

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DC241 SPECIFICATIONS

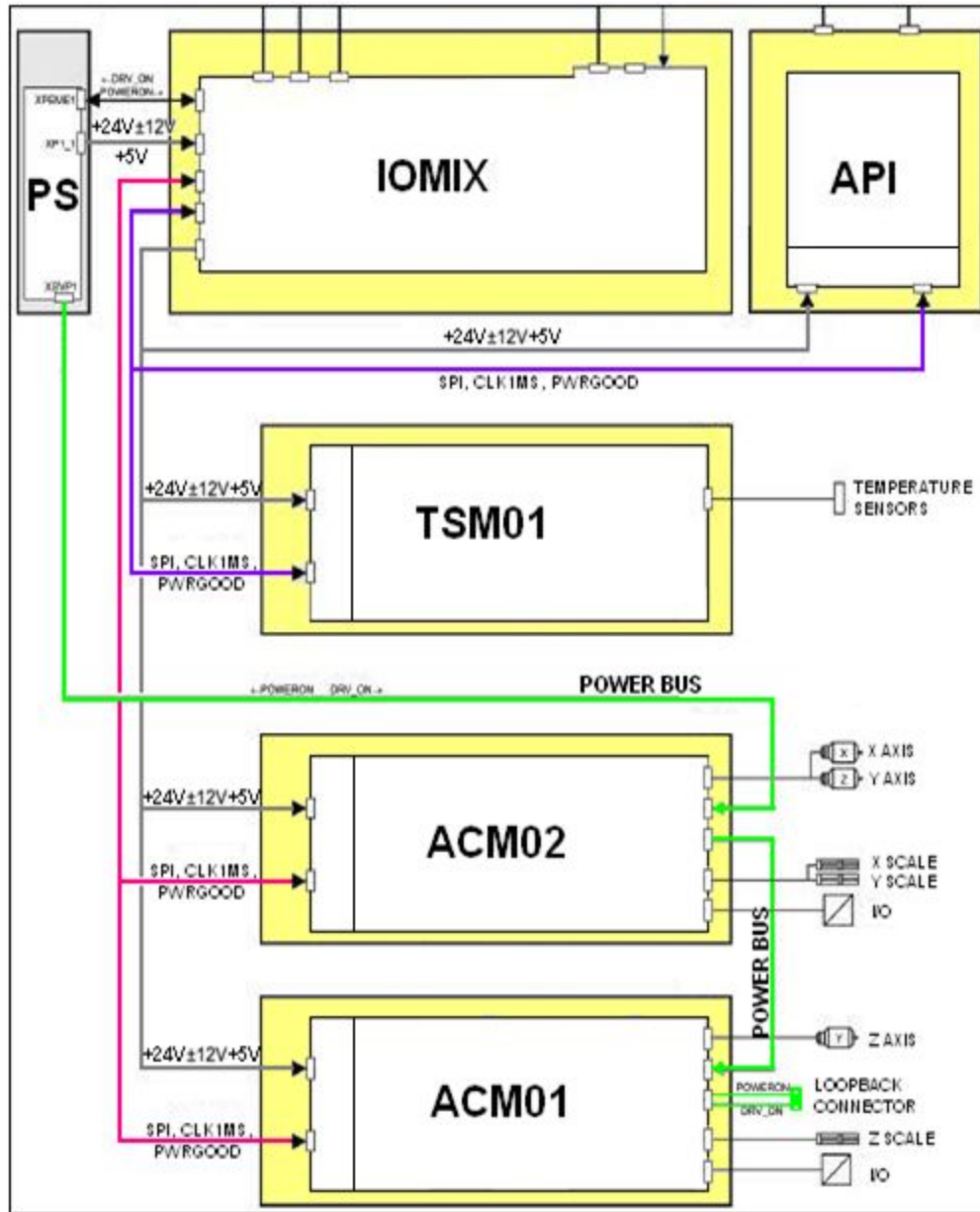
- Maximum number of axes 3 (linear axes X, Y and Z of the CMM)
- Max. total power output to power axes 240 W
- Axes encoder input Incremental type, digital TTL or analog 1Vpp voltage level
- Temperature sensors inputs 16 input channels for NTC100 type sensors

DC241

DC241 Controller is fixed inside the TIGO stand

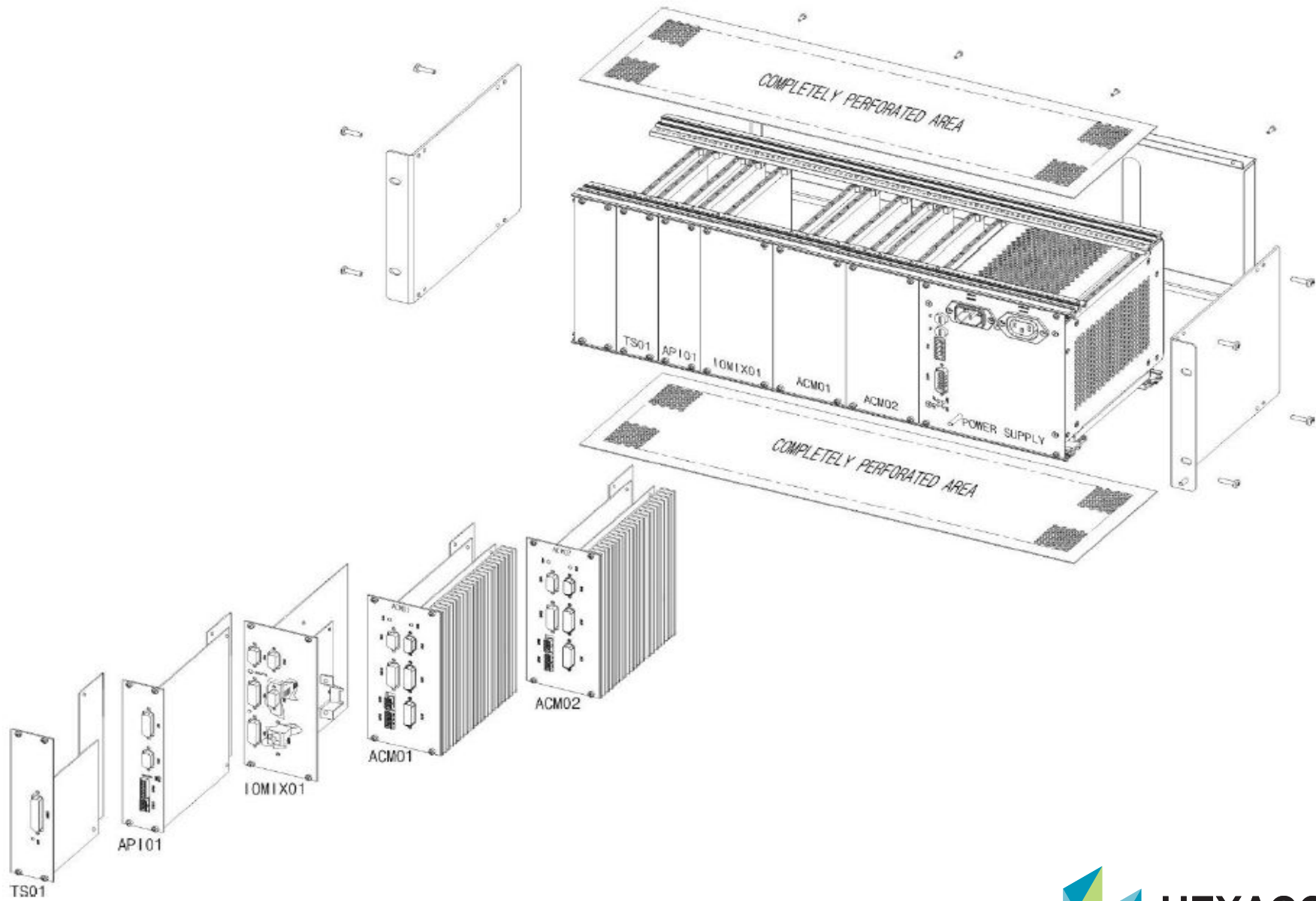


DC241 BLOCK DIAGRAM



DC241 CABINET





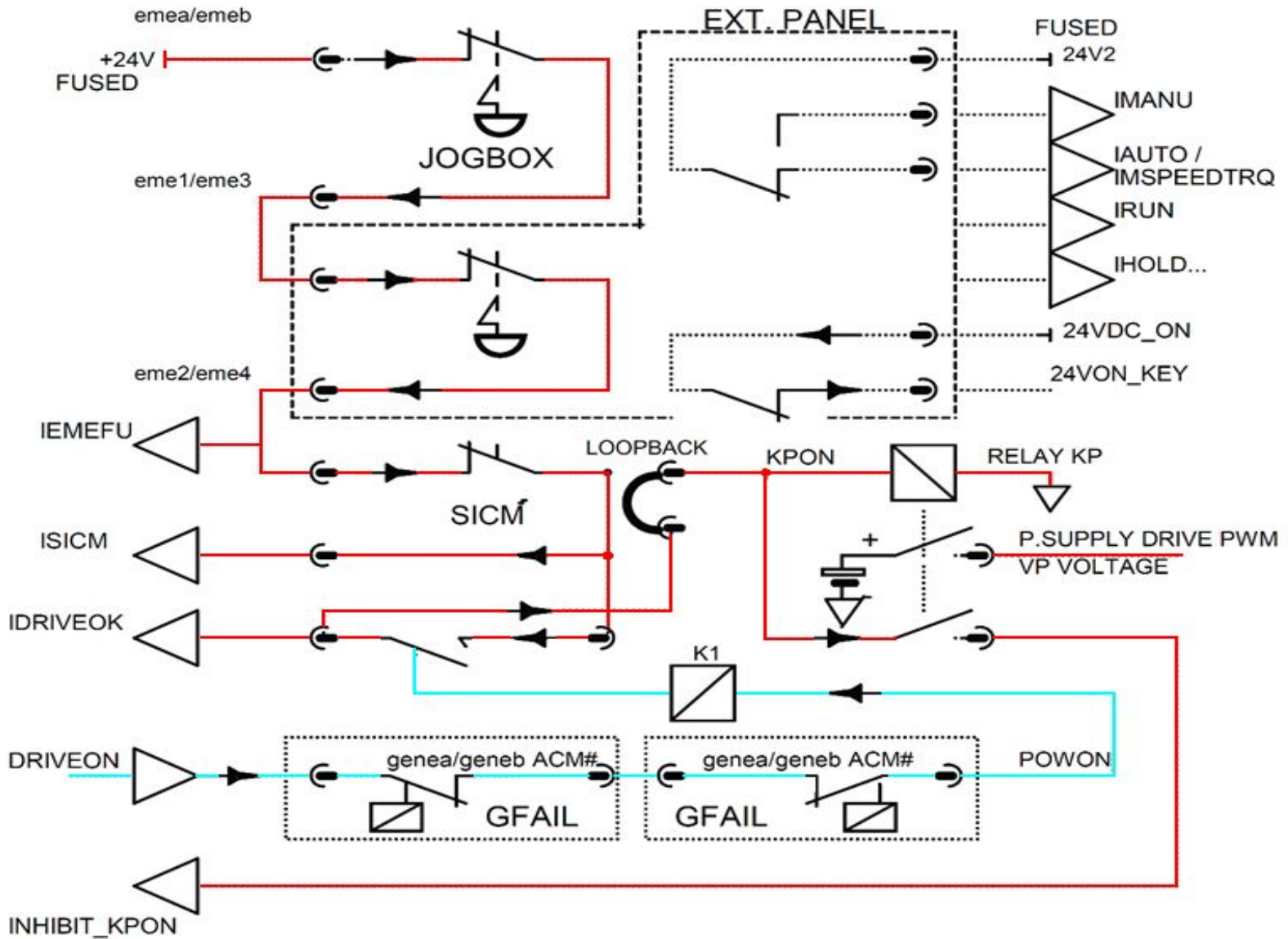
TS01

AP101

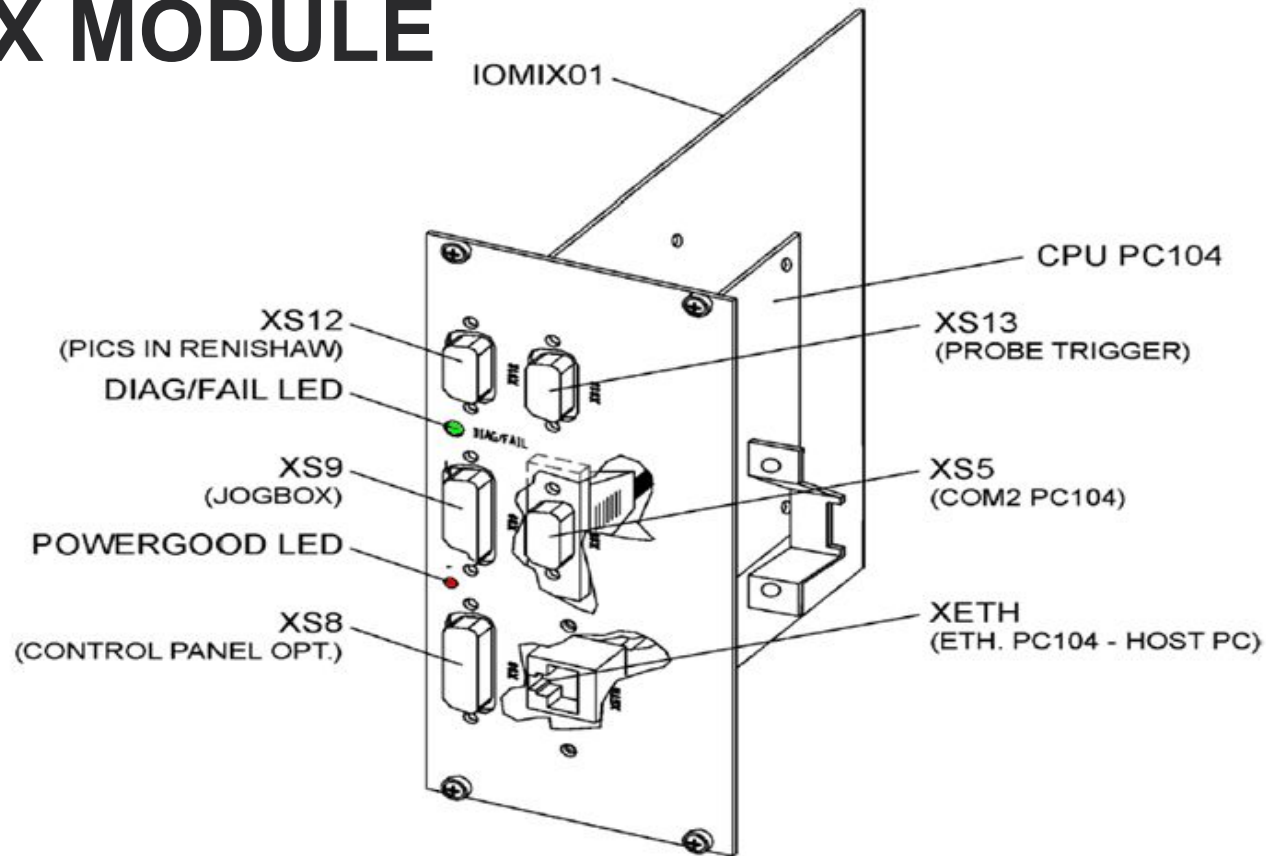
IOMIX01

ACM01

ACM02

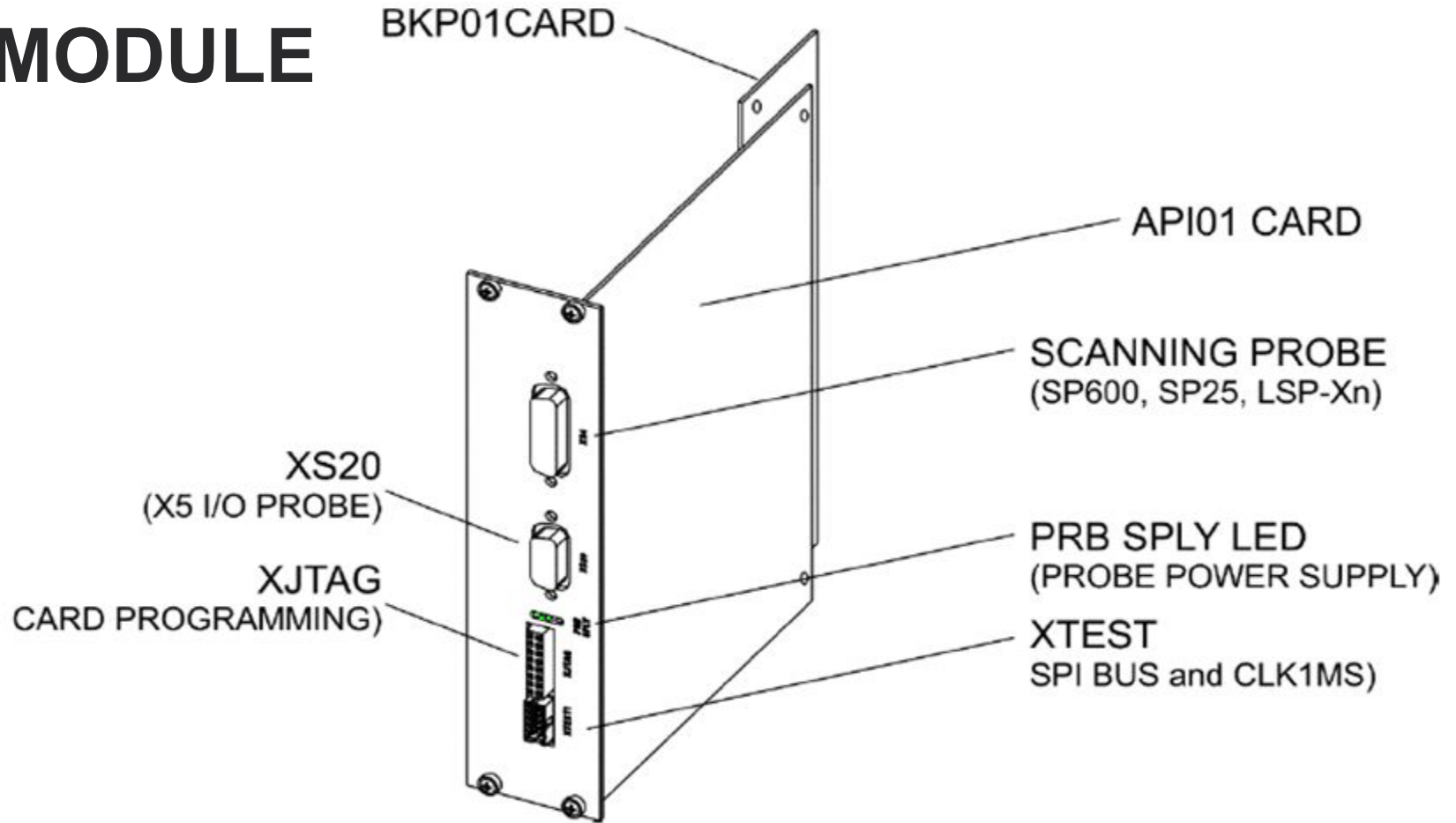


IOMIX MODULE



LED		Color	Function
DS1	DIAG	Green	Diagnostic Led: normal operation (RUN)
	FAIL	Red	Fault (available for future scopes)
DS4	--	Red	POWER-GOOD/HW Reset: if on, it indicates that one or more power supplies of the IOMIX01 card (+3,3V, ±12V, +5V, +2,5V) are out of tolerance: the CPU does not boot and the control system does not start.

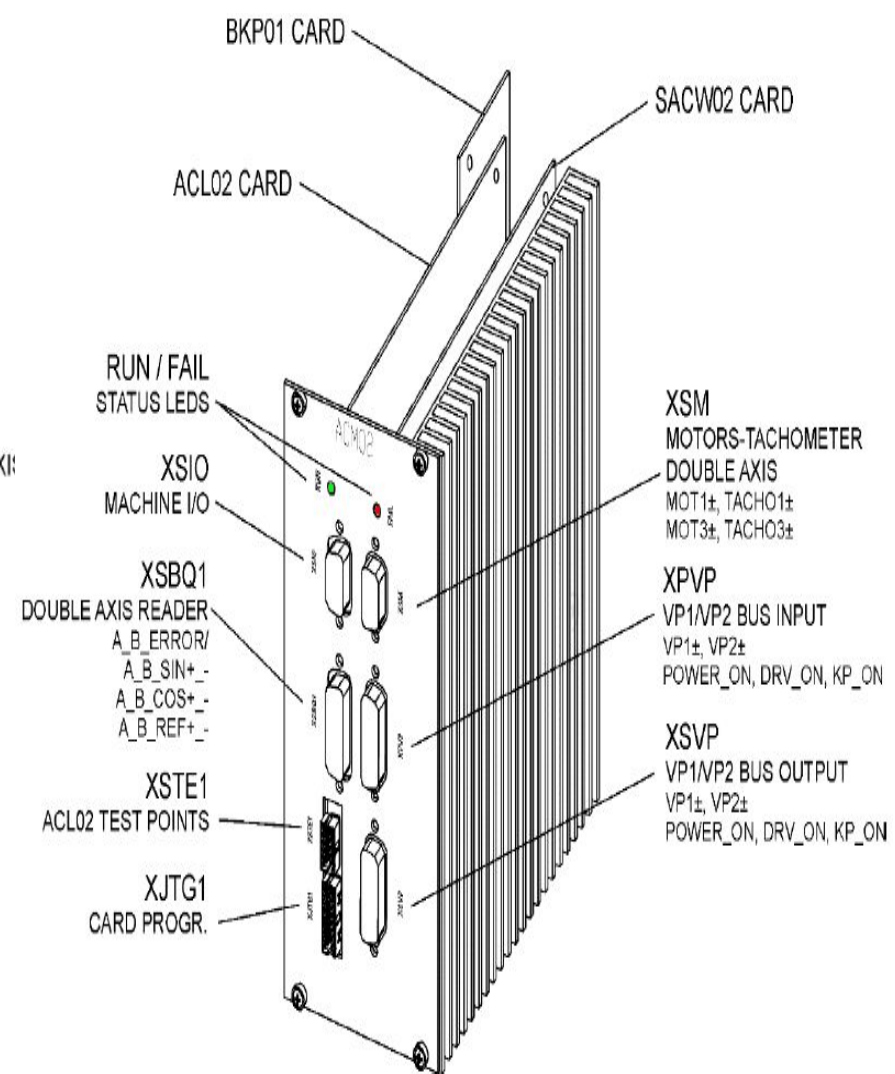
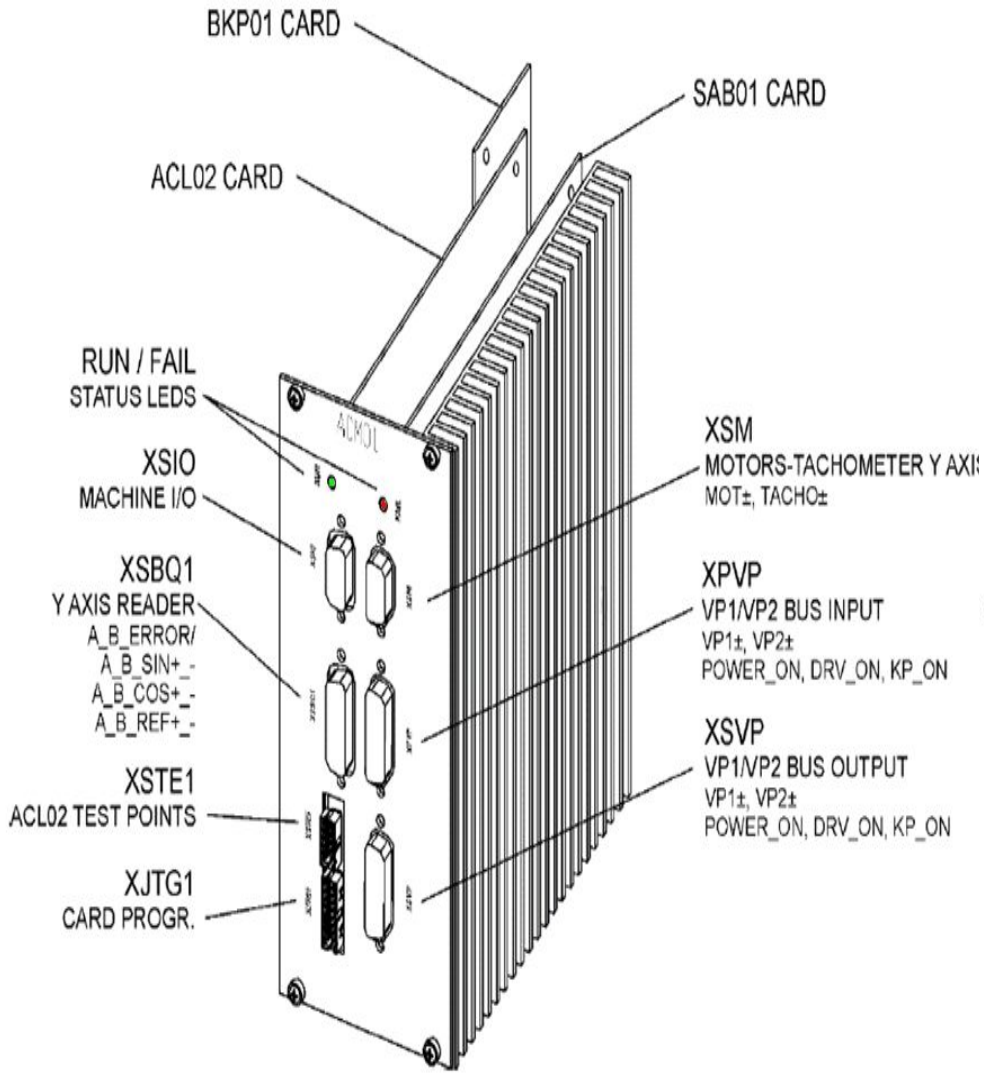
API MODULE

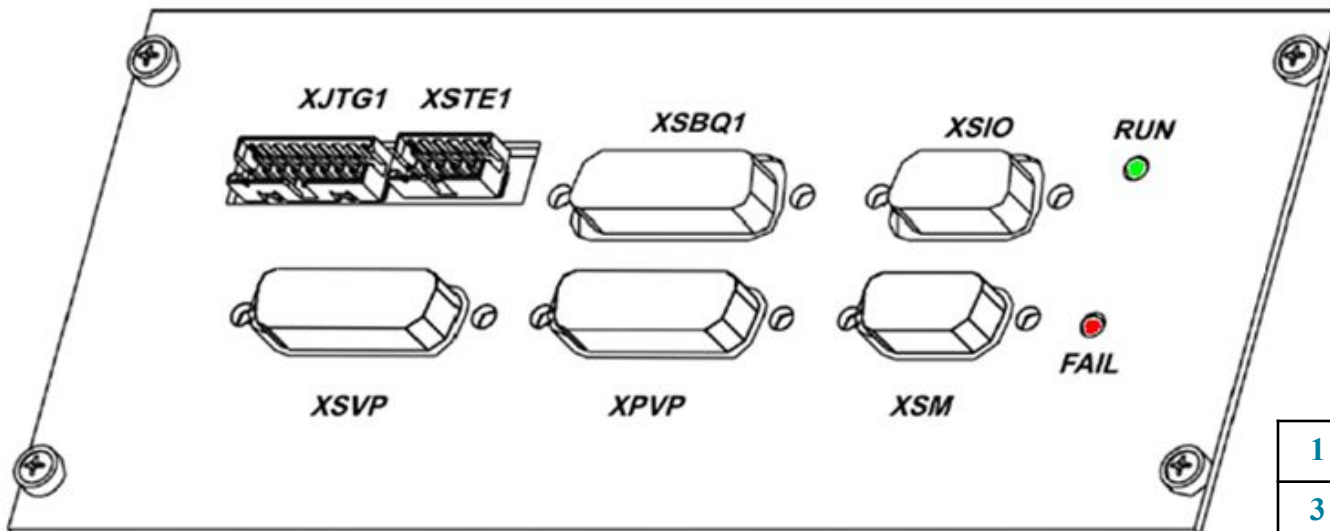


LED	Colore	Funzione
PRB SPLY	Green	Top: -12VAUX probe power supply enabled
		Middle: +12VAUX probe power supply enabled
		Bottom: +5VAUX probe power supply enabled

ACM01 MODULES

ACM02 MODULES



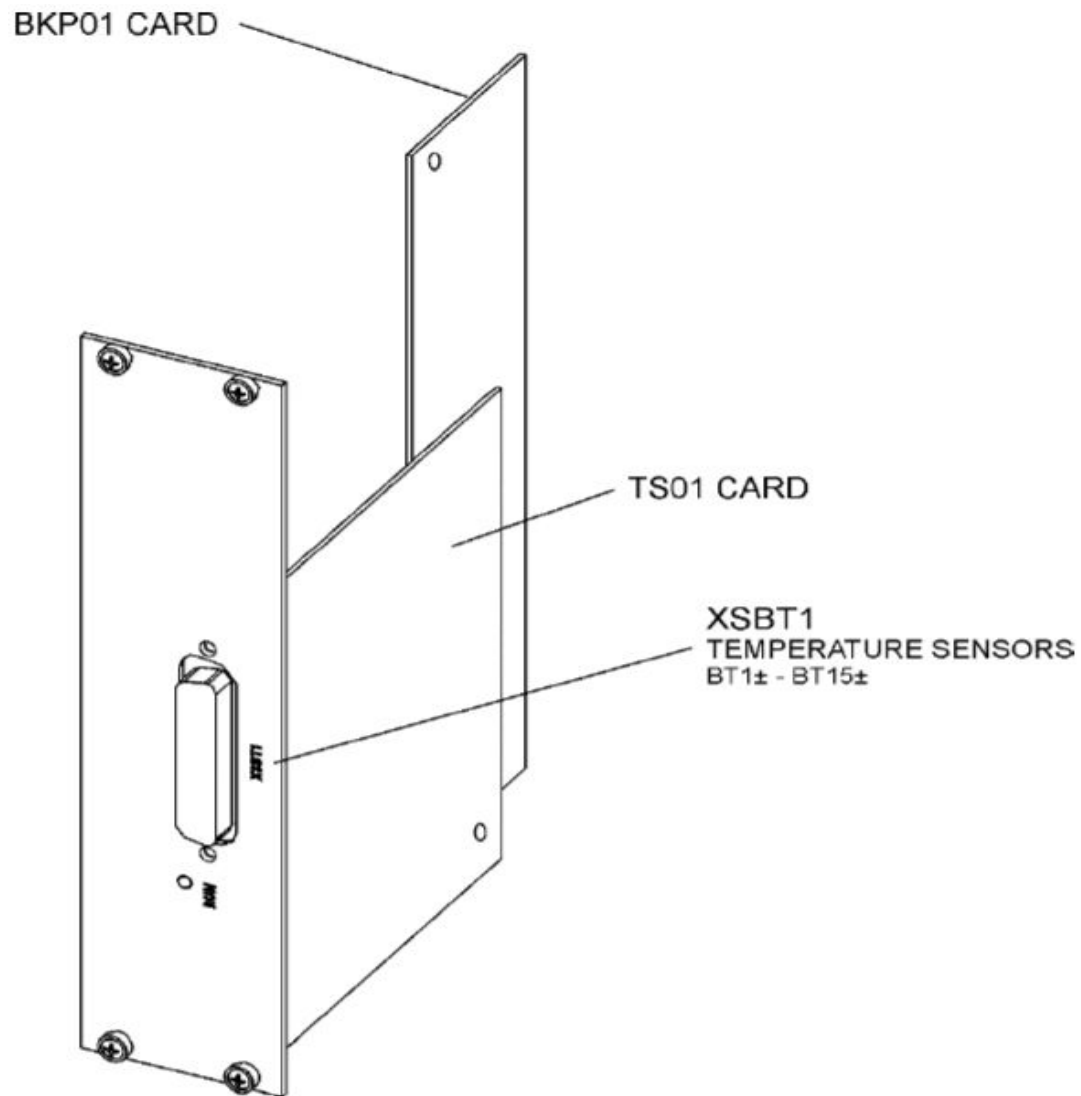


1	B SIN	2	A SIN
3	B COS	4	A COS
5	B REF	6	A REF
7	+3,3V	8	CURA
9	+5V	10	TACH A
11	GROUND	12	TACH B
13		14	CUR B

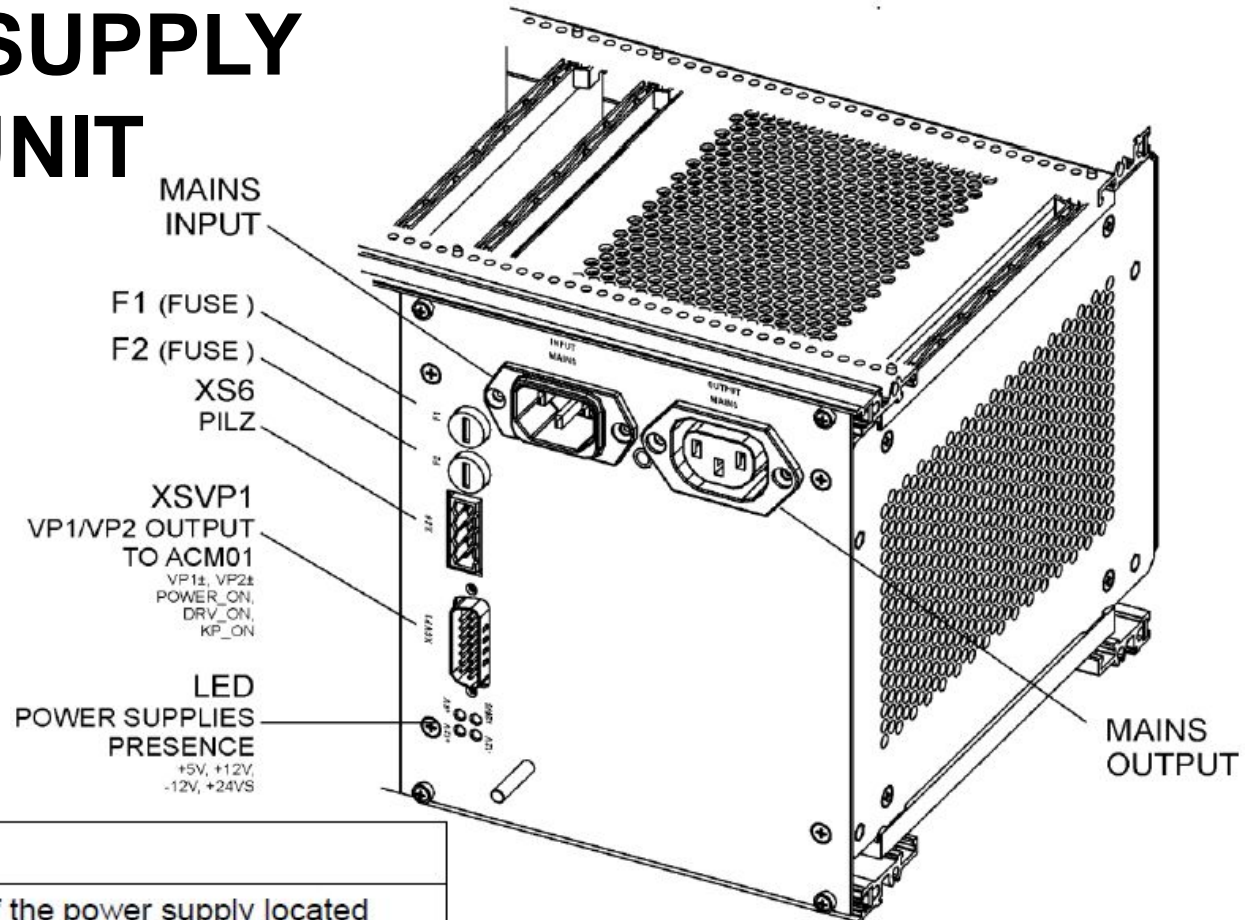
LED	Colour	Function
RUN (ACL02)	Blinking green	DSP on and working with two blinking speeds <ul style="list-style-type: none"> • ACM01: fast blinking, 0.82 s ON / 0.82 s OFF • ACM02: slow blinking, 2.18 s ON / 2.18 s OFF
	Red	<ul style="list-style-type: none"> • DSP failure • Watch-dog expired To reset the condition, switch off/on the control
FAIL (SAB01/ SACW01)	Steady red (SAB01) Orange (SACW01)	Driver failure: one of the drive emergencies listed in the Functional description of the SAB01 and SACW01 cards has occurred
	Off	Normal operation (no faults in drive hardware)

DC240/241	DC800
0.63 V -> 1A	0.315 V -> 1A

TSM01 MODULE



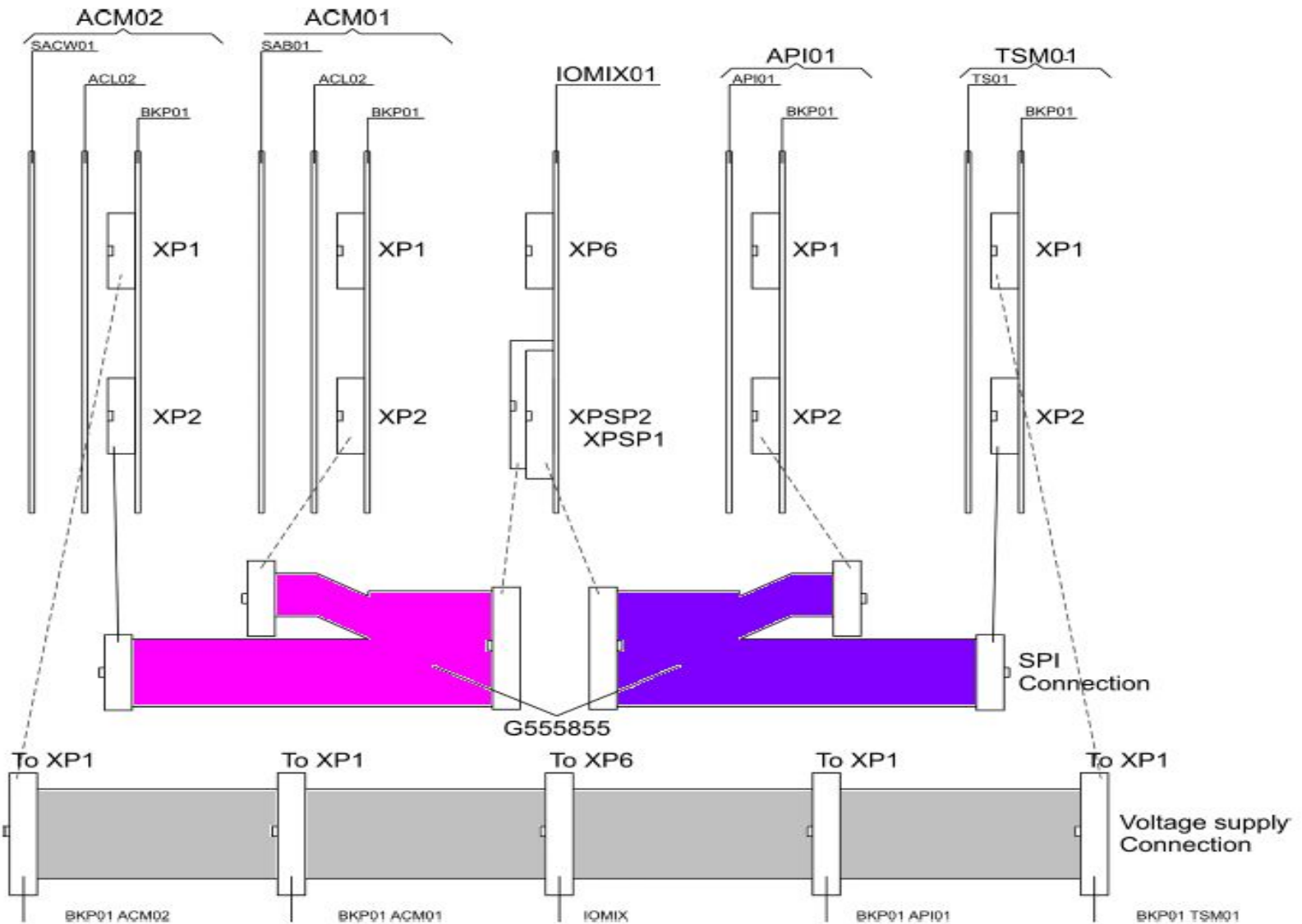
POWER SUPPLY UNIT



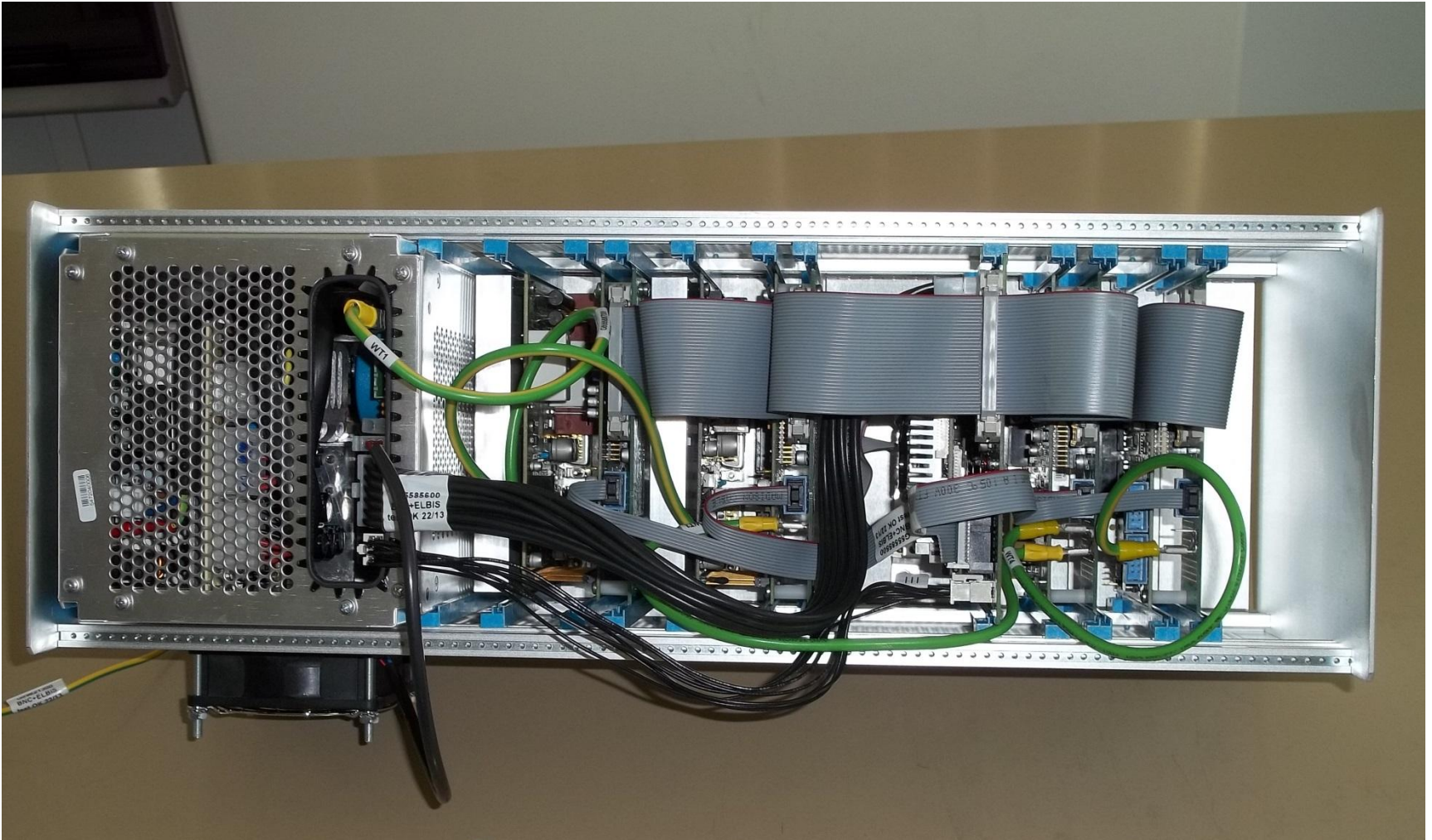
Device	Function
SWITCH	Power switch of the power supply located outside the control cabinet.
FUSE F1	<ul style="list-style-type: none"> 6A, 250V for 220V-240V mains voltage 12A, 250V for 100V-120V mains voltage
FUSE F2	<ul style="list-style-type: none"> 6A, 250V for 220V-240V mains voltage Not present for 100V-120V mains voltage (dummy fuse for USA market)

LED	Colour	Function
+5V	Green	When on, +5V power supply is present
+12V	Green	When on, +12V power supply is present
-12V	Green	When on, -12V power supply is present
+24VS	Green	When on, +24V power supply is present

INTERNAL CABLING WIRING DIAGRAM



rear view of the DC241 rack



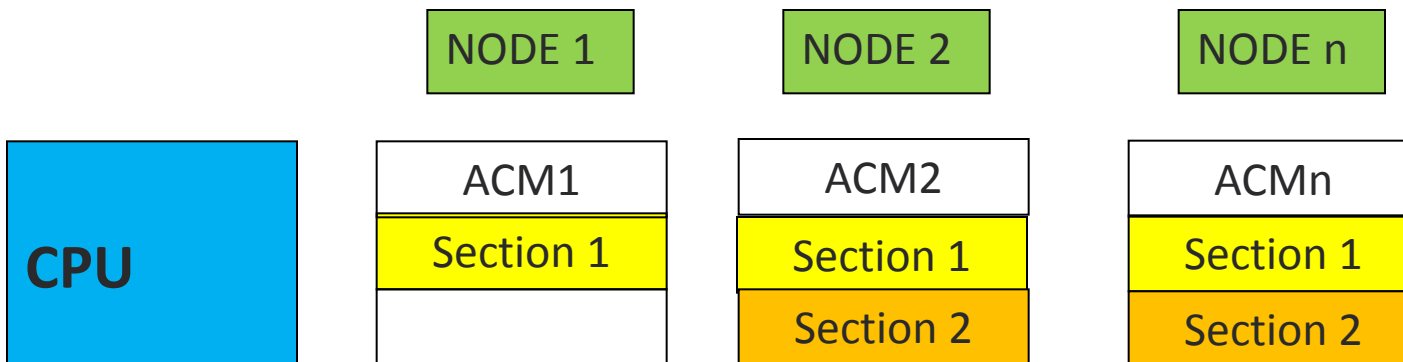
DC241

Hardware connection

Firmware configuration

	GLOBAL				TIGO		
	X	Y	Z		X	Y	Z
ACM Module	ACM2	ACM1	ACM2		ACM2	ACM2	ACM1
ACM Node	2	1	2		2	2	1
ACM Section	1	1	2		1	2	1

H/W connection
 F/W configuration
 F/W configuration



This controller runs FDC firmware

The screenshot displays a web browser window titled "FDC Web Interface" at the URL "http://100.0.0.1/main.asp". The interface features a teal background with the "FDC" logo and "HEXAGON METROLOGY" branding. A central "Log In" box contains a warning: "This environment contains functions intended for use by trained personnel only. Enter a password then press OK to indicate that you are a trained user. Untrained personnel can enter pressing OK without any password: unauthorized functions will be disabled in this case." Below the warning is a password input field and an "OK" button. A left-hand navigation menu includes sections for "View" (Fdc Configuration, Positions, Temperatures, I/O, Jogbox, Errors History, Communication Log, System Status, System Properties, Weight Compensation), "Edit", "Tools", "Probes", and "Statusbar". The bottom status bar shows "READY" and coordinates: X -0.001, Y -0.015, Z 0.018, A 90.00, B 0.00.

A large, abstract graphic on the left side of the slide, composed of overlapping teal and blue geometric shapes, including triangles and polygons, creating a layered, crystalline effect.

END