



PLC.163DSP

PLC WITH DISPLAY



- ECU for electrical panel installation
- Up to 20 inputs and up to 13 outputs
- Easy to integrate on DIN rails (G / Ω type) installation where flexibility and reliability are required
- Easy to program (LOGIClab development platform)
- SERIAL line (RS232) or in a CAN network, as MASTER or SLAVE

TECHNICAL FEATURES

MASTER CODE		PLC.163DSP
POWER SUPPLY		9 - 36 VDC / CURRENT ABSORPTION 50 mA AT 24 VDC (STAND BY MODE)
PUSHBUTTON	TOTAL 3	PROGRAMMABLE
INPUT	TOTAL 20	N. 4 DIGITAL INPUTS HighSide – LowSide (voltage threshold is sw configurable) N.4 DIGITAL INPUTS HighSide – LowSide (voltage threshold is sw configurable) - Frequency/Counter 1..1000Hz (resolution 1Hz) N.4 DIGITAL INPUTS HighSide - ANALOG INPUTS (0 – 40V resolution 10mV) N. 8 DIGITAL INPUTS HighSide - ANALOG INPUTS (0 – 40V resolution 10mV) – (4- 20 mA resolution 20uA) – Ratiometric Resolution 0,1%
OUTPUT	TOTAL 13	N. 4 PWM - DIGITAL OUTPUTS (PLd, CLOSED-LOOP CONTROL SYSTEM, SINGLE OUT 4A MAX) N. 4 PWM - DIGITAL OUTPUTS (PLc, CLOSED-LOOP CONTROL SYSTEM, SINGLE OUT 4A MAX) N. 4 DIGITAL HIGH SIDE OUTPUTS (SINGLE OUT 500mA MAX) N. 1 SQUARE WAVE GENERATOR FOR SAFETY CIRCUIT DIAGNOSTIC COVERAGE
LED		I/O STATUS COMMUNICATIONS PORTS STATUS (CAN – SERIAL - MICRO SD – USB) POWER SUPPLY STATUS DIAGNOSE L1 and L2: CUSOMIZABLE
DISPLAY		16 CHARACTERS X 2 LINES - VISUAL AREA 64.6 (W) X 16.0 (H)
CAN BUS	2 PORTS	2.0B COMPLIANT - (11, 29 BIT) - ISO 11898 - UP TO 1MBIT/S
CAN BUS PROTOCOLS		CAN OPEN (CIA DS401 DEVICE PROFILE FOR GENERIC I/O MODULE, WITH DS306 EDS FILE) ON REQUEST: SAE J1939 - ISO 11783 (ISO BUS) - FMS
SERIAL	1 PORT	RS232 UP TO 115200 BAUD
CONNECTIONS	4	REMOVABLE CLAMP CONNECTOR, WIRE SECTION 1.5 mm ² / 16 awg
USB		MICRO USB PORT
WORKING TEMPERATURE		-40°C +80°C



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ELECTRONIC FEATURES

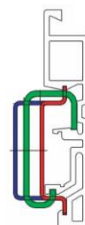
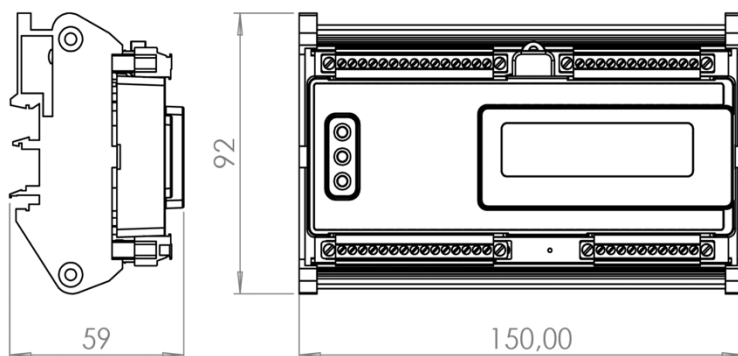
SLAVE USAGE	EDS FILE
MASTER USAGE	LOGIclab STANDARD C PROGRAM LANGUAGE
PROGRAMMING	FIRMWARE UPLOAD BY CAN BUS WITH ALOADER SOFTWARE TOOL
CYCLE TIME	MIN 5 ms
CPU	FAMILY: ARM Cortex M4, 32bit core CLOCK FREQUENCY : 120MHz
MEMORY	FLASH (Program Memory): 1MB RAM MEMORY: 256KB EEPROM: 128KB

STANDARDS

IMMUNITY TO CONDUCTED INTERFERENCE	ISO 7637-2: 2004, pulses 2a, 3a, 3b, 4, severity level 4, function state A ISO 7637-2: 2004, pulse 1, 2b, severity level 4, function state C ISO 7637-2: 2004, pulse 5, severity level 1, function state A
ELECTROMAGNETIC EMISSIONS	EN 61000-6-4// EN 55011 (RF RADIATE)
ELECTROMAGNETIC IMMUNITY	EN 61000-6-2// EN 61000-4-2/3/4/6
PROTECTION	IP20
MTTFD	95,5566 YEARS CALCULATED ACCORDING TO THE IEC61709 (SIEMENS SN29500), WITH ENVIRONMENTAL FACTORS 3K7 (IEC60721)
PERFORMANCE AND SAFETY INTEGRITY LEVEL	PLd – SIL2 (DUAL-CHANNEL INTERNAL SCHEME)

IN ACCORDANCE WITH THE EN50498 THE DEVICE MEETS THE TECHNICAL SPECIFIC REQUIREMENTS OF 2004-104 DIRECTIVE (AUTOMOTIVE).
THE DEVICE IS EMC 2004/108 COMPLIANT.

SIZE (mm)



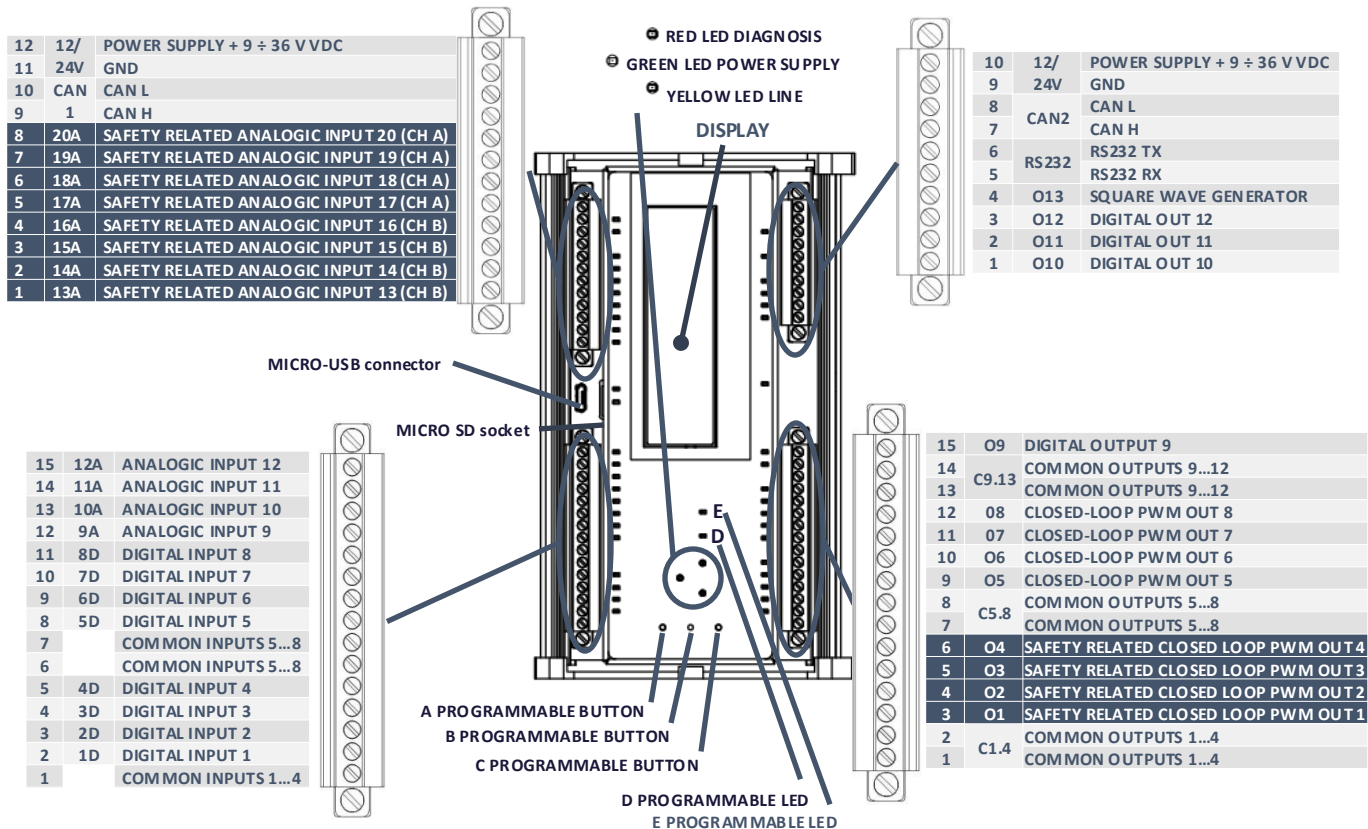
RED: Ω TYPE
IEC/EN 60715 – 35 × 7.5
BLUE: Ω TYPE
IEC/EN 60715 – 35 × 15
GREEN: G -TYPE RAIL (ACCORDING TO EN 50035,
BS 5825, DIN 46277-1)



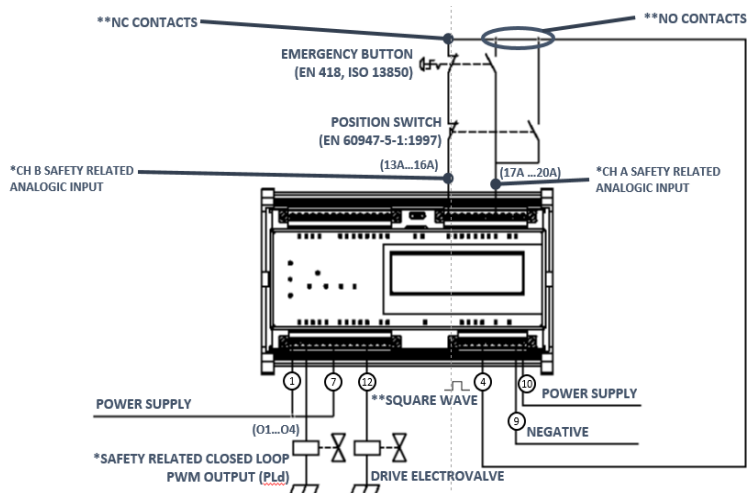
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CONNECTIONS TERMINALS



SAFETY CONNECTIONS EXAMPLE



LEGEND
(X) TERMINAL X
*DESIGNED ARCHITECTURE FOR CATEGORY 3 (EN 13849-1)
**DIAGNOSTIC COVERAGE (EN 13849-1)

SAMPLE CONFIGURATIONS (ALMEC PRODUCTS COMBINATION)



PLC.163 / PLC.163DSP

PLC.239

MASTER USAGE

SLAVE USAGE

TECHNICAL FEATURES (SEE THE DATASHEET FOR MORE INFORMATION)

MASTER CODE	PLC.239.S00
POWER SUPPLY	9 - 36 VDC
INPUT	UP TO 4 DIGITAL OPTOCOUPLED INPUTS, WITH COUNTER, ENCODER OPTION UP TO 4 ANALOGIC INPUTS: 0÷40Vdc - 4÷20mA - DIGITAL HIGH OR LOW SIDE (SOFTWARE SELECTABLE)
OUTPUT	8 OUTPUTS (CLOSED-LOOP CONTROL SYSTEM, SINGLE OUT 4A MAX)



NOTE