



Jazz™ Micro-OPLC™

Much More than a "Smart Relay"

Article number	JZ10-11-R10	JZ10-11-T10	JZ10-11-R16	JZ10-11-T17	JZ10-11-R31¹	JZ10-11-T40¹
	6 Digital Inputs 4 Relay Outputs	6 Digital Inputs 4 Transistor Outputs	6 Digital Inputs 2 Digital/Analog Inputs 2 Analog Inputs 6 Relay Outputs	6 Digital Inputs 2 Digital/Analog Inputs 2 Analog Inputs 7 Transistor Outputs	16 Digital Inputs 2 Digital/Analog Inputs 2 Analog Inputs 11 Relay Outputs	16 Digital Inputs 2 Digital/Analog Inputs 2 Analog Inputs 20 Transistor Outputs
I/Os						
Digital inputs	6 pnp/npn (source/sink) 24VDC	6 pnp/npn (source/sink) 24VDC	8² pnp/npn (source/sink) 24VDC	8² pnp/npn (source/sink) 24VDC	18² pnp/npn (source/sink) 24VDC	18² pnp/npn (source/sink) 24VDC
High-speed counter	2 inputs can function as either high-speed counters (5 kHz, 16 bit resolution), or as normal digital inputs					
Analog inputs	None	None	Two² 10 bit inputs: 0-10V and Two 10 bit inputs: 0-20mA, 4-20mA	Two² 10 bit inputs: 0-10V and Two 10 bit inputs: 0-20mA, 4-20mA	Two² 10 bit inputs: 0-10V and Two 10 bit inputs: 0-20mA, 4-20mA	Two² 10 bit inputs: 0-10V and Two 10 bit inputs: 0-20mA, 4-20mA
Digital outputs	4 relay outputs	4 pnp (source)	6 Relay outputs	7 pnp (source)	11 Relay outputs	20 pnp (source)
Program						
Ladder code memory	24K (virtual)					
Bit/Coils	256					
Integers/Registers (16 Bit)	256					
Timers	64					
Operator panel						
Display size & Type	2 lines x 16 characters, STN LCD, LED backlight					
HMI displays	60 user-designed displays available					
Variables	64 HMI variables are available to conditionally display text and data. List variables add up to 1.5K's worth of HMI capacity					
Keypad	16 sealed membrane keys, including 15 programmable keys (10 of which are user-labeled)					
Communication	Via an Add-on port Module (JZ-PRG or JZ-RS4)³					
Serial communications	RS232/RS485, RS232/Programming Add-on port (optional, see Accessories)					
GSM support	SMS messages to/from many cell phone numbers, up to 1K of user-designed messages. Remote access-enabled					
MODBUS	Supports MODBUS protocol, Master-Slave					
General						
Power supply	24 VDC					
Clock (RTC)	Real-time clock functions (date and time)					
Battery back-up	10 years typical at 25°C, battery back-up for RTC and system data, including variable data					
Environment	NEMA4X/IP65 (from panel, when mounted)					

¹ JZ10-11-R31, JZ10-11-T40 are not yet UL certified.

² These models comprise a total of 10/20 inputs (model-dependent). 6/16 (model-dependent) of these may be wired, in a group, as either digital npn or pnp. 2 inputs have added functionality. Both may be wired in a group as npn, pnp, or analog (voltage) inputs. Note that it is also possible to individually wire 1 input as a pnp input, and the other as an analog input. The 2 remaining inputs are analog (current).

³ In order to download applications and enable communications, install Jazz™ with the appropriate Add-on Module.

Add-on Modules and Accessories

Description	Article number
Programming kit¹: Software CD Isolated Programming Add-on port, cable and adapter	JZ-PRG
Com Port kit: Isolated RS232/RS485 Add-On port², cable and adapter	JZ-RS4
Program Cloner Add-on Module	MJ20-MEM1
Keypad Slide Kit	MJ20-JZ-SL1

¹ The module included in the JZ-PRG programming kit may be used to communicate with external devices, if the device provides active RS232 voltage signals for purposes of power supply (devices such as PCs and most modems).

² Isolated RS232/RS485 Add-on port is not yet UL certified.



M90/M91 Micro-OPLC™

All M91 OPLCs™ include: 2-line display, 80 user-designed available displays, 64 HMI variables, 4 PID loops' with Auto-tune, RS232/RS485 port (selectable) and Real-Time Clock functions.

Article Number	M91-2-R1	M91-2-R34⁴	M91-2-R2C	M91-2-R6C	M91-2-T2C	M91-2-T1	M91-2-T38⁴	M91-2-UN2	M91-2-UA2	M91-2-RA22⁴
Power supply	12/24VDC	24VDC	12/24VDC	24VDC	12/24VDC	12/24VDC	24VDC	12/24VDC	24VDC	24VDC
Digital inputs	10 pnp/npn (source/sink) 12/24VDC	22² pnp/npn (source/sink) 24VDC	10 pnp/npn (source/sink) 12/24VDC	6 pnp/npn (source/sink) 24VDC	12² pnp/npn (source/sink) 12/24VDC	12 pnp/npn (source/sink) 12/24VDC	22 pnp/npn (source/sink) 24VDC	12² pnp/npn (source/sink) 12/24VDC	12² pnp/npn (source/sink) 24VDC	12² pnp/npn (source/sink) 24VDC
High-speed counter/ Shaft-encoder/ Frequency measurer³	Three 10 kHz, 16 bit resolution	Three 10 kHz, 16 bit resolution	Three 10 kHz, 16 bit resolution	One 10 kHz, 16 bit resolution	Three 10 kHz, 16 bit resolution	Two 10 kHz, 16 bit resolution	Two 10 kHz, 16 bit resolution	Two 10 kHz, 16 bit resolution	One 10 kHz, 16 bit resolution	One 10 kHz, 16 bit resolution
Analog input types	One 10 bit input: 0-10V, 0-20mA, 4-20mA	Two² 10 bit inputs: 0-10V, 0-20mA, 4-20mA	Two 10 bit inputs: 0-10V, 0-20mA, 4-20mA	Six 10 bit inputs: Two 0-10V, 0-20mA, 4-20mA Four 0-20mA, 4-20mA	Two² 10 bit inputs: 0-10V, 0-20mA, 4-20mA	None	None	Two² 14 bit inputs: 0-10V, 0-20mA, 4-20mA	Two² 14 bit inputs: 0-10V, 0-20mA, 4-20mA	Two² 14 bit inputs: 0-10V, 0-20mA, 4-20mA
Temperature measurement	None	None	None	None	None	None	None	Two² PT100 or Thermocouple inputs	Two² Thermocouple inputs	Two² PT100 or Thermocouple inputs
Digital outputs	6 relay outputs	12 relay outputs	6 relay outputs	6 relay outputs	12 pnp (source)	12 pnp (source)	16 pnp (source)	12 pnp (source)	10 pnp (source)	8 relay outputs
High-speed outputs/ PWM	None	None	None	None	First 2 outputs can function as HSO, 2 kHz maximum					None
Analog outputs	None	None	None	None	None	None	None	None	Two 12 bit Outputs: 0-10V, 4-20mA	Two 12 bit Outputs: 0-10V, 4-20mA
Display	2 line x 16 characters, STN LCD display, LED backlight									
Communication port	RS232/RS485 port (selectable)									
CANbus	None	None	Yes	Yes	Yes	None	None	None	None	None
MODBUS	Supports MODBUS protocol, Master-Slave									
Ladder code memory (virtual)	36K									
GSM support	Enables SMS messages, containing text & variable data, to be communicated to & from cellular devices. Up to 1K of user-defined messages									
Data types	Bits/Coils -256, Timers - 64, Integers/registers (16-bit)- 256 direct addressing, 1024 additional indirect									

All M90 OPLCs™ include: 1-line LCD display, 80 user-designed available displays, 50 HMI variables, 4 PID loops' with Auto-tune (except for M90-T),

Article Number	M90-T	M90-TA2-CAN	M90-19-B1A ⁵
Power supply	24VDC	24VDC	24VDC
Digital inputs	8 pnp (source) 24VDC	10 pnp (source) 24VDC	10 pnp (source) 24VDC
HS counter/Shaft-encoder/ Frequency measurer ²	One 10 kHz, 16 bit resolution	One 10 kHz, 16 bit resolution	One 10 kHz, 16 bit resolution
Analog input types	None	Two 10 bit inputs: 0-10V	One 10 bit input: 0-5V, 0-10V, 0-20mA, 4-20mA
Digital outputs	6 pnp (source)	8 pnp (source)	6 relay outputs
Analog outputs	None	One 10 bit output: 0-10V	None
Display	1 line x 16 characders, STN LCD display, LED backlight		
Communication port	RS232 port		
CANbus	None	Yes	None
Ladder code memory (virtual)	24K	24K	12K
GSM support	None	Enables SMS messages, containing text & variable data, to be communicated to and from 6 phone numbers. Up to 1K of user-defined messages	
Data types	Bits/Coils -256, Timers - 64, Integers/Registers (16-bit)- 256 direct addressing, 1024 additional indirect		

¹ Auto-tune is provided via an external PC based application.

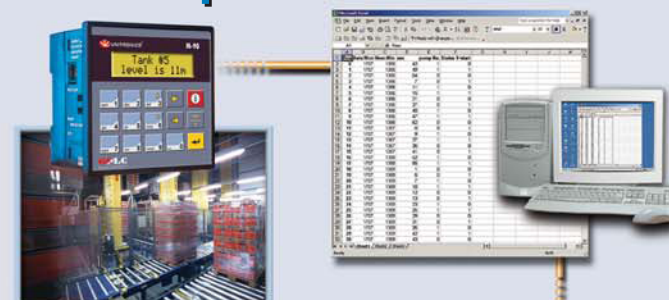
² In these models certain inputs can function as either digital, analog, thermocouple or PT100 inputs (model-dependent). Using those inputs, regardless of the combination among analog, thermocouple and PT100, will reduce the amount of free digital inputs.

³ Certain digital inputs can function as high-speed counters, shaft-encoder inputs, frequency measurers or normal digital inputs.

⁴ M91-2-R34, M91-2-T38 and M91-2-RA22 are not yet UL certified.

⁵ M90-19-B1A has no I/O expansion port.

DataXport



Export the PLC
application data
to Excel files
for processing



Vision 120™ OPLC™

Graphic Operator Panel and Programmable Logic Controller

All V120 OPLC™ include: Graphic display, up to 12 PID loops' with Auto-tune, 2 RS232/RS485 ports (selectable), MODBUS Master and slave, GSM/CDMA support, Real-Time Clock functions and 192 Timers.

Article Number	V120-22-R1	V120-22-R34 ⁴	V120-22-R2C	V120-22-R6C	V120-22-T2C	V120-22-T1	V120-22-T38 ⁴	V120-22-UN2	V120-22-UA2	V120-22-RA22 ⁴
Power supply	12/24VDC	24VDC	12/24VDC	24VDC	12/24VDC	12/24VDC	24VDC	12/24VDC	24VDC	24VDC
Digital inputs	10 pnp/npn (source/sink) 12/24VDC	22 ² pnp/npn (source/sink) 24VDC	10 pnp/npn (source/sink) 12/24VDC	6 pnp/npn (source/sink) 24VDC	12 ² pnp/npn (source/sink) 12/24VDC	12 pnp/npn (source/sink) 12/24VDC	22 pnp/npn (source/sink) 24VDC	12 ² pnp/npn (source/sink) 12/24VDC	12 ² pnp/npn (source/sink) 24VDC	12 ² pnp/npn (source/sink) 24VDC
High-speed counter/ Shaft-encoder/ Frequency measurer ³	Three 10 kHz, 32 bit resolution	Three 10 kHz, 32 bit resolution	Three 10 kHz, 32 bit resolution	One 10 kHz, 32 bit resolution	Three 10 kHz, 32 bit resolution	Two 10 kHz, 32 bit resolution	Two 10 kHz, 32 bit resolution	Two 10 kHz, 32 bit resolution	One 10 kHz, 32 bit resolution	One 10 kHz, 32 bit resolution
Analog input types	One 10 bit input: 0-10V, 0-20mA, 4-20mA	Two ² 10 bit inputs: 0-10V, 0-20mA, 4-20mA	Two 10 bit inputs: 0-10V, 0-20mA, 4-20mA	Six 10 bit inputs: Two 0-10V, 0-20mA, 4-20mA Four 0-20mA, 4-20mA	Two ² 10 bit inputs: 0-10V, 0-20mA, 4-20mA	None	None	Two ² 14 bit inputs: 0-10V, 0-20mA, 4-20mA	Two ² 14 bit inputs: 0-10V, 0-20mA, 4-20mA	Two ² 14 bit inputs: 0-10V, 0-20mA, 4-20mA
Temperature measurement	None	None	None	None	None	None	None	Two ² PT100 or Thermocouple inputs	Two ² Thermocouple inputs	Two ² PT100 or Thermocouple inputs
Digital outputs	6 relay outputs	12 relay outputs	6 relay outputs	6 relay outputs	12 pnp (source)	12 pnp (source)	16 pnp (source)	12 pnp (source)	10 pnp (source)	8 relay outputs
High-speed outputs/ PWM	None	None	None	None	First 2 outputs can function as HSO, 2 kHz maximum					None
Analog outputs	None	None	None	None	None	None	None	None	Two 12 bit Outputs: 0-10V, 4-20mA	Two 12 bit Outputs: 0-10V, 4-20mA
CANbus port	None	None	Yes			None	None	None	None	None
CANopen	None	None	CANopen Master, supports PDO and NMT, including RTR and SYNC			None	None	None	None	None
UniCAN	None	None	Multi-master CANbus network of 60 controllers, up to 1024 bytes per program scan			None	None	None	None	None
Application memory	448K									
Data tables	120K (RAM) / 120K (FLASH)									

¹ PID FB includes internal Auto-tune (shares memory with other FBs).

² In these models certain inputs can function as either digital, analog, thermocouple or PT100 inputs (model-dependent). Using those inputs, regardless of the combination among analog, thermocouple and PT100, will reduce the amount of free digital inputs.

³ Certain digital inputs can function as high-speed counters, shaft-encoder inputs, frequency measurers or normal digital inputs.

⁴ V120-22-R34, V120-22-T38 and V120-22-RA22 are not yet UL certified.

Unitronics OPLC™ - It's all around you



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