UR20 Remote Unit

UR20 is a numerical control dedicated to the pressbrake machine. Its distinguishing features are its modularity, both regarding the axes (with boards to be inserted in the device) and the local inputs/outputs (Tecnos BLT modules) controlled via serial line on proprietary bus, and the possibility to communicate on field bus according to CANOpen (DS301/401) standard. The device is placed inside the electrical cabinet on DIN bar.
UR10 operates on 24MHz 32-bit Motorola platform. It is composed of 1 modular electric axis boards (2 for board) up to a maximum of 4. The axes can be configured in Line Driver and Open Collector at 5 or 12 Volt. The CN has one idraulic axis board and one PWM idraulic servo drive board. The I/O section is external with with type 8 module fixed on DIN bar. Connection to the outside world is assured by two serial lines, one LAN line, and CANOpen system.

Cod. H1UR200XXXX

CHARACTERISTICS	DESCRIPTION	NOTES
	GENERALS	
Dimensions (LxHxD)	172mm x 123mm x101mm	-
Installation	On DIN bar	-
Weight (plus DIN bar hook)	1200g	-
Operating environment	Industrial	-
Protection class	IP20	-
Operating temperature	From 0° to 50°C	-
Operating humidity (without condensate)	≤75%	-
Max operating altitude	2000m	-
Conformity	CEI EN 50081/2, EN 55022 Class B	-
	ELECTRICAL	
Supply voltage	DC 18-30V AC 15-24V	-
Absorption	≤1A	-
Buffer battery	CR2032 - 3 Volt	-
Encoder power supply	+5V / +12V (Line driver / Open collector)	- Internal power supply
Analog outputs	±10v	-
Voltage monitoring	15 VDC, -15 VDC, 5 VDC, V-encoder (5,12V)	- LEDs on for correct voltages
	INTERFACES	
Serial	1 RS232 line from 1200 to 19200 (COM1) 1 RS232 line at 19200 (COM2)	- On DB9
Ethernet	1 10 MB line	- On RJ45
Field bus	1 CANOpen line with control of 96 inputs/outputs, 4 nodes of 64 inputs/outputs MAX	- DSP-DS301/401 communication protocol - on 5-pin connector
Local bus	1 line for local control of 72 inputs/outputs	-
Monitoring functions	LINK, RX, TX COM1, COM2	- LEDs on for connection, reception and transmission - LEDs on for communication

CHARACTERISTICS	DESCRIPTION	NOTES
	CPU	
Microprocessor	Motorola 68EC020 32-bit 24MHz	-
Working memory	Flash EPROM 1 Megabyte RAM 1 Megabyte	- - Buffered
MAX memory for programs	659Kbytes	-
MAX circular buffer	30Kbytes	- Inside the program memory
Max memory available for programs PLC	640Kbytes	-
Monitoring functions	RUN WD	- Blinking LED for active CPU - LED on for WATCHDOG enable
	AXES	
MAX number of axes controllable	6	- Each board has 2 axes
Encoder interface	Line driver, Open collector 5/12V	- Configurable with jumpers
Encoder count	500 KHz	-
Real Time	6 msec with PLC scanning time programmable from the application	-
Analog reference	±10 Volt	- 12-bit resolution with mark
Limit switch inputs	1 per axis	-
In-flight position connection inputs	1 per axis	-
Axis Monitoring	- Axis disable in case of error - Software limit control - Tracking error control	- LED for local control by operator on encoder phases and zero micro
Drive Control	- Motion control on individual axis - Possibility of in-flight position connection for high-precision mode	- Based on fully-developed PID -
Axis performance	- Automatic axis offset connection - Positioning with trajectory control - Linear and circular interpolation of up to 6 axes on the plane - Automatic interpolation speed adjustment on the connectors and direction change - S-ramp - Interpolation with 2 C-axes for tangent cutting - Electrical axis (Gantry)	- - - Possibility to define the working plane in the space - - - -
Monitoring functions	- V.enc - A, B, Z, IN, Enable	-LED on for 5V (green), 12V (red) - LED for phases, zero point, limit switch, enable
PWM Hydraulic servo drive board	- Analogic Input 0/±10v - Power Supply DC 24V ±10% - Maximun Output Current 0,8 / 2A	
Proportional Solenoid valve	4 VIE Power Supply DC 24V ±10% Factory Current 0,8A	
	SOFTWARE	
Development and analysis environment	SyncroView32	- Automatic monitoring of the last 6 sec. - For the axes, dedicated instructions for punching and form-pressing functions
Languages available	- PLC on IL basis (Tecnos Instruction List) - SBL	- Possibility of defining parallel processes - Set of commands for motion control (axes) with parallel processes and interaction with and by the PLC
	EXPANSIONS	
Axis board	Line driver, Open collector 5/12V	- Slot of two axes each - Installation inside UR10
Analog board	±10 Volt, 12-bit resolution with mark	- Slot of one analog output - Installation inside UR10
Digital inputs	- 8 24 VDC inputs ±10% PNP - PNP/NPN - Protection against polarisation inversion - Optoisolated	- External connection via Tecnos Local Bus
Digital outputs	- 8 outputs 24 VDC±10% PNP PNP - Protection against polarisation inversion - Protection against short-circuits - Optoisolated	- External connection via Tecnos Local Bus
Relay outputs	4 24 VDC relay outputs±10%	- External connection via Tecnos Local Bus

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