DC2004 Dialog Controller
High-performance CODESYS V3 display controller

The new all in one Dialog Controller is designed for use in complex machines. This has been made possible by using a powerful and scalable 800 MHz Arm® CPU with a Cortex™-A9 core. Also, the Dialog Controller can be programmed with the current CODESYS V3 software. In combination with the CODESYS SoftMotion package, technologically sophisticated multi-axis drive applications can be exploited. An extensive range of communication interfaces is integrated in it: Ethernet, EtherCAT, CAN Bus, RS232 and RS485. Additional protocols such as PROFINET, BACnet, SNMP, J1939, OPC UA, Powerlink, Ethernet/IP and Modbus are also available. Digital and analogue I/O's complement the functions. Applications include compact machines and building automation. For visualization the Dialog Controller uses CODESYS Target and Web Visu. The touchscreen device is furnished with a continuous CLEAN protective frontfoil.

- → Short cycle and fast response times
- → Consistent CODESYS V3 (programming, visualisation, communication and SoftMotion)
- → Easy configuration via web interface
- → 4.3" WQVGA LED display with resistive touch
- → CLEAN front with continuous protective foil
- → EtherCAT Master, CANopen Master
- → Serial interfaces
- → 8 digital I/O
- → 4 analogue inputs

Improved performance at reduced cost	The 800 MHz Arm® CPU with Cortex™ A9 core brings the efficiency of PCs to small display controllers. This means substantial saving potential (e.g. due to the fact that expensive additional components are not required).
Comprehensive communication options	EtherCAT and CANopen masters are the most important interfaces for field communication. Powerful and modern EtherCAT I/O and drive components can be combined with tried and trusted CANopen devices. The Ethernet interface remains in the foreground when the controller communicates with the control level via TCP/IP. For industrial plants PROFINET and OPC UA is available. In building technology the controller can also communicate as BACnet controller. More protocols and serial interfaces complement the range of communication options.
Storage media and onboard I/Os	The gathering, processing and the storing of data using the Micro SD slot and USB interface is one of the most important PLC controller tasks. The Dialog Controller has four digital inputs and four digital outputs onboard, permitting the direct control of (for example) switches and signal lamps. These are complement by four universal analogue voltage inputs, which can be combined into two 2/3-wire PT100(0) inputs.

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Data	
Description	**DC2004W Q TS 0.8S 1131**
Art. No.	270010000
Display diagonals /resolution	4.3" display / 480 x 272 (WQVGA)
Touch operation	Resistive
Colours	TFT: 16,7 M (24 Bit/Pixel)
Dimensions WxHxD [mm]	161 x 103 x 57
Weight	approx. 450 g
Mounting	Integrated securing clips
Certification	CE (EN 61131-2) / CB Scheme (IEC 61010-2-201) / $_{c}UL_{us}$ (UL 61010-2-201)
Development environment	CODESYS V3 (IEC61131-3)
CPU	800 MHz ARM® CPU with Cortex™ A9 single core
RAM / Flash / Retain storage	256 MB RAM / 256 MB Flash / 100 kB FRAM
Communication interfaces	1 x Ethernet, 10/100 base, RJ45
	1 x EtherCAT, RJ45
	1 x CAN Bus (opto-isolated)
	1 x RS485 (opto-isolated together with RS232)
	1 x RS232 (opto-isolated together with RS485)
Protocols	Standard: EtherCAT Master, CANopen Master Optional: Modbus RTU M/S, Modbus TCP M/S, SNMP, OPC UA, J1939, Ethernet/IP, Powerlink, PROFINET, BACnet
Visualization	Target Visu (Display), Web Visu (Web Server, HTML5)
Additional features	1 x USB 2.0 host / USB plug WR-COM Port A
	1 x Micro SD card slot (SDHC Standard up to 32GB)
	1 x Real-time clock, battery buffered
Digital I/O	4 x digital Input
	4 x digital Output (0.5 A)
Analogue I/O	4 x universal analogue Input (-10V..+10V, 2x PT100/PT1000) Resolution: 24 Bit
Supply voltage	+24 VDC (-15% / +20%) SELV max. AC voltage component 5% with reverse voltage protection
Current consumption Module	Typ. 0,3 A, max. 1,2 A at +24 VDC
Current consumption dig. Outputs	according to output load, continuous max. 2 A
Operating conditions Transport / storage	Ambient temperature: operational: 0 °C to 55 °C / transport: -20 °C to +70 °C
	Relative humidity: max. 85 %, non-condensing
EMC, protection type	
Emitted interference	EN 55011 Class B Group 1

Data	
Description	**DC2004W Q TS 0.8S 1131**
Immunity to interference	EN 61131-2
Protection class	III
Insulation strength	EN 61131-2
Protection type	IP20, Front IP54 (IP65 only with twist locks catches tightened)
Vibration	Sinusoidal (EN 60068-2-6) test: Fc; 10 ... 150 Hz, 1 G (operation mode)
Shock resistance	15 G (approx. 150 m/s²), 10 ms duration, half-sine (EN 60068-2-27) test: Ea

Your contact partner can be reached under:

Sales team | T +49.7121.894-131 | controls@berghof.com

Berghof Automation GmbH | Harretstrasse 1 | 72800 Eningen | www.berghof-automation.com