

Execution / Designation	Function	Data sheet number	Functions				Analog input signals		Digital input signals		Digital inputs/ outputs	Solenoid outputs	Analog outputs	Fieldbus				Graphic signal recording
			Ramps	Fixed command value	Pressure/Flow controller	Position controller	P/Q Controller	Voltage	Current	SSI/SSD				Start/Stop	Profibus DP	CANopen	HART	
Snap-on modules SD7.0 SD735 SD733 SD736	Digital amplifier module «Basic»	1.13-101	X	X			1	1			2/2	1 or 2					X	
	Digital amplifier module «Enhanced»	1.13-101	X	X			2	2			8/4	1 or 2	1				X	
	Digital controller module «Basic»	1.13-106	X	X	X		1	1(2)			2/2	2					X	
	Digital controller module «Enhanced»	1.13-106	X	X	X		2(1)	2(3)	X		8/4	2	1				X	
Plug P02 PD2	Analog amplifier	1.13-62	X				1				1	1					X	
	Digital amplifier	1.13-64	X				1	1			1/0	1					X	
Mobile electronics MD230 MD235 MD236 MD238	Digital amplifier «Basic»	1.13-240	X	X			1	1			2/2	4					X	
	Digital amplifier «Enhanced»	1.13-240	X	X			2	2			4/2	8					X	
	Digital controller «Basic»	1.13-240	X	X	X		1	1			2/2	4					X	
	Digital controller «Enhanced»	1.13-240	X	X	X		2	2			4/2	8					X	
Integrated «DSV» Digital Smart Valve	– Integrated amplifier electronics	1.13-76	X				1	1			1/1	1 or 2					X	
	– Integrated controller electronics for proportional hydraulic valves	1.13-76	X		X		1	1			1/1	1 or 2					X	

PME (Programmable Mobile Electronics)

PME products can be easily networked to each other. This results in a control system that can be adapted exactly to the needs of the application. An overview of the PME programme can be found in the brochure «PME – the smart hydraulic solution».

Type	Data sheet number	Inputs			Outputs			Sensor supply	Interfaces	
		Total	Analog	Digital	Freq.	Total	PWM			Solenoid current measurement
CL-307	1.13-270	3/5	3	0/2	0/2	8	8	4	Digital	CAN
CL-446	1.13-275	16	16	16	2	8	8	0	5V	2xCAN/USB
CL-449	1.13-280	8/6	4/2	8/6	4/2	4	4	0	-7.5V	CAN
CL-450	1.13-285	69	14	65	4	33	33	4	5V	3xCAN
CL-451	1.13-290	17	5	17	1	16	16	0		CAN

The number of usable inputs and outputs depends on the variant. Details can be found in the data sheet.

Type	Data sheet number	Inputs			Outputs			Display	Interfaces	
		Total	Analog	Digital	Freq.	Total	PWM			Solenoid current measurement
CL-609	1.13-300	2	1	2	0	4	4	0	20	CAN

Type	Display Size	Data sheet number	Resolution	Inputs			Outputs			Sensor supply	Interfaces	
				Total	Analog	Digital	Freq.	Video	Total			PWM
CL-709	4.3" 109 mm	1.13-310	480x242	10	4	10	4	0	4	4	5V	CAN/USB
CL-711	7" 178 mm	1.13-320	800x480	10	5	10	4	4	4	4	5V	2xCAN/USB

Programming tools

Orchestra™	Project management software article no. 740.1000 contains:
Composer™	For developing software by means of intuitive «Ladder-Logic» programming. Simple definition of a complete system from inputs and outputs to CAN messaging with minimal programming knowledge.
Presto™	Orchestra™ project definition tool for C/C ++ application programming, with the 3 rd party tool CodeWarrior™ for the C-code compilation. The respectively required NXP (Freescale) Suite «CW-SUITE-STANDARD: CodeWarrior® Development Suite-Standard» (contains «HCS12 (X) Edition» version 5.1 and «Microcontrollers Edition» version 10.6) is not contained in Orchestra™. It must be ordered directly from NXP.
Arranger™	The graphic display can be programmed with pre-prepared graphical elements simply with Drag & Drop. The program variables can be assigned to these elements in order to make the desired inputs and outputs via the display.
Conductor™	Diagnostic and set-up tool. Real-time view of system inputs, outputs and variables. Conductor is part of Orchestra™, but it is also available as an autonomous software with separate license dongle. Article no. 740.1001
Additional tools	
USB-to-CAN-adapter	The adapter is needed for downloading software on PME modules, which do not have a USB interface. Not contained in Orchestra™. PCAN-USB from Peak-Systems or from Gridconnect.
C-Code Debugging	Development tool for C-code debugging using JTAG interface. Not contained in Orchestra™. Must be ordered via P & E Microcomputer systems.