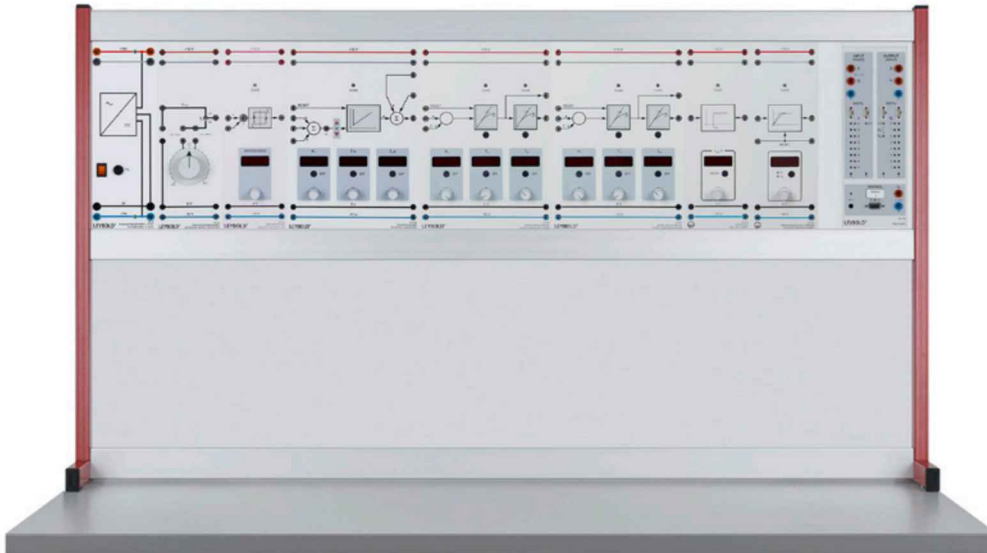## E6.3.4

SYSTEMS & COMPONENTS OF CONTROL ENGINEERING

E6.3.4.1
Electronic Controlled Systems

E6.3.4.2
Digital Closed Loop Control

Electronic Controlled Systems (E6.3.4.1)

Cat. No.	Description	E6.3.4.1	E6.3.4.2
734 02	Reference variable generator	1	1
734 011	Two position controller	1	
734 064N	PID digital controller Net	1	1
734 091	Digital Controlled System	2	2
734 0891	Dead time element	1	
734 0951	2nd Order transfer element	1	
524 016S2	Profi-CASSY Starter 2	1	1
726 09	Panel frame T130, two-level	1	1
726 86	DC-Power Supply ± 15 V/3 A	1	1
500 59	Safety bridging plugs, black, set of 10	1	3
500 592	Safety bridging plugs with tap, black, set of 10	1	1
500 641	Safety connecting lead, 100 cm, red	3	3
500 642	Safety connecting lead, 100 cm, blue	3	3
500 644	Safety connecting lead, 100 cm, black	3	3
564 19EN	LIT: E6.3.4.1 Control of Electronic Lines	1*	
734 482	WinFACT COM3LAB / CASSY Edition	1*	1*
734 41	Sample and Hold Element		1
726 10	Panel frame T150, two-level		1*
734 492	WinFACT LD Licence		1*
775 700EN	LIT: E6.3.4.2 Digital Control		1*
	additionally required: 1 PC with Windows 7/8/10		

* additionally recommended

Electronic Controlled Systems

The setup facilitates experiments on a wide variety of levels: ranging from the basics to university-level learning. It investigates the transfer components in the time range and the behaviour of the controlled systems formed by them. Digital adjusters for controller parameters and system time constants facilitate simple, intuitive operation of devices with higher precision. This allows for fast, reproducible, and targeted experimentation. Continuous and discontinuous controller designs are available to choose from. The Profi-CASSY interface is ideally equipped to support the use of graphic analysis methods (e.g. using the tangent method) and facilitates experiments with modern interface controllers and computer-aided control technology. For more in-depth experimentation and for simulations, it is recommended that you also use the WinFACT software.

Topics

- Setpoint and disturbance behaviour
- Recording and analysing step responses
- Output parameters of an open-path control
- Time response of transfer components
- Second order transfer component
- Behaviour of the dead-time component
- etc.

Experiments are operated and evaluated with CASSY Lab 2 and WinFACT.