



# HIRSCHMANN

A Belden Company

Controls

Consoles

SLIs

Sensors

Service

## iFLEX E2 / E5

Mobile controls with extended functionality and increased performance



### Take full control of the future with iFLEX E2 and E5

The mobile controls from the iFLEX E (Extended Class) series are programmable controls which combine the performance of highly integrated 32-bit microprocessor technology with compact design. Moreover, they are designed for use in tough environments, including extreme operating temperatures, and offer a protection standard up to IP 67, EMV durability, shake-proof, as well as the design of plugs and housing.

- ▶ High integrated 32-bit microcontroller
- ▶ Integrated floating point unit (FPU)
- ▶ Real-time multi-tasking operating system
- ▶ Programmable according to IEC 61131-3 and C
- ▶ PWM outputs with high output current
- ▶ Flexible with internal extension module
- ▶ ETHERNET interface for programming
- ▶ Supports SAE J1939
- ▶ Simple system diagnosis with numeric code
- ▶ Real-time clock
- ▶ SRAM, battery-buffered
- ▶ Extended temperature range

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# iFLEX E – EXTENDED CLASS

Controls systems for mobile applications.

Along with a high level of performance, thanks to 32-bit microprocessor technology, the iFLEX E controls permit a large number of inputs and outputs for digital and analogue signals which in their turn enable processing functions in the sensors and actuators.

The inputs and outputs can be individually configured and customized perfectly to suit the application. Proportional valves can be run directly through PWM outputs with internal current measurement without an additional amplifier.

The integrated CAN bus interfaces enable the integration of intelligent sensors and actuators with CANopen. Several iFLEX E2 control units can also be linked to create a powerful decentralized network. In addition the iFLEX E2 unit supports engine datacommunication as specified by SAE J1939.

The iFLEX E2 mobile control unit also features internal interfaces for extension modules. Up to 8 extra inputs and 4 outputs can be provided. The iFLEX E2 can therefore be customized to suit requirements at any time.

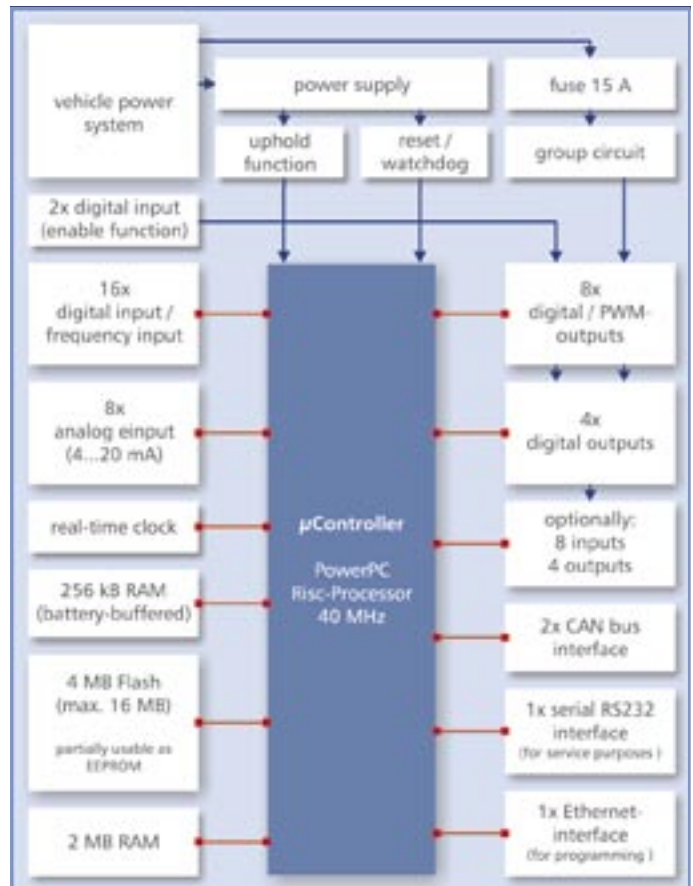
Recording and permanent storage of process data is no problem – the iFLEX E series has a real-time clock and a 256 kB RAM with battery back-up.

For simple fault diagnostic the iFLEX E2 has a 7-segment display which can be viewed from the outside. Two interfaces are provided: An RS232 service interface and an ETHERNET 10Base-T interface with industrial ETHERNET M12 plug connector for programming.

For more complex applications the iFLEX E5 offers over 100 inputs and outputs.

The iFLEX E series application software can be developed in the high-level language „C“ or with a PLC programming system in accordance with IEC 61131-3.

Block diagram iFLEX E2






# WHATEVER YOU MOVE, WE KEEP THINGS ON THE SAFE SIDE!

Reliable to use. Easy to operate.





## TECHNICAL DATA

Description	iFLEX E2	iFLEX E5/4	iFLEX E5/1
			
<b>CPU</b>	32 Bit RISC-Processor, 40 MHz, PowerPC™-architektur	32 Bit RISC-Processor, 48 MHz, PowerPC™-architektur	32 Bit RISC-Processor, 48 MHz, PowerPC™-architektur
<b>Program memory</b>	4 MB Flash (upgradeable to 16 MB)	8 MB Flash (upgradeable to 16 MB)	8 MB Flash (upgradeable to 16 MB)
<b>Data memory</b>	2 MB SRAM	2 MB SRAM	2 MB SRAM
<b>Process data memory</b>	256 kB SRAM, battery-buffered	256 kB SRAM, battery-buffered	256 kB SRAM, battery-buffered
<b>Protection class</b>	IP 66	IP 65	IP 67
<b>Programming</b>	Freely programmable in accordance with IEC 61131-3 (1131 Pro Direct or CoDeSys) or in C	Freely programmable in accordance with IEC 61131-3 (1131 Pro Direct) or in C	Freely programmable in accordance with IEC 61131-3 (1131 Pro Direct) or in C
<b>Real-time clock (battery-buffered)</b>	•	•	•
<b>Watch Dog</b>	•	•	•
<b>Field bus</b>	2 x CANopen 2.0B also supports SAE J1939	1 x CANopen 2.0B	2 x CANopen 2.0B also supports SAE J1939
<b>Ethernet interface</b>	Ethernet 10BaseT	-	-
<b>Serial interface</b>	2 x RS232, 1 x RS485	2 x RS232, 1 x RS485	2 x RS232, 1 x RS485
<b>Diagnostic display</b>	7-segment LED, display of status messages and error code	-	-
<b>Supply voltage</b>	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC
<b>Max. system power consumption</b>	< 2 A	< 2 A	< 2 A
<b>Max. power I/O (Total)</b>	< 24 A	< 36 A	< 15 A
<b>Inputs, analog</b>	8 (4-20 mA)	8 (4-20 mA)	16 (4-20 mA)
<b>Resolution</b>	10 Bit	12 Bit	12 Bit
<b>Inputs, digital</b>	16	20	44
<b>Number of counters upwards and down (Signal form: +/-90° or pulse + direction)*</b>	4	4	4
<b>Outputs , digital</b>	12	16	40
<b>Max. power</b>	1 (2) A	1 (2) A	1 (2) A
<b>Overload and short circuit protection</b>	•	•	•
<b>Recovery diode</b>	•	•	•
<b>Number of PWM-enabled outputs (any one digital output used at one time)</b>	8	4	12
<b>Max. power</b>	2 A	2 A	2 A
<b>Basic frequency</b>	Up to 400 Hz (configurable)	200 Hz (configurable)	200 Hz (configurable)
<b>Resolution</b>	8 Bit	8 Bit	8 (10) Bit
<b>Number of load relays</b>	1	1	1
<b>Max. circuit capacity</b>	150 W	150 W	150 W
<b>Max. power</b>	< 7.5 A	< 10 A	< 10 A
<b>Dimensions (in mm)</b>	271 x 223 x 91	270 x 190 x 140	270 x 190 x 140
<b>Operating temp. range</b>	-30° C to +75° C	-30° C to +75° C	-30° C to +75° C
<b>Storage temperature range</b>	-40° C to +75° C	-40° C to +85° C	-40° C to +85° C

\* Reduced maximum number of digital inputs

Developed and tested according to the following norms and guidelines:  
EN13000, EN61000-6-2, EN61000-6-4, EN60068-2-29, EN60068-2-64

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