



# spectrum 4

Performance and power for the largest machinery.



Scale 1:3

**Quality in Control.**



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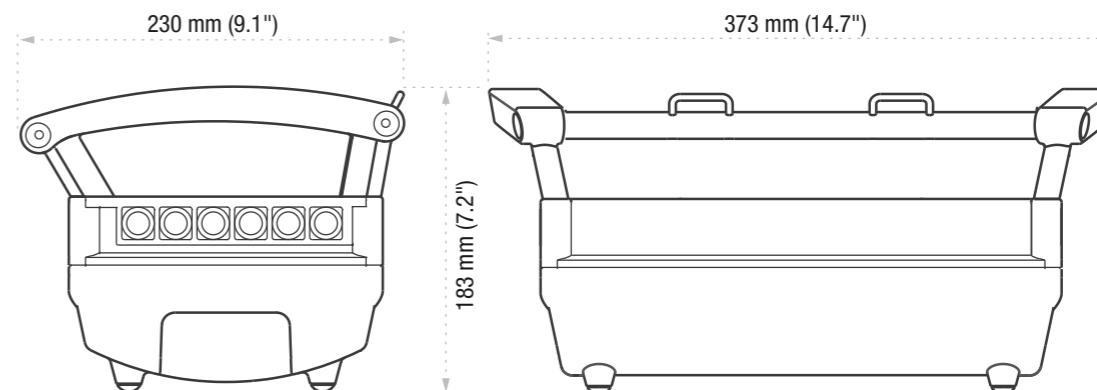


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## Technical data

|                                  |  |                                   |                       |
|----------------------------------|--|-----------------------------------|-----------------------|
| <b>Radio transmitter</b>         | spectrum 4   |                                   |                       |
| <b>Combined with</b>             | FSE 510 / 516 / 524, FSE 726 / 727 / 736 / 737 / 776 / 777 radiobus®   |                                   |                       |
| <b>Control concepts</b>          | Point-to-point operation, catch-release, combined operation (tandem, trio, quattro), pre-selection of trolley / hoist; cable option  |                                   |                       |
| <b>Operating elements</b>        | Up to 6 joysticks or up to 10 linear levers; combination of push buttons, toggle switches, rotary switches (maintained / spring- return) and other operating elements; a total of 8 one-step push buttons on the sides; <i>optional</i> : joysticks with integrated button; z-axis switches for the simultaneous control of 3 drives                   |                                   |                       |
| <b>Control functions</b>         | Up to 32 control functions (on / off); up to 12 analog functions for joysticks / linear levers; up to 4 additional analog functions, e. g. for potentiometer switches; number of control functions expandable by radiobus® modules   |                                   |                       |
| <b>Indication</b>                | LED / acoustic signal / transmitter vibration: operating status, battery status  |                                   |                       |
| <b>Safety</b>                    | E-STOP: PL d category 3 according to EN ISO 13849-1:2015<br>Protection from unauthorized use: activation via HBC start-up sequence or merlin® TUC<br>Auto Power Off: automatic deactivation of the transmitter after 15 min without command input<br>Auto Movement Off: automatic deactivation of movement functions after 5 min without command input |                                   |                       |
| <b>Enhanced safety functions</b> | radiomatic® shock-off / zero-g / inclination switch; <i>optional</i> : access control with merlin® TUC, radiomatic® infrakey, micro / orthogonal drive, two-step enabling switch, radiomatic® touch-to-activate, front panel lighting, flashlight, shut-down on implausible control commands   |                                   |                       |
| <b>Feedback to the operator</b>  | Information and warnings via 16 LEDs and / or transmitter vibration; number of LEDs expandable by radiobus® modules  |                                   |                       |
| <b>Service concept</b>           | radiomatic® iLOG, radiomatic® ADCON, merlin® TMC (Teach Mode Card) for teaching of hydraulic functions   |                                   |                       |
| <b>Frequency ranges</b>          | <b>ISM bands</b>   | <b>Channel spacing</b>            | <b>Radiated power</b> |
|                                  | country-specific use:<br>405 – 475 MHz<br>865 – 870 MHz<br>902 – 928 MHz   | 12.5 / 25 kHz<br>25 kHz<br>25 kHz | max. 10 mW            |
|                                  | country-independent use:<br>2.4 GHz: 2402 – 2480 MHz   | 1 MHz                             | max. 100 mW           |
|                                  | country-specific use:<br>DECT: 1790 – 1930 MHz   | 1.728 MHz                         | max. 250 mW           |
| <b>Frequency management</b>      | Manual frequency switch, radiomatic® AFS, Adaptive Frequency Hopping, DECT   |                                   |                       |
| <b>Antenna</b>                   | Internal   |                                   |                       |
| <b>Battery technology</b>        | Rechargeable Li-ion exchange battery; <i>optional</i> : capacity gauge via LEDs; continuous operating time: typically 40 hours; <i>optional</i> : radiomatic® CPS  |                                   |                       |
| <b>Charging time</b>             | < 8 h (typ.)   |                                   |                       |
| <b>Housing material</b>          | Plastic (PA6GF30)  |                                   |                       |
| <b>Dimensions / weight</b>       | 183 x 373 x 230 mm (7.2" x 14.7" x 9.1") / approx. 3.5 kg (7.7 lb.)  |                                   |                       |
| <b>Operating temperature</b>     | -20 °C ... +70 °C (-4 °F ... 158° F)   |                                   |                       |
| <b>Protection class</b>          | IP 65  |                                   |                       |

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spectrum 4 offers 100 or more control commands and a comfortable design. This transmitter is the perfect choice for machines with a large range of sophisticated functions. There is enough room for all different types of operating elements that can be customized by means of individual configuration. Moreover, a huge selection of additional features as well as the powerful batteries leave nothing to be desired.

## Valuable features at a glance:



### Functionally safe commands

#### Enhanced safety functions for particular scenarios

Apart from the E-STOP, the radio control is available with further safe commands corresponding to PL d category 3 according to EN 13849-1:2015.



### radiomatic® CPS (Continuous Power Supply)

#### Changing the battery without interrupting work

The operator can change the battery without having to deactivate the radio transmitter. The control and machine remain activated. As a result, this function is ideally suited for long machine use where no interruption is desired.



### radiomatic® touch-to-activate

#### Protection against unintended initiation of commands

In order to enable movement commands, the operator has to touch the roll-over bar or the joystick button. This will protect the operator against unintended machine movements.

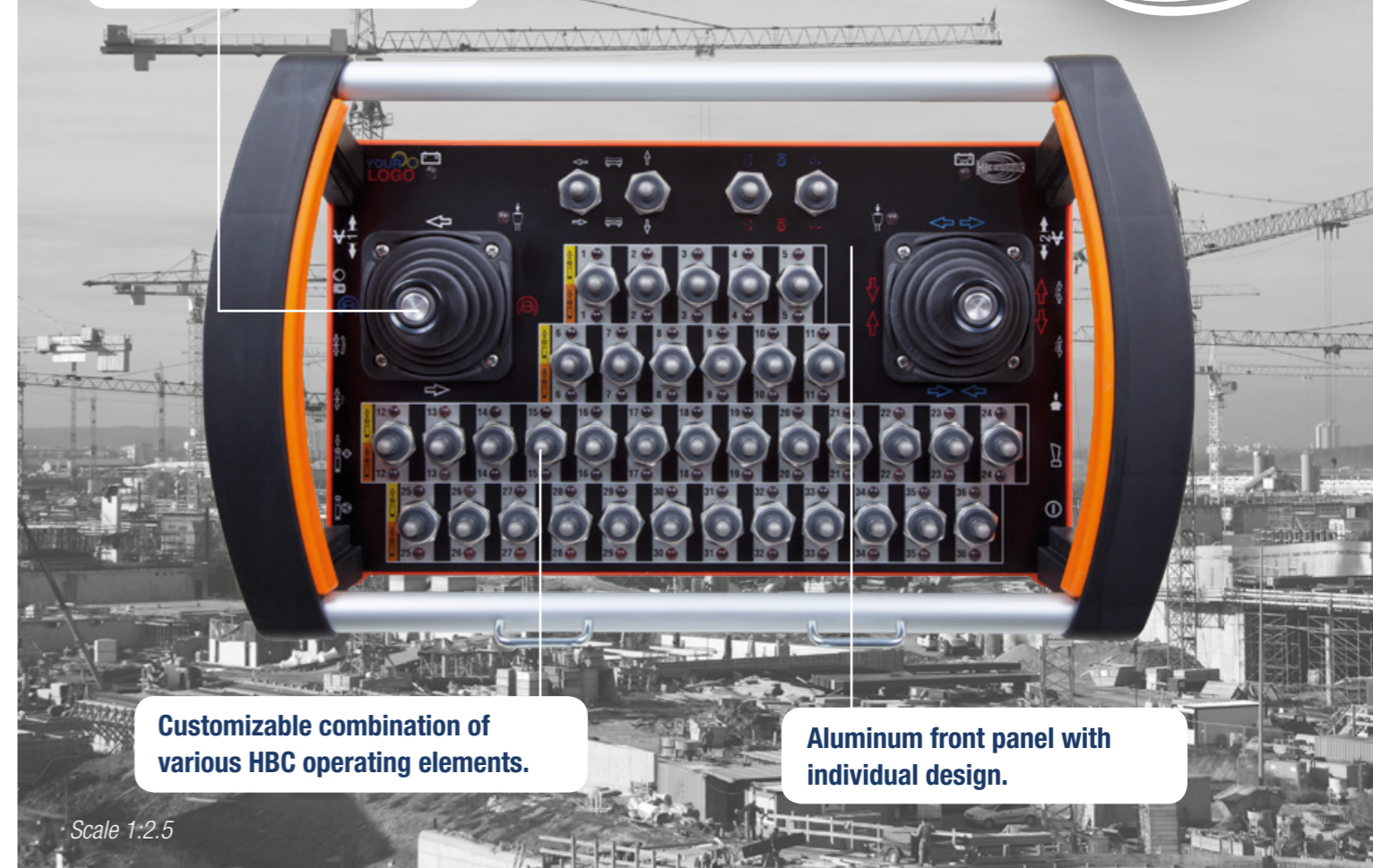


### Front panel lighting and flashlight

#### Clear vision even in the dark

These useful features can be conveniently activated at the touch of a button.

Up to 6 HBC joysticks with all-metal finish, alternatively up to 10 linear levers.



Customizable combination of various HBC operating elements.

Aluminum front panel with individual design.

Scale 1:2.5



Version with joysticks and linear levers.



E-STOP.



Front view.



High-performing Li-ion exchange batteries, optional with capacity gauge.



radiomatic® iLOG for the quick activation of a spare transmitter.



Carrying with the hip belt.