Firefighting Robot FMBOT 4800

The FMBOT 4800 is a high-output, tracked firefighting and reconnaissance robot designed to deliver water or foam from a safe stand-off distance in hazardous industrial environments.

Opis produktu:

The platform combines HD video surveillance with an integrated Thermal Imaging Camera (TIC) to support situational awareness and heat-source identification in low visibility and smoke, subject to standard operational risk assessment and communications conditions.

Key Features

- High-output stand-off attack – 4,800 l/min (80 l/s) at 10 bar with ≥85 m throw enables effective knock-down and exposure cooling while keeping crews further from heat, flame and potential explosion zones.
- TIC-enabled decision support – integrated Thermal Imaging Camera (TIC) helps locate hot spots, hidden fire spread and heat signatures in low visibility, improving tactical choices and reducing time-to-target.
- Hazardous-industry suitability – Exd [ib] IIB T4 Gb marking supports use in many explosive-risk industrial areas where personnel entry is restricted or delayed.
- All-terrain tracked access – strong traction, obstacle-crossing capability and climbing performance help the robot reach positions that are unsafe or inaccessible for appliances and crews.
- Precise remote water/foam delivery – remotely controlled pan/tilt monitor with jet/fog adjustment, presets and oscillation supports controlled sweeping, boundary cooling and defensive coverage.
- Reliable remote operation & command visibility – digital HD transmission with MESH networking (range conditions dependent) supports safer standoff control and real-time incident oversight.
- Operational robustness – IP65-rated protection, wading capability and adjustable lighting support harsh weather, spray, dust and night operations.
- Lower operator workload, better safety margin – radar obstacle avoidance plus two-way audio support safer navigation and clearer coordination during complex industrial incidents.

Technical data

Parameter	Specification
Explosion protection marking	Exd [ib] IIB T4 Gb
Overall dimensions (L × W × H)	1780 × 900 × 1300 mm
Weight	≤ 720 kg
Drive system	Electric, 2 × 3000 W
Undercarriage & traction	All-terrain high-strength crawler (all-metal internal skeleton); traction force 5800 N
Mobility	Max speed up to 7.5 km/h; obstacle crossing 260 mm; roll angle 35°; climbing ability 40°; turning diameter 1900 mm
Control modes	Wireless remote control + gesture control + following control
Endurance	Continuous running 3 h; working hours 50 h
Communications	Digital-data HD transmission (MESH; OFDM/MIMO); point-to-point / ad hoc network; multi-robot control; range up to 1.5 km (conditions dependent)
Protection	Ingress protection IP65; wading depth 400 mm
Lighting	20 W (adjustable)
Lifting mast	Multi-stage lift; lifting distance 650 mm
Obstacle avoidance	Millimetre-wave radar obstacle avoidance; max distance 5 m; channel detection
Recognition functions	Speech recognition + binocular recognition + flame recognition; flame/smoke identification
Cameras	360° HD panoramic camera + HD zoom camera (30×); integrated Thermal Imaging Camera (TIC) for heat-source detection
Audio	Bidirectional audio transmission; microphone-array sound-source localisation
Fire monitor	Water or foam; 10 bar (1.0 MPa); jet/fog (continuously adjustable); max flow 4,800 l/min (80 l/s); range ≥ 85 m; rotation: H −45° to +45° / V 0° to −85°; 3 inlets; remote pan/tilt with presets/oscillation
Remote control terminal	360 × 245 × 70 mm; 3.5 kg; 10″ high-brightness LCD; operating time 7.5 h; Windows 10
Optional detection & transport	Multi-gas detector (optional) 11–12 gases (sensor set dependent); lifting-platform environmental detection (optional); trailer (1 robot) / transport vehicle (up to 4 robots)

Primary Applications

Industrial firefighting support (outdoor & indoor, subject to risk assessment) • Petrochemical sites, refineries and fuel depots • Oil & gas tank farms and pipelines • Chemical plants and process facilities • Warehouses, logistics yards and external storage areas • Exposure protection and defensive cooling • Remote reconnaissance + suppression coordination on large incidents • Multi-robot large-area operations

Compliance & Certification

Explosion protection marking: Exd [ib] IIB T4 Gb.

Ingress protection: IP65.

Product-Market Insight

Positioned for European industrial and municipal rescue services seeking risk-reduced suppression and better situational awareness, the FMBOT 4800 combines a high-flow monitor with TIC-enabled reconnaissance and reliable tracked mobility. It is a strong fit for sites where access is restricted, hazards are elevated, and commanders need real-time video/thermal insight to deploy crews and water/foam more effectively.