Ex Zone 1 / 2 (Gas)
Ex Zone 21 / 22 (Dust)
Hazardous areas

EXPLORER Panel PC

For modern Operation and Visualization on-site
in hazardous areas Zone 1 / 2 (Ex Gas) and Zone 21 / 22 (Ex Dust)

- Pharmaceutical Industry
- Chemical Industry
- Oil & Gas
- Biotechnology
- Food & Beverages
- Life Science
- And many more...

GCMA
A member of The MTL Instruments Group plc

EXPLORER 15i Panel PC
EXPLORER 18i Panel PC

Operating station with integrated Panel PC for Ex Zone 1/2/21/22 in the plant – flexible modular design

Designed as a PANEL PC, the new EXPLORER is also based on a modular concept - in line with our world-wide established CHALLENGER remote PC terminals.

Whether for local display or operation of software in Ex Zone 1 / 2 / 21 / 22, for client server applications, such as a web terminal or for control of PLC, balances etc - the EXPLORER Panel PC offers maximum adjustability to individual requirements.

All operating and visualization components (display, touch screen, trackball, joystick, keyboard...) can be configured according to the requirements of the plant. Constructed as intrinsically safe panel mounting modules and certified for Ex Zone 1 / 2 (Gas), Zone 21/22 (Dusts) the EXPLORER Panel PC can easily be integrated into our FHP standard enclosure, as well as existing enclosures, walls and cabinets.

In addition to the Ethernet interface the EXPLORER offers USB, RS232, RS485 and RS422 interfaces to integrate further electrical equipment or for the functionality of WLAN or BLUETOOTH.

With our new EFU converter we have created the possibility to realize various ways of data transmission. The most important ways are: Ethernet via Fiber optic / Redundant Ethernet / Redundant Ethernet via Fiber optic....further options on request.

Ex II 2G Ex e mb [ia] IIC T4

APPLICATION

PHARMACEUTICAL INDUSTRY

CHEMISTRY

OIL & GAS

AUTOMOBILE PRODUCTION

WASTEWATER TREATMENT PLANT

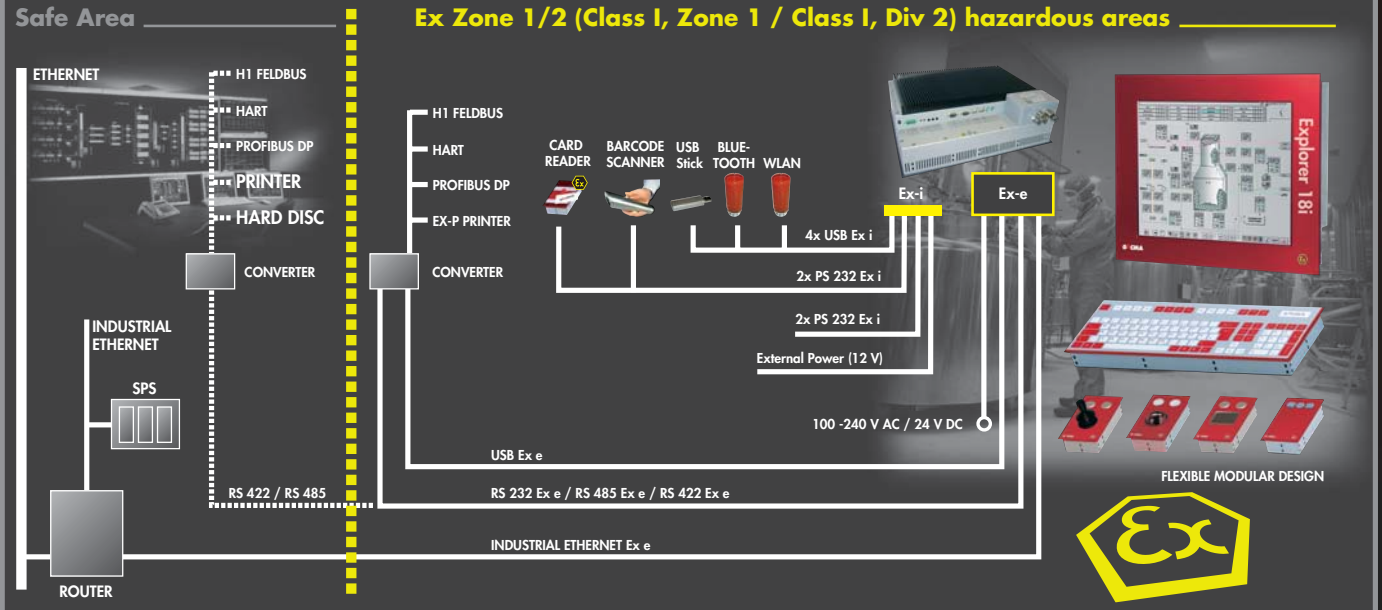
COAL-FIRED POWER PLANT

INCINERATION PLANT

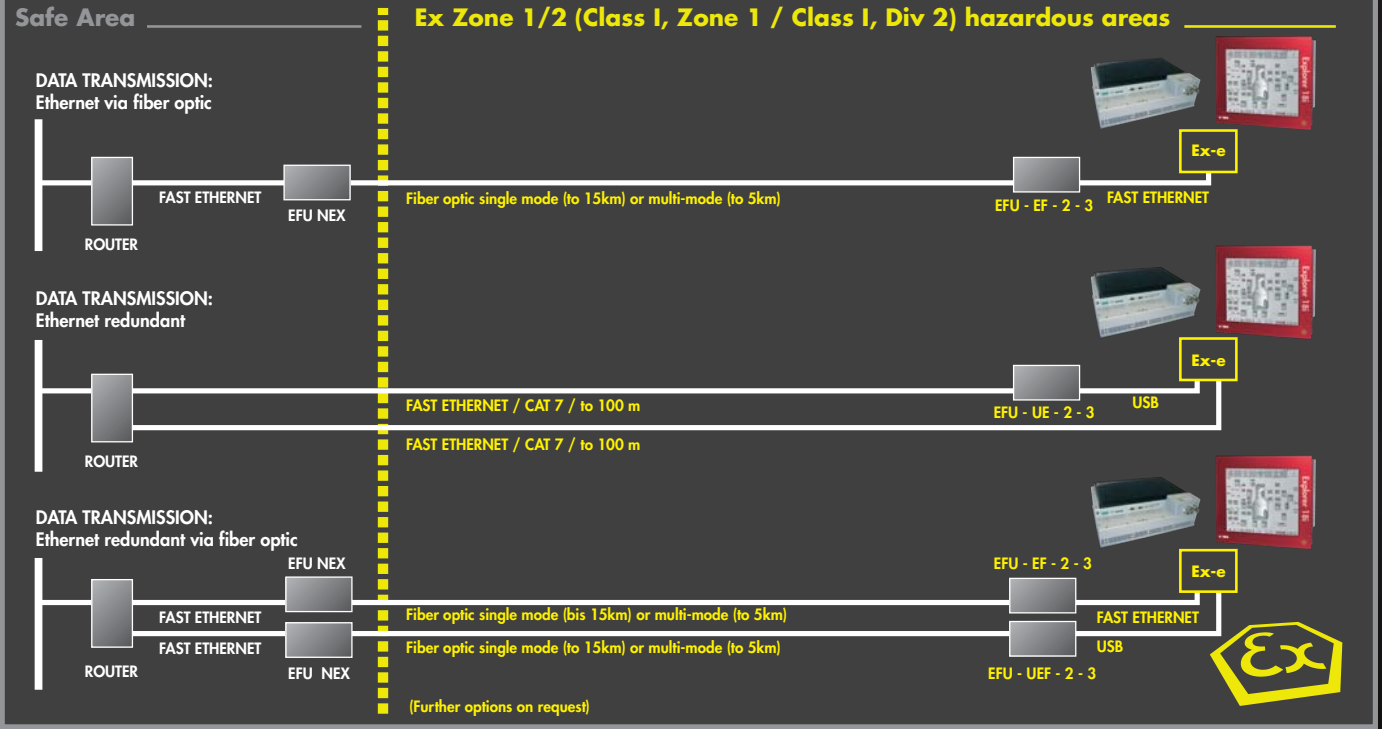
OTHER

OPERATING PRINCIPLE

EXPLORER operating principle – Data transmission via Ethernet



Further data transmission options via Ethernet / fiber optic



COMPUTER PERFORMANCE		
CPU	**RAM**	**HARD DISC**
• 1.6 GHz	• 1024 MB	• 60 GB HDD or • Compact Flash, up to 4 x 2 GB - 4 GB (other sizes on request)
Ethernet	**USB INTERFACES**	**SERIAL INTERFACES**
• Ex e available	• 4 x USB Ex i • 1 x USB Ex e	• 2 x RS 232 Ex i • 1 x RS 232 Ex e or 1 x RS 485 Ex e or 1 x RS 422 Ex e

(Subject to modifications and amendments / no liabitility for misprints and errors.)

FLEXIBLE MODULAR DESIGN

VISUALIZATION

TFT Display / Panel PC
- Panel-mount design
- Ingress protection IP 66 / NEMA 4X from front
- 15" screen diagonal (up to XGA)
- 19" screen diagonal (up to SXGA)
- Capable of displaying more than 16 million colors
- Glass front with an anti-reflective chemical coating
- Protection class GAS: Ex II 2G Ex e mb [ia] IIC T4
- Protection class DUST: Ex II 2D Ex tD A21 IP 6X T 120 °C
- ATEX certified (UL, C-UL and others in process)

OPTION: High-brightness Display
- High Brightness 650cd/m²
- Brightness control via sensor automatically or manually
- Protection class GAS: Ex II 2G Ex e mb [ia] IIC T4
- Protection class DUST: Ex II 2D Ex tD A21 IP 6X T 120 °C
- ATEX certified (UL, C-UL and others in process)

OPERATION

OPTION: Touch Screen
- Touch Screen as foil or glass version
- Resistive touch technology
- 5-wire technology
- Can be operated with gloves, pen and fingers
- Protection class GAS: Ex II 2G Ex e mb [ia] IIC T4
- Protection class DUST: Ex II 2D Ex tD A21 IP 6X T 120 °C
- ATEX certified (UL, C-UL and others in process)

Touch Pad
- Intrinsically safe Panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- Special resistive foil
- Optimum resolution – 200 dpi
- 2 pushbuttons
- Can be operated with gloves, pen and fingers
- Protection class: Ex II 2G Ex ia IIC T4
- ATEX certified (UL, C-UL and others in process)

Joystick
- Intrinsically safe Panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- High-precision mouse guidance
- Wearless up to 15 million actuations
- Extremely low-maintenance
- 2 pushbuttons, optionally 3 pushbuttons
- Button-in-joystick function optionally
- Protection class GAS: Ex II 2G Ex ia IIC T4
- ATEX certified (UL, C-UL and others in process)

Trackball
- Intrinsically safe Panel-mount module
- Ingress protection IP65 from front
- 55 mm ball
- 2 pushbuttons, optionally 3 pushbuttons
- Protection class GAS: Ex II 2G Ex ib IIC T4
- ATEX certified (UL, C-UL and others in process)

Keyboard
- Intrinsically safe Panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- Foil protected short stroke keyboard
- 105 keys, IBM* compatible
- Standard layouts: German, English, French
- More than 30 languages on request
- Special layouts on request
- TECHNOPLAST - resistant against many solvents
- Protection class GAS: Ex II 2G Ex ia IIC T4
- ATEX certified (UL, C-UL and others in process)

Mouse
- Intrinsically safe Panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- 4-step pressure-sensitive mouse guidance
- 2 pushbuttons
- Protection class GAS: Ex II 2G Ex ib IIC T4
- ATEX certified (UL, C-UL and others in process)

ACCESS CONTROLS

Card Reader
"CFR 21 part 11"
- Intrinsically safe Panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- Non-contact identification
- Mifare protocol as standard (others on request)
- Suitable for the majority of company IDs
- Connection: RS 232 serial interface
- Protection class GAS: Ex II 2G Ex ib IIC T4
- ATEX certified (UL, C-UL and others in process)

Fingerprint
"CFR 21 part 11"
- Intrinsically safe Panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- Contact identification < 500 dpi
- Via C-MOS sensor
- Connection: RS 232 serial interface
- Protection class GAS: Ex II 2G Ex ib IIC T4
- ATEX certified (UL, C-UL and others in process)

(Further certifications in process.)

ENCLOSURE / MOUNTINGS

FHP Standard Enclosure

Floor mounting

Wall mounting

Mounting on the ceiling

Field Desk Enclosures
- Hygienic, ergonomic Field Desk Enclosure to house the Display, Keyboard, Mouse or Trackball, Card Reader or Fingerprint
- Keyboard inclined by 30°
- Protection system IP 66 / NEMA 4X
- Stainless Steel 1.4301 (1.4404/316L opt.)
- Polished to 240 granulation

The EXPLORER components can be installed in any desired enclosure because all components for operation and visualization are certified for intrinsic safety independent of the enclosure.

SPECIAL ENCLOSURES

(Further on request)

COMMUNICATION

Data communication Ethernet/Fiber optic/USB:

NEW

EFU Converter

- Ethernet – Fiber optic
- USB – Ethernet
- USB/Ethernet – Fiber optic
- Ethernet/Fiber optic – for non ex area converter
- Ex II 2(1) G Ex e q (op is) IIC T4 or Ex II 2(1) G Ex q (op is) IIC T4 or Ex II 2 G Ex e q II T4 or Ex II 2 G Ex q II T4
- Ex II 2(1) D Ex tD A21 IP64 T130°C or Ex II 2 D Ex tD A21 IP64 T130°C
- Ex II (1) GD [Ex op is T4 Ga] IIC

Wireless Communication:

NEW

USB Bluetooth

- For connection to intrinsically safe USB interfaces
- Antenna integrated (Maximum distance 100m)
- Class I, USB V 1.1
- Ingress protection IP66
- Ex II 2G Ex ia IIC T4 / Ex II 2D Ex tD A21 IP 6X T 135°C

NEW

USB WLAN

- For connection to intrinsically safe USB interfaces
- Wireless lan / IEE 802.11b / IEE 802.11g
- WEP / WPA
- Antenna integrated (54/108 Mbit/s)
- Ingress protection IP66
- Ex II 2G Ex ia IIC T4 / Ex II 2D Ex tD A21 IP 6X T 135°C

Data transfer:

NEW

USB Memory Stick

- For connection to intrinsically safe USB interfaces
- 1 GB / 2 GB
- Ex II 2G Ex ia IIC T4 / Ex II 2D Ex tD A21 IP 6X T 135°C

NEW

USB Key

- For connection to intrinsically safe USB interfaces
- Dongle/ license key for connection of manufacturer-specific software in hazardous areas
- Ex II 2G Ex ia IIC T4 / Ex II 2D Ex tD A21 IP 6X T 135°C

NEW

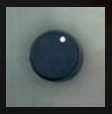
USB Docking Station

- Docking station as barrier for intrinsically safe USB devices
- For connection of intrinsically safe USB devices to a normal PC (for instance)
- For use in safe areas only (not in hazardous areas)
- Ex II (2)GD [Ex ia] IIC

OPTIONS & ACCESSORIES

BS Sensor

- Sensor mounted externally on the case for optimum adjustment of the display brightness
- Automatically regulated to the light conditions of the surroundings (e.g. direct solar radiation - high display brightness)



BS Regulator

- Regulator mounted externally on the case.
- For manual adjustment of the display brightness according to the light conditions of the surroundings

Barcode Scanner

- Barcode Scanner for all current barcodes (UPC, EAN, Code 128...)
- Contact-free recognition
- Automatic scan resolution (similar in design)
- Ingress protection IP65
- Protection class Ex II 2G Ex ib IIC T4

Key-Switch SW 1

- Key-Switch for locking the Keyboard / Mouse / Trackball on the EXPLORER
- Integrated in the EXPLORER enclosure
- Ingress protection IP 67 from front / NEMA 4X

Emergency-Stop-Button

- Emergency-Stop-Button to turn off individual connections (local connection)
- Ingress protection IP65 from front
- Protection class Ex II 2G Ex de IIC T6

(Further options on request)

TECHNICAL DATA / SERVICE

TYPE		EXPLORER 15i / 18i
UNIVERSAL	Processor	• Intel® Pentium® M Technology 1.6 GHz
	RAM	• 1024 MB
	Power supply	• 100 V - 240 V AC (wide range), 50 / 60 Hz, Typ. 75 W (optionally 24 V DC)
	MTBF backlights	• Typ. 50,000 h (temperature-dependent)
HARD DISC	Hard disc / Compact Flash	• HDD 60 GB • Compact Flash, up to 4 x 2 GB - 4 GB (other sizes on request)
	Software transfer	• Via USB stick / USB CD-ROM / NETWORK ETHERNET (Note: For software transfer in hazardous areas only certified equipment for hazardous areas is allowed)
INTERFACES	Profibus (optionally)	• Via USB interface
	Ethernet	• On board, 10/100 Mbit, Ex e
	USB (Universal Serial Bus)	• 4x USB Ex i • 1x USB Ex e
	Serial interface	• 2x RS 232 Ex i • 1x RS 232 Ex e or RS 485 Ex e or RS 422 Ex e
	Keyboard / Mouse	• 2x PS/2 Ex i
	Multimedia (optional)	• Line In/Out Ex i
OPTIONS & ACCESSORIES		• As touch design (foil or glass version) • As High-brightness Display (650 cd/m²) • EFU Converter - Data transmission Ethernet / Fiber optic / USB • USB Bluetooth • USB WLAN • USB Memory Stick • USB Key • USB Docking Station • Brightness control via sensor automatically or manually • Emergency off switch (to build in enclosure) • Key-Switch SW 1
ENVIRONMENTAL CONDITIONS	Protection class	• IP 66 (at the front) according to IEC60529, NEMA 4X
	Environmental temperature	• -20°C up to +40/50°C depending on ambient parameters e.g. airflow, type of enclosure etc. (optionally as low as -30°C)
	Relative humidity	• 10 % up to 90 % (non-condensing)
LICENSING	Protection method	• GAS: Ex II 2G Ex e mb [ia] IIC T4 • DUST: Ex II 2D Ex tD A21 IP 6X T 120 °C
	Certificates	• CE, ATEX (UL, C-UL and others in process)

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Offer made within 48 hours

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GECMA

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