



# EXPLORER Panel PC

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

**COOPER** Crouse-Hinds



A member of the  
MTL Instruments group

EXPLORER 15i Panel PC  
EXPLORER 18i Panel PC

TECHNICAL DATA

TYPE	EXPLORER 15i / 18i	
UNIVERSAL	Processor	<ul style="list-style-type: none"> <li>Intel® Pentium® M Technology 1.6 GHz</li> </ul>
	RAM	<ul style="list-style-type: none"> <li>1024 MB</li> </ul>
	Power supply	<ul style="list-style-type: none"> <li>100 V - 240 V AC (wide range), 50 / 60 Hz, Typ. 120 W (optionally 24 V DC)</li> </ul>
HARD DISC	MTBF backlights	<ul style="list-style-type: none"> <li>Typ. 50.000 h (Temperature dependent)</li> </ul>
	Hard disc / Compact Flash	<ul style="list-style-type: none"> <li>HDD 60 GB</li> <li>Compact Flash, up to 4 x 16 GB (other sizes on request)</li> </ul>
	Software transfer	<ul style="list-style-type: none"> <li>Via USB-Stick / USB CD-ROM / NETWORK ETHERNET (Note: For software transfer in hazardous areas only certified equipment for hazardous areas is allowed)</li> </ul>
INTERFACES	Profibus (optional)	<ul style="list-style-type: none"> <li>Via USB Interface</li> </ul>
	Ethernet	<ul style="list-style-type: none"> <li>On board, 10/100 Mbit, EEx e</li> </ul>
	USB (Universal Serial Bus)	<ul style="list-style-type: none"> <li>4x USB EEx i</li> <li>1x USB EEx e</li> </ul>
	Serial Interface	<ul style="list-style-type: none"> <li>2x RS 232 EEx i</li> <li>1x RS 232 EEx e oder RS 485 Ex e oder RS 422 Ex e</li> </ul>
	Keyboard / Mouse	<ul style="list-style-type: none"> <li>2x PS/2 EEx i</li> </ul>
	Multimedia (optional)	<ul style="list-style-type: none"> <li>Line In/Out EEx i</li> </ul>
OPTIONS & ACCESSORIES		<ul style="list-style-type: none"> <li>As Touch screen design (foil)</li> <li>HIGH BRIGHTNESS-Display (650 cd/m<sup>2</sup>)</li> <li>EFU Converter - Data transmission Ethernet / Fiber optic / USB</li> <li>USB Bluetooth</li> <li>USB WLAN</li> <li>USB Memory Stick</li> <li>USB Key</li> <li>USB Docking Station</li> <li>Brightness control via sensor automatically or manually</li> <li>Emergency off switch (to build in enclosure)</li> <li>Key-Switch SW 1</li> </ul>
ENVIRONMENTAL CONDITIONS	Protection class	<ul style="list-style-type: none"> <li>IP 66 (at the front)</li> </ul>
	Environmental temperature	<ul style="list-style-type: none"> <li>-20°C up to +40/50°C depending on ambient parameters e.g. airflow, type of enclosure etc.</li> </ul>
	Relative humidity	<ul style="list-style-type: none"> <li>10 % up to 90 % (non-condensing)</li> </ul>
LICENSING	Protection method	<ul style="list-style-type: none"> <li>GAS: Ex II 2G EEx e mb [ia] IIC T4</li> <li>DUST: Ex II 2D Ex tD A21 IP 6X T 120 °C. Relevant to the FHP IP66 - Enclosure</li> </ul>
	Certificates	<ul style="list-style-type: none"> <li>CE, ATEX, TIIS, Belarus</li> </ul>

CERTIFICATES



ATEX



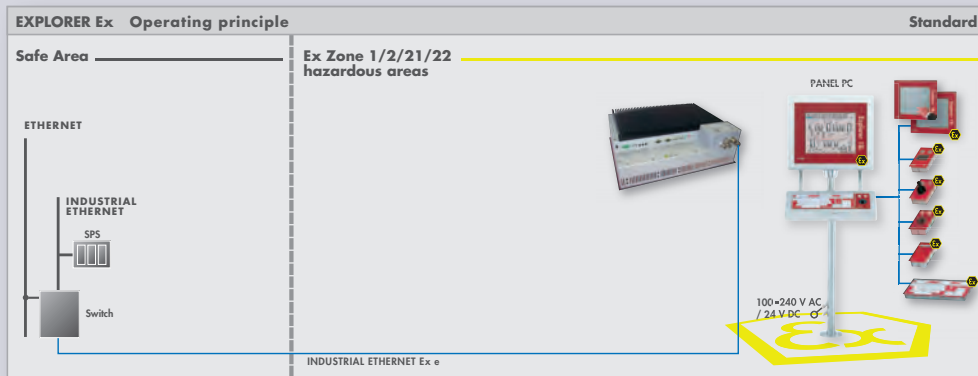
TIIS



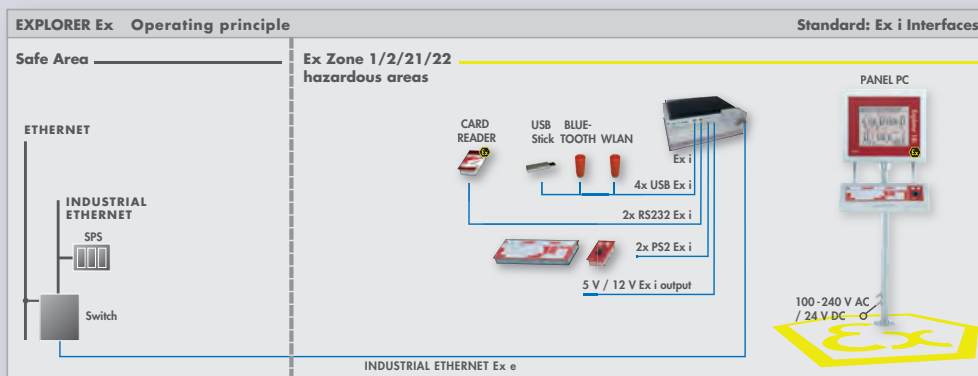
Belarus

# Explorer Operating Principles

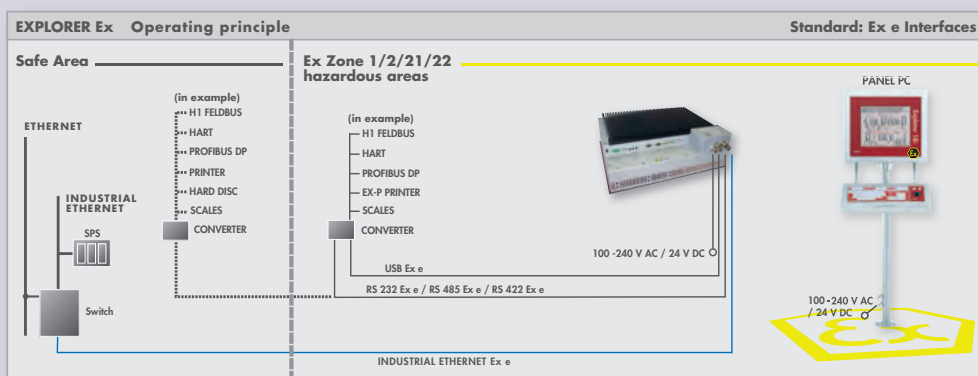
## Data transmission: Standard



## Data transmission: Standard Ex i Interfaces



## Data transmission: Standard Ex e Interfaces



## Visualisation/ Identification

## Operation



### 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 2D Ex tD A21 IP 6X T 120 °C
- ATEX/TIIS/Belarus



### High Brightness Display

as an Option for TFT Display

- High Brightness 650 cd/m<sup>2</sup>
- Brightness control via automatic sensor or manually
- Protection class GAS: Ex II 2G Ex e mb [ia] IIC T4
- Protection class DUST: Ex 2D Ex tD A21 IP 6X T 120 °C
- ATEX/TIIS/Belarus



### Touch Screen

as an Option for TFT Display

- 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/TIIS/Belarus



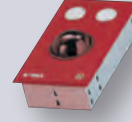
### Keyboard

- 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
- Polyesterfoil printed from behind - resistant against many solvents
- Protection class GAS: II 2G EEx ia IIC T4
- Protection class DUST: Ex II 2D Ex tD A21 IP 6X T 120°C
- ATEX/TIIS/Belarus



### Card Reader

- 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: II 2G EEx ib IIC T4
- ATEX/TIIS/Belarus



### Trackball

- Intrinsically safe panel-mount module
- Ingress protection IP65 from front
- 55 mm ball
- 2 pushbuttons
- Protection class GAS: II 2G EEx ib IIC T4
- ATEX/TIIS/Belarus



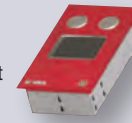
### Joystick

- 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: II 2G EEx ia IIC T4
- Protection class Dust: II 3D T60°C IP6x
- ATEX/TIIS/Belarus



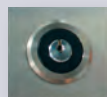
### Mouse

- Intrinsically safe panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- 4-step pressure-sensitive mouse guidance
- 2 pushbuttons
- Protection class GAS: II 2G EEx ib IIC T4
- ATEX/TIIS/Belarus



### Touch Pad

- Intrinsically safe panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- Special resistive foil
- High-definition resolution - up to 200dpi
- 2 pushbuttons
- Can be operated with gloves, pen and fingers
- Protection class Gas: II 2G EEx ia IIC T4
- Protection class Dust: II 3D T60°C IP6x
- ATEX/TIIS/Belarus



### Key-Switch SW1

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



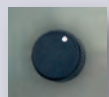
### BS Sensor

- 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)



### Emergency-Stop-Button

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

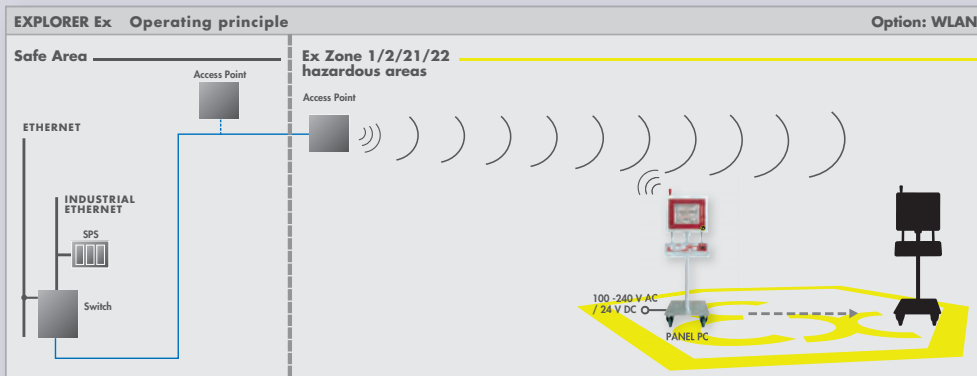


### BS Regulator

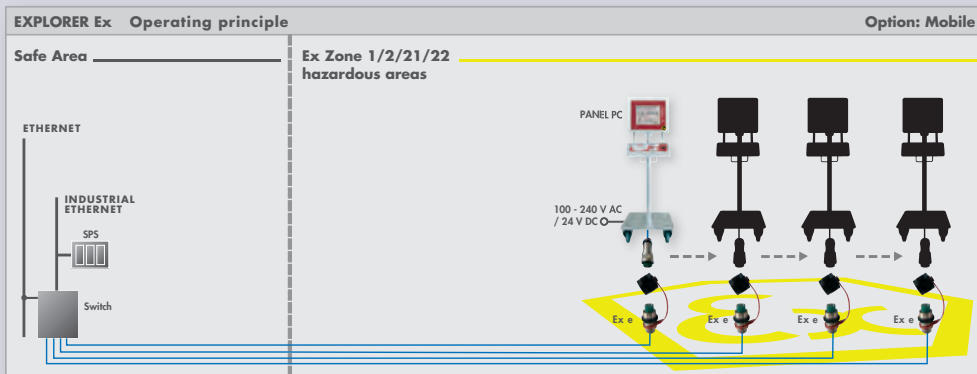
- Regulator mounted externally on the case.
- For manual adjustment of the display brightness according to the light conditions of the surroundings

# Mobile Solutions

## OPTION: WLAN



## OPTION: MOBILE



## EXPLORER 15i Panel PC EXPLORER 18i Panel PC



Designed as a PANEL PC, the EXPLORER is 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 EFU converter we have created the possibility to realize various ways of data transmission. The most important ways are: Ethernet via fibre optic / Redundant Ethernet / Redundant Ethernet via fibre optic... further options on request.

When an Explorer is installed in an enclosure that is IP 6x compliant (FHP), the complete assembly can be labelled as follows:

Ex II 2D Ex td A21 IP6X T120°C

## Enclosures

### ENCLOSURES / MOUNTINGS



FHP Standard Enclosure

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



Wall Mounting



Floor Mounting

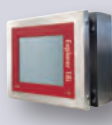


Ceiling Mounting

### Special Enclosures



VHH



VH



DH



DTH



SH 1



SH 2



SH 3



SH 4



SH 5



SH 6



SH 7



SH 8



SH 9



SH 10



SH 12



SH 15

### Data Communication Ethernet / Fibre optic / USB:



#### EFU Converter

- Ethernet - Fibre Optic
- USB - Ethernet
- USB/Ethernet - Fibre Optic
- Ethernet/Fibre Optic - for non Ex area converter
- Safety Code - Transmit:
  - Ex II (1) GD [Ex op is T4 Ga] IIC
- Safety Code - Receive:
  - Ex II 2(1) G Ex e q [op is] IIC T4
  - Ex II 2(1) D Ex tD A21 IP64 T130C°

### Wireless Communication:



#### USB Bluetooth

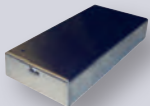
- For connection to intrinsically safe USB interfaces
- Antenna integrated
- Class I, USB V 1.1
- Range up to 100m
- Ingress protection IP66
- Ex II 2G Ex ia IIC T4 / Ex II 2D Ex tD A21 IP 6X T 135°C



#### USB WLAN

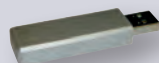
- For connection to intrinsically safe USB interfaces
- Wireless lan / IEE 802.11b / IEE 802.11g
- WEP / WPA
- 54/108 Mbit/s
- Antenna integrated
- Ingress protection IP66
- Ex II 2G Ex ia IIC T4 / Ex II 2D Ex tD A21 IP 6X T 135°C

### Data Storage and Transmission:



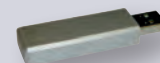
#### USB Docking Station

- Docking station as barrier for intrinsically safe USB devices
- For connection of intrinsically safe USB devices to a normal PC (for example)
- For use in safe areas only
- Ex II (2)GD [Ex ia] IIC



#### 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



#### USB Memory Stick

- For connection to intrinsically safe USB interfaces
- 2 GB / 4 GB / 8 GB
- Ex II 2G Ex ia IIC T4 / Ex II 2D Ex tD A21 IP 6X T 135°C

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