

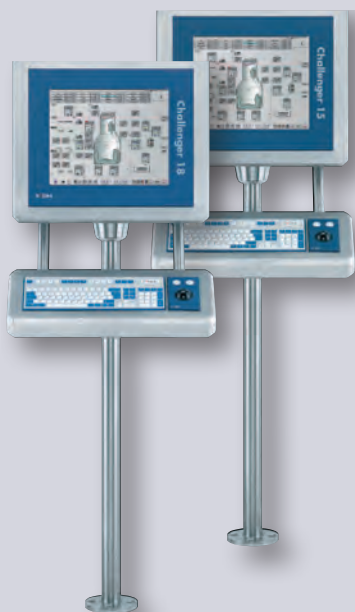


CHALLENGER

Remote PC Terminals

For modern Operation and Visualization on site
in hazardous areas Zone 1 / 2 and Zone 22
(Class 1, Zone 1 / Class 1, Div.2)

COOPER Crouse-Hinds



CHALLENGER 15i Remote PC-Terminal CHALLENGER 18i Remote PC-Terminal

BENEFITS

- Intrinsically safe certified components for operation and visualization
- Modular configuration
- Trouble-free PC hardware changes and software updates
- Ambient Temperature -10° C to +60° C
- Low installation costs
- Excellent and bright picture quality
- Savings of software costs by cascading up to 4 CHALLENGER to one PC

APPLICATIONS



PHARMACEUTICAL
INDUSTRY



CHEMICAL
INDUSTRY



OIL & GAS



AUTOMOBILE
PRODUCTION



WASTE WATER
TREATMENT PLANT



COAL FIRED
POWER PLANT



INCINERATION
PLANT



OTHER
PROCESSES

CERTIFICATES



ATEX



UL/C-UL



IECEX



TIIS



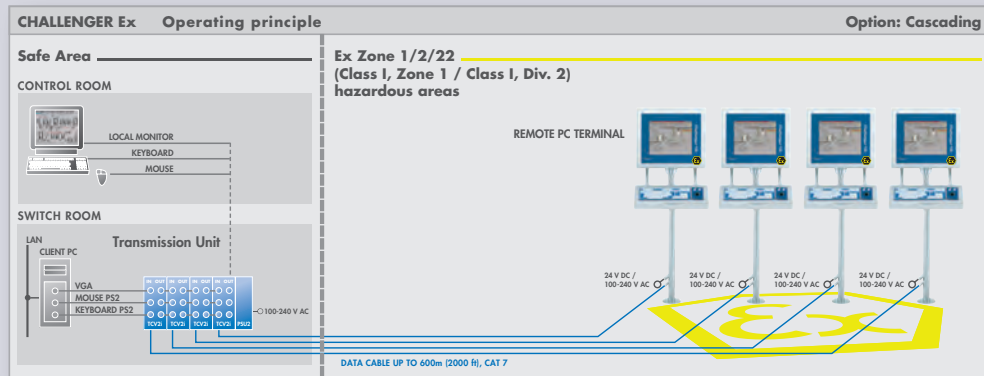
NEPSI...

tested by:

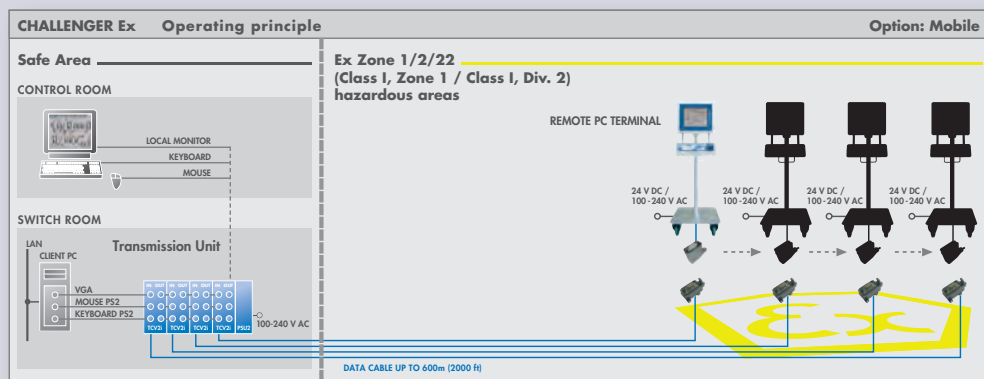


Operating Principles of Challenger

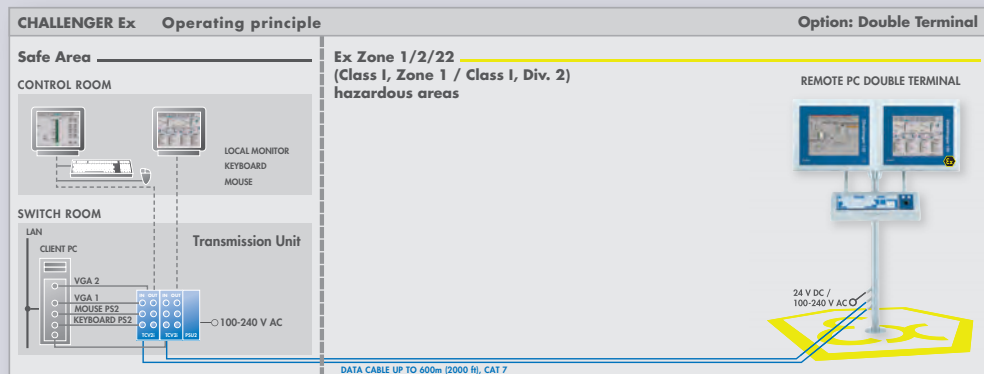
OPTION: CASCADING



OPTION: MOBILE



OPTION: DOUBLE TERMINAL



Visualisation/ Identification

Operation



TFT Display

- Intrinsically safe panel-mount module
- Ingress protection IP66 from front / NEMA 4x
- 15" screen diagonal (up to XGA)
- 19" screen diagonal (up to SXGA)
- Capable of displaying more than 16 million colors
- Protection class II 2G EEx ib IIC T4
- ATEX/UL/C-UL/TIIS/IECEX/NEPSI...



OPTIONAL HIGH BRIGHTNESS Display

- High-brightness 650cd/m²
- Brightness control via automatic sensor or manually
- Protection class II 2G EEx ib IIC T4
- ATEX/UL/TIIS/IECEX/NEPSI...



Card Reader

- Intrinsically safe panel-mount module
- Ingress protection IP66 from front /NEMA 4X
- Non-contact identification
- Mifare protocol as standard (others on request)
- Suitable for the majority of company ID's
- Connection: RS 232 serial interface
- Protection class II 2G EEx ib IIC T4
- ATEX/UL/C-UL/TIIS/IECEX/NEPSI...



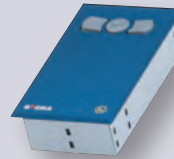
OPTIONAL TOUCH SCREEN Display

- Touch Screen as foil or glass version
- Resistive touch technology
- 5-wire technology
- Can be operated with gloves, pen and fingers
- Connection: RS 232 serial interface
- Protection class II 2G EEx ib IIC T4
- ATEX/UL/TIIS/IECEX/NEPSI...



Keyboard

- Intrinsically safe panel-mount module
- Ingress protection IP66 / 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 Ex II 2G Ex ib IIC T4
- Protection class DUST: Ex II 2D Ex tD A21 IP 6X T 120°C
- ATEX/UL/C-UL/TIIS/IECEX/NEPSI...



Mouse

- Intrinsically safe panel-mount module
- Ingress protection IP66 from front / NEMA 4X
- 4-step pressure-sensitive mouse guidance
- 2 pushbuttons
- Protection class II 2G EEx ib IIC T4
- ATEX/UL/C-UL/TIIS/IECEX/NEPSI...



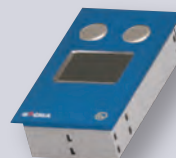
Trackball

- Intrinsically safe panel-mount module
- Ingress protection IP65 from front
- 55 mm ball
- 2 pushbuttons
- Protection class II 2G EEx ib IIC T4
- ATEX/UL/C-UL/TIIS/IECEX/NEPSI...



Joystick

- Intrinsically safe panel-mount module
- Ingress protection IP66 from front / NEMA 4X
- 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: Ex II 3D T 60°C IP 6X
- ATEX/TIIS/IECEX/NEPSI...



Touch Pad

- Intrinsically safe panel-mount module
- Ingress protection IP 66 from front/ NEMA 4X
- 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: Ex II 3D T 60°C IP 6X
- ATEX/TIIS/IECEX/NEPSI...

Operating Principles Data transmission extended to Touch Screen and Card Reader

Data transmission: Standard

Data connection at PC:

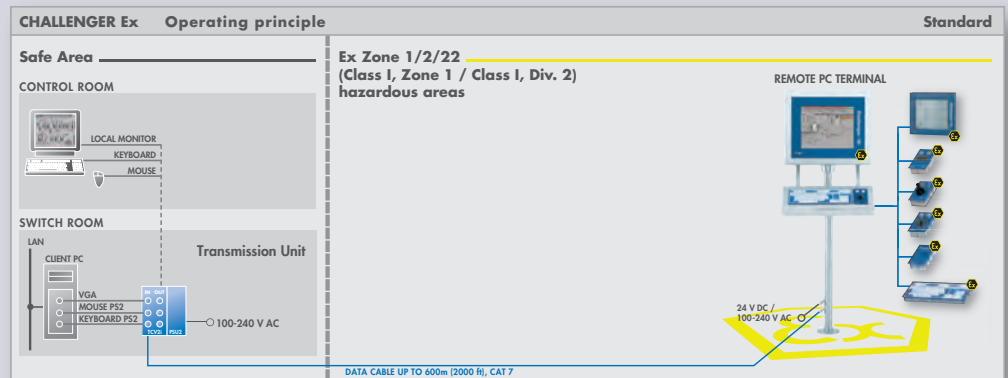
- Connection: VGA, PS2 Mouse, Keyboard at PC

Data transmission:

- Via TCV2i transmission unit and Twisted-pair data cable CAT7
- TCV2i transmission unit & PSU2 power supply pre-mounted at Rack 42 / Rack 84 (100-240V AC)
- Connection: VGA/Keyboard/Mouse locally as an option
- Cascadable up to 4 transmission units / CHALLENGER

Connection at Remote PC-Terminal:

- Data cable mounted at 10-pin screw socket at the display
- Connection: 24V DC at PSU14i or 100-240 V AC at PSU150i



Data transmission:

- Extended to RS232 (COM Port) for Touch Screen / Card Reader

Data connection at PC:

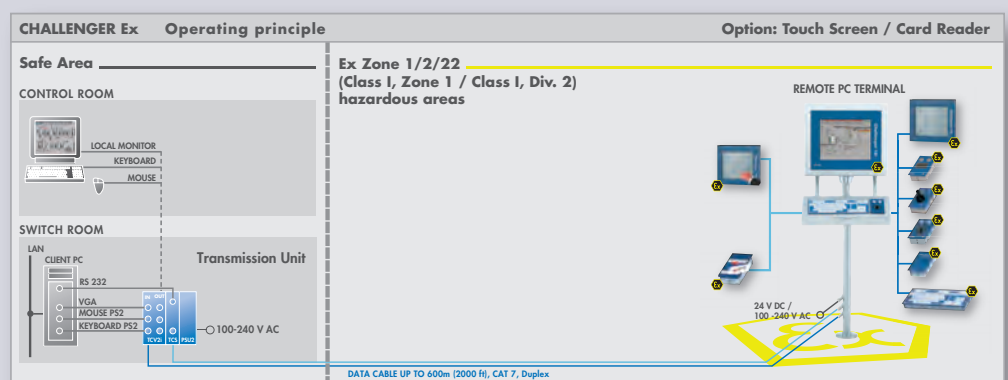
- Connection at the PC via RS232

Data transmission:

- Via RS232 transmission unit (TCS/RSI card) and 2nd twisted-pair data cable CAT7

Data connection PC-Terminal:

- Mounted at 12-pin screw socket at the display



CHALLENGER Remote PC-Terminals

CHALLENGER 15i Remote PC-Terminal CHALLENGER 18i Remote PC-Terminal



CHALLENGER PC Terminals are an optimum solution for demanding tasks in on-site operation and visualization in Zone 1 / 2 / 22 hazardous areas.

In the SAFE area the CHALLENGER transmission unit picks up the data from a PC via VGA / KEYBOARD / PS2 MOUSE and transmits the data up to 600m /2000ft to the CHALLENGER Terminal on site – in hazardous area zone 1 / 2 / 22. High quality bright images are visualized at the terminal.

CHALLENGER Terminals can be configured in a modular manner to meet with the plant installation requirements. All the components including the display, touch screen, keyboard, pointing devices, etc. - are certified for use in hazardous areas as control panel-mounted modules and can be mounted independently into various enclosures / walls or into our CHALLENGER FHP standard enclosure which provides environmental protection.

Intrinsically safe Remote PC terminals for hazardous areas Zone 1 / Zone 2 / Zone 22 (non-conductive dusts)

Certified by ATEX, IECEx, TIIS, FTZU, UL/C-UL (Class I, Zone 1 / Class I, Div. 2), NEPSI ...

Enclosures

FHP STANDARD ENCLOSURE



- Hygienic, ergonomic Field Desk Enclosure to house 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

Interfaces and Camera



RS 232 Interface

- Fully duplex-capable RS 232 Interface
- Intrinsically safe model or industry model including separate data cable for the connection of all RS 232-compatible equipment
- Protection class:
Transmission unit: II 2G EEx ib IIC T4
Receiving unit: II (2)G [EEx ib] IIC
- ATEX, UL, C-UL, TISS ... certified



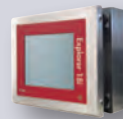
Video Camera

- Ex-protected Video Camera as Ex-d model including separate CHALLENGER Interface UVI
- Ambient Temperature -20°C to +50°C
- Ingress protection IP65
- Protection class II 2G EEx de IIC T6

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

Options and Accessories



Key Switch SW2

- Key switch integrated into the Rack 42 / Rack 84
- To lock Keyboard / Mouse / Trackball on the CHALLENGER or to lock the control room operation



Key Switch SW1

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



Emergency Stop Button

- Emergency Stop Button to turn off individual connections (local connection)
- Ingress protection IP 65 from front
- Protection class II 2G EEx de IIC T6

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