

TNCNP / ELB F-351



Features

Technor's EEx p pressurized systems are designed and purpose built according to each client's requirements. Our ability to deliver "Custom Made", is one of the main reasons for choosing a Technor solution. Technor deliver turnkey solutions with enclosures made in acid resistant stainless steel, SS316, all certified by DNV.

Main advantages by choosing TNCNP:

- Large flexibility regarding design of panels.
 - Tailor solutions according to clients request.
 - Excellent solution by use of electrical components:
 - With great heat dissipation.
 - With large physical measures and weight.
 - High operational reliability and cost efficiency, reduced lifetime maintenance costs.
- ATEX approved.

Options:

- Windows (max.size: 0,3m2 for each window)
- Mounting plates
- Lifting lugs
- Socket
- Transit frames
- Certified components mounted in door or walls
- One or several doors

Technor

EEx p solutions

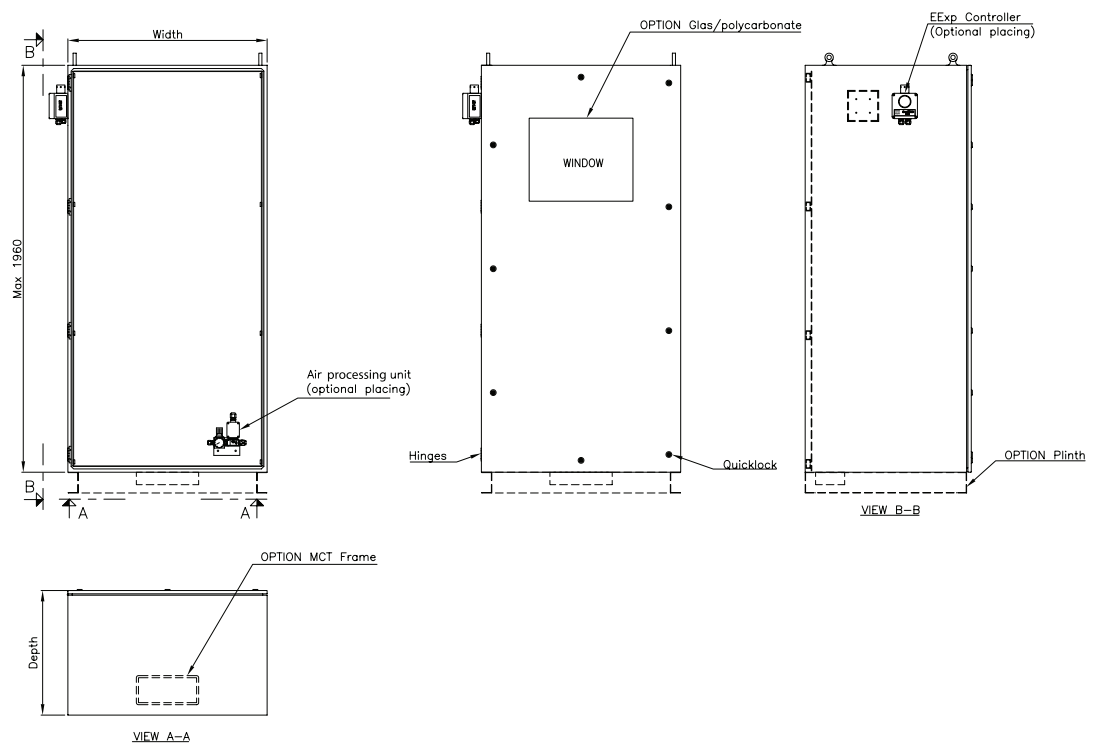
Applications

For use of standard (non-ex) electrical components in zone 1 and 2.

- Monitoring systems
- Control systems
- Computers (both traditional and LCD monitors)
- Driller consoles
- Large motor starters

General Specifications

Material	Acid resistant stainless steel SS316
IP Rating	IP66/IP67
Temperature	-40°C - +60°C
ATEX approvals	DNV-2003-OSL-ATEX-0028 (complete enclosure) DNV-2003-OSL-ATEX-0027U (empty enclosure)
Standards	EN50014, EN50016 IEC60079-0, IEC60079-2
Ex-Code	EEx p II ⊕ II 2 G
Lid/Door gasket	Neoprene (temp. -40°C to +100°C) Silicone (temp. -40°C to +200°C)
Surface treatment	Acidized as standard Electro polished as an option
Earthing	Internal earth bar/bracket External earth bracket



EEx p control unit F-351

Specification for EEx p control unit F-351

Material	GRP, epoxy resin, black
IP Rating	IP65
Temperature	Operating: -30°C - +60°C, without condensation
ATEX approvals	TÜV 02ATEX1801
Standards	EN50014, EN50016, EN50018, EN50019, EN50020, EN50028, EN954-1
Ex-Code	II 2 G EEx e m ia [p] [ia] IIC T4
Dimensions	HxWxD: 122mm x 122mm x 90mm

Electrical specifications:

Current consumption	30mA at 230VAC / 60mA at 115VAC/ 300mA at 24VAC / 200mA at 24VDC
Mains Voltage	12VDC, 24VDC, 24VAC, 115VAC, 230VAC, 48...62Hz
Contact load	AC: U = 250VAC, I = 12,0A / cos φ = 1
Terminals 6-7	AC: U = 230VAC, I = 3A
Terminals 9-10	DC: U = 230VDC, I = 3A
4xEEx cable glands	2xM16 for cable d = 4,5 – 10mm, 2xM20 for cable d = 7-13mm

Pneumatic

Measure Range	0-25 mbar
Flow	6,5l/min (0,1 l/sec) – 330,0l/min (5,5l/sec)
Relief valve	Patent. Completely maintenance-free air outlet with integrated ex-proofed particle barrier

Security Class

Duo-tec Technology	Fail safe, meets AK4 (according to EN945-1, cat.3)
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Parameterize

Patented wheel shuttle	Patented wheel-shuttle technology for quick and easy adjusting and configuration
Configuration	With menu on LCD display, different languages selectable: German, English



Display

Purge time	0-99min. realtime display (only in time control mode)
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LCD-Display high reflective

Pressure range	0-25 mbar, resolution: 0,1mbar
Menu and status	Text displays: 3 lines x 12 characters
Errors	Via display and acoustic (with remote unit F-411)

Viewing window

Mounted in cover of unit	To read the LCD display under operation without removing the cover of the controller
Material	Polyacryl, highly visible, diameter 58mm

Mounting

Position of mounting on cabinet	Without any limitations
Ambient temperature during storage/transport	-35°C to + 70°C, without condensation

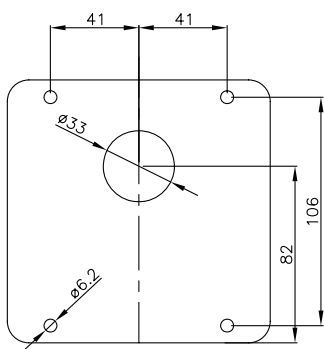
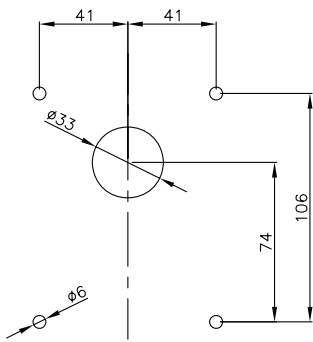
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EEx p solutions

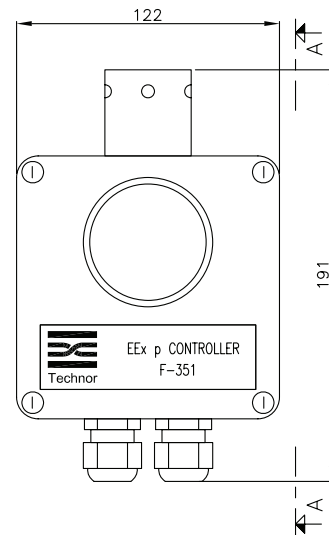
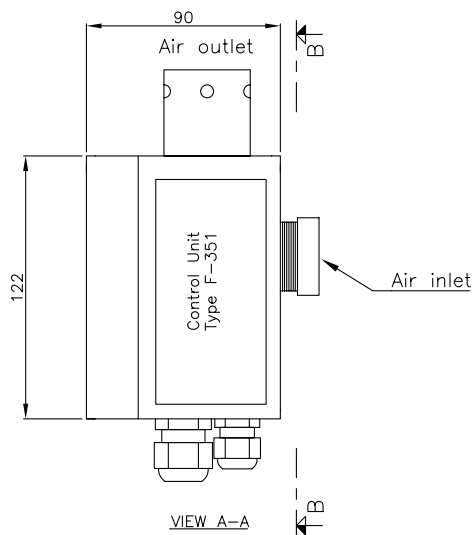
Options for control unit F-351.P / F351.F (for high flow and external air outlet)

Pneumatic	
Flow	Unlimited
Relief valve	N/A, only use together with separate air outlet with integrated spark/particle barrier

Mounting	
Position for mounting on cabinet, version F-351.P	On the cabinet wall or elsewhere in the same room as the cabinet (no limitations to position)
Position for mounting on cabinet, version F351.F	On the cabinet wall (no limitations to position)



VIEW B-B



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EEx p solutions

Air processing unit

General specification ELB500001/500002/500005

Material	GRP, epoxy resin, black/brass
Temperature	Operating: -30°C - +60°C, Storage: -40°C - +70°C, without condensation Other temperature ranges upon request
ATEX approvals	PTB00ATEX2129X
Standards	EN50014, EN50019, EN50028
Ex-Code	II 2 G EEx e m II T4
Dimensions	HxWxD: 205mm x 185mm x 90mm

Electrical specifications:

Current consumption	30mA at 230VAC / 60mA at 115V / 300mA at 24V
Mains Voltage	24VAC/DC, 115VAC/DC, 230VAC/DC, 48...62Hz
Limit power	9W
EEx cable glands	1xM20 for cable d = 6,0-13,0mm

Pneumatic

Pressure	0,5-10bar
Flow	1500l/min. Higher flow rates upon request
Connection	3/8" NPT / 10mm tube fitting. Other connections upon request

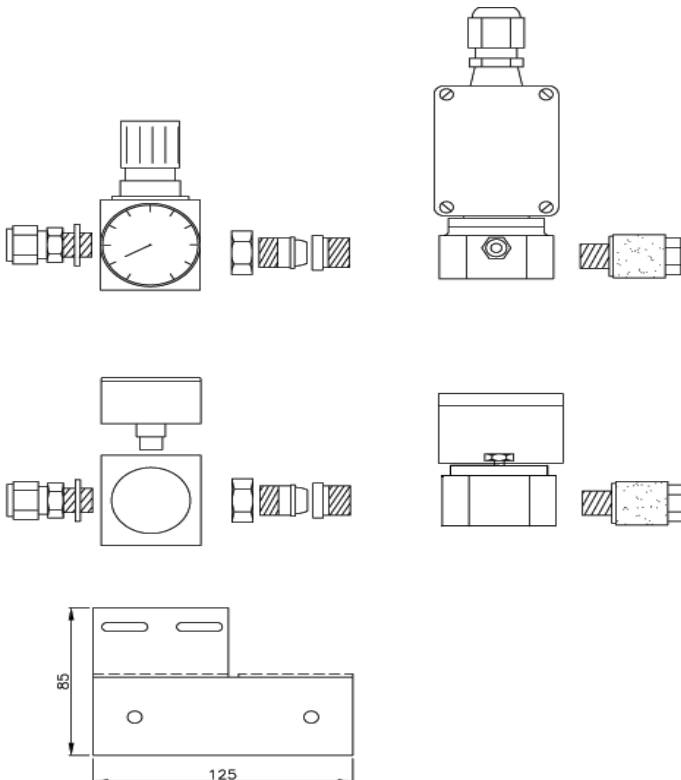


Adjustment

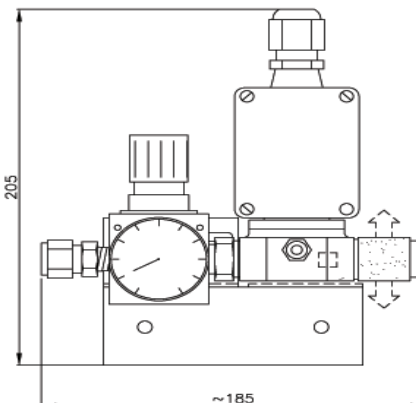
Purge flow	External adjustment screw located in nozzle
Maintenance flow	External adjustment screw located at valve body

Mounting

Position of mounting in cabinet	Without any limitations (inside cabinet)
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NOTE: Only for gas group IIA + IIB when arranged externally.



Hazardous area information & terminology

ATEX Directive

The ATEX Directive, derived from the French "ATmosphères EXplosibles" and formally known as 94/9/EC, contains the ESR (Essential Safety Requirements) to which electrical equipment and protective systems used within potentially explosive atmospheres must conform.

The new ATEX Directive currently in place within the European Union was made mandatory on 1st July 2003. Primarily intended for manufacturers of hazardous area equipment for use in the presence of flammable gases, vapours, fumes or dusts, the new directive requires a quality management system to be implemented.

Procedures for the design, manufacture and verification of products are to be approved by a notified body (i.e. DNV, NEMKO, etc.) and all equipment conforming to the new directive will feature CE and Ex Marking.

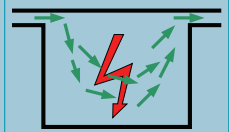
Zone Classification with the presence of GAS

Zone 1 (Category 2)	An area in which explosive gas is likely to be present during normal operation of the plant.
Zone 2 (Category 3)	An area in which explosive gas is not continuously present, but may exist for a short period of time.

Applicable EX protection

EEx p Protection

The ingress of the surrounding atmosphere into the housing of electrical equipment is prevented by maintaining an ignition shield gas (air or a different suitable gas) inside it at a pressure above atmospheric pressure. The overpressure is maintained with continuous flushing of the protective gas.



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