

Metacentre™ SX – T39.2

metacentre™

Identification:	Metacentre™ SX
Part number:	Refer to Product guide / price list for specific part number or contact dealer
Product Family:	Metacentre™
Function:	Central management control & monitoring of air / gas compressors Optional integrated control / monitoring of ancillary compressed air equipment
Definition:	Narrow pressure band controller with enhanced software features & functions
Capacity:	2 - 12 air / gas compressors & Metacentre™ ancillary product control / monitoring via optional Metacentre™ I/O & sensor options
Compressor connectivity:	SX Terminal board & dedicated compressor interface or via Air^{RS485} communication protocol ¹
Supported protocol:	Air^{RS485} & Modbus RTU via dedicated network gateway
Software:	Pre-programmed application software, configurable via password protected operator interface
Product overview:	

As demand for compressed air fluctuates and as system pressure decays or increases in response to that demand, Metacentre™ compressor management systems ensure that site wide compressors and ancillary compressed air equipment are harnessed as 1 to obtain an equilibrium where efficiency, equipment utilisation and system pressure are in perfect balance. In unmanaged compressed air systems that equilibrium represents a significant energy & cost saving opportunity.








Metacentre™ SX is a specialised supervisory control product designed to provide energy efficient optimised narrow pressure and priority management control of up to 12 air / gas compressors operating in a common compressed air / gas system.

Metacentre™ SX's general operating mode can be modified via a number of adjustable parameters enabling its control strategy to align with / optimise available compressed air equipment and site specific installation characteristics.

Features & Functions:

The primary function of the Metacentre™ SX pressure control strategy is to maintain system pressure between the 'High Pressure' set point & the 'Low Pressure' set point in conjunction with targeting energy efficiency through optimal compressor utilisation. The SX calculates a 'Target' pressure level which is used as the nominal 'target' pressure level for the system. Rate of change in pressure, is largely determined by system volume and the scale, and/or abruptness, of air demand fluctuations; these characteristics will differ from installation to installation. To accommodate for variations in installation characteristics the 'Tolerance' pressure level (TO) and an influence on the dynamic reaction time (or 'Damping') of the SX is adjustable.

Key product features:

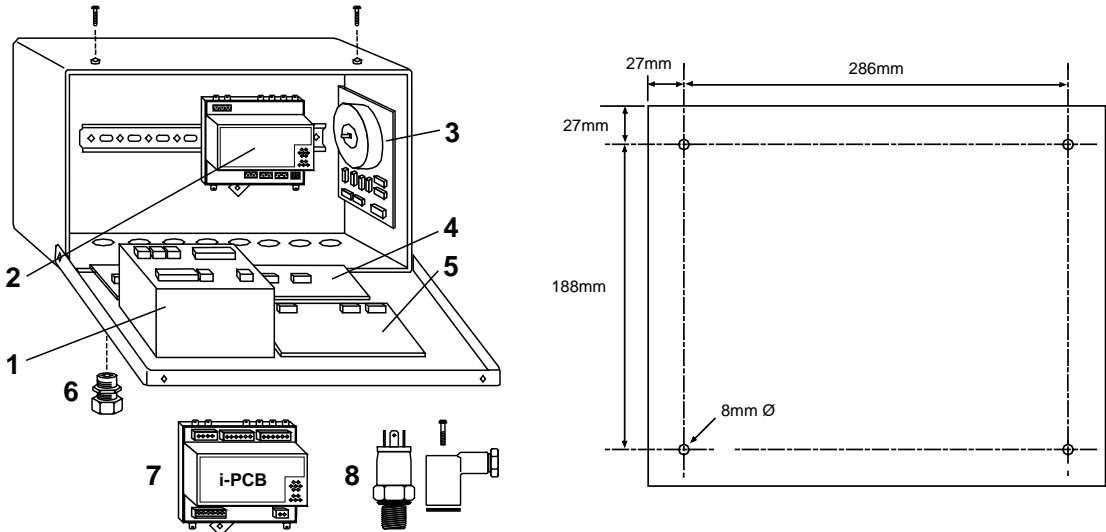
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|---|---|---|---|
|  | One touch & single pressure band technology narrowing site wide pressure to a minimum of 0.2bar |  | Intelligent pre – Fill, set required system pressure, when you want it and let Metacentre™ do the rest |
|  | Table Technology that allows configuration and inter-utilisation of up to 4 separate compressor management & control strategies |  | Energy Control Mode, our most advanced control algorithm for efficient compressor system management & control. |
|  | Real time clock & pressure schedule adding necessary fine tuning and pressure optimisation capabilities |  | Multiple VSD control & optimisation technology, as the use of variable speed drive increases its increasingly important to question what binds the equipment together ? |
|  | Remote I/O expansion. Add distributed intelligence to control / monitor equipment, sensors and automate functions | | Our advanced software algorithms ensure VSD load optimisation is assured |



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- Pressure ref: 4 – 20mA
 Pressure scale: Configurable to 600bar
 Processor: 16bit ST10 Micro-processor
 Op. interface: 128 x 64 graphical back lit LCD plus SX & individual compressor status indication panel
 Real time clock: internal real time clock
 Software: Pre-programmed application software, configurable via password protected operator interface
- Protocol: **Airbus RS485** & Modbus RTU via dedicated network gateway
 Modes of control: Fixed cascade mode, Equal hours run, Timer rotation (FILO), Energy control mode
 Tables: 4 operating parameter tables
 Software features: Intelligent pre-fill, Sequence rotation, Priority settings, Pressure schedule
 Auxiliary output: 1 x Menu selectable single function relay output ² (² see function list below)
 Auxiliary input: 1 x Menu selectable single function digital input ³ (³ see function list below)
 Supply / Power: 230Vac +/- 10%, 115Vac +/- 10%, 100VA
 Enclosure rating: IP54 / NEMA12
 Dimensions: Height: 340mm (13.4") x Width: 241mm (11.45") x Depth: 152mm (6")
 Access: Front, lockable, hinged access panel
 Cable entry: Bottom, gland cable entry system
 Weight: 7.5kg (16.5lb)
 Mounting: Wall, 4 x screw fixing
 Temperature: Min 0°C (32°F), Max +46°C (115°F)
 Humidity: 95% RH non-condensing
 Approvals: CE, UL, cUL

¹ The Metacentre™ SX terminal board is capable of accepting signals from up to 4 air / gas compressors. Additional terminal capacity (max = 12) can be added by selecting Metacentre™ iX. Refer to Product factsheet 'T77' for more information



Item - description

- 1 Unit, Controller
- 2 Unit, XPM – PSU24
- 3 Unit, XPM – TAC24
- 4 PCB, Terminal
- 5 Unit, XPM – LED24
- 6 Gland, Set – PG13.5
- 7 Module, iPCB*
- 8 Sensor, pressure*

* Supplied as part of SX kit only

³ Auxiliary digital input – Function list:

- Override - table 1
- Override - table 2
- Override - table 3
- Override - table 4
- Override – standby
- Remote start / stop
- Remote alarm (always active)
- Remote alarm
- (active when Metacentre™ running only)
- Remote trip (always active)
- Remote trip
- (active when Metacentre™ running only)

² Auxiliary relay output – Function list:

- Any fault (Alarm, Trip, unavailable condition)
- Any trip (trip, unavailable condition)
- Compressor fault (Alarm, Trip, unavailable)
- Compressor alarm (Alarm)
- Compressor trip (Trip, unavailable)
- System fault
- System On
- System active
- System pressure control active
- Low pressure alarm
- High pressure alarm
- Pressure control override

