

Metacentre™ DCO – T39.0

metacentre™

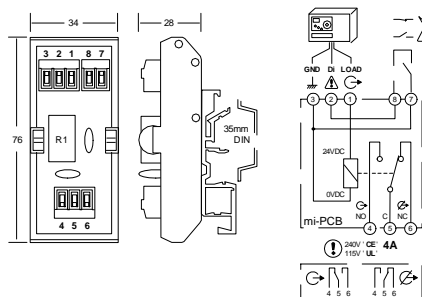
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|--------------------------|--|
| Identification: | Kit, Metacentre™ DCO2, DCO3 & DCO4 |
| Part number: | Refer to Product guide / price list for specific part number or contact dealer |
| Product Family: | Metacentre™ |
| Function: | Central management 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, 3 or 4 air / gas compressors & Metacentre™ ancillary product control / monitoring via optional Metacentre™ I/O & sensor options |
| Compressor connectivity: | DCO Series terminal board & dedicated compressor interface or via Airbus communication protocol |
| Supported protocol: | Airbus & 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™ DCO is a specialised supervisory control product designed to provide energy efficient optimised narrow pressure and priority management control of up to 4 air / gas compressors operating in a common compressed air / gas system. Each DCO kit is provided with a quantity of compressor interface PCB's (mi-PCB) and a 4-20mA / 0-16bar pressure sensor.



Metacentre™ 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™ DCO's 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 Metacentre™ 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 (tP) and an influence on the dynamic reaction time (or 'Damping' (dA)) of the Metacentre™ is adjustable.

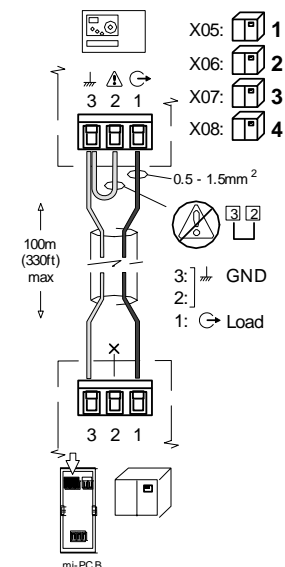
Key product features:



One touch & single pressure band technology narrowing site wide pressure to a minimum of 0.2bar



Remote I/O expansion. Add distributed intelligence to monitor equipment, sensors and automate functions

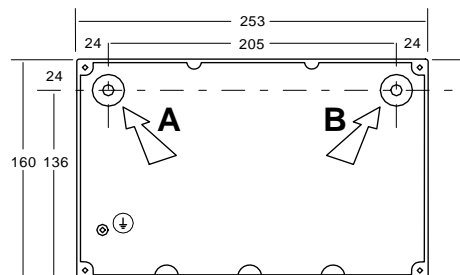
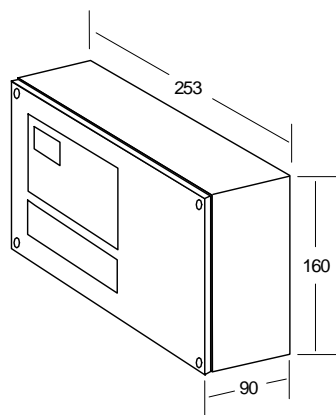


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 Optional integrated control / monitoring of ancillary compressed air equipment
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 Capacity: 2, 3 or 4 air / gas compressors & Metacentre™ ancillary product control / monitoring via optional Metacentre™ I/O & sensor options
 Pressure ref: 4 – 20mA
 Pressure scale: Configurable to 66bar
 Processor: 8 bit micro controller 80C51 family
 Op. interface: 45mm x 25mm backlit LCD with custom alpha-numeric / symbolic graphics...



Software: Pre-programmed application software, configurable via password protected operator interface
 Protocol: Airbus RS485 & Modbus RTU via dedicated network gateway
 Modes of control: ☑ Timer rotation
 Software features: ☐ Sequence rotation, ☐ Priority settings
 Auxiliary output: 1 x Menu selectable single function relay output ² (² see function list below)
 Auxiliary input: 2 x Menu selectable single function digital input ¹ (¹ see function list below)
 Alarm input: Alarm detection input from connected compressor (C1 through C4 relative to DCO type)
 Supply / Power: 230Vac +/- 10%, 115Vac +/- 10%, 100VA
 Enclosure rating: IP54 / NEMA12
 Dimensions: Height: 160mm (6.3") x Width: 253mm (10") x Depth: 90mm (3.6")



Access: Front, lockable access panel
 Cable entry: Bottom, gland cable entry system
 Weight: 2.2kg (5lb)
 Mounting: Wall, 2 x screw fixing
 Temperature: Min 0°C (32°F), Max +46°C (115°F)
 Humidity: 95% RH non-condensing
 Approvals: CE, UL, cUL

¹ Auxiliary digital inputs – Function list:

Disable – no function (default configuration)
 Remote start / stop
 Remote alarm
 Remote alarm - delayed
 Remote trip
 Remote trip - delayed

² Auxiliary relay output – Function list:

Any alarm - DCO or connected compressor with feedback to DCO (default configuration)
 Compressor 'Not OK' fault only
 DCO state (started, active & running)
 Low pressure alarm

Airbus RS485™

