

Process lock Dalton



Dalton M12 Eden M122 for severe environments

Approval:

Not ready at the time of printing

Use:

Doors and hatches

Advantages:

- Small and robust
- Integrated with Eden
- Flexible installation
- High enclosure classification
– IP 67
- Withstands severe environments
- Low current consumption
- Status information with LED on the lock housing and in the cable connection.

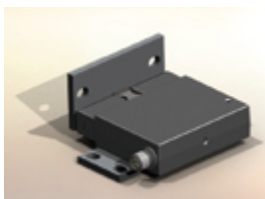
Dalton – the intelligent process lock

Dalton is a locking unit that is intended for use in preventing unnecessary process stoppages, i.e. it is not a safety lock. It can be used either as a free-standing lock or integrated with Eden as a safety sensor. In the unlocked state the door is held closed by a ball catch and locked mechanically. If necessary, the holding force of the ball catch can be adjusted. The unit only permits locking if the ball catch is secured and when the Eva is in contact with the Adam (depending on the variant). When an input is supplied with voltage, the ball catch is locked.

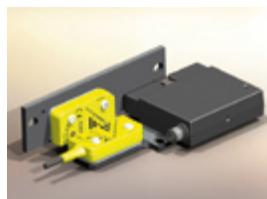
Dalton is easily connected with an M12 connector. The Tina junction block can also be used for distribution of both the safety and locking functions. The Dalton status is indicated by LEDs and can also be read by a PLC via the information output.

Assembly

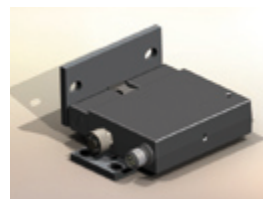
Dalton can be assembled with its opening in two directions. In order to ensure that Dalton works without any problems, the ball latch must be resting, i.e. not pressed in by the lock tongue when the door is closed Dalton's brackets are therefore made to ensure the lock tongue and ball latch positions can be adjusted.



Dalton with 5-pole or 8-pole connector



Dalton Eden with 5-pole or 8-pole connector to Dalton

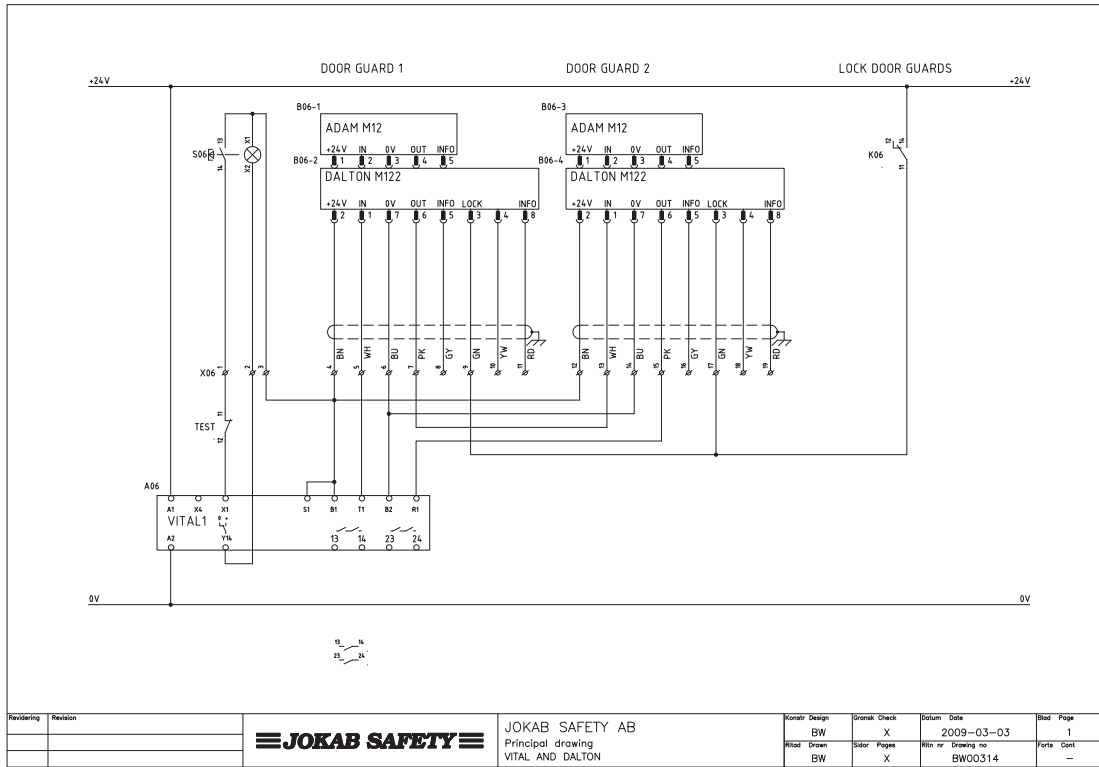


Dalton M121

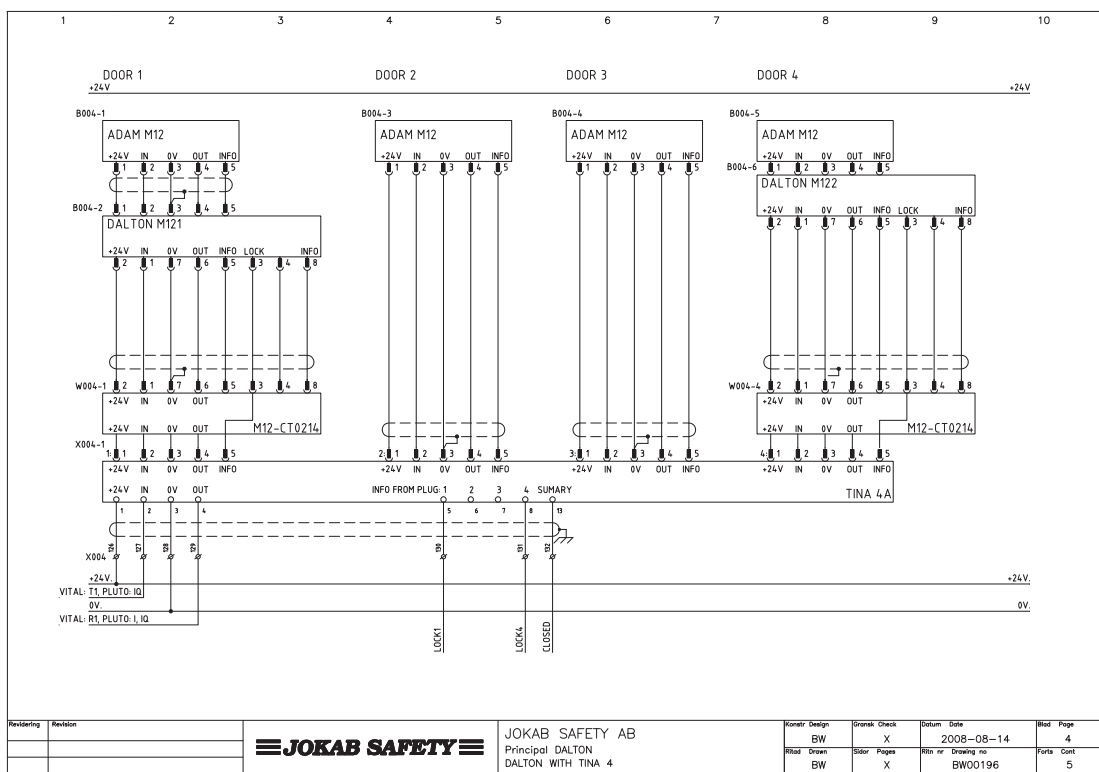


Dalton M122

BW00314 - Example connection of Dalton to Vital 1



BW00196 - Dalton and Eden connected to Vital 1 or Pluto



Tina 12A junction block

Tina 12A can be used to connect two Daltons with Edens with a cable to the apparatus enclosure. The summed information that indicates the states of both the Dalton and Eden also goes to the apparatus enclosure.

Transfer cables

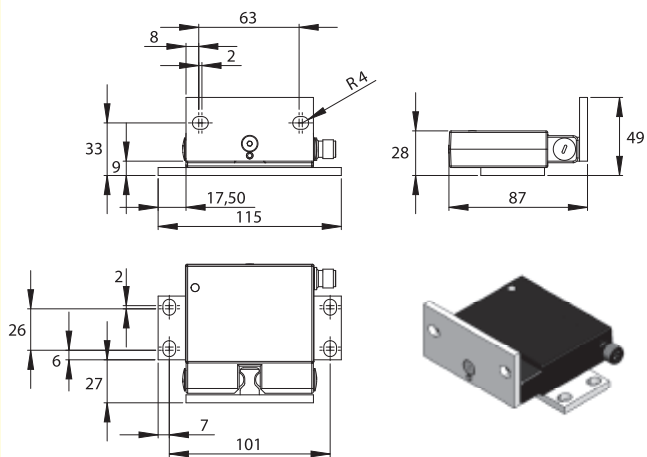
A transfer cable can be used when the Dalton's 8-pole contact is to be connected to that of the Tina 4A, or the Tina 8A's 5-pole M12 outlet. Note that the information from the Dalton and Adam cannot be used.

Technical data - Dalton	
Manufacturer	JOKAB SAFETY AB
Article number/ ordering data:	
Dalton M111	20-038-00 8-pole male plug
Dalton M311	20-038-07 5-pole male plug, locking pin 4
Dalton L001	20-038-90 Only ball latch, no electrical functions
Dalton M315	20-038-10 5-pole male plug, locking pin 4, small mounting plate for the tongue
Dalton M113	20-038-04 8-pole male plug, angle brackets for Jokab enclosure
Dalton - Lock with securing plate for separately connected Eden	
Dalton M112	20-038-03 8-pole male plug
Dalton M312	20-038-08 5-pole male plug, locking pin 4
Dalton L002	20-038-91 Only ball latch, no electrical functions, mounting plate also for Eden
Dalton - Lock with M12 connector for connection of separately mounted Eden	
Dalton M121	20-038-01 8-pole male plug
Dalton - Lock with integrated Eden	
Dalton M122	20-038-02 8-pole male plug
Dalton M124	20-038-09 8-pole male plug, 5-pole female plug for Adam, angle brackets for Jokab enclosure
Accessories	
DA 1	20-053-00 Spacer 2.5 mm for Adam and Eva.
M12-CT0214	20-060-01 Transfer cable 0.2 m M12 5-pole plug 8-pole female plug
Tina 12A	20-054-18 Distribution block for two Dalton Edens with 8-pole cables
Locking function	M - Locked when energised L - Only ball latch
Colour	Black
Operating voltage	24 VDC +25/-20%
Current consumption	
Unlocked	40 mA
Locked	130 mA
Lock input	5 mA
Information output	Max. 10 mA
Eden	See the data for Adam M12
Enclosure classification	IP67
Holding force	
Unlocked	25-100 Nm
Locked	2000 Nm
Material	
Ball catch, securing plate	Anodised aluminium
Enclosure	Anodised aluminium
Lock tongue, securing plate	Stainless steel

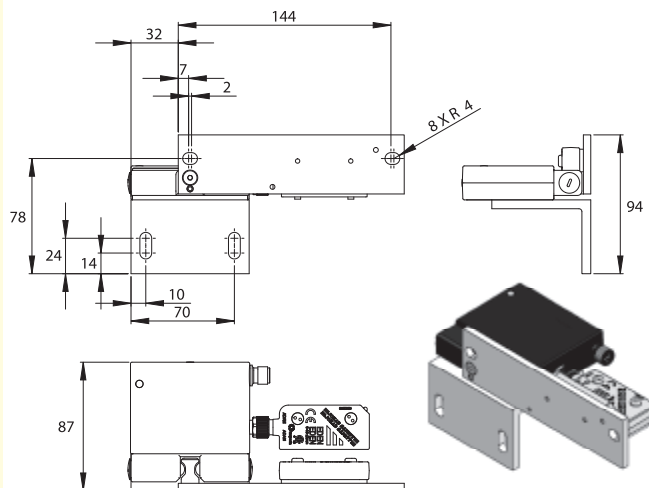
Resistance Stainless steel	Good resistance to most acids, except for hydrochloric and sulphuric acids.
Connections	Connector to connect Dalton (varies depending on type) 8-pole male plug, M12 5-pole male plug, M12 Outlet for externally connected Adam female plug M12, 5-pole
Colour markings (pins)	
Function	
Dynamic input signal, Adam +24 VDC	8-pole Colour 1 (White)
Lock signal	2 (Brown) 1 (Brown)
Not used	3 (Green) 4 (Black)
Information Adam	4 (Yellow) 2 (White)
Dynamic output signal, Adam 0 VDC	5 (Grey)
Information Dalton	6 (Pink)
	7 (Blue) 3 (Blue)
	8 (Red) 5 (Grey)
Warning	Dalton locks mechanically. If the lock is forced, the Dalton can be permanently damaged.

LED indication	
	Information function
	1 Locked 0 Closed but unlocked 0 Open
Alarm:	
	1Hz Lock has not entered the unlocked state
	1Hz Eden or ball catch not in position = open
	1Hz Open, locking not permitted
	1Hz Lock has not entered the locked state
	1Hz Undervoltage - locking not permitted
	1Hz Overvoltage
	1Hz Overtemperature (> 80°C)

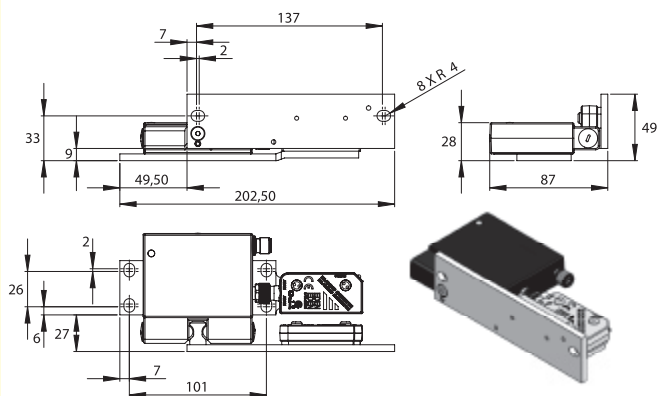
**Dimensions drawing, Dalton M111,
Dalton M311, Dalton L001
(and Dalton M121)**



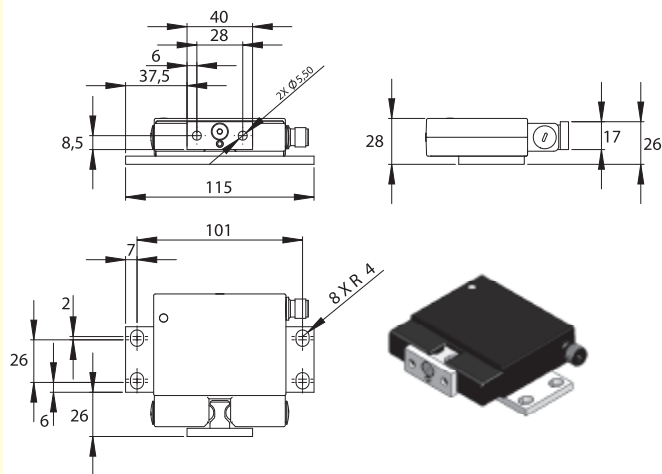
Dimensions drawing, Dalton M124



**Dimensions drawing, Dalton M122,
Dalton L002 and Dalton M112**



Dimensions drawing, Dalton M315



Dimensions drawing, Dalton M113

