

Connect Box

Parameter list

Compressors

Vacuum Systems

Parameter Description

Note: Third-party devices can also be connected to the Connect Box. When monitoring third-party devices, Dürr Dental/Air Techniques assumes no liability for damage due to incorrect warning or alarm messages from the Connect Box.

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Manufacturer	Product Family	Model Name	Model Number (REF)	Mains Phases	Mains Voltage [V]	Max Device Duty cycle [%]	Device Duty Cycle Time [s]	Device Current On-Threshold [A]	Device Current Crit. High [A]	Device Current Crit. Low [A]	Device Current Warn. High [A]	Device Current Warn. Low [A]	Current Fault Trip Time [s]	Voltage Fault Trip Time [s]	Device Care Time [h]
Air Techniques	Compressor	AirStar 10	AS10	1	120	85	1800	1.0	10.4	0.0	9.2	0.0	6	2	1000
Air Techniques	Compressor	AirStar 12	AS12	1	220	85	1800	1.0	5.2	0.0	4.6	0.0	6	2	1000
Air Techniques	Compressor	AirStar 21	AS21	1	120	85	1800	1.0	19.5	0.0	17.3	0.0	6	2	1000
Air Techniques	Compressor	AirStar 22	AS22	1	220	85	1800	1.0	10.4	4.0	9.2	6.0	6	2	1000
Air Techniques	Compressor	AirStar 30	AS30	1	220	85	1800	1.0	10.4	4.0	9.2	6.0	6	2	1000
Air Techniques	Compressor	AirStar 40	AS40	1	220	85	1800	1.0	15.6	6.0	13.8	9.0	6	2	1000
Air Techniques	Compressor	AirStar 50	AS50	1	220	85	1800	1.0	20.8	8.0	18.4	12.0	6	2	1000
Air Techniques	Compressor	AirStar 70	AS70	1	220	85	1800	1.0	31.2	16.0	27.6	18.0	6	2	1000
Air Techniques	Compressor	AirStar 100	AS100	3	220	85	1800	1.0	26.0	10.0	23.0	15.0	6	2	1000
Third Party	Compressor	Depending on the device	Third Party	Depending on the device	Depending on the device	70	Formula 1 (see under the table)	1.0	1,3 x nominal current	Formula 2 (see under the table)	1,15 x nominal current	0,75 x nominal current	6	2	Depending on the device

Compressors



Manufacturer
Product Family
Model Name
Model Number (REF)
Mains Phases
Mains Voltage [V]
Max Device Duty cycle [%]
Device Duty Cycle Time [s]
Device Current On-Threshold [A]
Device Current Crit. High [A]
Device Current Crit. Low [A]
Device Current Warn. High [A]
Device Current Warn. Low [A]
Current Fault Trip Time [s]
Voltage Fault Trip Time [s]
Device Care Time [h]

Formula 1:	10 x Device On/Off cycle
Formula 2:	If the compressor has 1 aggregate or more than 4 aggregates select 0 A*, If the compressor has 2 aggregates then select 0,5 x nominal current**, If the compressor has 3 aggregates then select 0,7 x nominal current**
Comments:	* deactivated because hard to define ** detects if one Aggregate is not working

Manufacturer	Product Family	Model Name	Model Number (REF)	Mains Phases	Mains Voltage [V]	Max Device Duty cycle [%]	Device Duty Cycle Time [s]	Device Current On-Threshold [A]	Device Current Crit, High [A]	Device Current Crit, Low [A]	Device Current Warn, High [A]	Device Current Warn, Low [A]	Current Fault Trip Time [s]	Voltage Fault Trip Time [s]	Device Care Time [h]
Air Techniques	Vacuum System	V3PUMP (Before 4/2020)	V3PUMP-L	1	220	100	3600	1,0	44703.0	0.0	44732.0	0.0	6	10	1000
Air Techniques	Vacuum System	V3PUMP	V3PUMP	1	220	100	3600	1.0	44675.0	0.0	44703.0	0.0	6	10	1000
Air Techniques	Vacuum System	V5PUMP (Before 4/2020)	V5PUMP-L	1	220	100	3600	44562.0	30.0	0.0	28.0	0.0	6	10	1000
Air Techniques	Vacuum System	V5PUMP	V5PUMP	1	220	100	3600	44562.0	30.0	0.0	28.0	0.0	6	10	1000
Air Techniques	Vacuum System	V7PUMP (Before 4/2020)	V7PUMP	1	220	100	3600	44562.0	35.0	0.0	33.0	0.0	6	10	1000
Air Techniques	Vacuum System	V7PUMP	V7PUMP	1	220	100	3600	44562.0	32.0	0.0	30.0	0.0	6	10	1000
Air Techniques	Vacuum System	VacStar 20	VS20	1	115 / 220	100	3600	44562.0	20,8 / 10,4	0.0	18,4 / 9,2	0.0	6	10	1000
Air Techniques	Vacuum System	VacStar 40	VS40	1	230	100	3600	44562.0	44698.0	0.0	44666.0	0.0	6	10	1000
Air Techniques	Vacuum System	VacStar 50/50H	VS50 VS50H	1	220	100	3600	44562.0	44793.0	0.0	44669.0	0.0	6	10	1000
Air Techniques	Vacuum System	VacStar 80/80H	VS80 VS80H	1	220	100	3600	44562.0	34.8	0.0	44803.0	0.0	6	10	1000
Third Party	Vacuum System	Depending on the Device	Third Party	Depending on the Device	Depending on the Device	100	3600	1,1 *	1,3 x nominal current	0.0	1,2 x nominal current	0.0	6	10	1000

Parameter Description



Max. Device Duty Cycle [%]

The "Max. Device Duty Cycle " is the maximum percentage that the device is allowed to run during a specified timeframe "Device Duty Cycle Time". If the device is allowed to run permanently this parameter should be set to 100% and there won't be a "duty cycle to high" error. With this parameter it is for example possible to detect that a compressor has a leakage.

Device Duty Cycle Time [s]

The "Device Duty Cycle Time" is the update time of the duty cycle calculation in seconds. This value must be greater than the on/off cycle of the device, otherwise the duty cycle calculation is not correct. Since there is also a filter function in the background, this value should be set correctly, otherwise an error or warning may come too late. It is recommended to use the value given in the parameter list.

Device Current On-Threshold [A]

The "Device Current On-Threshold" is used to detect if the device is running or not. If the current is higher than this threshold the Connect Box thinks that the device should be running otherwise not. This value should be high enough that it can't be triggered by the standby current. The value should be at least 0.4 amps.

Parameter Description



Device Current Crit. High [A]

The value "Device Current Crit. High" is the threshold value for an overcurrent alarm. If the device current exceeds this value, then the device has a fault and a technician should be contacted. The device current may be too high if, for example, a motor is blocked.

Device Current Crit. Low [A]

The value "Device Current Crit. Low" is the threshold value for an undercurrent alarm. If the device current falls below this value, then the device has a fault and a technician should be contacted. The device current may be too low if, for example, a compressor aggregate fails.

Device Current Warn. High [A]

The device current is outside the expected range, this could indicate wear. There is no fault yet, but the cause should be investigated. A technician should be contacted.

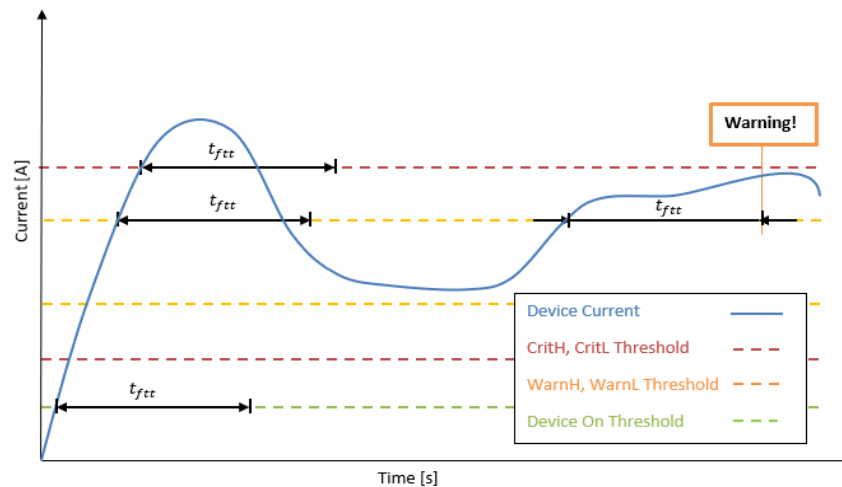
Parameter Description

Device Current Warn. Low [A]

The device current is outside the expected range, this could indicate wear. There is no fault yet, but the cause should be investigated. A technician should be contacted.

Current Fault Trip Time [s]

When the device is started or switched off, currents may occur that exceed the set warning and alarm limits and would falsely signal errors. The parameter "Current Fault Trip Time" defines a period of time that a fault current must be present before a warning or alarm occurs. In the following diagram we can see that a warning is only thrown when the error exceeds the timeframe "Current Fault Trip Time".



Parameter Description



Voltage Fault Trip Time [s]

The same as with "Current Fault Trip Time" but for voltage warnings and errors.