



OMS Double Actuator Braking Solenoids

The braking solenoid used by OMS is an OEM product manufactured exclusively for OMS by Kendrion Binder. The design and the construction of the solenoid are such, that it will withstand the operating temperatures found in escalators and elevators indefinitely at 100% „On Time“, which is present in escalators use only. Maximum ambient temperature , operating, is $T_{AMB} = 50^{\circ}C$ ($T_{AMB} = 60^{\circ}C @ 1 \text{ hour}$) for the units.

Due to the solid design and construction of these solenoids, it is not necessary to monitor their operating temperature or to use a thermo contact switch (or PTC) to give an early warning signal to an over temperature condition.

These solenoids are of the electrical double circuit type, meaning that separate coils are used for each of the two magnet circuits. These solenoids can be equipped with one or two electronic control modules, depending on customer requirements.

The electronic control module (OMS pat. pending) comes in three versions:

Type 1: without over-excitation, electronic self commutated switch in the DC path switches off in 100ms, $F = 600N$

Type 2: with over-excitation, electronic self commutated switch in the DC path switches off in 100ms, $F = 720N$ and $F = 850N$

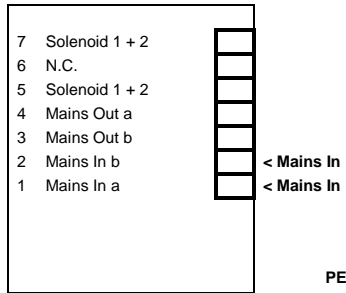
Type 3: with over-excitation, electronic self commutated switch in the DC path switches off in 100ms, $F = 1.100N$

SOLENOID TYPES:

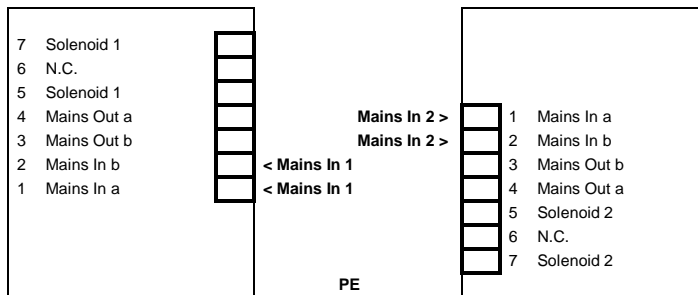
| TYPE | max. FORCE [N] | No. of Modules | Type of Module | Current [A] pull in / OP | Remarks |
|------------|----------------|----------------|----------------|--------------------------|--|
| O20 | 600 | 1 | Type 1 | 0,27 / 0,27 | single circuit |
| O21 | 720 | 1 | Type 2 | 1,1 / 0,54 | single circuit |
| O22 | 720 | 2 | Type 2 | 1,1 / 0,54 | double circuit |
| O23 | 720 | 2 | Type 2 | 2 x 0,54 / 2 x 0,27 | O22 with separate external |
| O31 | 850 | 1 | Type 2 | 1,1 / 0,54 | single circuit |
| O32 | 850 | 2 | Type 2 | 1,1 / 0,54 | double circuit |
| O33 | 850 | 2 | Type 2 | 2 x 0,54 / 2 x 0,27 | O32 with separate external wiring for earth quake security |
| A42 | 1.100 | 2 | Type 3 | 1,1 / 0,54 | double circuit |
| A43 | 1.100 | 2 | Type 3 | 2 x 0,54 / 2 x 0,27 | A42 with separate external wiring for earth quake security |

Main stream

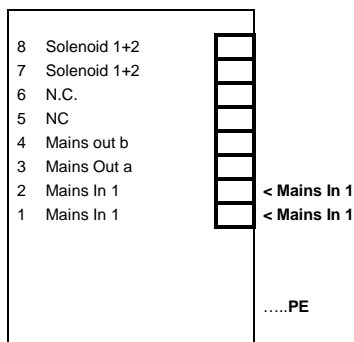
Mains connection for OMS braking solenoids for ELEVATORS



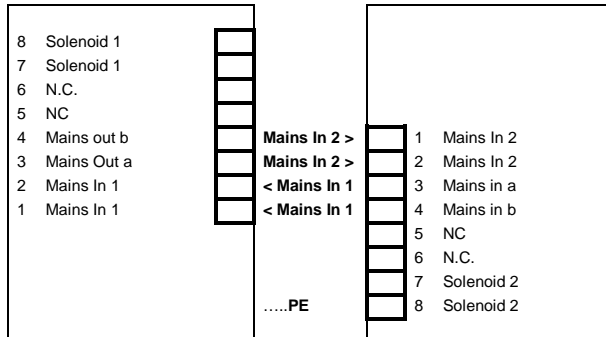
O21 and O31: Connection for one electrical circuit, both circuits are operated in parallel.



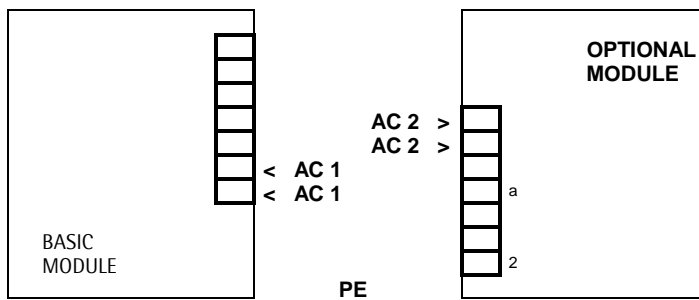
O23 and O33 : Connection for two electrical circuits, both circuits are operated independently.



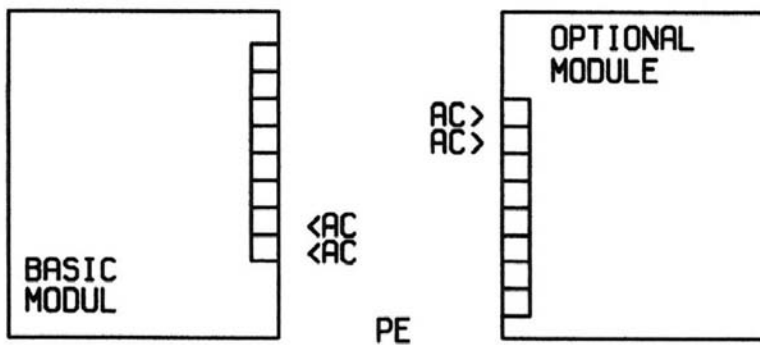
A41 : Connection for one electrical circuit, both circuits are operated in parallel.



A43 : Connections for double modules with over-excitation, double mains connection

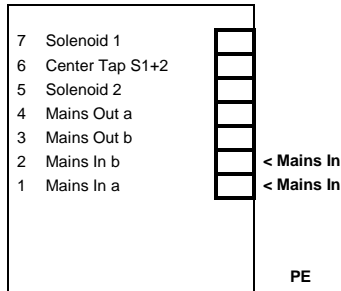


Wiring scheme on top of the wiring box for Elevator and Escalator solenoids, Type Ox

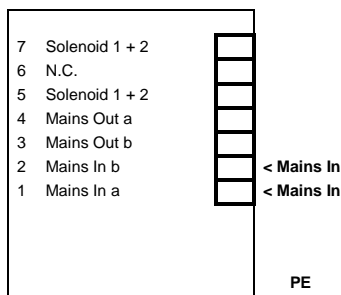


Wiring scheme on top of the wiring box for Elevator and Escalator solenoids, Type Ax

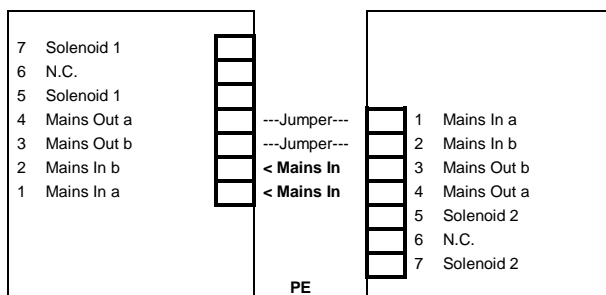
Mains connection for OMS braking solenoids for ESCALATORS



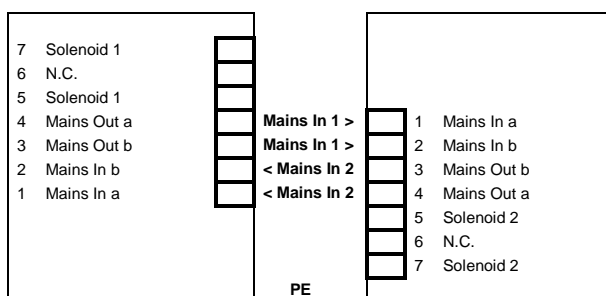
O20: Connections for single module without over-excitation



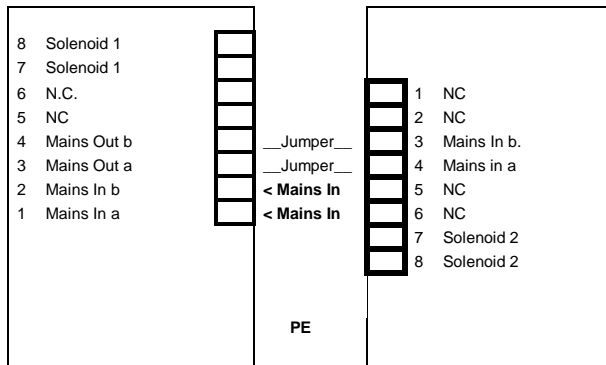
O21 and O31: Connections for single module with over-excitation



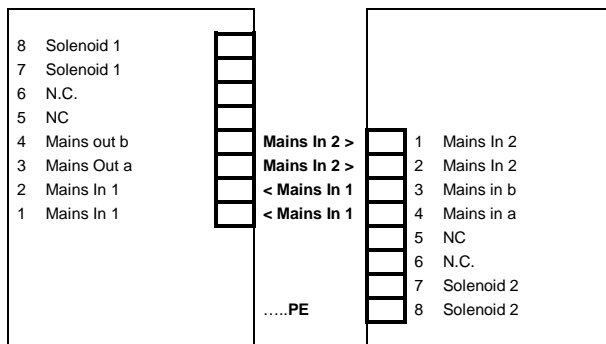
O22 and O32 : Connections for double modules with over-excitation, single mains connection



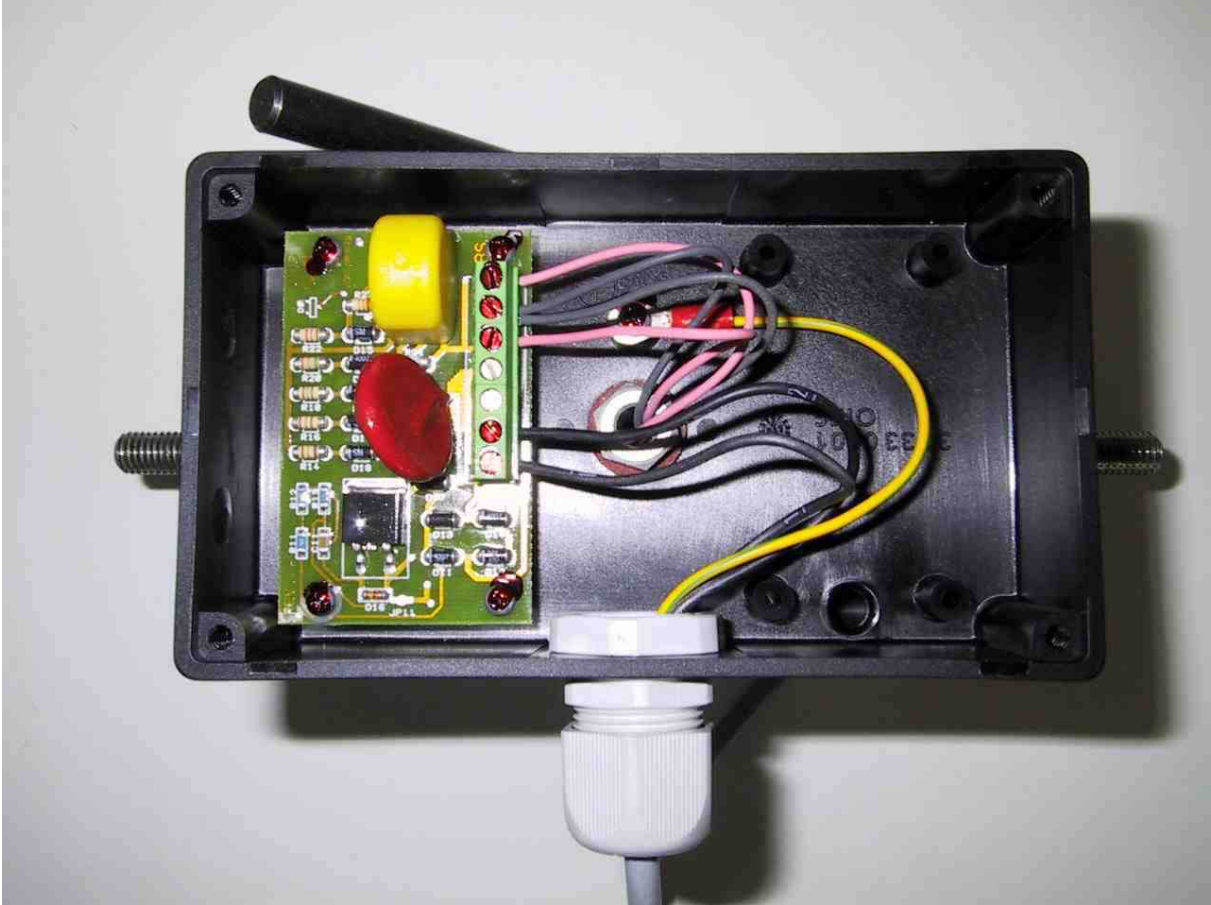
O23 and O33 : Connections for double modules with over-excitation, double mains connection



A42 : Connections for double modules with over-excitation, single mains connection

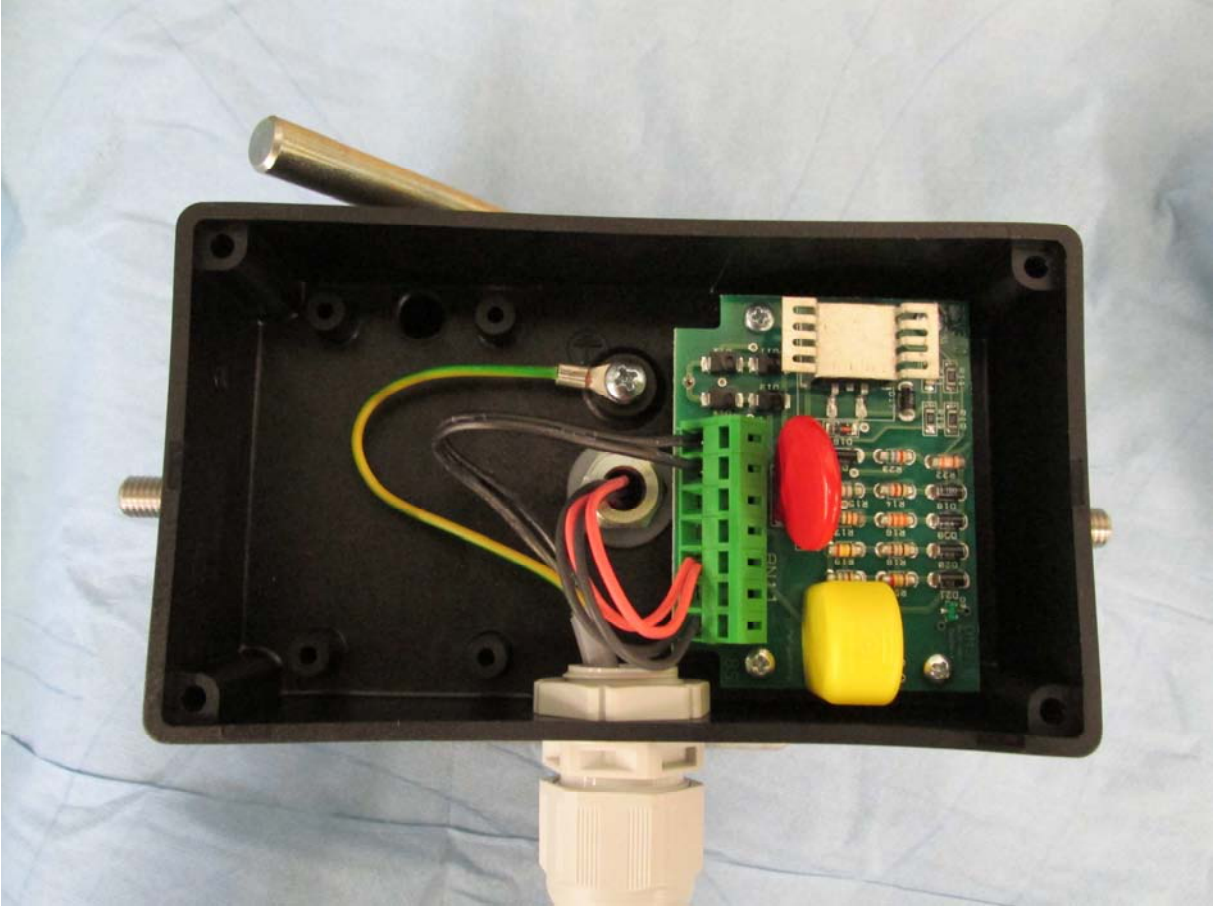


A43 : Connections for double modules with over-excitation, double mains connection



Picture: O20 Braking Solenoid, view into the opened junction box shows the electronic control module.





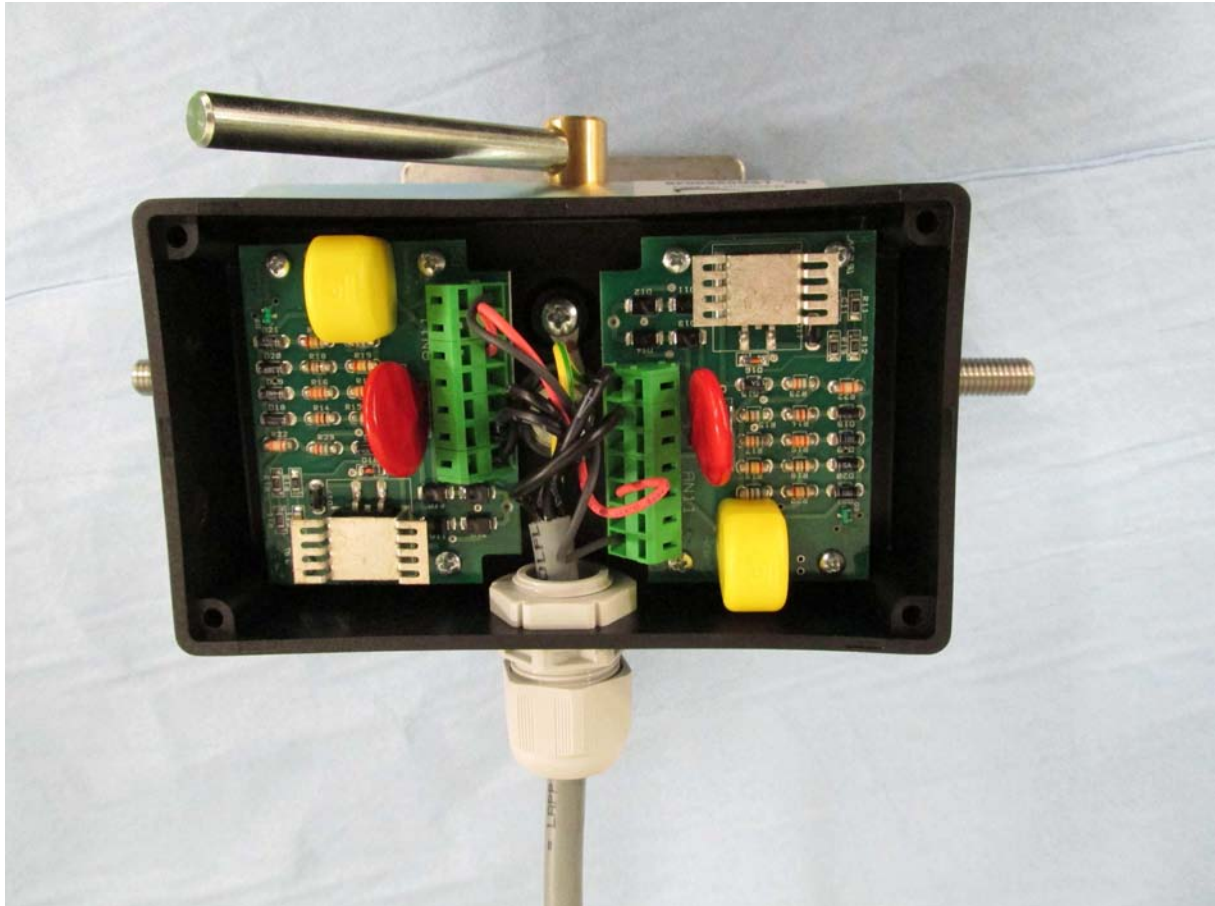
Picture: 021 / 031 Braking Solenoid, view into the opened junction box shows the electronic control module.



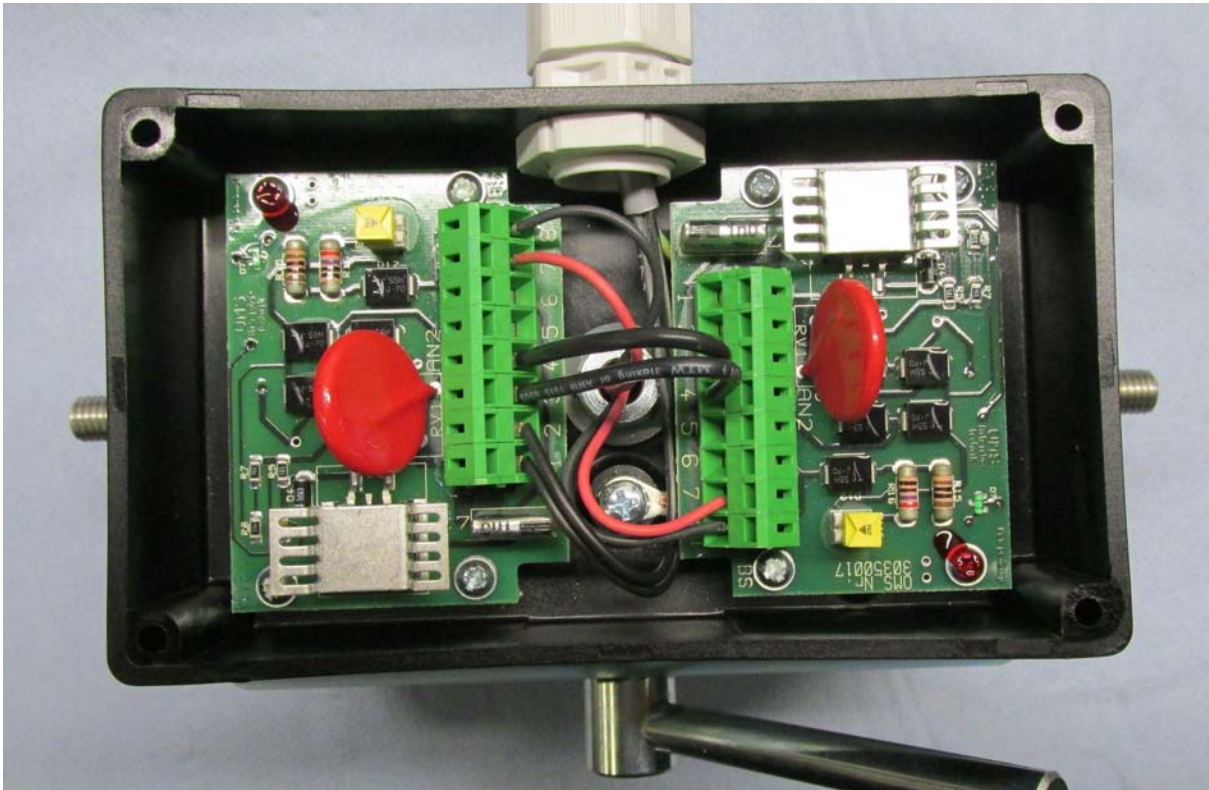


Picture: 022/032 Braking Solenoid, view into the opened junction box shows the electronic control module.



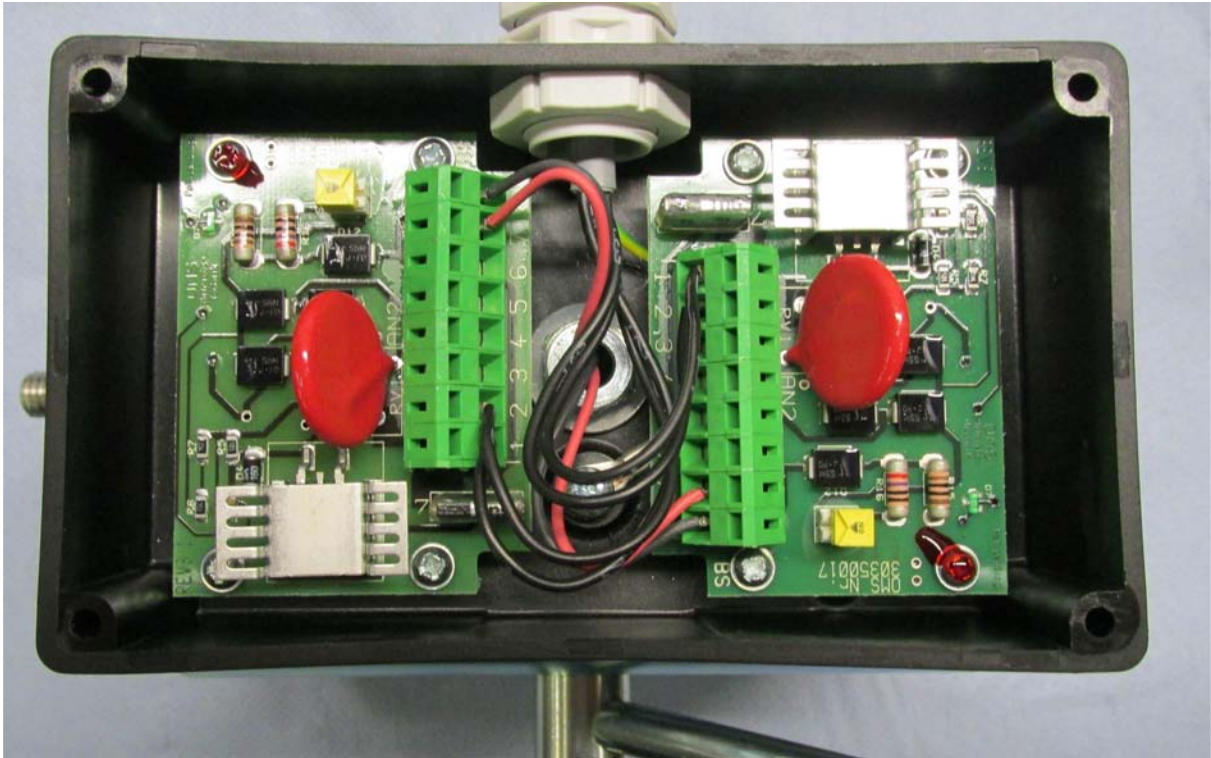


Picture: O23 / O33 Braking Solenoid, view into the opened junction box shows the electronic control module. Braking solenoid O33 is available with CSA approval.



Picture: A42 Braking Solenoid, view into the opened junction box shows the electronic control module.





Picture: A43 Braking Solenoid, view into the opened junction box shows the electronic control module. Braking solenoid is available with CSA approval.

