

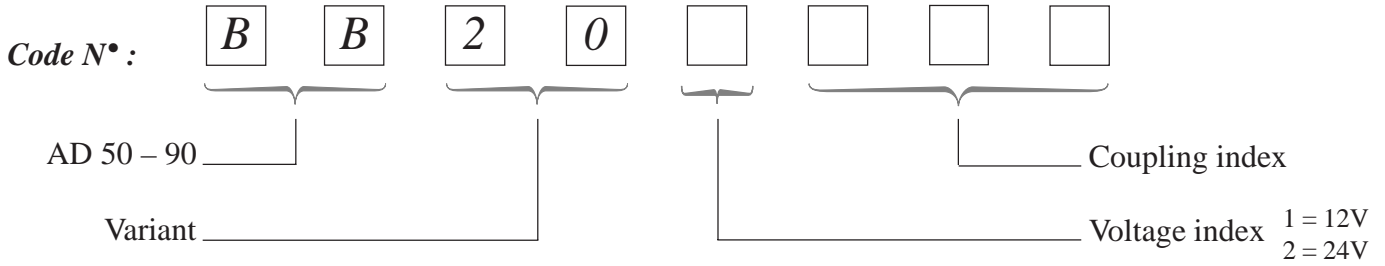


## *TECHNICAL SPECIFICATIONS*



### *AD 50 – 90 Retarder*

**Identification**



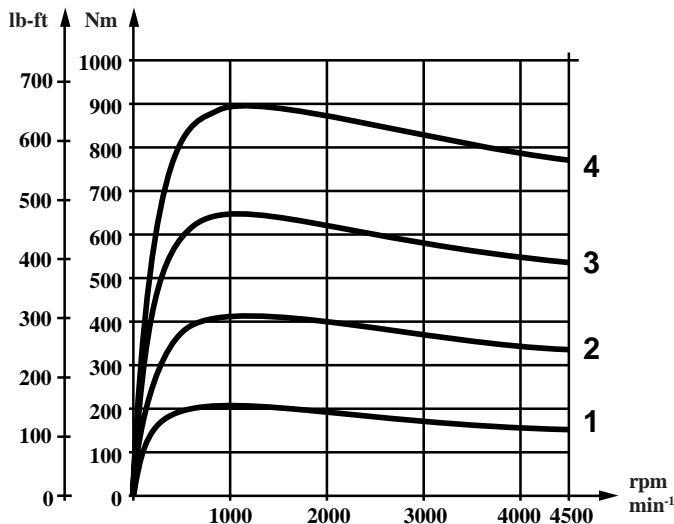
**Specifications**

MASS	Total : 125 kg/275 lb	Rotors : 39 kg/86 lb	Stator : 86 kg/189 lb
Application RANGE* G.C.W.	6 / 11 t		
Maximum BRAKING TORQUE	900 Nm/663 lb-ft		
Rotors INERTIA	0,64 kgm <sup>2</sup> /15 lb-ft <sup>2</sup>		
Maximum bearing R.P.M.	4500 tr/min		
Max. TRANSMISSIBLE TORQUE	10 000 Nm/7370 lb-ft		

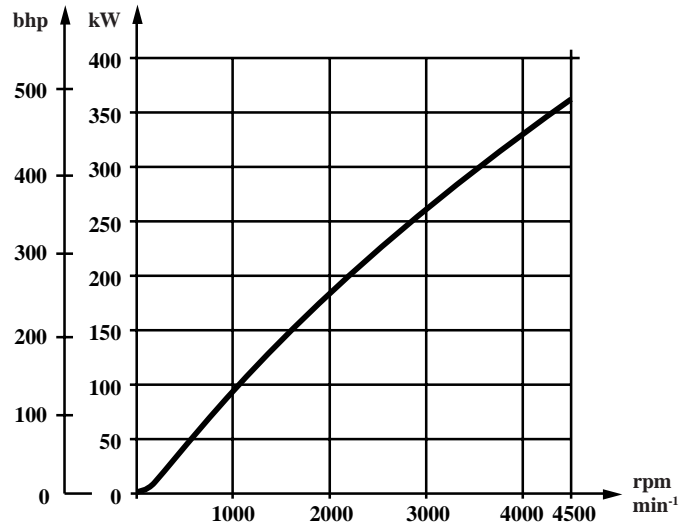
\* for specific applications, consult our Technical Department

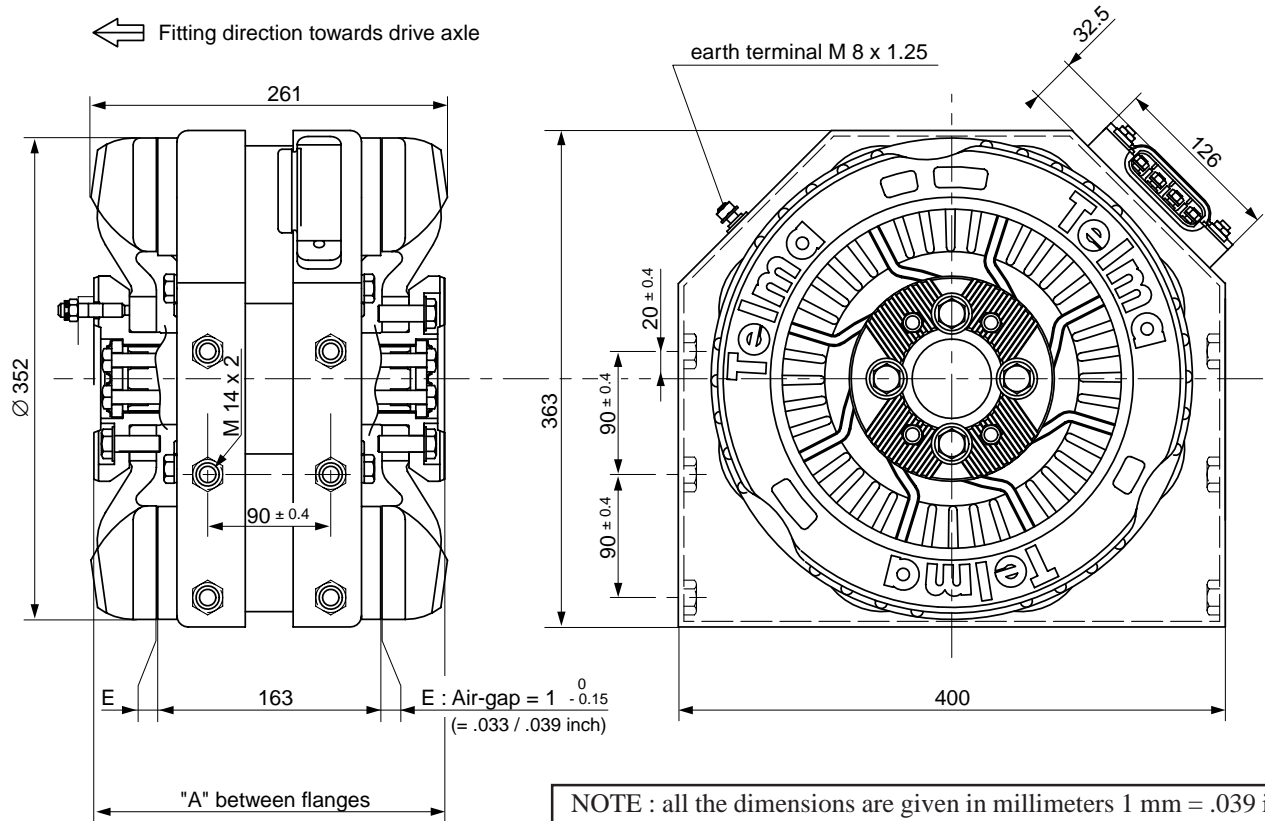
**Performance curves (versus rotor speed)**

**TORQUE**  
Control stages : 1–2–3–4

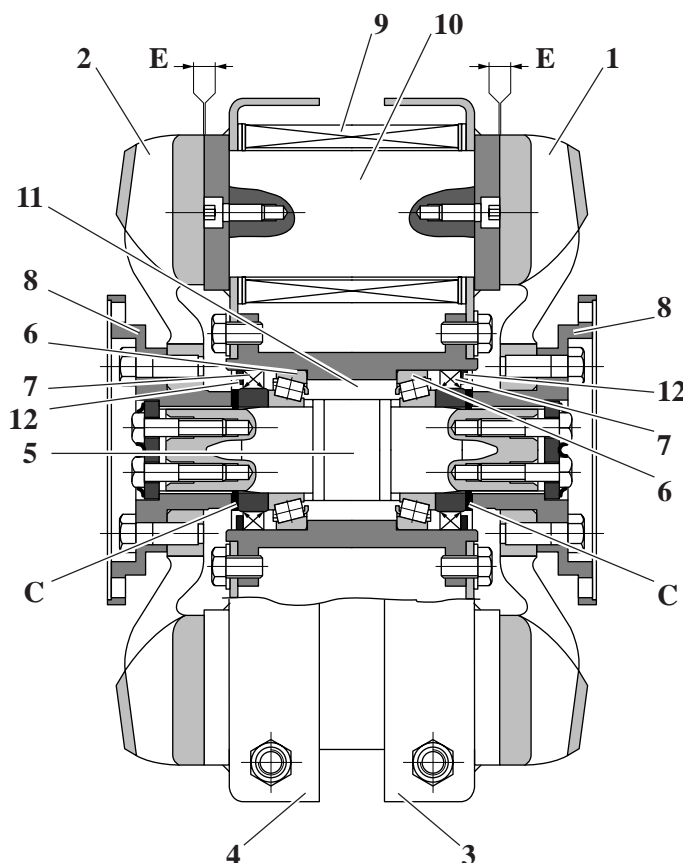


**POWER**





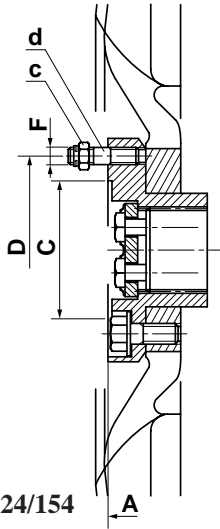
## Cross-section view



- C – Air-gap adjusting shims
- E – Air-gap
- 1 – Front rotor
- 2 – Rear rotor (axle side)
- 3 – Front housing
- 4 – Rear housing
- 5 – Shaft
- 6 – Bearing
- 7 – Lip seal
- 8 – Coupling flange
- 9 – Coil
- 10 – Pole
- 11 – Hub
- 12 – Circlips

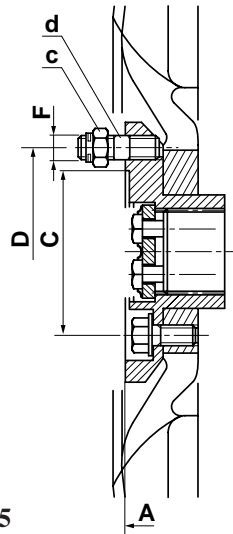


Cross-section view



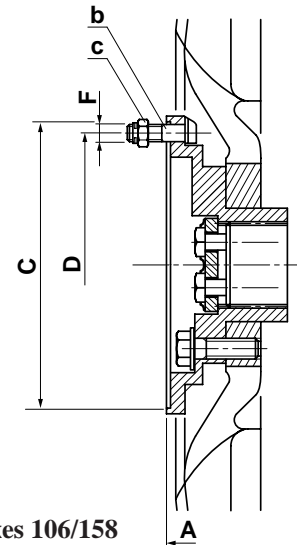
indexes 124/154

Figure 1



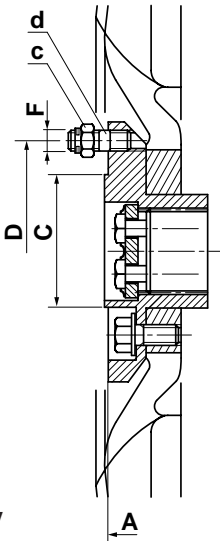
index 105

Figure 2



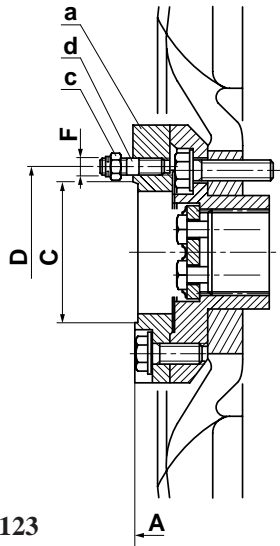
indexes 106/158

Figure 3



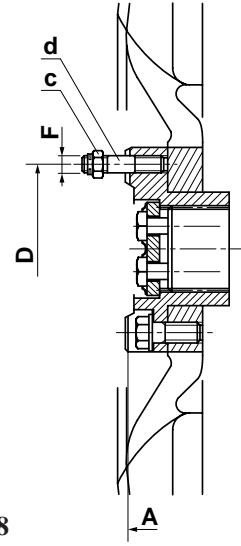
index 117

Figure 4



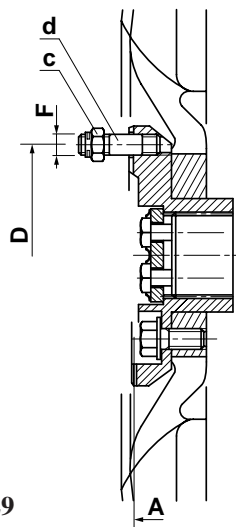
index 123

Figure 5



index 128

Figure 6





index 129

Figure 7



## Specifications

A	C	D	E	F	FIXATION	Fig.	Rotor	
							4 screws	5 screws
<b>105 index : SAE 1500 – metric thread</b>						<b>Réf. 24 V : BB202105</b>		
245.4	95.25	120.67	4	M14x1.50	studs (d) nuts (c)	2	x	
<b>106 index : SAE 1600 – metric thread</b>						<b>Réf. 24 V : BB202106</b>		
264.4	168.22	155.52	8	M10x1.00	screws (b) nuts (c)	3	x	
<b>117 index : DIN Ø 150 mm</b>						<b>Réf. 24 V : BB202117</b>		
245.4	90	130	8	M12x1.50	studs (d) nuts (c)	4	x	
<b>123 index : Mercedes–Benz Ø 120 mm</b>						<b>Réf. 24 V : BB202123</b>		
287.4	82.5	101.6	6	M10x1.00	adaptator (a) studs (d) nuts (c)	5	x	
<b>124 index : Mercedes–Benz Ø 130 mm</b>						<b>Réf. 24 V : BB202124</b>		
245.4	82.56	112	8	M10x1.00	studs (d) nuts (c)	1	x	
<b>128 index : Ø 120 mm cross–serration</b>						<b>Réf. 24 V : BB202128</b>		
253.4		100	4	M10x1.00	studs (d) nuts (c)	6	x	
<b>indice 129 : Ø 150 mm cross–serration</b>						<b>Réf. 24 V : BB202129</b>		
253.4		130	4	M12x1.50	studs (d) nuts (c)	7	x	
<b>154 index : SAE 1350/1410 – british/american thread</b>						<b>Réf. 24 V : BB202154</b>		
245.4	69;85	95.27	4	11.1	7/16” 20 UNF studs (d) nuts (c)	1	x	
<b>158 index : SAE 1550/1610 – british/american thread</b>						<b>Réf. 24 V : BB202158</b>		
264.4	168.22	155.52	8	9.52	3/8” 24 UNF screws (b) nuts (c)	3	x	

**A** – Distance between the 2 coupling flanges (see page 3, dimensions)

**C** – Centering diameter

**D** – Pitch circle diameter

**E** – Number of securing screws

**F** – Specifications of the securing screws

**NOTE :** For all other couplings, consult our Technical Department.  
All the dimensions are given in millimeter 1 mm = .039 inch.

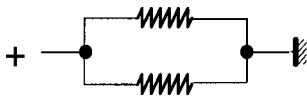
VOLTAGE (according to vehicle equipment)	12 V	24 V
VOLTAGE index	1	2
RESISTANCE per CIRCUIT at 20 °C (± 5 %)	0.25 Ω	1 Ω
RESISTANCE per COIL at 20 °C (± 5 %)	0.5 Ω	
INSULATION RESISTANCE	> 1 MΩ	
Nominal average AIR-GAP	1 <sup>0</sup> <sub>-0.15</sub> mm	

### 12 V specifications

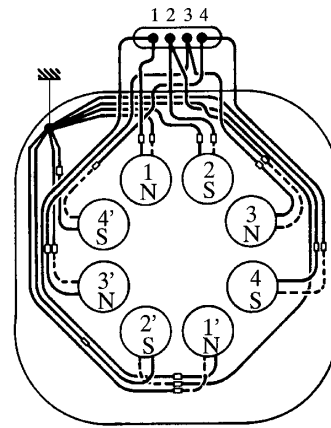
**CURRENT CONSUMPTION**  
(at 20 °C depending on control stage)

STAGE	1	2	3	4
CURRENT ± 5% (A)	48	96	144	192

**CIRCUIT DIAGRAM**



**WIRING DIAGRAM**



— RED SLEEVE      - - - - WITHOUT SLEEVE

### 24 V specifications

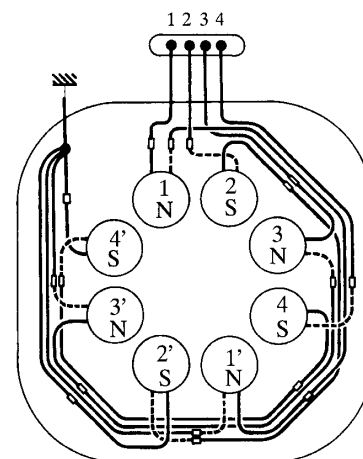
**CURRENT CONSUMPTION**  
(at 20 °C depending on control stage)

STAGE	1	2	3	4
CURRENT ± 5% (A)	24	48	72	96

**CIRCUIT DIAGRAM**



**WIRING DIAGRAM**

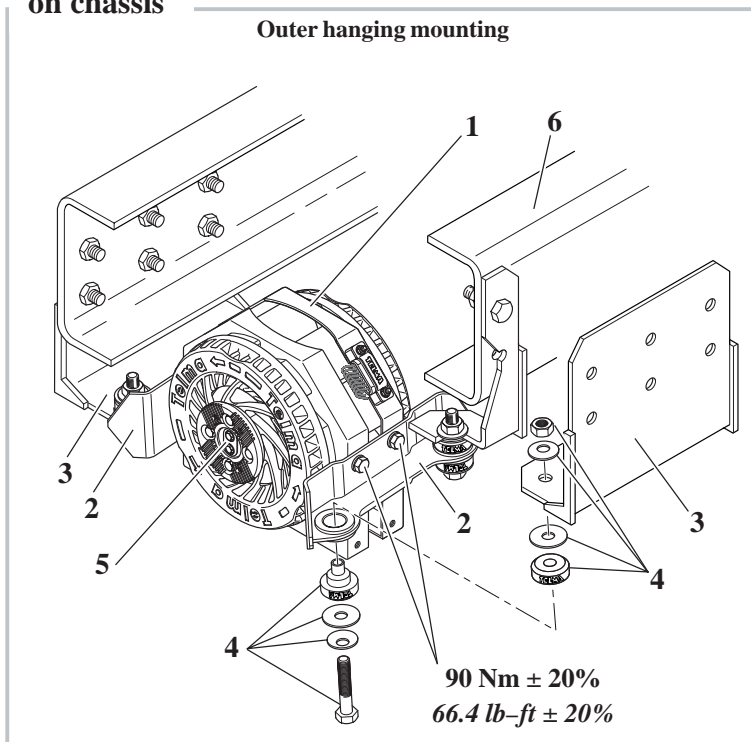


— RED SLEEVE      - - - - WITHOUT SLEEVE



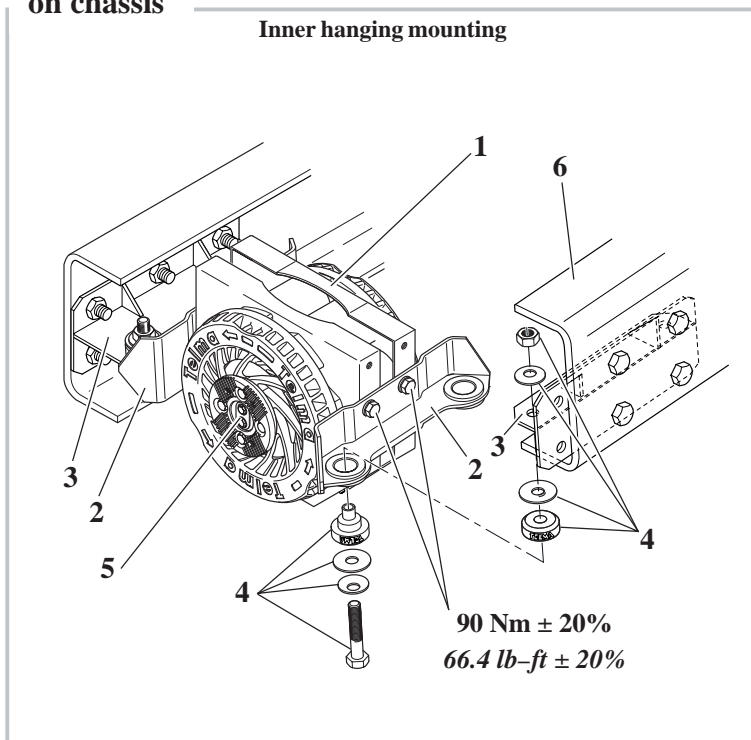
## Fitting example

on chassis



- 1 – Retarder
- 2 – Set of 2 side – plates
- 3 – Set of 2 consoles (JZ100743)
- 4 – Set of 4 rubber mounts with fasteners  
(230 Nm ± 20%/169.6 lb-ft ± 20%)
- 5 – Coupling flange
- 6 – Chassis

on chassis

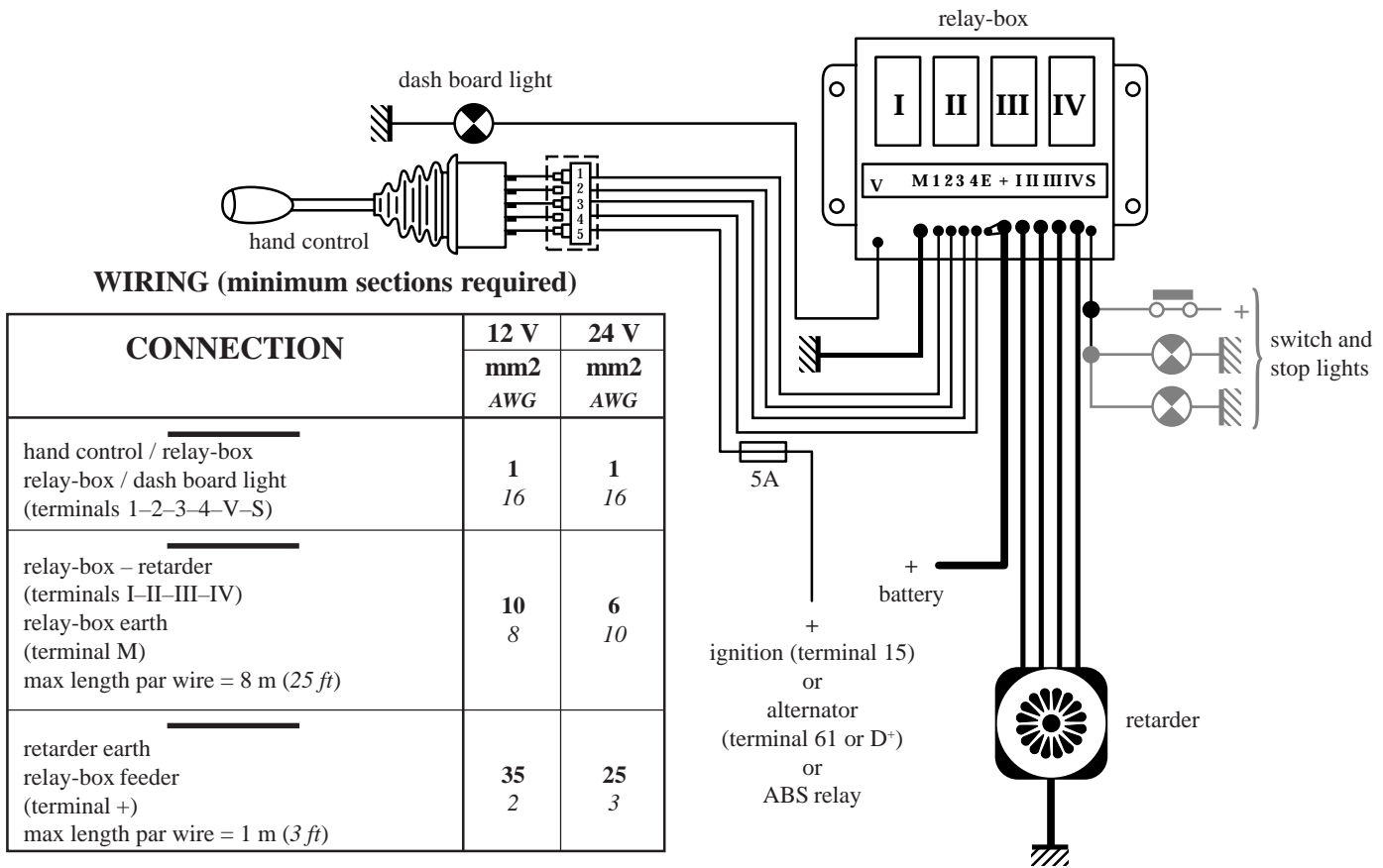


- 1 – Retarder
- 2 – Set of 2 side – plates
- 3 – Set of 2 consoles
- 4 – Set of 4 rubber mounts with fasteners  
(230 Nm ± 20%/169.6 lb-ft ± 20%)
- 5 – Coupling flange
- 6 – Chassis



## Wiring diagram (example with hand control)

Consult our Technical Department for automatic control and governing devices (ex. : ABS ...)



NOTE : for longer lengths, consult our Technical Department.



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