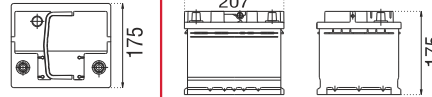
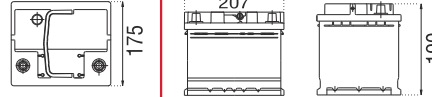
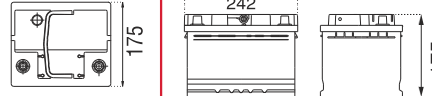
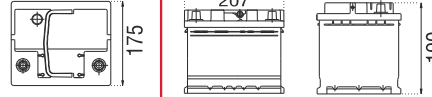
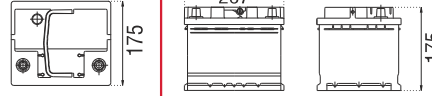

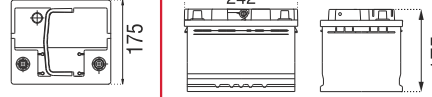
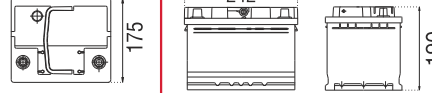




BATTERY



PRODUCT CATALOGUE

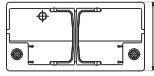
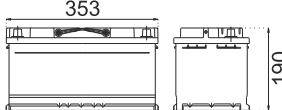

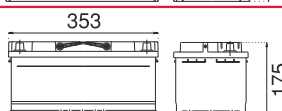
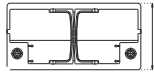
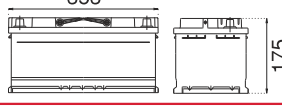

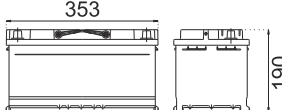
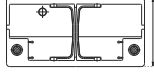
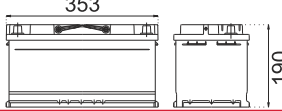
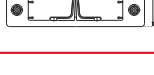
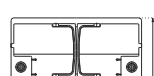
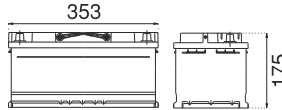


CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGHT	WIDTH	HEIGHT							
S44L1B	44	360	1	0	B13	207	175	175	✓	✓	L1B	120			
S44L1B-R	44	360	1	1	B13	207	175	175	✓	✓	L1B	120			
S44L1	44	360	1	0	B13	207	175	190	✓	✓	L1	120			
S44L1-R	44	360	1	1	B13	207	175	190	✓	✓	L1	120			
S45L2B	45	380	1	0	B14	242	175	175	✓	✓	L2B	100			
S45L2B-R	45	380	1	1	B14	242	175	175	✓	✓	L2B	100			
S50L1	50	400	1	0	B13	207	175	190	✓	✓	L1	120			
S50L1-R	50	400	1	1	B13	207	175	190	✓	✓	L1	120			
S50L1B	50	400	1	0	B13	207	175	175	✓	✓	L1B	120			
S50L1B-R	50	400	1	1	B13	207	175	175	✓	✓	L1B	120			
S50L2	50	420	1	0	B13	242	175	190	✓	✓	L2	100			
S50L2-R	50	420	1	1	B13	242	175	190	✓	✓	L2	100			
S50L2B	50	420	1	0	B14	242	175	175	✓	✓	L2B	100			
S50L2B-R	50	420	1	1	B14	242	175	175	✓	✓	L2B	100			
S55L2	55	480	1	0	B13	242	175	190	✓	✓	L2	100			
S55L2-R	55	480	1	1	B13	242	175	190	✓	✓	L2	100			



SMF SERIES

CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGHT	WIDTH	HEIGHT							
S55L2B	55	480	1	0	B13	242	175	175	✓	✓	L2B	100			
S55L2B-R	55	480	1	1	B13	242	175	175	✓	✓	L2B	100			
S60L2	60	510	1	0	B13	242	175	190	✓	✓	L2	100			
S60L2-R	60	510	1	1	B13	242	175	190	✓	✓	L2	100			
S60L2B	60	510	1	0	B13	242	175	175	✓	✓	L2B	100			
S60L2B-R	60	510	1	1	B13	242	175	175	✓	✓	L2B	100			
S66L3	66	540	1	0	B13	278	175	190	✓	✓	L3	80			
S66L3-R	66	540	1	1	B14	278	175	190	✓	✓	L3	80			
S66L3B	66	540	1	0	B14	278	175	175	✓	✓	L3B	80			
S66L3B-R	66	540	1	1	B14	278	175	175	✓	✓	L3B	80			
S72L3	72	580	1	0	B14	278	175	190	✓	✓	L3	80			TAXI
S72L3-R	72	580	1	1	B14	278	175	190	✓	✓	L3	80			
S75L3B	75	600	1	0	B14	278	175	175	✓	✓	L3B	80			
S75L3B-R	75	600	1	1	B14	278	175	175	✓	✓	L3B	80			
S75L3	75	600	1	0	B13	278	175	190	✓	✓	L3	80			
S75L3-R	75	600	1	1	B13	278	175	190	✓	✓	L3	80			

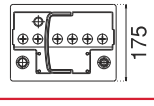
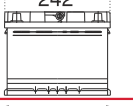
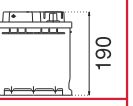
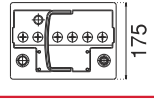

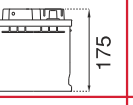
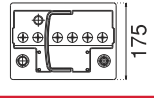
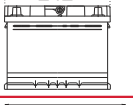
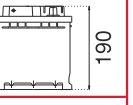
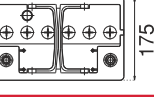
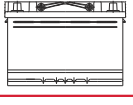
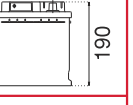
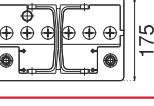
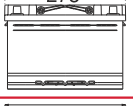
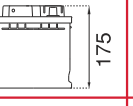
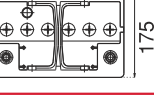

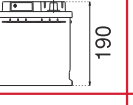
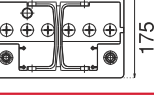
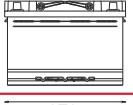
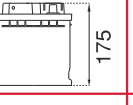
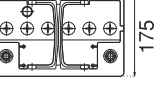

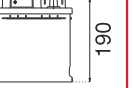


CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGTH	WIDTH	HEIGHT							
S88L5	88	720	1	0	B13	353	175	190	✓	✓	L5	80			
S88L5-R	88	720	1	1	B13	353	175	190	✓	✓	L5	80			
S88L5B	88	720	1	0	B13	353	175	175	✓	✓	L5B	80			
S88L5B-R	88	720	1	1	B13	353	175	175	✓	✓	L5B	80			
S100L5	100	760	1	0	B13	353	175	190	✓	✓	L5	80			
S100L5-R	100	760	1	1	B13	353	175	190	✓	✓	L5	80			
S100L5B	100	760	1	0	B13	353	175	175	✓	✓	L5B	80			
S100L5B-R	100	760	1	1	B13	353	175	175	✓	✓	L5B	80			



CLASSIC SERIES

CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGHT	WIDTH	HEIGHT							
C40L1B	40	330	1	0	B13	207	175	175	✓	✓	L1B	120			
C40L1B-R	40	330	1	1	B13	207	175	175	✓	✓	L1B	120			
C44L1	44	360	1	0	B13	207	175	190	✓	✓	L1	120			
C44L1-R	44	360	1	1	B13	207	175	190	✓	✓	L1	120			
C45L2B	45	380	1	0	B14	242	175	175	✓	✓	L2B	100			
C45L2B-R	45	380	1	1	B14	242	175	175	✓	✓	L2B	100			
C50L1	50	420	1	0	B13	207	175	190	✓	✓	L1	120			
C50L1-R	50	420	1	1	B13	207	175	190	✓	✓	L1	120			
C50L1B	50	420	1	0	B13	207	175	175	✓	✓	L1B	120			
C50L1B-R	50	420	1	1	B13	207	175	175	✓	✓	L1B	120			
C50L2	50	420	1	0	B13	242	175	190	✓	✓	L2	100			
C50L2-R	50	420	1	1	B13	242	175	190	✓	✓	L2	100			
C50L2B	50	420	1	0	B14	242	175	175	✓	✓	L2B	100			
C50L2B-R	50	420	1	1	B14	242	175	175	✓	✓	L2B	100			
C55L2	55	480	1	0	B13	242	175	190	✓	✓	L2	100			
C55L2-R	55	480	1	1	B13	242	175	190	✓	✓	L2	100			
C55L2B	55	480	1	0	B13	242	175	175	✓	✓	L2B	100			
C55L2B-R	55	480	1	1	B13	242	175	175	✓	✓	L2B	100			

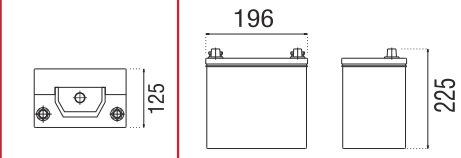
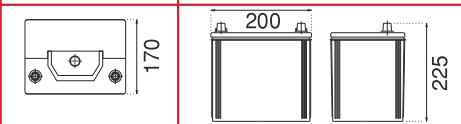
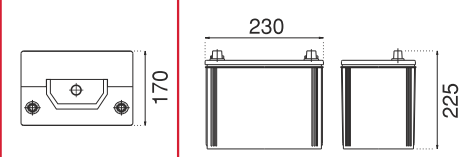
CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS		NOTES
						LENGHT	WIDTH	HEIGHT								
C60L2	60	510	1	0	B13	242	175	190	✓	✓	L2	100				
C60L2-R	60	510	1	1	B13	242	175	190	✓	✓	L2	100				
C60L2B	60	510	1	0	B13	242	175	175	✓	✓	L2B	100				
C60L2B-R	60	510	1	1	B13	242	175	175	✓	✓	L2B	100				
C66L2	66	530	1	0	B13	242	175	190	✓	✓	L2	100				
C66L2-R	66	530	1	1	B13	242	175	190	✓	✓	L2	100				
C66L3	66	540	1	0	B13	278	175	190	✓	✓	L3	80				
C66L3-R	66	540	1	1	B14	278	175	190	✓	✓	L3	80				
C66L3B	66	540	1	0	B14	278	175	175	✓	✓	L3B	80				
C66L3B-R	66	540	1	1	B14	278	175	175	✓	✓	L3B	80				
C72L3	72	580	1	0	B14	278	175	190	✓	✓	L3	80				
C72L3-R	72	580	1	1	B14	278	175	190	✓	✓	L3	80				
C75L3B	75	600	1	0	B14	278	175	175	✓	✓	L3B	80				
C75L3B-R	75	600	1	1	B14	278	175	175	✓	✓	L3B	80				
C75L3	75	600	1	0	B13	278	175	190	✓	✓	L3	80				
C75L3-R	75	600	1	1	B13	278	175	190	✓	✓	L3	80				



CLASSIC SERIES

CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGTH	WIDTH	HEIGHT							
C80L4	80	640	1	0	B13	315	175	190	✓	✓	L4	80			
C80L4-R	80	640	1	1	B13	315	175	190	✓	✓	L4	80			
C88L5	88	720	1	0	B13	353	175	190	✓	✓	L5	80			
C88L5-R	88	720	1	1	B13	353	175	190	✓	✓	L5	80			
C100L5	100	760	1	0	B13	353	175	190	✓	✓	L5	80			
C100L5-R	100	760	1	1	B13	353	175	190	✓	✓	L5	80			
C100L5B	100	760	1	0	B13	353	175	175	✓	✓	L5B	80			
C100L5B-R	100	760	1	1	B13	353	175	175	✓	✓	L5B	80			

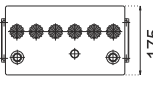
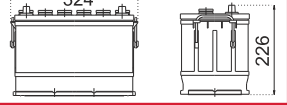
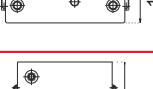
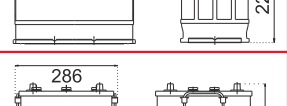
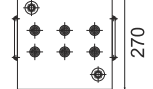
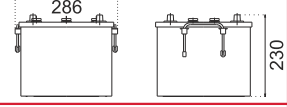
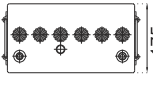
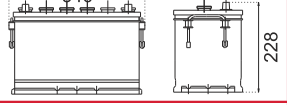
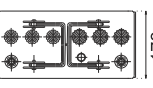
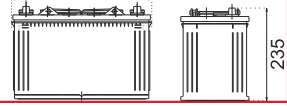
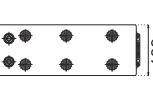
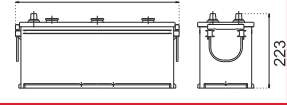
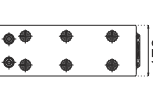
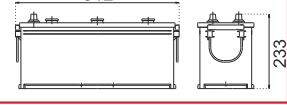
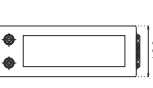
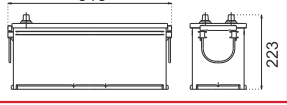
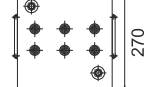
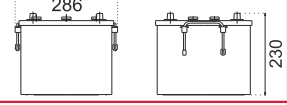
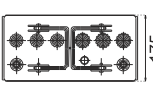
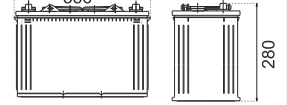




CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGHT	WIDTH	HEIGHT							
J35NS40	35	300	1	0	B0	196	125	225	✓	✓	NS40	144			
J35NS40-R	35	300	1	1	B0	196	125	225	✓	✓	NS40	144			
J35NS40-3	35	300	3	0	B0	196	125	225	✓	✓	NS40	144			
J35NS40-R3	35	300	3	1	B0	196	125	225	✓	✓	NS40	144			
J42NS40	42	330	1	0	B0	196	125	225	✓	✓	NS40	144			
J42NS40-R	42	330	1	1	B0	196	125	225	✓	✓	NS40	144			
J42NS40-3	42	330	3	0	B0	196	125	225	✓	✓	NS40	144			
J42NS40-R3	42	330	3	1	B0	196	125	225	✓	✓	NS40	144			
J45NS60-3	45	360	3	0	B0	237	127	225	✓	✓	NS60	120			
J45NS60-R3	45	360	3	1	B0	237	127	225	✓	✓	NS60	120			
J45NS60	45	360	1	0	B0	237	127	225	✓	✓	NS60	120			
J45NS60-R	45	360	1	1	B0	237	127	225	✓	✓	NS60	120			
J50D20	50	400	1	0	B1	200	170	225	✓	✓	D20	96			
J50D20-R	50	400	1	1	B1	200	170	225	✓	✓	D20	96			
J50D23	50	420	1	0	B1	230	170	225	✓	✓	D23	96			
J50D23-R	50	420	1	1	B1	230	170	225	✓	✓	D23	96			
J55D23	55	440	1	0	B1	230	170	225	✓	✓	D23	96			
J55D23-R	55	440	1	1	B1	230	170	225	✓	✓	D23	96			

JAPAN TYPE SERIES

CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGTH	WIDTH	HEIGHT							
J60D23	60	480	1	0	B1	230	170	225	✓	✓	D23	96			
J60D23-R	60	480	1	1	B1	230	170	225	✓	✓	D23	96			
J60NS60	60	480	1	0	B0	237	127	225	✓	✓	NS60	120			
J60NS60-R	60	480	1	1	B0	237	127	225	✓	✓	NS60	120			
J60D26	60	500	1	0	B1	260	175	225	✓	✓	D26	80			
J60D26-R	60	500	1	1	B1	260	175	225	✓	✓	D26	80			
J70D26	70	540	1	0	B1	260	175	225	✓	✓	D26	80			
J70D26-R	70	540	1	1	B1	260	175	225	✓	✓	D26	80			
J80D31	80	660	1	0	B1	305	175	225	✓	✓	D31	60			
J80D31-R	80	660	1	1	B1	305	175	225	✓	✓	D31	60			
J90D31	90	740	1	0	B1	305	175	225	✓	✓	D31	60			
J90D31-R	90	740	1	1	B1	305	175	225	✓	✓	D31	60			

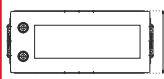
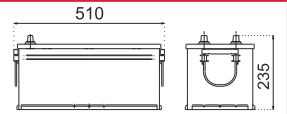
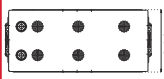
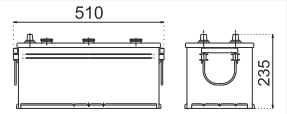

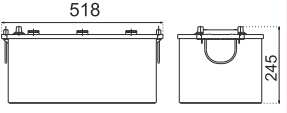
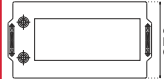
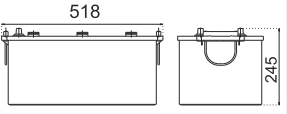

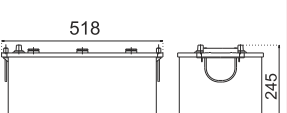
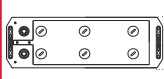
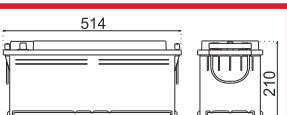
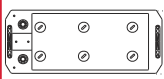
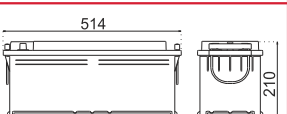
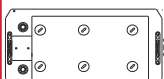
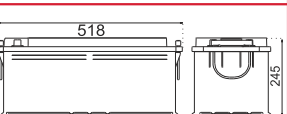


CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGHT	WIDTH	HEIGHT							
HD90H3	90	740	1	1	B3	324	175	226	OPTIONAL	✓	H3	60			
HD90H3-R	90	740	1	0	B3	324	175	226	OPTIONAL	✓	H3	60			
HD100D7	100	680	1	2	B0	286	270	230	OPTIONAL	✓	D7	24			
HD105H4	105	820	1	0	B3	346	175	228	OPTIONAL	✓	H4	60			
HD105D2	105	840	1	0	B1	356	173	235	OPTIONAL	✓	D2	60			
HD110D2	110	860	1	0	B1	356	173	235	OPTIONAL	✓	D2	60			
HD120A	120	920	1	3	B3	513	189	223	OPTIONAL	✓	A	36			
HD120D1	120	920	1	3	B3	512	176	233	OPTIONAL	✓	12D1	36			
HD120SMF	120	950	1	3	B3	513	189	223	OPTIONAL	✓	A	36			SMF
HD125D7	125	800	1	2	B0	286	270	230	OPTIONAL	✓	D7	24			
HD128D3	128	800	1	0	B1	356	175	280	OPTIONAL	✓	D3	36			

HEAVY DUTY SERIES

CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGHT	WIDTH	HEIGHT							
HD135A	135	950	1	3	B3	513	189	223	OPTIONAL	✓	A	36			
HD135D1	135	950	1	3	B3	512	176	233	OPTIONAL	✓	12D1	36			
HD135SMF	135	950	1	3	B3	513	189	223	OPTIONAL	✓	A	36			SMF
HD150B	150	1100	1	3	03	510	218	235	OPTIONAL	✓	B	30			
HD150SMF	150	1100	1	3	B3	510	218	235	OPTIONAL	✓	B	30			SMF
HD150D5	150	1100	1	3	B3	502	220	223	OPTIONAL	✓	D5	30			
HD165B	165	1150	1	3	B3	510	218	235	OPTIONAL	✓	B	30			
HD180B	180	1200	1	3	B3	510	218	235	OPTIONAL	✓	B	30			
HD180D5	180	1200	1	3	B3	502	220	223	OPTIONAL	✓	D5	30			



CODE	AH	A EN	TRM	LAYOUT	HOLD DOWN	DIMENSIONS			IND	HANDLE	BOX TYPE	QUANTITY PER PALLET	TOP VIEW	SIDE VIEWS	NOTES
						LENGHT	WIDTH	HEIGHT							
HD180SMF	180	1200	1	3	B3	510	218	235	OPTIONAL	✓	B	30			SMF
HD190B	190	1250	1	3	B3	510	218	235	OPTIONAL	✓	B	30			
HD190C	190	1270	1	3	B3	518	276	245	OPTIONAL	✓	C	30			
HD200SMF	200	1300	1	3	B3	518	276	245	OPTIONAL	✓	C	24			SMF
HD200C	200	1300	1	3	B0	518	276	245	OPTIONAL	✓	C	24			
HD210C	210	1350	1	3	B0	518	276	245	OPTIONAL	✓	C	24			
HD225C	225	1450	1	3	B0	518	276	245	OPTIONAL	✓	C	24			
MAC110	110	760	1	3	B3	514	175	210	OPTIONAL	✓	MAC110	36			MAC
MAC135	135	800	1	3	B3	514	175	210	OPTIONAL	✓	MAC110	36			
MAC143	143	860	1	3	B3	514	218	210	OPTIONAL	✓	MAC143	30			
MAC200	200	1200	1	3	B3	518	276	245	OPTIONAL	✓	MAC200	24			
MAC225	225	1300	1	3	B3	518	276	245	OPTIONAL	✓	MAC200	24			

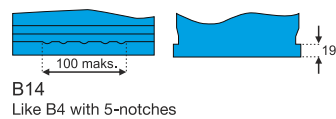
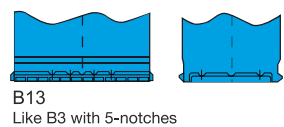
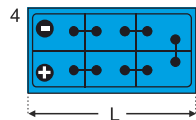
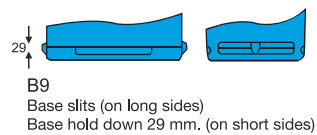
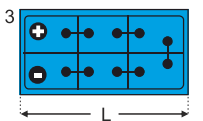
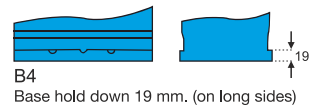
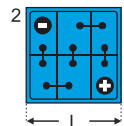
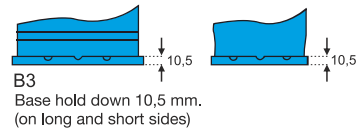
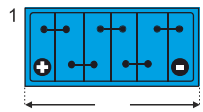
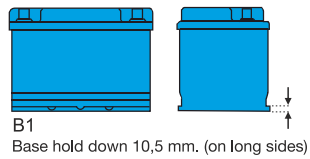
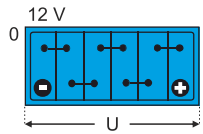


TECHNICAL DATA

TECHNICAL DATA

Layout

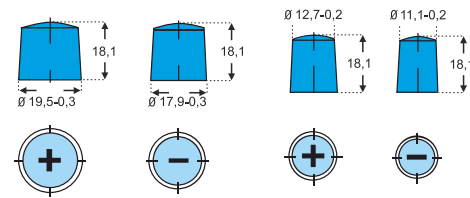
Base hold down



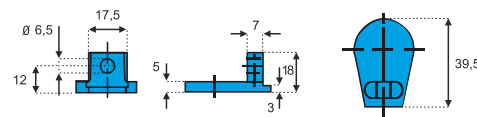
Terminal

1 Tapered terminal to DIN 72311 T.4

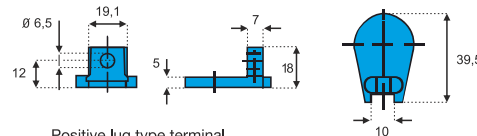
3 Small dia. Tapered terminal (Japanese)



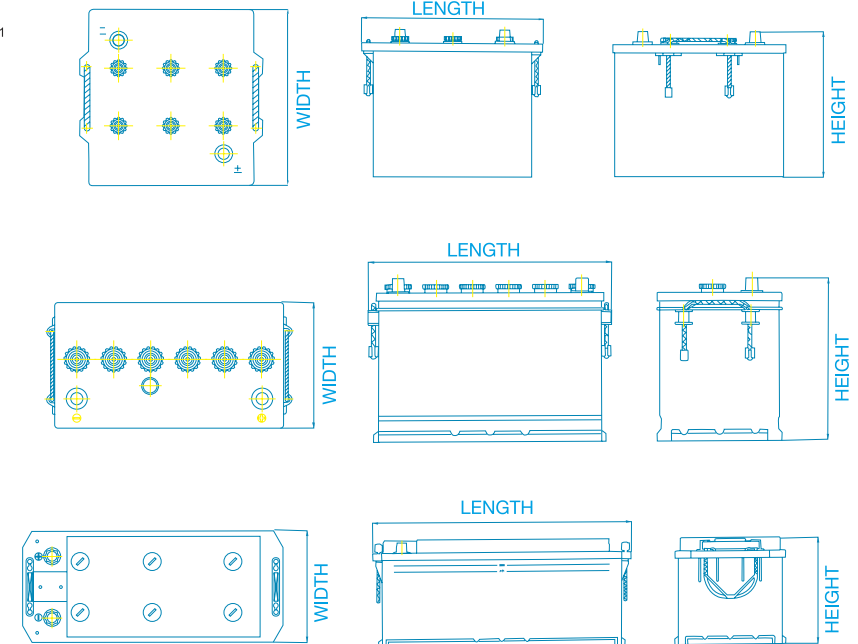
19 Ford Lug type terminal



Negative lug type terminal



Positive lug type terminal



OPTIONAL CHARACTERISTICS

- HD - Heavy Duty
- SHD - Super HD
- (level 3 = Vibration to EN)
- Rf - Vibration proof
- Srf - Super vibration proof

Integrated Flash Arrestor Indicator

- * provides safety system
- * prevents accidental explosion
- * From external spark or open flame
- * avoids acid-leakage
- * prevents inflow of dust

PE High Performance Envelope Separators

- * encapsulate negative plates
- * better durability against vibration
- * prevents short circuiting between positive and negative plates

Expanded Metal Calcium – Lead Alloy Grids

- * offer considerable strength
- * extra resistant to grid corrosion
- * resistant to over – charge
- * minimal gas emission
- * minimal waterloss



SOC Indicator

- * at full charge, the electrolyte specific gravity is 1.280 while at 50% of charge considered the minimum serviceable condition, the specific gravity is typically 1.220 In a typical situation when the specific gravity drops to 1.100, the battery is fully discharged.
- * provides foresight about status of battery

Heat – Selaed Covers

- * prevent leakage and contamination
- * increases case strenght and rigidity

Polypropylene Case

- * supports the battery elements for resistance to vibration and road shock damage.
- * light weight, exceptionally strong, durable and resistant to handling and impact damage
- * extra strenght to external effects
- * recycleable if disposed of properly

WARNINGS

Warning notes and safety regulations filled lead – acid batteries



1. The following information is about the battery, instructions of use, and instructions for installing the battery in the vehicle



2. Wear eye protection.



3. Keep children away from acid and batteries.



4. Explosion hazard:
-A highly-explosive oxyhydrogen gas mixture occurs when charging batteries, therefore:



5. Fires, sparks, naked lights and smoking are prohibited:
-Avoid causing sparks when dealing with cables and electrical equipment, and beware of electrostatic discharges
-Avoid short-circuits



6. Corrosive hazard:
Battery acid is highly corrosive, therefore:
-Wear protective gloves and eye protection.
-Do not tilt battery: acid can escape from the degassing openings or vents.



7. First aid:
-Rinse off acid splashed in the eyes immediately for several minutes with clean water. Then consult a doctor immediately.
-Neutralize acid splash on skin or clothes immediately with acid neutralizer (soda) or soap suds and rinse with plenty of water.
-If acid is consumed, consult a doctor immediately.



8. Warning note:
-Do not place batteries in direct sunlight without protection.
-Discharged batteries can freeze up, therefore store in an area free from frost.



9. Disposal:
-Hand in old batteries at a collection point. Always store batteries upright, and prevent from tipping over during transportation.
Never dispose of old batteries as domestic waste.



