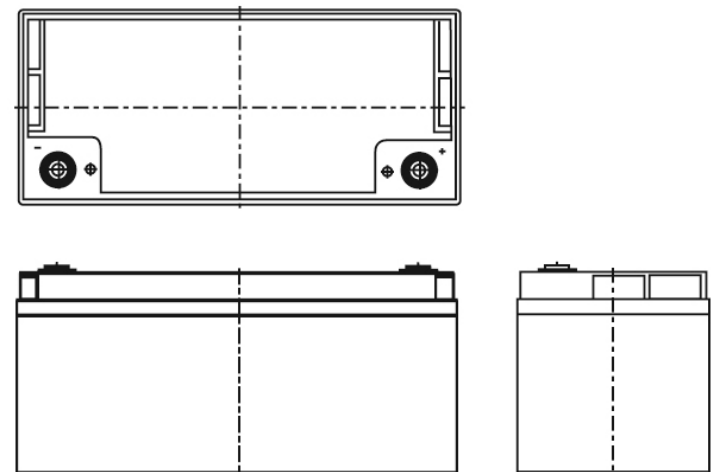


## NPL-Series - Valve Regulated Lead Acid Battery NPL78-12IFR

SPECIFICATIONS		
Nominal voltage	12	V
20-hr rate Capacity to 10.5V at 20°C	78	Ah
10-hr rate Capacity to 10.8V at 20°C	68.64	Ah
DIMENSIONS		
Length	380 (±0.7)	mm
Width	166 (±0.5)	mm
Height	174 (±0.5)	mm
(height over terminals)	N/A	mm
Mass (typical)	27.5	kg
TERMINAL TYPE		
Female threaded terminal	M8	mm
Torque	6	Nm
OPERATING TEMPERATURE RANGE		
Storage (in fully charged condition)	-20°C to +50°C	
Charge	-15°C to +50°C	
Discharge	-20°C to +60°C	
STORAGE		
Capacity loss per month at 20°C (approx)	3	%
CASE MATERIAL		
Standard Option	ABS (UL.94:HB)	
Flame retardant option (FR)	ABS (UL94:V0)	
CHARGE VOLTAGE		
Float charge voltage at 20°C	13.65 (±1%)	V
	2.275 (±1%)	V/cell
Float Charge voltage temperature correction factor (for variations from the standard 20°C)	-3	mV/cell/°C
Cyclic (or Boost) charge at 20°C	14.5 (±3%)	V
	2.42 (±3%)	V/cell
Cyclic Charge voltage temperature correction factor (for variations from the standard 20°C)	-4	mV/cell/°C
CHARGE CURRENT		
Float charge current limit	No limit	A
Cyclic (or Boost) charge current limit	19.50	A
MAXIMUM DISCHARGE CURRENT		
1 second	800	A
1 minute	500	A
SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21)		
Internal resistance	N/A	mΩ
Short-Circuit current	N/A	A
IMPEDANCE		
Measured at 1 kHz	<5	mΩ
PERFORMANCE & CHARACTERISTICS		
Refer to the technical manual	NPL	
DESIGN LIFE		
EUROBAT Classification: High performance	10 to 12	years
Yuasa design life @ 20°C	up to 10	years
SAFETY		
<b>Installation</b>	Can be installed and operated in any orientation except permanently inverted	
<b>Handles</b>	Batteries must not be suspended by their handles (where fitted)	
<b>Vent valves</b>	Each cell is fitted with a low pressure release valve to allow gasses to escape and then reseal.	
<b>Gas Release</b>	VRLA Batteries release hydrogen gas which can form explosive mixtures in air. Do not place inside a sealed container	
<b>Recycling</b>	YUASA's VRLA batteries must be recycled at the end of life in accordance with local and national laws and regulations	



### LAYOUT



### 3RD PARTY CERTIFICATIONS

ISO 9001 - Quality Management Systems  
 ISO 14001 - Environmental Management Systems  
 EN 18001 - OHSAS Management Systems  
 UNDERWRITERS LABORATORIES Inc.



### STANDARDS

IEC61056  
 IEC60896-21/22



ALL DATA IS SUBJECT TO CHANGE WITHOUT NOTICE

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