



BATTERY STATE OF HEALTH INDICATOR

Description	Battery Failure Warning System for Engine Starting Batteries
Part Number	BI-12V-Smart-400-NO-33
Applications	All 12V batteries used to power engine cranking systems: Diesel and Gas Generators, Trucks and other Vehicles
Operating Parameters	
System voltage, nominal	12V
Input voltage range	9 - 16V DC
Battery constructions supported	Rechargeable VRLA, SLA, AGM, WET, MF
Battery types supported	High rate, long life, general purpose batteries
Power consumption	<15mAh (sensor)
Internal battery	None
Operating temp	-15C to 85C*
Battery size range	200 to 3000 CCA
Battery connection	8mm 'Y' for auto terminal
Communication connection	RJ11, 2 conductor, 1m
Alarming	Voltage Free, Dry Contact Closure / switch: Normally open: switch 5V-60V 100 mA continuous
Display	LED Red-Light and LCD - Digital, graphical, icons
Buttons	None
Test frequency	Every engine cranking event
Test time	~3 sec.
Test technology	Cranking Voltage Profile Analysis
Warranty	1 year
Reverse wiring protection	Yes

Performance and Diagnostics

Replace battery indicator	Yes
Automatic battery baseline calibration	Yes
Cranking Health (CH) test	Yes
Cranking State of Health (Csoh) analysis	Yes
Automatic reset for use with new batteries	Yes
Battery voltage	Yes
Last Crank Performance	Yes
Overcharge indicator	Yes
Low battery / recharge indicator	Yes
Extreme temperature indicator	Yes

Physical Specifications

Dimensions	55mm x 55mm x 19mm (sensor)
Case material	ABS Plastic (IEC 68-2-32)
Water resistance	IPX-5
Mounting	Surface mount (adhesive/mechanical)

* Sensor continues to operate down to -40C. LCD display loses function if temp below -15C.

Configuration Matrix

Part Number	Battery Quantity				
	1	2	4	6	8
BI-12V-Smart-400-NO-33	1	2	4	6	8
BI-Hub-5	0	1	1	2	2
APC-01	1	1	1	1	1