

UPS-NiMH for imc ARGUSfit

UPS for imc ARGUSfit (ARGFT) and imc CANSASfit (CANFT)



The imc ARGUSfit UPS module is used to bridge short-term power failures that typically occur in vehicle electrical systems. Typical applications are mobile measurement tasks in vehicles where the starting process or start-stop automatics in operation are to be recorded by an uninterrupted measurement. The module is equipped with NiMH batteries. These have a sufficient capacity for several such events, lasting max. 30 s each. If a single power failure exceeds the duration of 30 s, an auto-shutdown of the system is triggered.

Additional output supply sockets "POWER OUT" enable the supply of further external imc devices or modules or blocks (independent of the clicked modules).

Highlights

- Buffering of an entire system of imc ARGUSfit / imc CANSASfit
- Total power approx. 50 W (expected total power of typical configurations)
- Sufficient buffer capacity even under derating conditions (esp. -20°C and moderate aging)
- Fixed delay / buffer time constant of 30 sec. (typical application vehicle start-up process)
- Robust NiMH battery technology
- Additional AUX output for external components

imc ARGUSfit: Flexible modular system for fast measurement systems

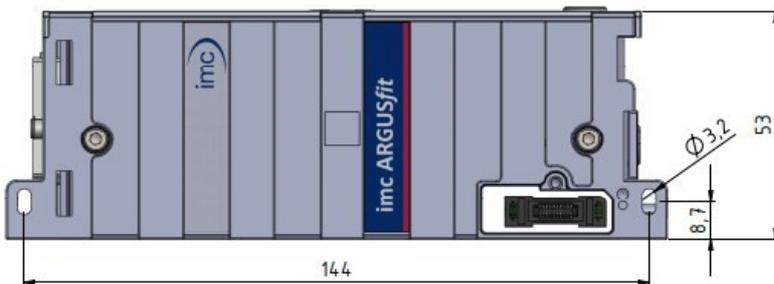


Based on an imc ARGUSfit base unit, imc ARGUSfit measurement amplifier and interface modules can be combined to form complete systems by means of a robust click mechanism, which can even integrate imc CANASfit modules. The click connectors provide the electrical connection to the power supply and system bus.

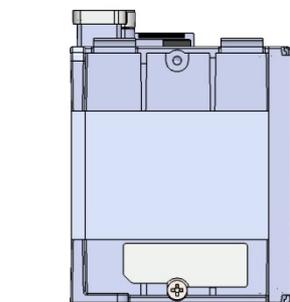
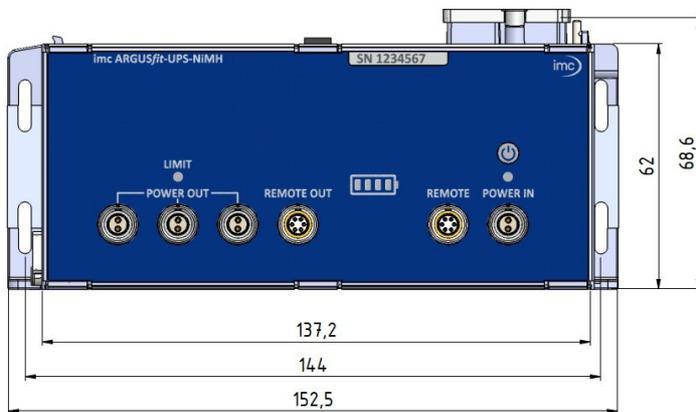
For expansion to decentralized distributed topologies, the fast internal ARGFT system bus can be converted to fiber optic cables by means of a clickable fiber converter module.

The entire system can be controlled via a common Ethernet connection (LAN/WLAN) with a PC (imc STUDIO software) and can be networked and operated synchronously and uniformly with all other imc measuring instrument series. Furthermore, it can also be operated autonomously and stand-alone capable without PC with data storage on microSD during the measurement.

Dimensions



Module shown in standard operating position (terminal connections upwards)



left module panel with parking position for the covers of the module connectors

Overview UPS module

Order Code	properties	article no.
ARGFT/UPS-NIMH	battery buffered operation for ARGUSfit (ARGFT) systems (UPS with NiMH technology)	11400219

Included accessories

Networking		
Order Code	properties	article no.
ARGFT/UPS-BASE-REMOTE-OUT-0M3	UPS control cable: REMOTE OUT (UPS) - REMOTE (BASE), LEMO.0B (6-pin), 30 cm length	11400223
ARGFT/UPS-BASE-POWER-OUT-0M3	UPS power cable: POWER (OUT) - POWER (BASE), LEMO.0B (2-pin), 30 cm length	11400224
Documents		
Getting started with imc ARGUSfit (one copy per delivery)		
Device certificate		

Optional accessories

Device power supply and networking		
Order Code	properties	article no.
ARGFT/UPS-BASE-REMOTE-OUT-0M1	UPS control cable: REMOTE OUT (UPS) - REMOTE (BASE), LEMO.0B (6-pin), 10 cm length	11400221
ARGFT/UPS-BASE-REMOTE-OUT-0M3	UPS control cable: REMOTE OUT (UPS) - REMOTE (BASE), LEMO.0B (6-pin), 30 cm length	11400223
ARGFT/UPS-BASE-POWER-OUT-0M1	UPS power cable: POWER (OUT) - POWER (BASE), LEMO.0B (2-pin), 10 cm length	11400222
ARGFT/UPS-BASE-POWER-OUT-0M3	UPS power cable: POWER (OUT) - POWER (BASE), LEMO.0B (2-pin), 30 cm length	11400224
ACC/AC-ADAP-24-60-0B	AC/DC power adaptor: 24 V, 60 W, connector: LEMO.0B 2-pin	13500246
ACC/POWER-PLUG3	DC-power connector (plug for power socket)	13500033
ACC/CABLE-LEMO-0B-BAN-2M5	supply cable with LEMO.0B.302 via banana, 2.5 m length	13500276
Miscellaneous		
ACC/REMOTE-0B	connector for remote	13500050

Technical Specs - ARGFT/UPS-NIMH

Power supply		
Parameter	Value	Remarks
Input supply voltage	7 V to 50 V DC	e.g. via AC/DC adapter or on-board power supply via LEMO supply socket
Power-on threshold (typ.)	10 V DC	min. input voltage required for power-on (open circuit)
UPS take-over threshold (typ.)	9.0 V DC 9.9 V DC	at 25 °C, no load take-over internal buffer battery switch back to external supply
Output voltage	$V_{in} - 0.3$ V DC (min.) 12.2 VDC (typ.)	10 V to 50 V DC input (full load) buffer operation
Output power	50 W	max.
Tolerated overload	shutdown after: 10 s 1 s	with static load > 50 W in operation with external supply in buffer operation
Overload / short-circuit protection Output	long-term (reversible)	with reference ground of the output voltage; automatic restart after short circuit until it is interrupted
Overload protection Input	safety fuse 10 A	

Uninterruptible power supply (UPS)			
Parameter	Value typ.	min. / max.	Remarks
Battery type	NiMH		
Nominal capacity		12 Wh (min.)	25 °C, fully charged battery
Available buffer capacity	11 Wh 6.5 Wh		battery was fully charged at 25 °C 12 W output power, 25 °C 50 W output power, 25 °C
Reduction of the maximum output power for buffer operation in cold conditions	1 W / K		$T_a < +15$ °C, fully charged battery
Continuous buffer duration (bridging time)	30 s		internal timer is reset when external supply is applied
Charging power	8.0 W		module switched on
Charging time ratio: charging- and discharging duration	1.25 · (total power / 8 W)		worst case example: total power of the system: 50 W discharge time 0.5 min., resulting charge time < 4 min. (charging time ratio 8:1)
Charging time for complete battery recovery	2.4 h		module switched on
Battery temperature range	-10 to +60 °C -10 to +60 °C -20 to +65 °C		charging discharging standby

General		
Parameter	Wert	Bemerkungen
Isolation	isolated from CHASSIS, no input-to-output isolation	from housing (CHASSIS)
Power supply sockets	LEMO.ENG.0B.302 (2-pin)	"POWER IN" and "POWER OUT"
Remote control	LEMO.ENG.0B.306 (6-pin)	"REMOTE" and "REMOTE OUT"
On/Off push button	✓	
Weight	0.7 kg	
Dimensions (L x W x H)	153 x 69 x 53 mm	including mounting flanges and click mechanism, see drawings ²
Status LED	POWER (Tri-Color) LIMIT (Tri-Color) battery charge level (4 segment Tri-Color)	operating mode overload battery charge level and UPS state

Operating conditions		
Parameter	Value	Remarks
Operating environment	dry, non corrosive environment within specified operating temperature range	
Ingress protection class	IP50	with correctly fixed mounted covers over both module connectors
Pollution degree	2	
Operating temperature range	-15 °C to +55 °C	without condensation
Shock- and vibration resistance	IEC 60068-2, IEC 61373 IEC 60062-2-64 category 1, class A and B MIL-STD-810 Rail Cargo Vibration Exposure U.S. Highway Truck Vibration Exposure	
Extended shock- and vibration resistance	upon request	specific tests or certification upon request