



Compact Control for Walk-behind and Ride-on Cleaning Machines

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PG DRIVES TECHNOLOGY



SK79008/04/08



PG DRIVES TECHNOLOGY

- 24V or 36V system voltages
- 45A, 70A, 140A and 180A power ratings
- Advanced drive algorithm
- 3 programmable auxiliary outputs
- Belly-button function
- Battery lockout function
- Hours run timer function
- Powerful on-board diagnostics
- System log
- Environmentally sealed
- Low impedance inputs
- Self-protecting outputs

The i-Drive permanent magnet motor speed controller has been designed specifically for applications such as walk-behind floorcare machines and small materials handling devices. i-Drive provides a combination of features, protection, and cost-effectiveness unmatched by any other controller on the market today.

i-Drive is available with 45A, 70A, 140A and 180A power outputs for both 24V and 36V system voltages, and employs advanced control algorithms for smooth and precise speed control. In addition to the main motor output, the i-Drive features 3 auxiliary outputs with programmable operating modes and timers. These outputs can be used to drive solenoid brakes, brush and vacuum relays, warning alarms or similar devices.

The electronics of the i-Drive are sealed against water ingress to IPx5, and when the optional connector sealing system is fitted, the cable connections are protected to IPx4. Low impedance inputs and current limited output drivers provide full protection against electrical faults and wiring errors. These features allow the i-Drive to function safely and reliably in the harshest of environments.

The powerful on-board diagnostics log records the details of system problems for all electrical items connected to the i-Drive, allowing difficult intermittent wiring problems to be solved rapidly. A run timer is also included, so that the total number of hours that the machine has been driven is recorded. Programming is achieved by PGDT hand-held devices or PC based programming software.

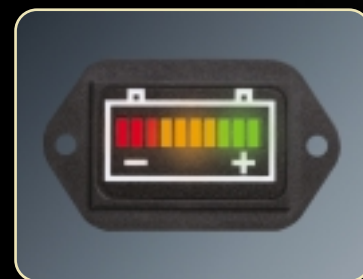


**Safe and reliable
functionality
in the harshest
of environments**



TRUCharge DISPLAY

The optional Trucharge display module provides accurate battery status indication, and displays useful diagnostic information when a problem occurs anywhere on the electrical system.



PRODUCT CODES

i24-45	24V, 45A
i36-45	36V, 45A
i24-70	24V, 70A
i36-70	36V, 70A
i24-140	24V, 140A
i36-140	36V, 140A
i24-180	24V, 180A
i36-180	36V, 180A

ANCILLARY ITEMS

i Cover: i45/i70	Water resistant sealing system
i Cover: i140/i180	Water resistant sealing system
i Molex®	Control connector kit
TruCharge Display	BDI & diagnostic gauge, 38x24mm mounting aperture

PROGRAMMING

SP1A	Dealer/service level hand-held programming device
Ind PCPa	CD-ROM and cable for Dealer/service level PC programming*
Ind PCPb	CD-ROM and cable for OEM engineering PC programming*
	*Microsoft® Windows 98 / 2000 / XP

SPECIFICATIONS

Supply Voltage:	24Vdc	36Vdc
Operating Voltage:	16-30Vdc	16-45Vdc
Peak Voltage:	36Vdc	49Vdc
Reverse Battery Voltage:	40Vdc	60Vdc
Output Current:	45A / 70A / 140A / 180A	
PWM Frequency:	20kHz ± 1%	
Aux 1 Output:	Programmable mode, 1.25A	
Aux 2 Output:	Programmable mode, i45/i70: 0.3A i140/i180: 1A	
Aux 3 Output:	Programmable mode, i45/i70: 0.3A i140/i180: 1A	
Status Output:	Programmable 12V, 50mA sink or source	
Inhibit Input:	Programmable mode	
Power Connections: i45/i70	6.35mm (0.25") Faston Spade	
Power Connections: i140/i180	M6 screw terminals	
Aux 1 Output Connections:	2-way Molex® Mini-Fit, Jr™	
Control Connector:	14-way Molex® Mini-Fit, Jr™	
Moisture Resistance:	Electronics to IPx5 Connections to IPx4 with terminal cover fitted	
Operating Temperature:	-25°C to +50°C	
Storage Temperature:	-40°C to +65°C	
Safety:	Multiple hardware & software strategy Designed to EN60335/2/67	
EMC on sample machine	Tested at 30V/m	
Susceptibility:	To EN55022 Class B	
Emissions:	IEC801 part 2	
ESD:	IEC801 part 2	

For further details, refer to i-Drive Technical Manual SK76977

DIMENSIONS

	i45/i70		i140/i180	
Length	132mm	5.2"	Length	173.0mm 6.8"
Width	74.0mm	2.9"	Width	122mm 4.8"
Height	40mm	1.6"	Height	48mm 1.9"
Trucharge Display				
Length	53mm	2.1"		
Width	31mm	1.2"		



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