



CS 160 Charging Satellite

INTRODUCTION

Normet SmartDrive CS 160 Charging Satellite offers flexible power distribution precisely where it is needed most. Designed as a supply interface for use with Normet supply cabinets or charging cabinets, the CS160 features a durable and robust design specifically tailored for harsh conditions.

Key features

- Charging with up to 160kW power and 200A current
- Robust and easy to use user interface with e-stop
- Up to 80 m installation distance from Charging cabinet or Supply cabinet
- Led bar indicator for State of Charge (SOC)

GENERAL ELECTRIC SPECIFICATION

Voltage	Max. 1000 VDC
Standby power	25 W
Max. charging current	200 A

ELECTRICAL PROTECTIONS

Charging connector pin temperature monitoring

ENVIRONMENTAL SPECIFICATION

Operating temperature	-30°C to +50°C
Derating high temperatures: Charging cable pin temperature limits charging current. For other limiting variables, see the Charging cabinet or Supply cabinet datasheet.	
Storage temperature	-40 to +60°C
Enclosure class	IP65, IK10
Humidity	<95% relative humidity

GENERAL

Housing material	Stainless steel
DC connection standard	CCS type 2 IEC 62196-3
Connector specification	
DC cable length	
• 5 m	
◦ 7 m	

Connectivity (via Supply cabinet or Charging cabinet)

Connectivity	3G/4G/LTE, WiFi, OCPP 1.6/2.0
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Electrical connections (between Charging satellite and Supply cabinet)

DC power cable per vehicle connector	terminals 2 x 95 mm ² per pole
Control cable	24 VDC
Control bus cable	

Compliance to standards

IEC 61851-1
 IEC 61851-23
 IEC 61851-21-2

ACCESSORIES

- Installation stand
- Cable management system

SERVICES

NORMET SERVICES

Our services cover the whole life cycle of your equipment. They include start-up and commissioning, genuine spare parts, upgrades & modifications, and remanufacturing, as well as rental and leasing offerings, and field services. We also offer improvement services such as operator training and process audits.

SPARE PARTS

Genuine parts from Normet Services ensure that you always have the highest quality parts available to keep your equipment up and running. Depending on your needs, we can offer everything from individual parts to complete parts contracts, and our professionals around the world have the experience to ensure that you have the parts you need when you need them.

Initial spare parts package:

Available for one year of use*. Includes periodical service, most common wearing parts and most critical safety parts.

Spare parts packages made for customer needs:

Available based on years of use*. Includes periodical service, most common wearing parts and most critical safety parts.

* Recommendations are based on average time – can vary a lot depending on work site conditions.

UPGRADES AND MODIFICATIONS

Our Upgrades and Modifications services are designed to ensure the economical, efficient and purposeful performance of your equipment over its entire life cycle. A service provided by a reliable OEM like Normet ensures the safety and performance of your equipment. Normet Upgrades and Modifications save you both time and money, while delivering the high quality you expect from us.

SERVICE CONTRACTS



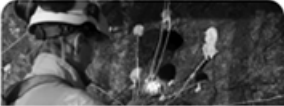

With a service agreement, Normet manages your fleet with guaranteed availability and agreed costs, giving you transparency for your life cycle costs, annual operational budget and fleet uptime. This lets you focus on your core operations. Each service agreement is built and customized to meet the individual customer's needs from our portfolio of services. Depending on the level of service agreement you need, you can choose anything from basic technical support for an individual machine all the way up to services for your entire fleet, as well as process performance. The service levels we offer are:

- Parts Availability
- Fleet Support
- Fleet Availability
- Process Performance

The content of a service level can be tailored to meet your particular requirements.

TRAINING SERVICE

Our Training Services are available for you and your operators throughout the equipment lifecycle and they include:

	 Operation & Maintenance	 Spraying	 Charging	 Scaling
ADVANCED	Advanced fault diagnostics & troubleshooting	Concrete chemicals, testing and preparing for EFNARC-certificate test	-	-
INTERMEDIATE	Troubleshooting training Foundations of electrics, hydraulics and mechanics NorSmart	Advanced training in concrete spraying Economics of concrete spraying	Advanced training in explosives Economics of charging	Advanced training in scaling Economics of scaling
BASIC	Operation and Maintenance Training Basic Product Training	Basic understanding of concrete spraying	Basic understanding of charging	Basic understanding of scaling
LEVEL	SERVICE	PROCESS KNOWLEDGE		

START-UP AND COMMISSIONING

1. OPERATOR TRAINING

	Start-up training	Commissioning
1.1 Classroom training		
General introduction and operation of charger	Basic	No classroom training included in commissioning
Safety instructions	Basic	
Use of manuals	Basic	
Technical introduction of equipment	Basic	
Hands-on service and pre-operation checks	Basic	
1.2 Practical training		
Pre-operation checks	Basic	Introduction
Safety instructions	Basic	Introduction
Preparing the charger for specific operation conditions	Basic	Not covered
Operation	Basic	Introduction
Charger daily checks	Basic	Introduction
Troubleshooting	Basic	Not covered

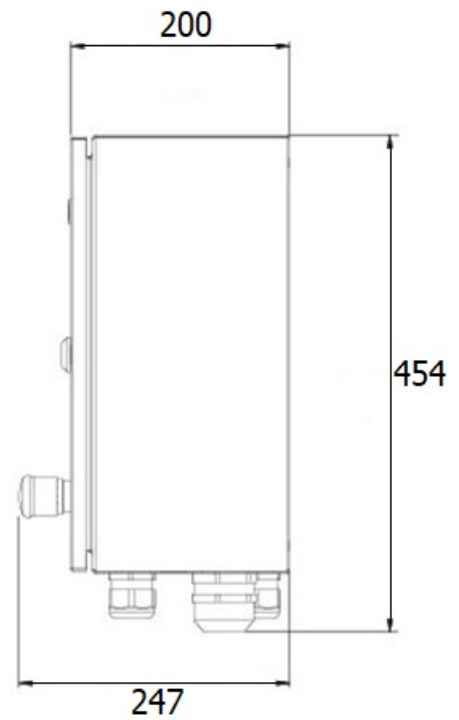
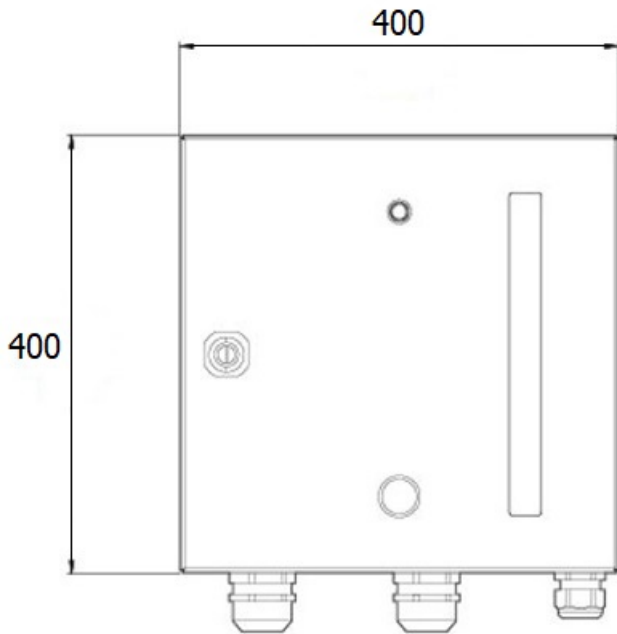
2. MAINTENANCE AND REPAIR TRAINING

General operation of charger	Basic	Introduction
Symbols of drawings and codes	Basic	Not covered
Control systems	Basic	Introduction
Function of main components (depending on charger)	Basic	Introduction
Locations of components in the machine	Basic	Not covered
Periodical maintenance	Basic	Introduction
Troubleshooting	Basic	Not covered
Use of manuals and safety instructions	Basic	Introduction
Installation assistance	Basic	Not covered

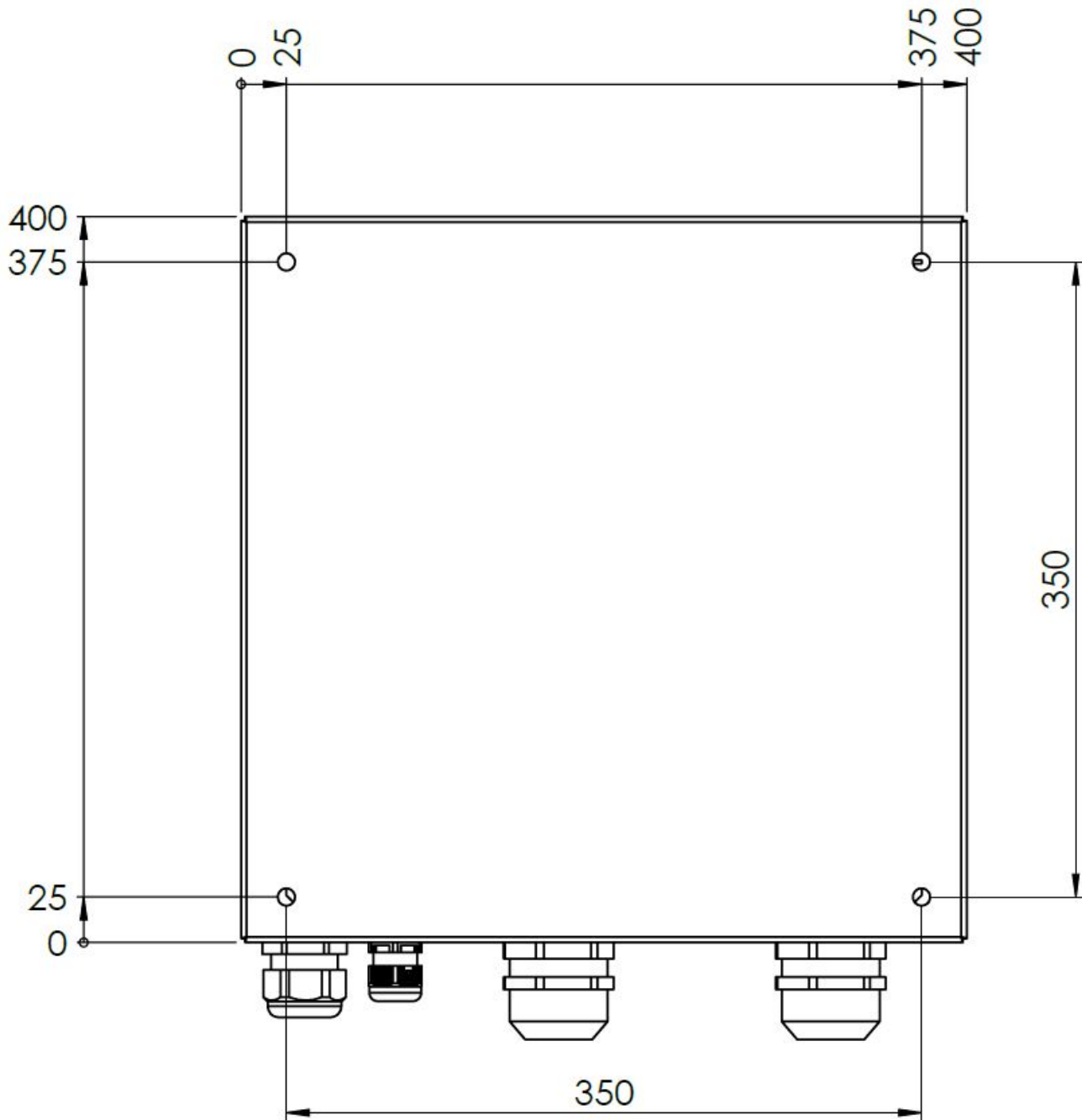
DIMENSIONS

Height	400 mm	Depth with stop button	247 mm
Height with cable fastener	454 mm	Weight with 5 m charging cable	23.5 kg
Width	400 mm	Weight with 7 m charging cable	25.5 kg
Depth	200 mm		

DIMENSIONAL DRAWINGS



DIMENSIONAL DRAWINGS



Backside mounting holes

Normet reserves the right to change this specification without further notice

Pictures may include options and additional equipment.