

INSTALLATION INSTRUCTIONS



Integrated Motor Drive



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1. Introduction

This document describes how to install and use the IMD Manager. The IMD Manager is used for configuration, monitoring and troubleshooting of PRACTEK's Integrated Motor Driver (IMD). It does not describe how each parameter is configured, but rather the principles of using the IMD Manager.

Installation instructions for the IMD Manager can be found at the end of this manual.



Read instructions

Read the *IMD 100 Function description* (document no. 4189360013) and the IMD Integration manual in order to understand the functions and configuration of the IMD.




1.1 Revision history

Apart from editorial changes the following changes have been made in this revision:

Date	Revision	Changes
2016-12-22	A	This is the first version of the document.

1.2 Conventions

The following conventions are used in this document:

Used in document	Description
Monotype font	Used when describing a path or text input in a machine human interface
␣ ↵	Used to illustrate a space and Enter characters
	A yellow symbol that illustrates hazard type (this symbol is an example for general hazard). There are different types such as electrical, chemical and so on.
Danger!	A signal word used to indicate an imminently hazardous situation, which if not avoided, will result in death or serious injury. (ISO 3864)
Warning!	A signal word used to indicate an imminently hazardous situation, which if not avoided, could result in death or serious injury. (ISO 3864)
Caution!	A signal word used to indicate a potentially hazardous situation, which if not avoided, could result in minor or moderate injury. (ISO 3864)
	A blue symbol that illustrates a need for mandatory action. In this example read instructions. Other types of blue symbols exist and always indicate mandatory action.
	A symbol used to draw attention to extra information or an action that is not mandatory

1.3 Product user documentation

The IMD product has an extensive user documentation, targeted towards different audience and product use stages.

The following documents are part of the user documentation:

Table 1 IMD user documentation

Document	Target audience	Content
IMD 100 datasheet Document no.: 4921260015	Buyers and technicians of customers	Describes relevant specifications and give an overview of the IMD functions
IMD 100 function description Document no.: 4189360013	Mainly technicians and engineers of customers.	Describes the functions of the IMD. Gives the reader an understanding of the purpose of the IMD in a system, and which functions can be utilised in a pitch system. The functions are described so that the reader can understand what each function is used for.
IMD 100 integration manual Document no.: 4189360015	Engineers at customer R&D department	Describes how to integrate the IMD in a pitch system. Gives extensive knowledge about: IMD SW (parameters and how to achieve specific functionality) How to create customized parameter file for use in production Requirements for external interfaces/components
IMD Manager installation instructions Document no.: 4189360018	Engineers at customer R&D department, as well as commissioners and service personnel	Describes how to install the IMD Manager. The IMD Manager is an application used to configure and control the IMD using the Service USB connector.
IMD Manager user manual Document no.: 4189360019	Engineers at customer R&D department, as well as commissioners and service personnel	Describes how to use the IMD Manager. The IMD Manager is an application used to configure and control the IMD using the Service USB connector.
IMD 100 installation instructions Document no.: 4189360005	Technicians at production site where the IMD is mounted in the cabinet/hub	Describes how to mount, connect and perform initial start, test, and configuration (using a configuration file) of the IMD at production.
IMD 100 initial configuration and verification manual Document no.: 4189360016	Commissioners or other personnel with similar qualifications, as well as service personnel (for SW upgrade)	Describes how to upgrade the IMD SW, how to load configuration file, and how to verify the IMD installation to the possible extent.
IMD 100 service and maintenance manual Document no.: 4189360017	Service and warehouse personnel	Describes preventive (scheduled) and corrective maintenance of the IMD, as well as storage requirements.
IMD 100 installation checklist Document no.: 4189360021	Technicians at production site where the IMD is mounted in the cabinet/hub	Installation tasks with check boxes to document the tasks done during installation
IMD 100 configuration and verification checklist	Commissioners or other personnel with similar qualifications, as well as	configuration and verification tasks with check boxes to document the tasks done during configuration and verification

Document	Target audience	Content
Document no.: 4189360022	service personnel (for SW upgrade)	
Addendum to installation manual Document no.: 4189360023	Integration and installation personnel	Describes the how to replace a pitch drive when the IMD is equipped with Retrofit wiring harness var.1

The IMD 100 documentation is written anticipating an OEM (original equipment manufacturer) product use-cycle in a wind turbine. The envisioned cycle is described in the following figure. The description also explains the tasks, who is expected to execute the task, the location where the execution takes place and the supporting PRACTEK documentation for the task. Many details in these tasks depends on the actual implementation, which is why the IMD documentation will never stand alone.

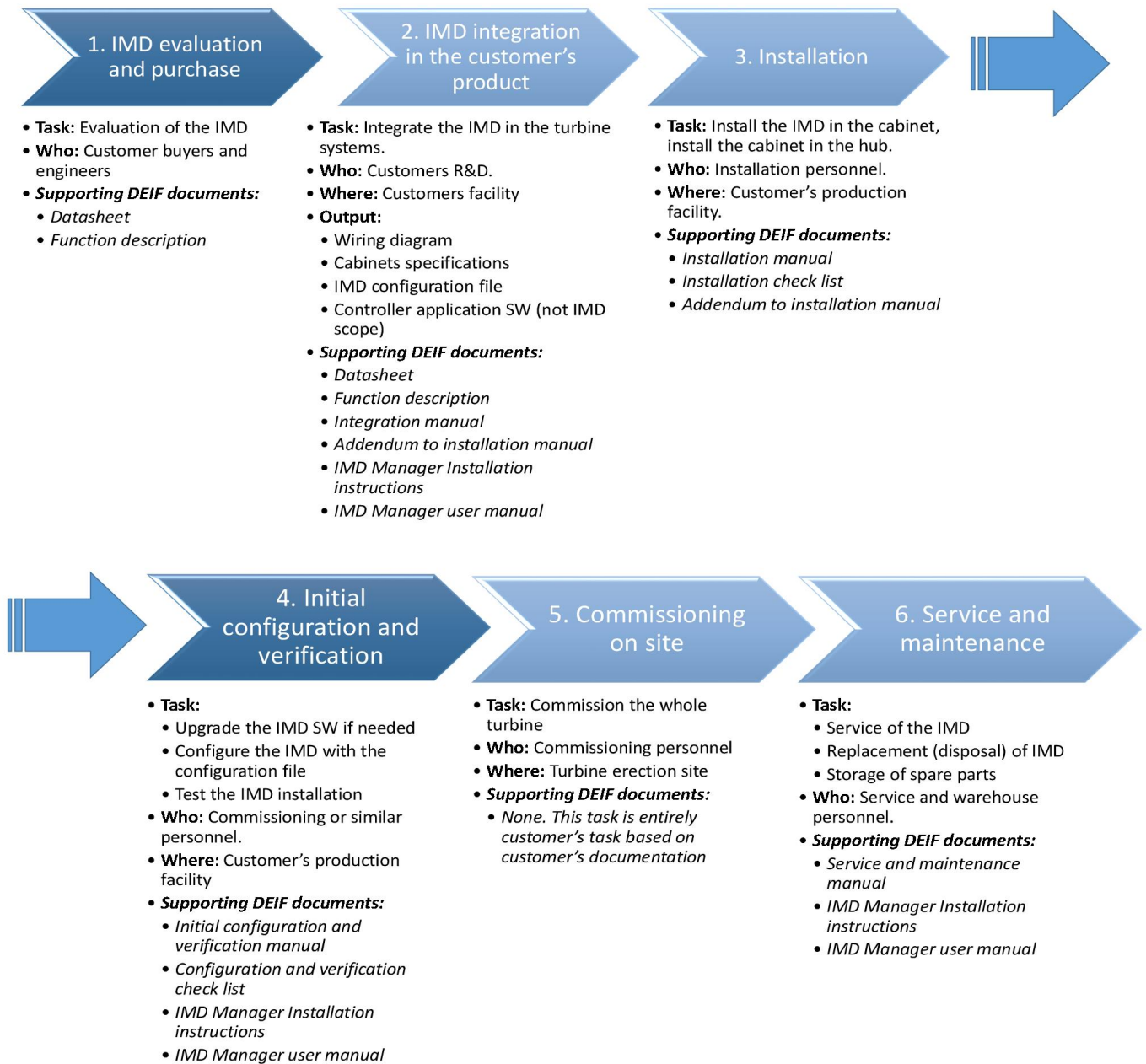


Figure 1 Tasks and documentation overview

The described product use-cycle might not apply as is for all customers, but the tasks are universal and can therefore be adapted. For example, if the SW upgrade, configuration and verification is done during the turbine commissioning, the applicable documentation can be used at this stage instead of a separate stage at the end of production.

2. Installation of the IMD manager

The IMD manager requires a Windows (XP or newer) operating system.

2.1 Installing USB driver

It is recommended to connect the IMD to the computer that will be used to run the IMD manager for the first time while the computer is connected to the internet. This way the computer will automatically download the necessary USD driver.

If this is not possible, go to Silicon Labs home page and download the latest driver for CP210x USB to UART Bridge (<http://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx>).

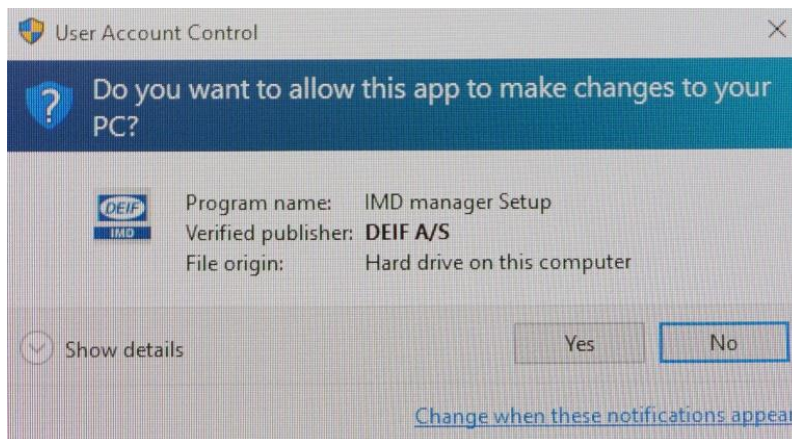


Info

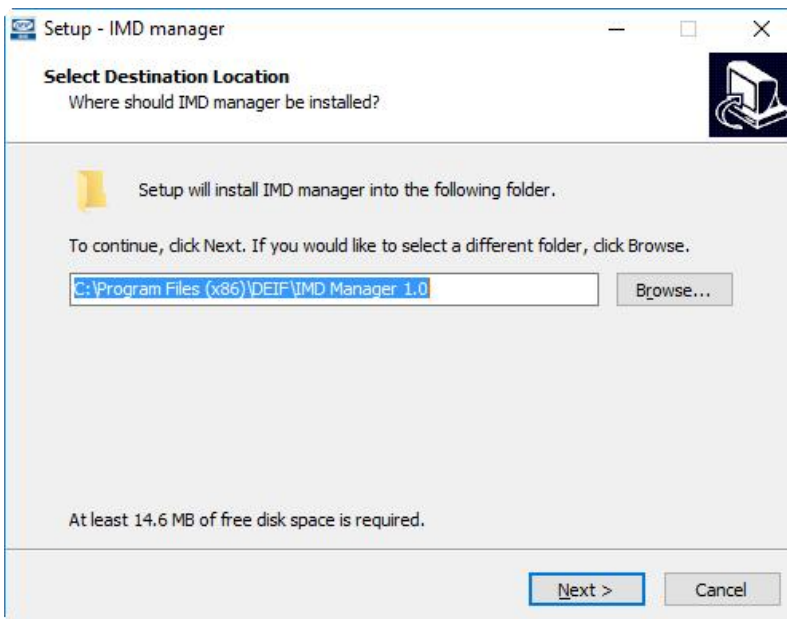
The link above was valid at the time when this manual was written. If the link does not work anymore, search for CP210x USB to UART Bridge driver in Silicon Labs home page.

2.2 Installing the IMD manager

1. Save the installation file (IMD Manager setup VxxxRxxxxxx.exe) on your disk
2. Double-click on the file (execute)
3. If a security warning for unknown publisher appears, click on the “Run” button
4. Click “Yes” in the User account control dialogue, to allow the installation to make changes
- 5.



- 6.
7. Accept the destination folder for the installation or select another and click “Next >”

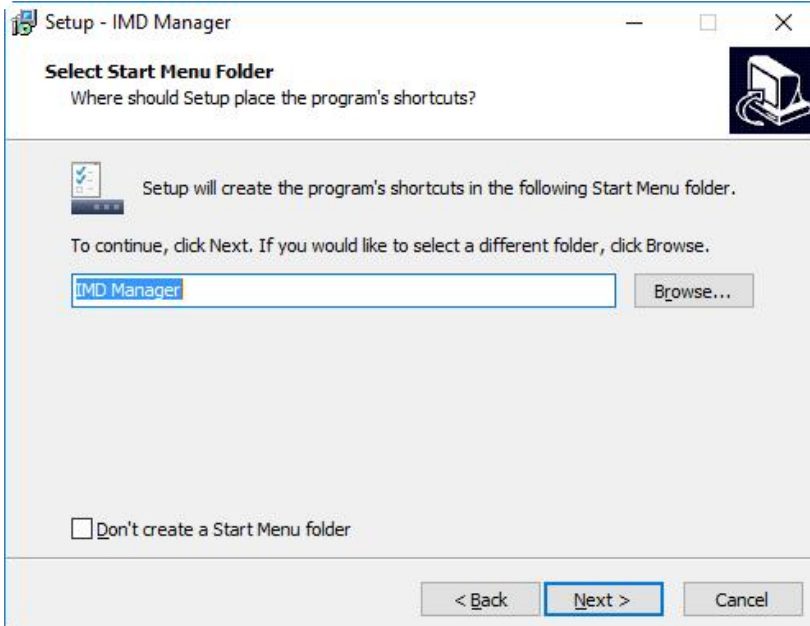


8.

**Info**

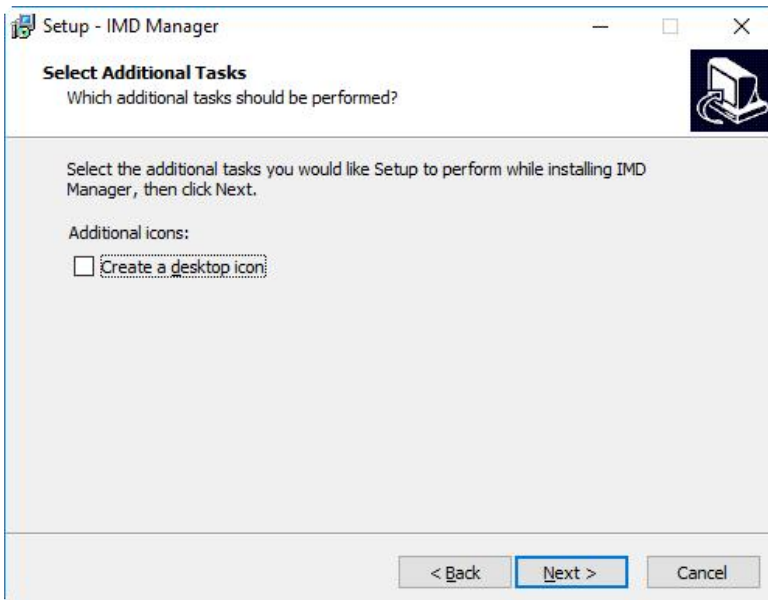
If the IMD manager is already installed on your PC, step [5](#) on page [8](#), and step [6](#) on page [9](#), will be skipped.

9. Select whether to create a start menu folder and click “Next >”



10.

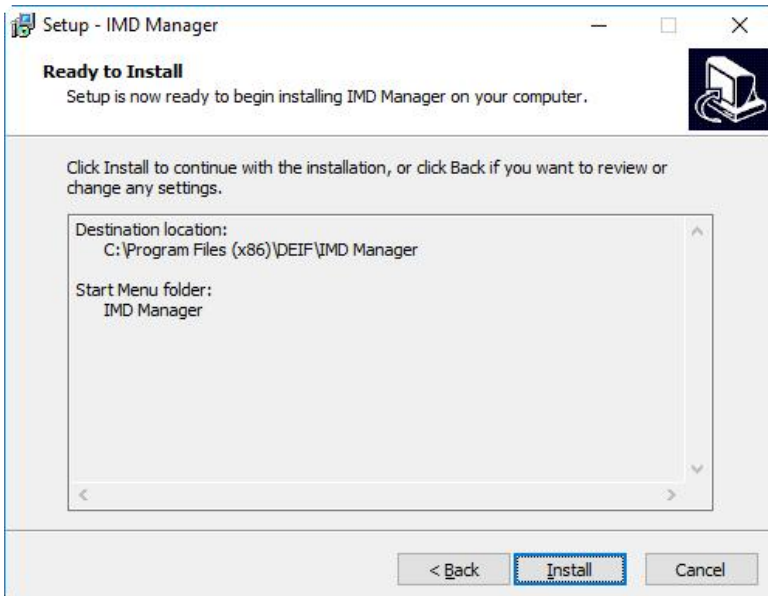
11. Select whether to create an icon on your desktop and click “Next >”



12.

13.

14. Click on Install



15.



Info

If the IMD manager is already installed on your PC, the folder information will not be shown.

16. When the installation is completed, click on “Finish”. The IMD manager is now installed on your computer.

17.

3. Glossary

3.1 Terms and abbreviations

IMD	Integrated Motor Drive
N/A	Not applicable

3.2 Units

Unit	Unit Name	Quantity name	US unit	US name	Conversion	Alternative units
A	ampere	Current				
°C	degrees Celsius	Temperature	°F	Fahrenheit	$T[°C] = \frac{(T[°F] - 32 °) \times 5}{9}$	
g	gram	Weight	oz	ounce	1 g = 0.03527 oz	
Hz	hertz	Frequency (cycles per second)				
bps	Bits per second	Data transmission speed				
kg	kilogram	Weight	lb	pound	1 kg = 2.205 lb	
m	metre	length	ft	foot (or feet)	1 m = 3.28 ft	
mA	milliampere	Current				
ms	millisecond	Time				
Nm	Newton metre	Torque	Lb-in	pound-force inch	1 Nm = 8.85 lb-in	
RPM	revolutions per minute	Frequency of rotation (rotational speed)				
s	second	Time				
V	volt	Voltage				
V AC	volt (alternating current)	Voltage (alternating current)				
V DC	volt (direct current)	Voltage (direct current)				
W	watt	Power				
Ω	ohm	Resistance				