

HMI Report HMI-REPORT-QS001-EN-MAR-2025





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End-User License Agreement (EULA) for Software developed by Sharadsoft

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Introduction

We are excited to introduce our new Report Designer, developed with a focus on fulfilling your specific reporting requirements. While this tool offers the essential functionality you need, please note that it is designed to provide a streamlined and user-friendly experience rather than compete with feature-rich professional report designers.

Key Highlights:

- 1. Simplicity and Efficiency: Our Report Designer is built to offer a straightforward and efficient way to generate reports without the complexity often associated with professional tools.
- 2. Tailored to Your Needs: We have prioritized the features that are most relevant to your reporting requirements, ensuring that the tool meets your specific needs without overwhelming you with unnecessary options.
- 3. Ease of Use: The intuitive interface allows for quick and easy report creation, making it accessible even for users with minimal technical expertise.
- 4. Focused Functionality: While it may not have all the advanced features of professional report designers, our tool is enough to handle your reporting tasks effectively.

We understand that you may compare our Report Designer with more comprehensive professional alternatives. It's important to recognize that our tool is designed to provide the essential functionality required for your reporting needs, focusing on simplicity and ease of use. This approach allows us to deliver a solution that is both cost-effective and user-friendly.

Important User Information

- The points and notes mentioned in this manual are based on our sole understanding and the data available to us as of March 1, 2025. Please be aware that interpretations or meanings may vary. Kindly refer to the respective third-party manuals or documentation for further clarification or detailed information.
- The report page will be A4 size only.
- The left & top margin on the report page is fixed, i.e., 20 mm
- The drawing unit in CEDataReportDesigner is mm only.
- Each control in CEDataReportDesigner will appear initially at X=10, Y=10 location.
- CEDataReportPreview is meant for report format testing purposes only. Please note that report print drivers used while scripting differ for CEDataReportPreview & CEDataReport due to driver limitations. The report format may vary if compared.
- This initial release has report retrieval functionality based on Start & End time with interval. Batch-based report retrieval functionality has been scheduled for the next release.
- Images used in the HMI demo application are for demo purposes only and licensed by Sharadsoft for their use in application developed by Sharadsoft. To maintain optimal CPU performance, avoid using multiple images within the application. Excessive image usage can lead to increased processing demands, potentially impacting overall application efficiency.
- Please keep in mind the CPU performance, Resource constraints, Real-time processing, and Power consumption of the HMI while designing & deploying the reporting functionality on the HMI.
- Do not trigger multiple processes such as Report view, CSV to Database data update, or Database management at a time. Allow time for one process to complete its execution successfully and then trigger the second process.
- Even though SQLite can store more data, please limit the data storage capacity in live databases by implementing SOP for data management. For example, take a backup and then clear data of the live database using the 'CEDataMgmt' application on fixed intervals like every 7/15/30/60/90 day, depending on actual live database size monitoring for your process.
- Reporting utilities developed for HMI are scripted to trap the error; however, if any error occurs, then the HMI terminal should be restarted after resolution. Such an error may disable running services on HMI, such as the Audit Trail/Alarm log service.
- Use an Industrial SD card (SLC type), if required. SLC-type SD card provides the best performance and the highest endurance. You can store PDF reports and archived databases on an SD card to save the HMI internal memory.

Prerequisites

System requirements-Hardware & Software

Description	Firmware/Software Revision	
	Minimum	Recommended
HMI Terminal-PVP7 Performance (Series-B)	12.108 or later	15.100
HMI App Development Software	Version 12 or later	Version 15
Windows Operating System	Windows 10 Pro / Windows 11 Pro	-
Dot Net Framework	4.8.1	-
Workstation RAM	8 GB or more	16 GB
Sharadsoft Software	1.00.00	-
Network Printer, A4 Paper	Print Language: PCL 5/5e *2	HP makes *1

Note:

- 1. We have tested the above application on HP make LaserJet Pro M403n, M405n, M4004dn
- 2. Check for 'PCL 5'/' PCL 5e' in HP printer specification before purchasing the printer.

Sharadsoft software details

Description	Activation	Functionality	Manual intervention /Trigger using PLC bit
CEDataReport *3 (HMI Level)	Requires *1	View, Save & Print report from HMI	Manual intervention required
CEDataCSVReader *4 (HMI Level)	Requires *1	Read data from CSV files & stored it in SQLite database on HMI	Can be triggered using PLC bit
CEDataMgmt (HMI Level)	Free with CEDataReport	Manage SQLite databases like databases backup, clearing, etc.	Manual intervention required
CEDataClear (HMI Level)	Free with CEDataReport	SQLite database clearing	Can be triggered using PLC bit
CETimeSync (Optional) *5 (HMI Level)	Requires *2	Time sync between NTP server & HMI	Can be triggered using PLC bit
CEDataReportDesigner (PC Level)	Free until further notice	Design HMI Report Templates	NA
CEDataReportPreview (PC Level)	Free until further notice	Preview designed HMI Report	NA

Note:

- 1. CEDataReport & CEDataCSVReader have a common activation key
- 2. CETimeSync is a separate purchase and requires a separate activation key
- 3. Without activation, it will print 'Sample Print' as a watermark on the report
- 4. Without activation, it will keep only today's data
- 5. Without activation, it will trigger 50 successful time synchronization

Section1: Configuration of HMI Application

Your first step will be creating the HMI application using HMI application development software. Configure the different parts of the application as follows:

Configuration-Users, User Groups & Runtime Security

Configure the users under FT Directory \rightarrow System \rightarrow Users and Groups \rightarrow Users.

Configure the user groups under FT Directory \rightarrow System \rightarrow Users and Groups \rightarrow User Groups.

Allocate the users under 'User Groups'

Configure the runtime security under the HMI Server \rightarrow System \rightarrow Runtime Security

Add 'User Groups' to the 'Runtime Security' and assign the security alphabets as per your application requirements.



Configuration-Tag Database

Configure the HMI Tag database under the HMI Server \rightarrow HMI Tags \rightarrow Tags

You can export the 'Report' folder from the demo application Tags database and import it into your application. After a successful import task, you can modify the tag data source to match your application requirements. In the demo application, all tags data source type is set to 'Memory' to avoid controller requirements while HMI report concept testing.

After understanding HMI's whole report generation process, you can decide which tags can be referenced directly and which tags can be referenced as HMI tags.

Tags - /PVP7B101/			
*8 🖉 *8 🖒 🎦 🖆 🐄 🗵			
Name:	Close		
Type: Description:	Prev		
	Next		
Data Source	Help		
Address:		- EReport	
Search For: 1		- Proc	ess1 ess2 ess3
Aarms		Proc Proc Proc Proc	ess4 æss5 æss6 æss7
System			ess8 ion

In this report release, you can log data of a maximum of 8 processes, 1 Alarm & 1 Audit Trail log. Each process will include a maximum of 10 analog tags, five-string tags & 1 digital tag.

Report	Tag Name	Туре
- 🖻 Data	1 Report\Data\Process1\Alg1	Analog
- Process 1	2 Report\Data\Process1\Alg10	Analog
E Process2	3 Report\Data\Process1\Alg2	Analog
C Process 2	4 Report\Data\Process1\Alg3	Analog
Flocesso	5 Report\Data\Process1\Alg4	Analog
- Process4	6 Report\Data\Process1\Alg5	Analog
- Process5	7 Report\Data\Process1\Alg6	Analog
- Process6	8 Report\Data\Process1\Alg7	Analog
- Process7	9 Report Data Process 1 Alg8	Analog
L CPPmcass 8	10 Report Data Process 1 Alg9	Analog
- Thosesso	11 Report\Data\Process1\Str1	String
	12 Report\Data\Process1\Str2	String
	13 Report\Data\Process1\Str3	String
	14 Report\Data\Process1\Str4	String
	15 Report\Data\Process1\Str5	String
	16 Report\Data\Process1\Trigger	Digital
	17	

In our demo application, we have configured tag properties as follows:

Tag Name Type I	Tags - /PVP7B101/	
1 Report/Data/Process1/Alg1 Analog	*6 0 *6 0 *= = *= *= *= *=	
3 Report\Data\Process1\Alg2 Analog	Tag	
4 Report\Data\Process1\Alg3 Analog 5 Report\Data\Process1\Alg4 Analog	Name: Report\Data\Process1\Alg1	Close
6 Report\Data\Process1\Alg5 Analog	Type: Analog •	Prev
7 Report\Data\Process1\Alg6 Analog 8 Report\Data\Process1\Alg7 Analog	Description:	Next
9 Report\Data\Process1\Alg8 Analog	Minimum: -100000 Scale: 1	
10 Report/Data/Process1/Alg9 Analog 11 Report/Data/Process1/Str1 String	Maximum: 100000 Offset: 0 Data Type: (Default)	New
12 Heport Uata Vhocess I \Str2 String	Data Source	Help
13 Report/Data/Process1/Str3 String 14 Report/Data/Process1/Str4 String	Type: O Device • Memory	
15 Report\Data\Process1\Str5 String	Initial Value: 1001	
16 Report/Data/Process1/Ingger Digital	V Receive	
	V Tags - /PVP7B101/	
	*8 2/ *8 2 *= 2 *= 59 53	
	Tag	
	Name: Report\Data\Process1\Str1	llose
	Type: String •	Prev
	Description:	Next
	Length: 82	vext
	1	New
	Data Source	Help
	Type: O Device Memory	
	Initial Value: P1Str1	
	Retentive	
	7 Tags - /PVP7B101/	
	Tag Name: Report/Data/Process1\Trigger	Close
	Description	Prev
	Pescipion.	Next
		New
	Data Server	
	Type: O Device Memory	Help
	Initial Value: 0	
	Retentive	
Tao Nama	A Tage (0)(070101)	
1 Report\Transaction\CEDataClearTrigger Digital		
2 Report\Transaction\CEDataCSVReaderTrigger Digital		
A Report Transaction CEDataMgmt Ingger Digital A Report Transaction CEDataReport Trigger Digital	Name: Report\Transaction\CEDataClearTrigger	Close
5 Report\Transaction\CETimeSyncTrigger Digital	Type: Digital •	-
6 Report \ Iransaction \ HMI Hestart I rigger Digital	Description:	Prev
8 Report \Transaction \RALog ToCSVTrigger Digital		Next
9 Report Transaction Update User Trigger Digital		New
	Data Source	
	Type: O Device Memory	нер
	Initial Value: 0	
	Retentive	
-	Tags - /PVP7B101/	
	- ¹ = ∅ ¹ = ∅ ¹ = ¹	
	Tag	Close
	Name: Report\Transaction\UpdateUserTrigger	ciose
	Type: Digital •	Prev
	Description:	Next
		New
	Data Source	Help
	Type: Device Memory	
	Initial Value: 1	
	✓ Retentive	

Configuration-Audit Trail Setup

If you expect audit trail log and its report, then Enable 'Audit Trail' option under

Explorer - PVP7B101	Py Startup - /PVP7B101/	- 0	×
□ CB PVP7B101 (EWS04PC) □ System □ System □ System	Start when project is run Alarms Information messages	Audit trai	
- ⊷ Runtime Security - Ŏ Diagnostics List Setup - 甜 Audit Trail Setup	Data logging Startup macro	•	
- GSV Export Setup Jobal Connections	Shutdown macro	•	
HMI lags Graphics Alarms Log Alarms Log: and Control Data Log Det Log ForcipePlus FactoryTalk Linx System	All optional displays All optional displays: 	Selected displays: ActiveXContainer PowerUpScreen Up Cown	
	Parameter list		
		OK Cancel Help	

HMI Server → System → Startup

Configure' Maximum number of audit entries' and 'Remote clear audit history' under

HMI Server →System→Audit Trail Setup

You can set maximum number of audit entries to 10,000. Assign tag to 'Remote clear audit history' option to clear the internal audit trail log (not the SQLite stored log or exported CSV file) remotely.

Explorer - PVP7B101	Audit Trail Setup - /PVP7B101/ – 🗆 🗙
	History Maximum number of audit entries: 8000
- Project Settings	Optional connections
- 📰 Audit Trail Setup	Capacity high warning (%): 90 🛟
- 🌐 CSV Export Setup - 🦈 Global Connections	Capacity high-high warning (%): 99 🛟
🖶 🏴 HMI Tags	Benoth Lansaction \Bål on Clear Trings
🖶 🛑 Graphics 🖨 🛁 Alarms	
🖓 🗐 Alarm Setup 🛞 📁 Information	OK Cancel Help
🕀 🛑 Logic and Control 🕁 🛑 Data Log	
E EccipePlus FactoryTalk Linx	
🕑 🔳 System	

Configuration-Alarm Setup

Configure 'Triggers', 'Messages' and 'Advanced' tab under

HMI Server →Alarms→Alarm Setup

Avoid the use of comma in message text.

You can define 'Alarm Identifier' with respect to process group to segregate the alarms. It will be useful in future release of report where one can retrieve the alarm report process wise.

Explorer - PVP7B101	Alarm Setup - /PVP7B101/	- 🗆 ×
□ □ PVP7B101 (EWS04PC) □	Triggers Messages Advanced Select trigger:	
- 📴 Project Settings - 🗝 Runtime Security - Ö Diagnostics List Setup - 🎛 Audit Trail Setup	Alarma Process IA1 Alarma Process IA2 Alarma Process IA3 Alarma Process IA4 Alarma Process IA4 Alarma Process IA1 Alarma Process IA2	Add Edit Remove
- 4 Global Connections	Trigger settings Trigger type: Optional trigger connections:	
🕀 🗰 HMI Tags	Value Name Tag or expression Tag Exprn	
Graphics	Trigger label: Ack	
	Label 1 Bernote Ack · · · · ·	
Alarm Setup	Remote Ack Handshake ····	
Logic and Control	Use ack all value: Message ····	
Data Log	Message Notification	
RecipePlus	Message Handshake ···· ···	
E FactoryTalk Linx		
🗑 🛑 System		
	Alarm Setup - /PVP7B101/	- 🗆 ×
	Triggers Messages Advanced	
	Trigger filter: <none></none>	
	Alarm messages:	
	Trigger Trigger value Message Alarm Identifier Display Audio Print Message to Tag Background	Foreground
	1 Alerrs/Process1/Ja1 1 This is Process-1-Alerra1 101	
	2 Alarms Vrocess 1/A2 1 [Ins is Process -1-Alarm2 101 0]	<u> </u>
	4 Alarms/Process1/Al 1 This is Process-1-Alarm4 101	
	5 Alarms Process 2:41 1 This is Process-2:4larm 1 102	
	6 Alarms Process 2 A2 1 This is Process 2-Alarm 2 102 2 0 0	
	7 Alarms\Process2\A3 1 This is Process-2-Alarm3 102	
	8 Alarms Process 2: Alarm 4 102	
	The state of the s	

Note: Avoid the use of comma in the message text

Configure' Maximum number of alarm entries' and 'Remote clear history' under 'Advanced' tab.

You can set maximum number of alarm entries to 10,000. Assign tag to 'Remote clear history' option to clear the internal alarm log (not the SQLite stored log or exported CSV file) remotely.

Explorer - PVP7B101	Alarm Setup - /PVP78101/	- 🗆 ×
	Triggers Messages Advanced Display Current alorms: [ALARM] Edit Time settings Utilation of the DSD Maximum undelst rate (second): 0, 05	
- 🏭 CSV Export Setup - 💭 Global Connections	modiume (ms): 200 modium update rate (second): U.23 modium update rate (second): Match Alarm Update Rate	
HMI Tags Graphics	History Maximum number of alarm entries: 8000	
Alarms	Capacity high warning (%): 90 0	
H Information H Infor	Capacity high-high warning (%): 99 C	
E RecipePlus FactoryTalk Linx	Optional connections:	
💮 💼 System	Name Tag or expression Tag Exprn	
	Remote Silence	
	Remote Ack All ····	
	Status Reset	
	Hemote Status Heset	
	Rende Close Display	
	Remote Clear History Report\Transaction\RALogClearTrigger	

Configuration-CSV Export Setup

Configure CSV export options under HMI Server \rightarrow System \rightarrow CSV Export Setup

Enable the 'Enable CSV Export' option. Enable the 'Audit Information' & 'Alarm Information' option.

Define the path where exported CSV files get stored.

Assign tag to 'Export Trigger' option to export the internal alarm & audit trail log remotely.

Explorer - PVP7B101	GSV Export Setup - /PVP7B101/ - □ ×
PVP78101 (EWS04PC) PVP78101 PVP78101 PVP78101 PV78101 PV7810 PV77810 PV77810 PV77810 PV77810 PV77810 PV77810 PV77810 PV77810 PV77810	
i 🖬 System	Status
	Audit History Alarm History Diagnostics
	Status Code: Status Message:
	OK Cancel Help

When you export the alarm log to CSV, it will look like as follows:

2025_02_19_12_48_09-PVP23620-ALARM.csv

	Α	В	С	D	E	F	G	Н	1	
1	Trigger Index	Trigger Name	Trigger Value	Message	Identifier	<alltriggers></alltriggers>	Active	Alarm Time (UTC)	Acknowledge Time (UTC)	LmbHneNlr1G@;elljy
2	0	Alarms\Process1\A1	1	This is Process-1-Alarm1	101	FALSE	FALSE	02/19/2025 07:15:22	02/19/2025 07:15:25	OlkcKl)`bO ♠=mlEicHlu
3	1	Alarms\Process1\A2	1	This is Process-1-Alarm2	101	FALSE	FALSE	02/19/2025 07:15:27	02/19/2025 07:15:30	OlmgHl`dLr1G@;elljy
4	2	Alarms\Process1\A3	1	This is Process-1-Alarm3	101	FALSE	FALSE	02/19/2025 07:15:32	02/19/2025 07:15:34	OlmaO`mNlr1G@;ellj
5	3	Alarms\Process1\A4	1	This is Process-1-Alarm4	101	FALSE	FALSE	02/19/2025 07:15:36	02/19/2025 07:15:38	OljgHo`F ♠ =mlEicHlu2
6	l>70InfS@9II	6LugK>yMGheJ0=100	fTlo~G ♠mcOll	i`F0n						

When you export the audit trail log to CSV, it will look like as follows:

2025_02_19_12_48_09-PVP23620-AUDIT.csv

	А	В	С	D	E	F	
1	Occurred Time (UTC)	Source	Location	Resource	Username	Message	J0meM0kaF0reN0l0
2	02/19/2025 05:49:16	FactoryTalk Security	PVP23620	Local	Op1	Successful login of user [Op1] on directory [Local]	FliaJl` lM idMl <g< td=""></g<>
3	02/19/2025 05:49:16	FactoryTalk View SATag	PVP23620		Op1	Write 'Op1' to 'System\User'. Previous value was 'DEFAULT'.	MafNljcO ∧ idMl< ₈
4	02/19/2025 05:49:16	FactoryTalk View ME Station	PVP23620		Op1	Successful login of user 'op1'.	FlleGlndM+idMl<
5	02/19/2025 07:14:57	FactoryTalk View SATag	PVP23620		Op1	Write '1' to 'Report\Data\Process1\Trigger'. Previous value was 'False'.	OjdHlhlNreNll0M
6	Olk`UnlSClmUi5Klu50]kylDh2ll:dHloeTlhbTlreLkaJlkl	L				

Configuration-Graphics-Displays

Create a display which is going to be appear first at HMI power up. For our demo application, we have created 'PowerUpScreen' display for that purpose.



Create another display for multiple ActiveX accommodation which will play important role in HMI reporting. We are going to use two ActiveX majorly, i.e., ME CSVDataLog & ME Program Launcher.



We have created a 'ActiveXContainer' display in our demo application for this purpose. You can import same into your application.

Graphics Displays [ALARM] [DIAGNOSTICS] [INFORMATION]	ActiveXContainer - /PVP781 ActiveX Container This display must alway	101// (Displa) r ys be activ) re in the background.	×
- 🗎 ActiveXContainer	1	ActiveX	ActiveX Name	Function
- 🖹 AlarmHistory - 🖹 AlarmSimulation - 🖹 Architecture	Process Data Log		ME CSVDataLog	Process Parameter Log-Periodic
- 🗎 AuditTrailHistory - 🖹 Control - 🗎 HomeScreen	1 /Da 2 /Da 3 /Da 4	4 /Da 5	/Da 6 /Da 7 /Da 8 /Da	CSV to HMI Local DB Data Update
- 🖻 Overview - 🖹 PowerUpScreen - 🖹 ReportProperties	CEDataReport		ME Program Launcher	Reporting Utility
🗎 Settings1 🗎 Settings2	CEDataManagement		ME Program Launcher	HMI Local DB Management
🖹 SystemInfo 🗎 Trend	CEDataClear		ME Program Launcher	HMI Local DB Clear
UserManagement	CETimeSync		ME Program Launcher	Get NTP time for HMI
	HMI Restart		ME Program Launcher	HMI Restart
	Username Log	SVData	ME CSVDataLog	PVP Current Username Log

Set the display settings as shown in below snapshot. This display set to 'On Top' & 'Cannot Be Replaced'. Position the display such as it will remain always active outside the display area. Tag update rate for this display must not be too fast or too slow.

Display Settings	×	1
General Behavior		
Display Type Replace On Top Cannot Be Replaced Display Number: 0 Security Code: * * Title Bar Disable Initial Input Focus Maximum Tag Update Rate: 0.25 * seconds	Size Use Current Size Specify Size in Pixels Width: 640 Height: 480 Position X: 641 Y: 0 Background Color: Use Gradient Style	
	OK Cancel Apply Help	Display Area Outside Display Area

We are using 'ME CSVDataLog' ActiveX for process data log to CSV on interval basis (1 Second/60 Second) and current username log to CSV (per 2 Seconds). This current username can be use in report footer for 'CurrentUserName' parameter value.

ActiveX' ME Program Launcher' is useful to trigger the executable files available at HMI.

Properties of 'ME CSVDataLog' ActiveX for process data log is as follows:

ME CSVDataLog Properties	×	ME CSVDataLog Properties		>
General Advanced Common Connections		General Advanced Common	Connections	
Start New Files Never Periodic At Specified Times		Size Width: Height: 25 25	Position Top: Left: 131 34	
		Other		
ME CSVDataLog Properties	×	Name: MECSVDataLog1		
File Headers		Visible	🛃 Key navigation	
		Focus highlight		
Default Template Use tag names	On HM	1I → Internal Memory\Shara	dsoft\Release\Resources\Setting	gs.xn
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Default Template Use tag names Log periodically every 60 seconds Round logged data to 2 decimal points Suppress log file row numbering Log System Time and Date of each record Include timezone indicator Log UTC Time and Data of each record Overwrite oldest data when file reaches 1 MB Log assigned connections only Enable tamper detection SSV File Loging Drafe	On HM	Al → Internal Memory\Shara Electrony Settings.xml × File Edit View <pre> configurations capd key="Activationkey1" cadd key="PrinterPath" value." cadd key="Printintervalue" cadd key="PortIntervalue" cadd key="Defath" value="1" cadd key="Defathetemationpays cadd key="Defath</pre>	dsoft\Release\Resources\Setting + tf-8" >> tf-8" >> value="AAAA-8888-CCCC-0000-EEEE-FFFF-GGGG-HH value="AAAA-8888-CCCC-0000-EEEE-FFFF-GGGG-HH value="AAAA-8888-CCCC-0000-EEEE-FFFF-GGGG-HH value="AAAA-8888-CCCC-0000-EEEE-FFFF-GGGG-HH value="10", fds_110" /> t" value="d10", fds_1, 10" /> t" value="1">> sharadsoft\lbata\\SpLite\\Archive\\" /> value="7" /> ** v	нн" /> нн" /> нн" /> нн" />
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If you want print interval unit in reporting utility shall be Minute, then set 'Log periodically every' to 60 seconds and set 'PrintIntervalUnit' to 1 in Settings.xml file.

If you want print interval unit in reporting utility shall be seconds, then set 'Log periodically every' to 1 seconds and set 'PrintIntervalUnit' to 0 in Settings.xml file.

Note: Prefer to log data on per 60 seconds basis since it will help to keep database size smaller and in result retention period can be a more for live database.

Any other value apart from '1' or '60' seconds is not compatible with reporting utility.

Other settings must be same as shown above in ActiveX Properties \rightarrow Advanced

Connection properties of 'ME CSVDataLog' ActiveX for process data log is as follows:

General Ac	dvance	ed Common Connections		
Name		Tag / Expression	Tag	Exprn
FileLocation	+	"\Sharadsoft\Data\CSV\Process1.csv"	•••	•••
Trigger	+	Report\Data\Process1\Trigger	•••	•••
Float01	\leftrightarrow	Report\Data\Process1\Alg1	•••	
Float02	\leftrightarrow	Report\Data\Process1\Alg2	•••	
Float03	\leftrightarrow	Report\Data\Process1\Alg3	•••	
Float04	\leftrightarrow	Report\Data\Process1\Alg4	•••	
Float05	\leftrightarrow	Report\Data\Process1\Alg5	•••	
Float06	\leftrightarrow	Report\Data\Process1\Alg6	•••	
Float07	\leftrightarrow	Report\Data\Process1\Alg7	•••	
Float08	\leftrightarrow	Report\Data\Process1\Alg8	•••	
Float09	\leftrightarrow	Report\Data\Process1\Alg9	•••	
Float10	\leftrightarrow	Report\Data\Process1\Alg10	•••	
Float11	\leftrightarrow		•••	
Flent12	+		L.	
,a				_
Float100	\leftrightarrow		•••	
String01	\leftrightarrow	system\User	•••	
String02	\leftrightarrow	Report\Data\Process1\Str2	•••	
String03	\leftrightarrow	Report\Data\Process1\Str3	•••	
String04	\leftrightarrow	Report\Data\Process1\Str4	•••	
String05	\leftrightarrow	Report\Data\Process1\Str5	•••	
String06	↔		•••	
String07	+		the state	

'File Location' **must be** the same as shown in the above snapshot.

'Float01 to Float10' and 'String01 to String05' connections <u>must be</u> assigned. If you do not have actual tag data to log, then assign a memory tag with a valid data type (Analog/String).

Prepare the parameters mapping table with respect to the report column as follows:

Report Column Name	Process Parameter Name
Alg1	Process Temperature
Alg2	Process Flow
Str1	Username
Str2	Process Step Description

The data log will remain active until the 'Trigger' tag value remains '1'. You can stop the data log by setting the 'Trigger' tag value to '0' whenever the data log is not required. It will help to keep the database size smaller.

After the data log, the CSV file must look like the one shown in the snapshot below regarding the column name and its sequence. Different column names or sequences will result in errors during the 'CEDataCSVReader' application execution. Avoid the use of comma in string data.

Pr	Process1.csv																
	Α	В	С	D	E	F	G	Н	1	J	K	L	М	N	0	Р	Q
1	LocalDate	LocalTime	Alg 1	Alg 2	Alg 3	Alg 4	Alg 5	Alg 6	Alg 7	Alg 8	Alg 9	Alg 10	Str 1	Str 2	Str 3	Str 4	Str 5
2	02/11/2025	20:07:48	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	DEFAULT	P1Str2	P1Str3	P1Str4	P1Str5
3	02/11/2025	20:08:48	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	DEFAULT	P1Str2	P1Str3	P1Str4	P1Str5
4	02/11/2025	20:09:48	1011	1002	1003	1004	1005	1006	1007	1008	1009	1010	DEFAULT	P1Str2	P1Str3	P1Str4	P1Str5

Properties of 'ME CSVDataLog' ActiveX for the Current Username log are as follows:

ME CSVDataLog Properties X	ME CSVDataLog Properties
General Advanced Common Connections	General Advanced Common Connections
Start New Files	File Headers
Never Periodic At Specified Times	Default O Template O Lise tag names
O Hourly	
O Daily (Change at Midnight)	
Weekly (Change at Midnight Saturday)	Log periodically every 2 seconds ~
Monthly (Change at Midnight on the Last Day of the Month)	Record learned data to a desired exists
Filename Delimiter selection Underscore'_' ~	
Sample filename = yyyy_mm_dd_HH_mm_NNNN_ <filename>.csv</filename>	Suppress log hie row numbering
Delete Oldest Files	Log System Time and Date of each record
After Maximum Time 1 O Days O Weeks O Months	Include timezone indicator
After Maximum Files 1	Log UTC Time and Data of each record
If you select both checkboxes, files are deleted after the maximum time or after the	Overwrite oldest data when file reaches 1 MB
maximum number of files is reached, whichever happens first.	Log assigned connections only
	Enable tamper detection
ME CSVDataLog Properties X	CSV File Logging Order
Court Manual Common Courts	C <float> data followed by <string> data</string></float>
General Advanced Common Connections	◯ <string> data followed by <float> data</float></string>
Size Position	
FO 25 420 100	OK Cancel Apply Help
	Contra Contra
Other	
000	
Name:	
MECSVDataLog5	
Visible Key navigation	
Z Encus highlight	
ME CSVDataLog Properties	×
General Advanced Common Connections	
Name Lag / Expression Tag Exprn	
Trigger + Report/Transaction/UpdateUserTrigger ····	
Float01 +	
	77.11
Float39 +7	- 11
String01 ↔ system\User ····	
String02 \leftrightarrow	
OK Cancel Apply Help	

'General', 'Advanced' & 'Connections' <u>must be</u> the same as shown in the above snapshot.

After the data log, the CSV file must look like the one shown in the snapshot below regarding the column name and its sequence. Different column names or sequences will show no value at 'CurrentUserName' and may be an error during the reporting utility window popup.

2025_03_04_19_00_0001_PVPUser.csv										
	А	В	С							
1	LocalDate	LocalTime	Str 1							
2	03/04/2025	19:00:01	DEFAULT							
3	03/04/2025	19:00:03	DEFAULT							
4	03/04/2025	19:00:05	DEFAULT							
5	03/04/2025	19:00:07	DEFAULT							

Properties of '	ME Program	Launcher'	ActiveX	for different	executables	calling are a	s follows:
	- 0 -						

	inci ri	operues			^	ME Program Laun	cher Pr	operties			×
General Common	Conn	ections				General Common	Conn	ections			
						Name	<u> </u>		Tag / Expression	Tag	Exprn
						Program ocation	+	"\Sharac	soft/Belease/CEDataCS/Beader	109	Capiti
This page is not	t used.					ProgramParameter	+	Torrisi de			
	_					FocusEnable	÷				
15 D					~	LaunchEnable	+	Report\T	ransaction\CED.ataCSVBeaderTr		
AE Program Launch	her Pr	operties			~	Newlostance	+	перока	Tansactomete bataco meadern		
General Common	Conr	ections				Hemitisdite	-				
Size	· .		Position			ME Program Laun	cher Pr	operties			×
Width		Height	Too	Left			_				
50		ae	214	100		General Common	Conr	nections			
00		20	314	168		Name			Tag / Expression	Tag	Exprn
						ProgramLocation	+	"\Sharad	soft\Release\CED ataReport.exe		
Others						ProgramParameter	+				
Uther						FocusEnable	+				
						LaunchEnable	+	Report\T	ransaction\CED ataReportTrigger		
Name:						NewInstance	+				
MEProgramLa	sunche	r6				MaximizeEnable	4				
✓ Visible ✓ Focus highli	light										
✓ Visible ✓ Focus highl ME Program Launch	light ther Pr	roperties	- Key navigation		×	ME Program Laun	cher Pr	operties			×
 ✓ Visible ✓ Focus highl ME Program Launch General Common 	light ther Pi	roperties	Key navigation		×	ME Program Laun General Common	cher Pr	operties			×
Visible Focus highl VE Program Launci General Common Name	light :her Pi	roperties	Key navigation Tag / Expression	Тәр	×	ME Program Laun General Common Name	cher Pr	operties	Tag / Expression	Tag	×
Visible Focus high VE Program Launce General Common Name ProgramLocation	light ther Pr Conr	roperties nections	Key navigation Key navigation Tag / Expression \Release\CE TimeSync.	ехе" тад	× Exprn	ME Program Laun General Common Name ProgramLocation	cher Pr Conr	roperties nections	Tag / Expression Isoft\Release\CED ataMgmt exe''	Tag	× Exprn
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Visible Focus highl ME Program Launce General Common Name ProgramLocation ProgramParameter FocusEnable	light ther Pr Conr t	roperties nections ''\Sharadsol	Key navigation Tag / Expression \Release\CE TimeSync.	exe"	Expm 	ME Program Laun General Common Name ProgramLocation ProgramParameter FocusEnable	Conr Conr +	roperties rections	Tag / Expression Isoft\Release\CED ataMgmt.exe''	Tag 	× Exprn
Visible Focus highl ME Program Launci General Common Name ProgramLocation ProgramParameter FocusEnable LaunchEnable	light ther Pr Conr t- t- t-	roperties nections ''\Sharadsol Report\Tran	Key navigation Key navigation Tag / Expression \Release\CE TimeSync. saction\CE TimeSync Trig	exe"	×	ME Program Laun General Common ProgramLocation ProgramParameter FocusEnable LaunchEnable	Conr Conr + +	roperties rections ''\Sharao Report\1	Tag / Expression Isoft\Release\CED ataMgmt.exe'' ransaction\CED ataMgmtTrigger	Tag 	× Exprn ····
Visible Focus highl ME Program Launci General Common Name ProgramLocation ProgramParameter FocusEnable LaunchEnable NewInstance	light ther Pr Conr t- t- t-	roperties nections ''\Sharadsol Report\Trar	Key navigation Key navigation Tag / Expression \Release\CE TimeSync. saction\CE TimeSyncTrig	exe" gger	×	ME Program Laun General Common Name ProgramLocation ProgramParameter FocusEnable LaunchEnable NewInstance	cher Pr Conr + + +	roperties rections ''\Sharao Report\1	Tag / Expression soft\Release\CED ataMgmt.exe'' ransaction\CED ataMgmtTrigger	Tag 	Expm
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Visible Focus highl ME Program Launci General Common Name ProgramDocation ProgramDarameter FocusEnable LaunchEnable LaunchEnable NewInstance MaximizeEnable AE Program Launch	light Conr + + + + + + + + + + + + + + +	roperties "\Sharadsol Report\Tran roperties	Key navigation Key navigation Tag / Expression IvRelease\CE TimeSync. saction\CE TimeSyncTrig	exe" gger	× Expm ×	ME Program Laun General Common ProgramLocation ProgramParameter FocusEnable LaunchEnable NewInstance MeximiseEnable ME Program Laun	cher Pr Conr + + + + + + + + + + +	roperties rections ''\Sharao Report\1	Tag / Expression Isoft\Release\CED ataMgmt.exe'' ransaction\CED ataMgmtTrigger	Tag 	Exprn
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Visible Visible Focus highl ME Program Launco General Common Name ProgramLocation ProgramLocation ProgramParameter FocusEnable General Common Name ProgramLocation ProgramParameter FocusEnable	light Conr Conr Conr Conr Conr Conr Conr	roperties nections "\Sharadsol Report\Tran roperties nections "\\Vindows\	Key navigation Key navigation Tag / Expression saction\CE TimeSyncTrig Tag / Expression RebootSystem.exe''	exe" oger Tag Tag	× Exprn × Exprn ×	ME Program Laun General Common ProgramParameter FocusEnable LaunchEnable NewInstance Mevinstance ME Program Laun General Common Name ProgramDacation ProgramParameter FocusEnable	cher Pr Conr + + + + + + + + + Conr Conr	roperties "\Sharac Report\T roperties rections	Tag / Expression Isoft\Release\CED ataMgmt exe'' ransaction\CED ataMgmtTrigger Tag / Expression Isoft\Release\CED ataClear.exe''	Tag Tag 	× Exprn ×
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'LaunchEnable' tag <u>must be</u> digital and keep it true/active for at least 3/5 seconds during any executable file calling requirement.

Create a display where you want to user-call executable files like 'CEDataReport', 'CETimeSync', etc. In our demo application, we have created a 'HomeScreen' & 'ReportProperties' display for those purposes.





'ReportProperties' display is designed to understand the data flow diagram.

You can place the database management button on any secured screen per your application requirements.

If you plan to clear the data using PLC bit, then the 'HMI Local Database Clear' button is not required. Ensure no parallel task is running relevant to SQLite database access while data clear execution or database management like 'Backup', 'Clear', 'Post Data Clear' etc.



'SystemInfo' display is designed to indicate hardware & software details used for this application. You can configure 'Go To Configuration' & 'HMI Restart' buttons on this display, which will be useful during HMI Terminal Settings access/troubleshooting.



Systeminfo - /PVP7B101// (Display)	×	Goto Configure Mode Button Properties	×
	##/##/#### ##:##:## \$\$\$\$\$\$\$\$\$\$\$	General Label E-Signature Common Appearance	
HMI Application development software: FactoryTalk View Studio (V15.00) HMI Catalog Number: 2711P-T7C22D9P (Ser-B)		Border style: Border width: Border uses back color None 1 Back color Back style: Pattern style: Border color Transparent None Pattern color Shape: Blink:	
HMI information: PanelView Plus 7 Performance Terminal, Touch Screen, 7 VGA, 1 Ethernet DLR, 24V DC, Windows 10 IoT Core, Performance Mode	FFT Color, el	Touch margins Horizontal margin: Vertical margin: 00	
HMI Firmware: 15.100 HMI Maintenance:		Other	
		Momentary Push Button Properties	×
HMI Configuration HMI Restart		General States Common Connections Name Tag / Expression Yalue ↔ Report\Transaction\HMIRestatTrigger Indicator ←	Exprn

Configuration-Startup

Explorer - PVP7B101	Startup - /PVP7B101/	×
PVP7B101 (EWS04PC) PVP7B101 PVP7P101 PVP7B101 PVP7B101 PVP7B101 PVP7B101 PVP	Startup - /PVP78101/ Start when project is run ✓ Alarms ✓ Alarms □ Information messages □ Data logging □ Startup macro □ Shutdown macro ✓ Initial graphic displays: ▲Il optional displays: ☑ Displays	
Logic and Control	Image: Address of the second and th	Up Down
	Parameter file Parameter list	
	OK Cance	el Help

Configure the Startup option under HMI Server \rightarrow System \rightarrow Startup

Important: 'ActiveXContainer' display must be first and then 'PowerUpScreen' at

Initial graphic displays ightarrow Selected displays

Section2: Configuration of HMI

This section will prepare the HMI terminal for the application run.

HMI Configuration-Windows 10 IoT Core Dashboard

HMI Firmware Update

Understand the system requirement mentioned in the 'Prerequisite' section in this manual, and download and update the firmware of the HMI terminal.

≡	Menu Settings	Firmware Updates	
88	System		
	Network & Wi-Fi	PanelView Plus Firmware Updates	
	Firmware Updates	Switch to Firmware Update mode	
⊕	Power Options		
	Touch		
	Event Log		
	Services		
Q			
٢			
×	$\leftarrow \rightarrow $	±0 ~	

PanelView Plu	us Firmware Update Utility
System Firmware Start Update Utility Update from USB Storage	Catalog Number 2711P-T7C22D9P Device Name PVP23620 IP Address 192.168.1.5
DLR Network Switch Firmware Start Update Utility current version: 4.20.1	USB Storage Devices Local Disk (D:)

Enable Services

After successfully upgrading the required firmware, enable the services on HMI, as shown in the snapshot below.

	Menu Settings	Sorvicos
	System	
	Network & Wi-Fi	ViewPoint Server (HTTP/HTTPS)
	Firmware Updates	• off
⊕	Power Options	
	Touch	File Server (SMR)
	Event Log	
	Services	
		Internet Printing Protocol (IPP) C Off
R		Secure File Transfer (SFTP)
۲		
×	$\leftarrow \rightarrow $	₹ <u>¥</u> 0 ~
	Menu Settings	
	Menu Settings System	Services
	Menu Settings System Network & Wi-Fi	
=	Menu Settings System Network & Wi-Fi Firmware Updates	Services
	Menu Settings System Network & Wi-Fi Firmware Updates Power Options	Services
	Menu Settings System Network & Wi-Fi Firmware Updates Power Options Touch	Services
	Menu Settings System Network & Wi-Fi Firmware Updates Power Options Touch Event Log	Services
	Menu Settings System Network & Wi-Fi Firmware Updates Power Options Touch Event Log	Services
	Menu Settings System Network & Wi-Fi Firmware Updates Power Options Touch Event Log Services	Services
	Menu Settings System Network & Wi-Fi Firmware Updates Power Options Touch Event Log Services	Services
	Menu Settings System Network & Wi-Fi Firmware Updates Power Options Touch Event Log Services	Services
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= = = = ⊕	Menu Settings System Network & Wi-Fi Firmware Updates Power Options Touch Event Log Services	Services
	Menu Settings System Network & Wi-Fi Firmware Updates Power Options Touch Event Log Services	Services

Enable 'File Server' service to access the HMI internal storage from the PC using File Explorer.

Enable 'Secure File Transfer' service, if you have planned to access HMI internal storage files on FTP.

Enable 'Remote Client Access' service to control the HMI remotely, i.e., from a PC using a VNC viewer.

Enable 'Ping Response' service to get the IP address ping response from HMI at the PC

HMI Configuration-Terminal Settings

Now, set the basic settings of the HMI terminal using the 'Terminal Settings' option.



Time/Date/Regional Settings-Time Zone

Set the proper time zone as per the final installation location of HMI.



Time/Date/Regional Settings-Time Format

Set the time format to 'HH:mm:ss' to get the 24-hour time display on the HMI runtime application.



Time/Date/Regional Settings-Short Date Format

Keep the short date format 'M/d/yyyy' and separator '/' as they are.



Time/Date/Regional Settings-Date

Set the current date with respect to your standard Date & Time reference.



Time/Date/Regional Settings-Time

Set the current time with respect to your standard Date & Time reference.



Networks and Communications-Device Name

Set the meaningful device name with reference to Machine/Process ID since it will reflect in the audit trails.

Networks and Co KEPServer Serial KEPServer Drive Network Conne FactoryTalk Linx LDAP Configurat	Port ID's r Configuration ctions Communications ion	Network Connections Device Name Network Adapters Network Identification Network Diagnostics
Device Name		
Device Name [F1]	PVP23620	
Device Description [F2]	PanelView Plus	

Networks and Communications-IP Address

Set the required IP address for the HMI terminal.

Networks and Communications KEPServer Serial Port ID's KEPServer Driver Configuration Network Connections FactoryTalk Linx Communications LDAP Configuration	Network Connections Device Name Network Adapters Network Identification Network Diagnostics	
Network Adapters CEPALNIC1: Microsoft CEPAL ETHER PORT		
Name Servers [F1] IP Address [F2]	Settings [F3]	Close [F8]

etwork Adapters						
CEPALNIC1: Microsoft CEF	AL ETHER PORT					
Name Servers [F1]	IP Address [F2]	Settings [F3]	Close [F8]			

IP Address			
IP Address [F1]	192.168.1.5		Use DHCP [F4]
Subnet Mask [F2]	255.255.255.0		O Yes No
Gateway [F3]	0.0.0		
Mac ID:		ОК [F7]	Cancel [F8]

Diagnostics Setup-Audit Trail Message Routing

Enable required message routing options only since it affects the size of the audit trail log. Please use the help of HMI development software to understand those routing options.



Now, power cycle the terminal before further use.

Section3: Configuration of Report-PC Level

In this section, we will design the report templates using the 'CEDataReportDesigner' software.

Insight-PC Level-Folder & File Structure

Please go through the folder & file structure before proceeding to report template design.



CEDataReportDesigner

Design Page First Look



Design Page Sections

Understand the sections of design page.



Page Orientation & Source Binding

First, you need to set the report template's page orientation (Portrait/Landscape). Note that, in both cases, the left & top margins will be fixed, i.e., 20 mm. The design page drawing unit is mm only. 'Details Header' section content will always be static. The remaining section's content can be dynamic and hence bind the data source for each section at Design Page Properties \rightarrow Source Binding

	2 ↓		~	Appearance ReseOrientation	Portrait	
~	Appearance			FageOffentation		<u> </u>
	PageOrientation	Portrait	×.	Layout	Portrait	
~	Layout			DetailsHeaderHeight	Landscape	
	DetailsHeaderHeight	20	_			
	DetailsHeight	20	~	SourceBinding		
	PageFooterHeight	20		DetaileTableName	Process 1Table	
	PageHeaderHeight	20		Details rabiename	FIOCESSITADIE	
	Report Footer Height	20		PageFooterTableName	AlamTable	
	Report Header Height	20		PageHeaderTableName	AuditTable	
~	SourceBinding			ReportFooterTableName	Process1Table	
	Details Table Name	Process1Table		Penert Header Table Name	Process2Table	
	PageFooterTableName	Process1Table		Report Header Table Name	Process3Table	
	PageHeaderTableName	Process1Table			Process4Table	
	ReportFooterTableName	Process1Table			Process5Table	
	ReportHeaderTableName	Process1Table			Process6Table	
-					Process7Table	
					Process8Table	

Menu & Toolbar

You can design the report template with the help of the Menu/Toolbar. Keyboard shortcut keys are unavailable for cut/copy/paste/delete functionality in this report designer release.



Controls available for template design are as follows.	Controls available	for template	design are	as follows:
--	--------------------	--------------	------------	-------------

Control	Control Name	Data Source	HMI Database
00	Horizontal Line	NA	CEDataDB01 AlarmTable ← Table Column Name AuditTable RecordDT Process1Table Column → Alg1
	Vertical Line	NA	HMI Report Utility
D D D D D D D D D D D D D D D D D D D	Text	NA	Report Reports Other Report Name: Process1
0 0 0 0 999.99 0 0 0	Data Numeric	Database Filter Built-in	From Date 8. Time: 06/03/2025 00:00:00 •
	Data String	Database Filter Built-in	View Save Print Close
0 02025-02-19 20:58:29 0 0	Data DateTime	Database Filter Built-in	HMI Report-Page Footer
	Image	NA	Report printed on: 2025-03-20 21:28:26 Report printed by: DEFAULT Page 1 of 1 Page 1 of 1 Built-In Built-In Built-In Built-In

Use the properties window to change the control's properties.

Control Properties-Horizontal Line



Control Properties-Vertical Line



Control Properties-Data Numeric



Control Properties-Data String



Control Properties-DateTime

Follow the global standards letters for Date & Time, which can be combined to create custom date and time formats based on your needs.



Control Properties-Image

You can use image control in the 'Page Header' section only.



Sample Template-Alarm

We have designed an alarm report template sample as follows:

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File	Edit Controls Ab	out								
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-1		anna anna		1				PageFooterHeight	12	
Ξ	COMPANY	Document Title	: Alarm Report		To Time:	2025-03-07 09:08:05		PageHeaderHeight	30	
- 2	VOLD TALLART HERE	Equipment Name	My Equipment	1				Report Footer Height	22	
Ξ	Furner and	Equipment vame	. My Equipment	_				Report Header Height	/	
-	Report Header						- 1	DetailsTableName	Alarm Table	
-							÷.	PageFooterTableName	Narm Table	
-	Datala Hander						1	PageHeaderTableName	NarmTable	
-	Details header							ReportFooterTableName	NarmTable	
Ξ.	Date & Time	Alarm message						Report Header Table Name	Alarmiable	
	Details						L			
-	1						E			
Ξ	2025-03-07 09:08:0	5 DDDDDDDDDDD								
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							-			
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Mouse	Position: X = 67 mm V	= 1 mm								
mean										_

Sample Template-Audit Trail

We have designed an audit trail report template sample as follows:

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=						DetailsHeaderHeight	12	
Ē,	-AL	Company Name	: End User Name	From Time:	2025-03-07 09:09:07	DetailsHeight	12	
Ξ'		Document Title	Audit Trail Report	To Time:	2025-03-07 09:09:07	PageFooterHeight PageHeaderHeight	12	
=_2	COMPANY			[]		ReportFooterHeight	22	
ΞĒ		Equipment Name	: My Equipment			Report Header Height	7	
-	L.					✓ SourceBinding		
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-						PageHeaderTableName	Audit Table	
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-	Details							
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Sample Template-Process

We have designed a process report template sample as follows:

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File Edit Controls About	
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End User Name From Time: 2025-03-07 09:09:36 DetailsHeight	10
PageFooterHeight	12 30
COMPANY ReportFooterHeight	22
Equipment Name My Equipment Report HeaderHeight	7
Parot Mader V SourceBinding	Process 1Table
- Page Page Page Page Page Page Page Page	Process 1 Table
PageHeaderTableName PageHeaderTableName	Process1Table
verais nearer ReportFooter Table Name	Process1Table Process1Table
Date & Time Parameter1 Parameter2 Parameter3 Parameter4 Process Status	riocess riable
P01 P02 P03 P04	
- [nearol [nearol [nearol]	
Details	
2025-03-07 09:09:36 9999 9999.9 9999.9 999999 DDDDDDDDDDD	
Report Footer	
E Remark:	
2 Done by: Checked by:	
Page Footer	
Report reinted or: 2025.02-07.09-09-36 Report reinted by: DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	
Annexance	
Mouse Position: X = 27 mm, Y = 2 mm	

Template Save

The report template will be saved with an XML extension.

We recommend using 'CEDataReportDesigner\Template' path during template save.

	CEDataReportDesigner - New Report Templat	e				
U		I I IN IS IDT 163	G.			
Desiç	זיין 1111 1111 1111 1111 1111 1111 1111 2 3 4 5 6	7 8 9 10	11 12 13 14 15 16 17	111		
	Page Header					
		🖬 Save Report Template	As			×
-1		← → ~ ↑	CEDataReportDesigner > Templates	~ C	Search Templates	م
-	Report Header	Organize 🔻 New fol	der		≡ •	0
_1		This PC	Name	Date modified	Type	Size
		Local Disk (C:)	HMI	01/03/2025 12-34	File folder	
	Details Header	🛁 Local Disk (D:)	Alarm.xml	20/02/2025 18:22	Microsoft Edge H	12
		🛋 Local Disk (E:)	C AuditTrail.xml	20/02/2025 18:22	Microsoft Edge H	12
- 1		💓 CD Drive (F:)	C Process1.xml	20/02/2025 18:23	Microsoft Edge H	15
	Details	🐲 Network				
						_
-1		File name:				~
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-1						
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Templates	×	+								
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合 Home	Name	^		Date m	nodified	Туре	Size			
🔁 Gallery	HMI			19/02/	2025 23:43	File folder				
less Sharad - Personal	💽 Alarm.xi	ml		03/02/	2025 19:37	Microsoft Edge HT	12 KB			
	💽 AuditTra	ail.xml		13/02/	2025 12:34	Microsoft Edge HT	12 KB			
E Desktop	Process ¹	1.xml		03/02/	2025 19:38	Microsoft Edge HT	15 KB			

Template Export for HMI

Use the export button to export the report template to a file compatible with HMI. The compatible report template will be exported with the 'hmirpt' extension and saved at 'CEDataReportDesigner\Template\HMI' path.

Edit Controls A	bout				
			[]		
mulumh	աղուղուղո	սիուհայիունու	պապապապ	untrintrintrint.	
1 2 3	4 5 6	7 8 9 10	11 12 13 14	15 16 17 18	
Page Header					
	Company Name	: End User Name	From Time:	2025-03-03 20:07:39	
	Document Title	: Alarm Report	To Time:	2025-03-03 20:07:39	
COMPANY HILE TALLAST HERE	Equipment Name	: My Equipment			
Report Header				-	
			C		
Details Header			In	fo	
Date & Time	Alarm message				orted successfully
Details				Kepolit template exp	oned successfully:
2025-03-03 20:07:					
Report Footer					OK

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\leftarrow \rightarrow \uparrow	℃ ♀ …		Win	> CEDataReportDesigner > Templates > HMI
🕀 New - 🐰		🖌 Sort - 🛛 🗮 View -		
A Home	Name	Date modified	Туре	Size
🔁 Gallery	Alarm.hmirpt	19/02/2025 23:43	HMIRPT File	5 KB
less Sharad - Personal	🗋 AuditTrail.hmirpt	15/02/2025 22:54	HMIRPT File	5 KB
	Process1.hmirpt	15/02/2025 22:54	HMIRPT File	6 KB
Deskton	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~	

Template Open

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	This PC	C Process1.xml	20/02/2025 18:23	Microsoft Edge H	1
	Local Disk (C:)				
Details	🛋 Local Disk (D:)				
	🛋 Local Disk (E:)				
	😥 CD Drive (F:)				
	Vetwork				
Report Footer					
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				Open Can	cel
Page Footer				(

Info		×
1	Report template loaded successfully!	
	ОК	

Section4: Configuration of Report-HMI Level

In this section, we will configure the HMI terminal for reporting.

Insight-HMI Level-Folder & File Structure

Please review the folder & file structure before proceeding to HMI level configuration for reporting.



Access HMI Internal Storage from PC

Use file explorer on your PC to access the HMI's internal storage.



Type the HMI IP address with the syntax "\\HMI IP Address" at the file explorer address bar and press enter.

A Home		× +	÷						-	×
$\leftarrow \rightarrow \uparrow$	C	\\192.10	58.1.5					Search Home		Q
🕀 New - 岁		õ Ø	È	Û	↑↓ Sort ~	8= View ~	√ Filter ~			etails
A Home	~	Quick acc	255							

Provide valid credentials to access the HMI internal storage.

Windows Security		>
Enter network credenti	als	
Enter your credentials to connect	to: 192.168.1.5	
User name		
Administrator		
Password		
•••••	©	
Remember my credentials		
ОК	Cancel	

Now you can see the 'Internal Storage' folder of the HMI as shown below:



Copy Folder to HMI Internal Storage

Copy 'Sharadsoft' folder from the 'HMI Report\HMI' to the HMI internal storage at path 'Internal Storage\'.

📜 Internal Storage	× +		
$\leftarrow \rightarrow \uparrow$	C	1.5 > Internal Storag	ie >
🕀 New -		Sort - View -	
合 Home	Name	Date modified	Type Size
🔁 Gallery	Application Data	07/07/2024 11:24	File folder
📥 Sharad - Personal	Certificates	07/07/2024 11:24	File folder
	Media	07/07/2024 12:22	File folder
🔚 Desktop 🛷	My Documents	07/07/2024 11:24	File folder
↓ Downloads #	🚞 Sharadsoft	11/02/2025 19:51	File folder
Documents	Storage Card	07/07/2024 11:24	File folder
Distures	Temp	18/02/2025 10:18	File folder
	Test	07/07/2024 11:24	File folder
🕐 Music 🛛 🖈	Web Content	07/07/2024 11:24	File folder
📔 Videos 🛛 🖈	Windows	18/02/2025 10:18	File folder

Settings file update

Open the 'Settings.xml' file at 'Internal Storage\Sharadsoft\Release\Resources' using Notepad.





You can edit the 'Settings.xml' file as per your application requirements.

```
×
                                    +
     Settings.xml
File
      Edit
            View
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <appSettings>
     <add key="ActivationKey1" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
     <add key="ActivationKey2" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
     <add key="ActivationKey3" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
     <add key="ActivationKey4" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
     <add key="ActivationKey5" value="AAAA-BBBB-CCCC-DDDD-EEEE-FFFF-GGGG-HHHH" />
     <add key="PrinterMaker" value="19" />
     <add key="PrinterPath" value="192.168.1.10" />
     <add key="PrintIntervalUnit" value="1" />
     <add key="PrintInterval" value="1" />
     <add key="PDFPath" value="\Sharadsoft\\Data\\PDF\\" />
     <add key="BackupPath" value="\Sharadsoft\\Data\\SQLite\\Archive\\" />
     <add key="DataRetentionDays" value="7" />
     <add key="ShortDatePattern" value="dd/MM/yyyy" />
     <add key="TimeServerIP" value="192.168.1.21" />
     <add key="TimeOffsetMin" value="0" />
  </appSettings>
</configuration>
```

Settings file parameters & its description is shown below:

Settings Name	Default Value	Value Description
ActivationKey1	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF- GGGG-HHHH	Activation Key for CEDataReport & CEDataCSVReader
ActivationKey2	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF- GGGG-HHHH	Activation Key for CETimeSync
ActivationKey3	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF- GGGG-HHHH	Reserved
ActivationKey4	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF- GGGG-HHHH	Reserved
ActivationKey5	AAAA-BBBB-CCCC-DDDD-EEEE-FFFF- GGGG-HHHH	Reserved
PrinterMaker	19	19=For HP PCL 5 compatible printer
PrinterPath	192.168.1.10	Printer IP Address
PrintIntervalUnit	1	Reporting utility print interval unit. 0=Sec, 1=Min
PrintInterval	1	Default print interval. 1 Sec/1 Minute
PDFPath	\Sharadsoft\\Data\\PDF\\	PDF storage path when the user uses the 'Save' button from 'CEDataReport' utility
BackupPath	\Sharadsoft\\Data\\SQLite\\Archive\\	Database backup storage path when the user uses the 'Backup' button from 'CEDataMgmt' utility
DataRetentionDay s	7	When the user triggers the 'CEDataClear' utility, Live database will keep last 7 days data and clear previous data
ShortDatePattern	dd/MM/yyyy	Short date pattern for 'CEDataReport' utility DateTime based filter
TimeServerIP	192.168.1.21	NTP Time Server IP Address
TimeOffsetMin	0	Offset to NTP Time Server time in Minute

Copy Report Templates to HMI

Copy HMI-compatible report templates (exported after report template design completion using 'CEDataReportDesigner' Software) to the HMI internal storage at 'Internal Storage\Sharadsoft\Release\Templates' path.

	HMIReport \ Win \ CEDataReportDesigner \ Temp	olates \ HMI
Сору	Alarm.hmirpt AuditTrail.hmirpt	
	Process1.hmirpt	
	Internal Storage \ Sharadsoft \ Release \	Templates
	aste Alarm.hmirpt ↑ AuditTrail.hmirpt	
	Process1.hmirpt	

Copy Logo Image to HMI

Copy the logo to the HMI internal storage at 'Internal Storage\Sharadsoft\Release\Resources' path



Section5: Transfer Runtime to HMI

Create Runtime & Download to HMI

Create the runtime of the HMI application and download it to the HMI terminal.



Important: Uncheck the 'Delete Log Files' option during the runtime download to the HMI terminal.

Access HMI using VNC Viewer

You can use any VNC Viewer software to control the HMI terminal remotely from a PC. We have used 'RealVNC' Viewer for our testing purposes.



Section6: Demo Application

In this section, we have attached the HMI Terminal snapshot taken during the demo application testing for your reference. You can follow the same for demo application testing.

Login with User

Login with username (Op1/Su1/Qa1/En1/Ad1) and password ('1234' for all users).



Navigate to the 'Home' screen.

G	† Ho	ime			19/02/2025 DEFAULT	10:61:16
	<u></u>	Til		الامر		
	Overview	Trend	Alarm Simulation	Reports		
	Control	<u>R</u>		~2		
	Control	Users	Alarm History	Report Properties		
	₽	Ē		E		
	Settings	Architecture	Audit Trail History	Time Sync		

Process Start

Start the process using the button at the bottom of the 'Overview' screen. Keep the process running for at least 30 minutes (if the data log interval is set to 60 seconds) or 5 minutes (if the data log interval is set to 1 second).



Trigger Alarms

Trigger the alarms during the process running for simulation purposes.

G		Alarr	ns Simi	ulation			19/ DE	02/2025 FAULT	10:63:39
Proces No.	S				Process No.				
1	A1	A2	A3	A4	5	A1	A2	A3	A4
2	A1	A2	A3	A4	6	A1	A2	A3	A4
3	A1	A2	A3	A4	7	A1	A2	A3	A4
4	A1	A2	A3	A4	8	A1	A2	A3	A4

Change Settings

You can alter any setting during the process running to check the audit trail log functionality.

G	¢	Settin	gs				2 DE	9/02/2026 10:55:29 EFAULT
	With	out E-Sign			With Blank	E-Sign comment allow	With Blan	E-Sign k comment not allow
Process	Alg1	1011	Alg2	1012.0	Alg3	1003.0	Alg4	1004.0
1	Str2	P1Str2			Str3	P1Str3	Str4	P1Str4
Process	Alg1	2001	Alg2	2002.0	Alg3	2003.0	Alg4	2004.0
2	Str2 P2Str2			Str3	P2Str3	Str4	P2Str4	
Process	Alg1	3001	Alg2	3002.0	Alg3	3003.0	Alg4	3004.0
ັ 3	Str2 P3Str2			Str3	P3Str3	Str4	P3Str4	
Process	Alg1	4001	Alg2	4002.0	Alg3	4003.0	Alg4	4004.0
4	Str2	P4Str2			Str3	P4Str3	Str4	P4Str4

Data update sequence

After completing the process, first trigger the CSV export, clear the internal log, and then export CSV to the local database (SQLite on HMI). Allow sufficient time between each trigger to complete the required process execution. You can use the 'Database Management' button to perform database-related tasks like backup, clear, etc. To clean the database, use 'Database Clear' button.



Report View, Save & Print

Open the reporting utility window using 'Report' button available on the 'Home' screen. Select the report name from the drop-down list, select time span, select print interval (this option applies to process report only), then execute the View/Save/Print button.

	3	19/02/2025 10:59:07 DEFAULT
Report		
Reports Ot	ner I	
Report Name	Alarm	.
From Date &	Time: 19/02/2025 00:00:00	• •
To Date & Ti	me: 19/02/2025 10:58:26	
Print Interval	(Min): 1	-
3	View Save Print	Close

If you execute the 'View' button, the report will be open in utility background as shown in the snapshot below. Close the utility.

Menu			×
	Demont	Conversion free : Coli Lan Reve From The : 20163-14:000000 Focument Tale : Alam Revol To Trace : 20163-14:1062.01	
	Report		
	Reports Other	l	
	Report Name:	Alarm	
	From Date & Time:	10/02/2025 00:00:00	
	To Date & Time:	19/02/2025 10:58:26	
	Print Interval (Min):	1	
5		View Save Print Close	
	Report	11.2.05.5 Prace Maand Interior 205-0-012153 Aquityreadly 209613 Page 1 of 2	

'Save' button will save the report in pdf format at 'Internal Storage\Sharadsoft\Data\PDF'

'Print' button will print the report directly to the network printer.

You can now view the report in pdf format.

AL.	Congany New Dist like New From Texas 2003-02 and 1000000 Datasets No. Award Inguid TraTions. 2005-02 at 1010020	
01110	Issand Rea Policipant	
Datation	Advisionap	
2014/01/12/00/17	Trail Room (April	
#1549-11 B (B (3)	Prace Process-Linearci	
#1515-12-00-0	Place Perman (Apenul)	
#154511.81.81.3	The Article Hand	
20100112-002	These Vesses J-Rents	
8050118-818	These House & Hearth	
\$2512-11 B (B (3)	Tex Texes (Ast)	
#1549-01 B-00 B	Tran Room Johnson	
ALC: NO. OF THE OWNER, OWNER, NO. OF THE OWNER, OWNE	Tage from Lightle	
bam	ple-krint	
315-0-13-0-2	Track Fearm 3 Aprel	
8054511.81819	Their Steam I-Harry	
ALC: NO. OF THE R. P.	Trace House 4 Alastic	
81543412084	Trait Team Adura	
#2500-1120.00-04	Third House (Alam)	
20572-1120-00-00	Train Fearm Marrie	
201010-008	Train Norma Likest	
8050118.00	Thes feare Unand	
2051211-2010-00	Triais Promo SAlamili	
BONDON MORE	These Texano Lideout	

You can zoom/scroll the report using the finger tap on the HMI screen. Close the pdf file using the 'Menu \rightarrow Exit' option available at the pdf viewer menu bar.

Menu	<u>⊮ { </u>	- <u>)</u>	→ Ľ			×
	.0.	Company Name	: End User Name		From Time:	20
		Document Title	: Alarm Report		To Time:	20
	COMPANY	Equipment Name	: My Equipment			
	LI					_
	Date & Time	Alarm message				
	2025-02-11 20:08:17	This is Process-1-	-Alarm1	A		
Ś	2025-02-11 20:08:21	This is Process-1	-Alarm2			_
	2025-02-11 20:08:23	This is Process-1-	-Alarm3	Sample Print		
	2025-02-11 20:08:25	This is Process-1-	-Alarm4			
	2025-02-11 20:08:27	This is Process-2-	-Alarm1			

Database Management

You can use 'CEDataMgmt' utility to manage the HMI local database. Follow the on-screen button to perform the database-related task.



If you want to view/print the report from the archived database, select the archived database path from the drop-down list available at 'Other' tab in the reporting utility, then configure the required filter at 'Reports' tab and execute the view/print button.

G	Home		19/02/2025 11:00:23 DEFAULT
de	Report Other Utility Name: Mac ID: License: Database Path:	CEDataReport Not Active Live Live Data_20250213_222725	

HMI Time Sync

HMI terminal time sync with reference to the NTP time server available at your premises is an optional utility. Time between two triggers of time sync **must be** greater than one Minute.



Once triggered, it will check the availability of the time server for one Minute. It will show an error without a time server, as shown below. On the availability of the time server, it will sync the time and close the time sync app within 10/15 seconds or less.



You can sync the time for 50 successful attempts without a valid activation key.



Section7: Report Format Testing at PC

This section describes the steps for using the 'CEDataReportPreview' application on PC. 'CEDataReport' & 'CEDataReportPreview' functionalities are the same except for the non-availability of the 'View' and 'Print' buttons at the 'CEDataReportPreview' application. The CEDataReportPreview application aims to test the report format without an HMI terminal.

Copy Report Templates

Copy HMI-compatible report templates from 'CEDataReportDesigner' to 'CEDataReportPreview' as shown below:



Copy Logo Image

Copy the logo image from 'CEDataReportDesigner'/'Other Image Resource' to 'CEDataReportPreview' as shown below:



Settings File Update

Set the settings file the same as 'CEDataReport' application settings file.



Copy CSV File

Copy the existing CSV file used to log the current user on the HMI terminal.



Copy Database File

Copy the existing database file with sample data logged or the actual live database file from the HMI terminal as shown below:



CEDataReportPreview

Run the 'CEDataReportPreview' application on PC.

HMIReport \ Win \ CEDataReportPreview
🔁 Data
📜 de
Resources
📒 Templates
📒 хб4
🚞 x86
EDataReportPreview.exe

Select the copied database path from the database path drop-down list available at the 'Other' tab of the reporting utility.

Report			
Reports Other			
Utility Name:	CEDataReportPreview		
Mac ID:			
Database Path:	Live	~	
	Live Data_20250213_222725 Data_20250219_125049 YourProjectName		
		J	

Select the required report name, configure the selection criteria, and save the report in pdf format.

Report	
Reports Other	
Report Name:	Alarm
From Date & Time:	07/03/2025 00:00:00
To Date & Time:	07/03/2025 18:30:54
Print Interval (Min):	1 ~
	Save Close
HMIReport \ V	Vin \ CEDataReportPreview \ Data \ PDF
 ▲ Alarm_20250215_ ▲ AuditTrail_202502 ▲ Process1_202502 	_000000_To_20250220_120613.pdf 215_000000_To_20250220_120613.pdf 15_000000_To_20250220_120613.pdf

Sample reports snapshots are as follows:

Alarm Report

				-
A	Company Name	: End User Name	From 1	Time: 2025-02-15 00:00:00
	Document Title	: Alarm Report	To Tim	ne: 2025-02-20 12:06:13
TOUR TROLINE HERE	Equipment Name	: My Equipment		
Date & Time	Alarm message			
2025-02-19 12:45:22	This is Process-	1-Alarm1		
2025-02-19 12:45:27	This is Process-	1-Alarm2		
2025-02-19 12:45:32	This is Process-	1-Alarm3		
2025-02-19 12:45:36	This is Process-	1-Alarm4		
2025-02-19 12:45:40	This is Process-2	2-Alarm1		
2025-02-19 12:45:44	This is Process-2	2-Alarm2		
2025-02-19 12:45:48	This is Process-2	2-Alarm3		
2025-02-19 12:45:52	This is Process-2	2-Alarm ⁴		
2025-02-19 12:45:57	This is Process-	3-Alarm1		
2025-02-19 12:46:01	This is Process-	3-Alarm2		
2025-02-19 12:40:05		<u>peen gene</u>	rated thro	ough PC.
2025-02-19 12:46:09	This is Process-3	3-Alarm4		
2025-02-19 12:46:13	This is Process-4	4-Alarm1		
2025-02-19 12:46:17	This is Process-4	1-Alarm2		
2025-02-19 12:46:22	This is Process-4	4-Alarm3		
2025-02-19 12:48:25	This is Process-4	4-Alarm4		
Remark:				
iveniaria.				
Done by:		Ch	ecked by:	
Report printed on: 20	025-03-07 12:09:03	Report printed by: Use	r6	Page 1 of 1

Audit Trail Report

	Company Name	· End Lises Name	From Time: 2025-02	15.00-00-00
	Company Name	: End User Name	From time: 2025-02-	15 00:00:00
COMPANY	Document Title	: Audit Trail Report	To Time: 2025-02-	20 12:06:13
YOUR TASLINE HERE	Equipment Name	: My Equipment		
Date & Time	Audit Trail messa	ge		
2025-02-19 10:16:27 DEFAULT	"Write 'Tuesday, F	ebruary 11, 2025 8:14:31 PM' t	o 'system\AlarmResetDateAndTir	neString'."
2025-02-19 10:48:28 DEFAULT	"Write 'Tuesday, F	ebruary 11, 2025 8:14:31 PM' t	o 'system\AlarmResetDateAndTir	neString'."
2025-02-19 10:57:41 DEFAULT	Write '1' to 'Report	\Transaction\CEDataMgmtTrigg	er'. Previous value was 'False'.	
2025-02-19 10:57:44 DEFAULT	Write '0' to 'Report	\Transaction\CEDataMgmtTrigg	er'. Previous value was 'True'.	
2025-02-19 10:58:25 DEFAULT	Write '1' to 'Report	\Transaction\CEDataReportTrig	ger'. Previous value was 'False'.	
2025-02-19 10:58:28 DEFAULT	Write '0' to 'Report	\Transaction\CEDataReportTrig	ger'. Previous value was 'True'.	
2025-02-19 11:19:16		rusen [Op1]*on directory [Local]		
2025-02-19 11:19:16 Op1	Write 'Op1' to 'Sys	tem\User'. Previous value was '	DEFAULT'.	
2023 1819 18970	OLING CALLER COLOR	een generat	ed through F	°C.
2025-02-19 11:25:44 Op1	Write 'DEFAULT' t	o 'System\User'. Previous value	was 'Op1'.	
2025-02-19 11:25:45 DEFAULT	Write 'DEFAULT' t	o 'System\User'. Previous value	was 'DEFAULT'.	
2025-02-19 12:34:07 DEFAULT	"Write 'Tuesday, F	ebruary 11, 2025 8:14:31 PM' t	o 'system\AlarmResetDateAndTir	neString'."
2025-02-19 12:43:37 Op1	Successful login o	f user [Op1] on directory [Local]		
2025-02-19 12:43:38 Op1	Write 'Op1' to 'Sys	tem\User'. Previous value was '	DEFAULT'.	
2025-02-19 12:43:38 Op1	Successful login o	f user 'op1'.		
2025-02-19 12:44:57 Op1	Write '1' to 'Report	\Data\Process1\Trigger'. Previo	us value was 'False'.	
2025-02-19 12:44:59 Op1	Write '1' to 'Report	\Data\Process2\Trigger'. Previo	us value was 'False'.	
Report printed on: 20	25-03-07 12:10:49	Report printed by: User8	Page	1 of 6

Process Report

CONTRACT OF	Company Name	: End User Name		From	Time: 2025-02-15 00:00:00
	Document Title	: Process1 Re	: Process1 Report		ne: 2025-02-20 12:06:13
	Equipment Name	: My Equipment			
Date & Time	Parameter1 P01 [Deg.C]	Parameter2 P02 [Deg.C]	Parameter3 P03 [Deg.C]	Parameter4 P04 [Deg.C]	Process Status
2025-02-19 12:44:57	1011	1012.0	1003.00	1004	P1Str2
2025-02-19 12:45:57	1011	1012.0	1003.00	1004	P1Str2
2025-02-19 12:46:57	1012	1012.0	1003.00	1004	P1Str2

Sample Print This report has been generated through PC.	
Remark: Done by: Checked by:	
Report printed on: 2025-03-07 12:10:53 Report printed by: User8 Page 1 of	1

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Feedback/Support

Your comments will help us better serve your HMI reporting needs. If you have any suggestions/ require support, then drop the email to 'info@sharadsoft.com'.

Location: Mumbai, India.

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