



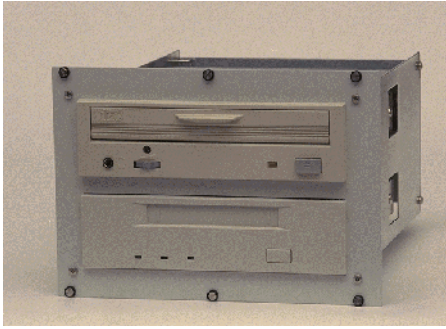
## External Memory Units (EMU 01/02)

Version 1.2 D or higher

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# 1 Features



- Plug-in module for fitting in 19" racks or desktop housing (only EMU 01).
- Ready for connection to a workstation rack-mounted WSR xx or Hewlett Packard Workstations HP 712 / 100 MHz (WSD 13) or HP C110 (WSD 15)
- Suitable for use in industrial environments

# 2 Applications

Mass storage unit with removable storage media for non-volatile storage of

- system, text and configuration data,
- archiving process data in the form of trends or reports,
- loading external software,
- and for making data available for online documentation and online help.

### 3 Description

The EMU 0\_ external memory units are constructed as 19" plug-in modules for fitting in racks. The EMU 02 is equipped with its own 24 V power supply unit. The EMU 01 is also available in a desktop version with a lockable transparent protective door. All models are ready for connection to a workstation rack-mounted WSR xx or Hewlett Packard Workstations HP 712 / 100 MHz (WSD 13) or HP C110 (WSD 15). They can therefore also be used in industrial environments.

The external memory units can be fitted with the following mass storage drives for use with removable storage media:

- DAT drives for DDS magnetic tapes
- CD-ROM drives for compact disks
- MO drives for magneto-optical disks (only available in the EMU 02)

Digital Data Storage magnetic tapes can be written to and read from in a non-volatile manner. They can therefore be used in a broad range of situations both for archiving and for loading external data.

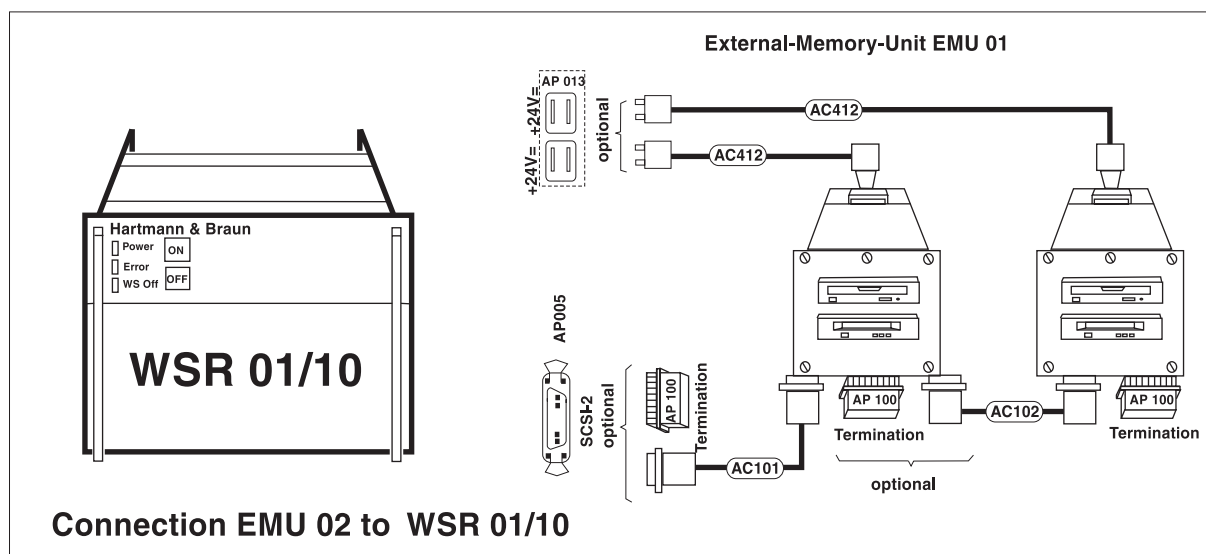
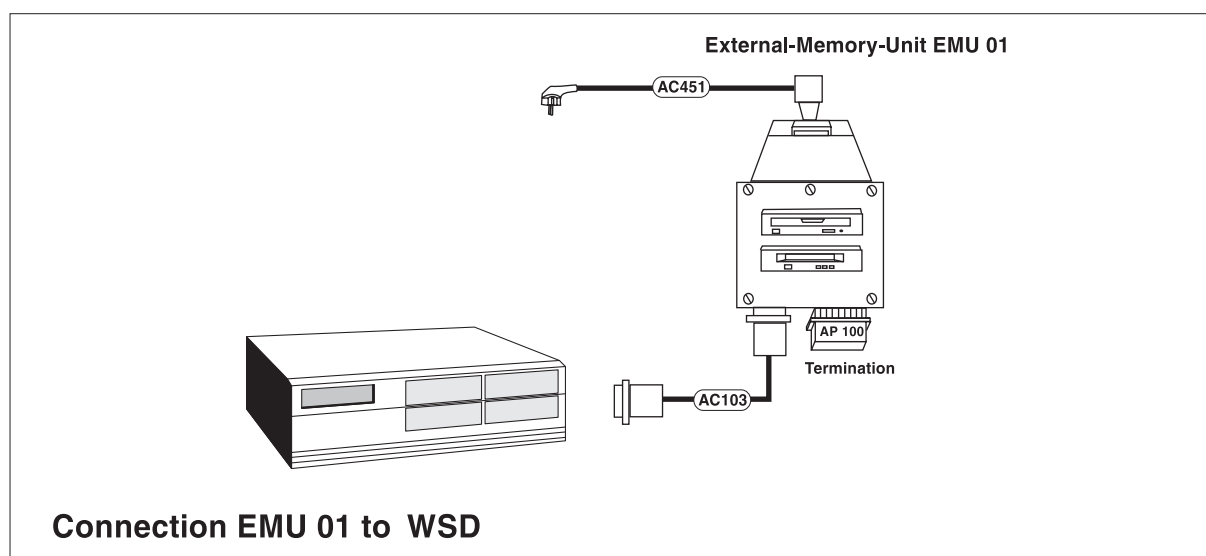
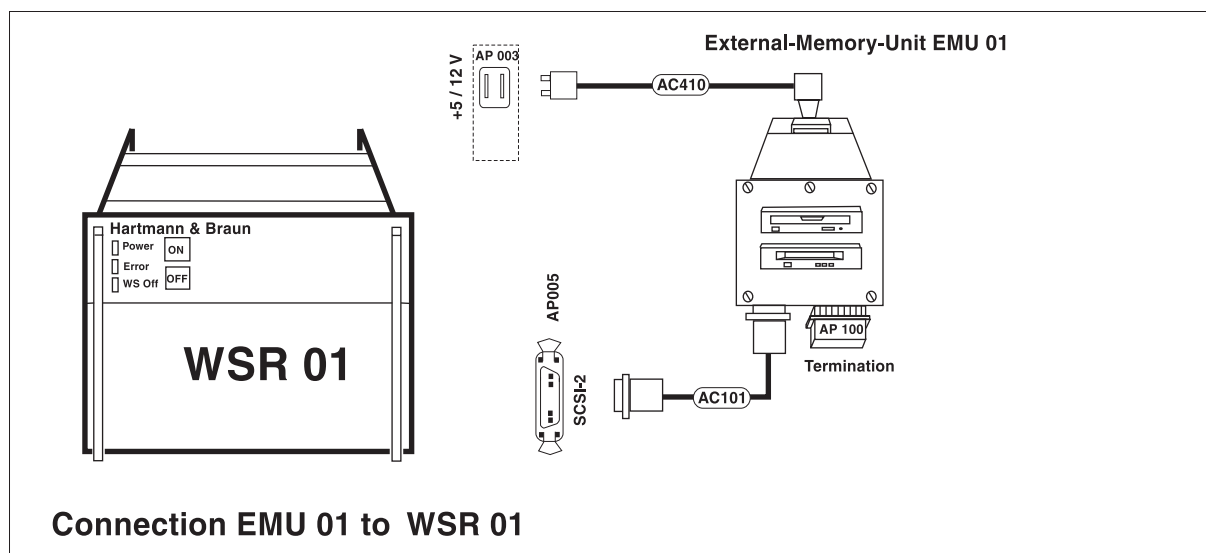
Compact disks however can only be read from (Read Only Memory). They are used exclusively for loading external data, e.g. for ONLINE documentation and ONLINE help.

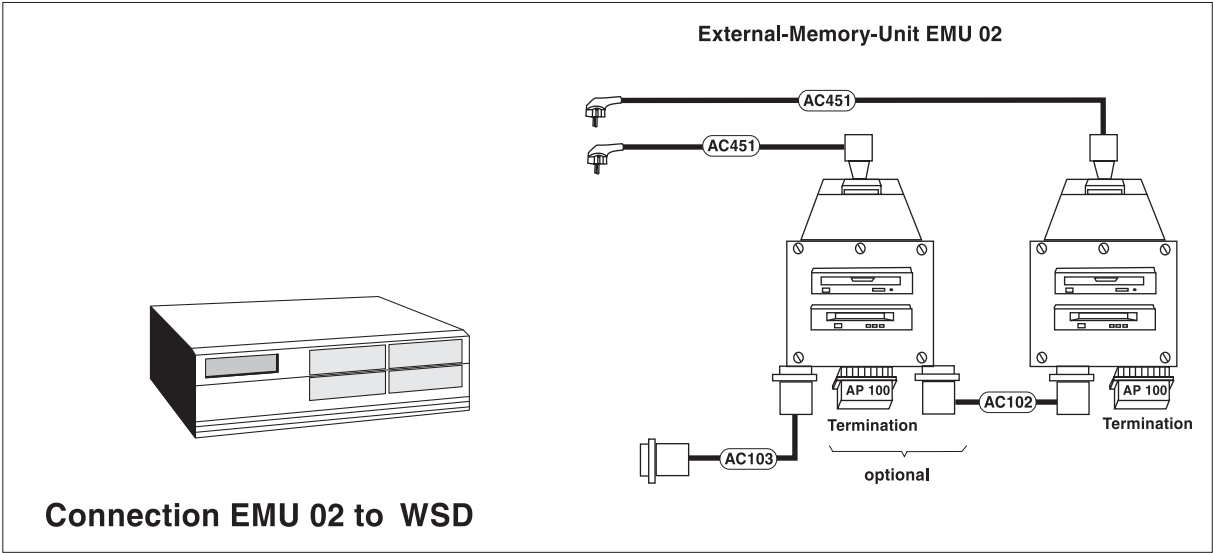
Magneto optical disks can also be written to and read from in a non-volatile manner. They can therefore be used as an alternative to DAT drives.

The (safe-guarded) power supply (EMU 01 with 12 V, EMU 02 with 24 V) is provided by the rack-mounted workstation WSR xx.

(Exception: EMU 01 / 02 as 230 V version).

## 4 Overview of connections





## 5 Technical data (general)

<b>Description:</b>		
<b>Dimensions of table-top casing</b>		
<b>Model:</b>	<b>EMU 01</b>	<b>EMU 02</b>
Width	36 HP (horizontal pitch)	42HP (horizontal pitch)
Height	3 U (unit)	3 U(unit)
Depth (without E/A connections)	250 mm	250 mm
Net weight	approx. 2.8 kg (with module rack approx. 5.3 kg)	approx. 3.5 kg (with module rack approx. 6.0 kg)
Width	292 mm	-
Height	170 mm	-
Depth (without E/A connections)	280 mm	-
Net weight	approx. 6.5 kg	-
<b>Power supply 19" plug-in module</b>	+5 VDC / + 12 VDC ( $\pm 5\%$ ) <a href="#">1)</a>	+24 V DC ( $\pm 5\%$ ) <a href="#">2)</a> <a href="#">3)</a> or 115/230 V AC 50 ... 60 Hz
Max. current consumption	1.6 A / 0.4 A (stand by) 3.3 A / 1.75 A (max.)	0.8 A at 24 V DC (stand by) 2.1 A at 24 V DC (max.) 0.5 A at 115 V AC 0.3 A at 230 V AC
Connection	4 pole built-in connector type STASEI 3	3 pole connector GSN 20 in accordance with DIN 43650/B (at 24 V DC) or connector in accordance with DIN 49451 T1 (at 115/230 V AC)
<b>Power supply table-top casing</b>	+5 VDC / + 12 VDC ( $\pm 5\%$ ) <sup>1</sup> or 115/230 V AC 50..60 Hz	-
Max. current consumption	as 19" plug-in module or 0.5 / 0.3 A at 115 / 230 V AC	-
Connection	as 19" plug-in module or connector in accordance with DIN 49451 T1 (at 115 / 230 V AC)	-
<b>E/A connections</b>	2 x SCSI-2 single ended (LD clip connector 50 pole, bail locked)	

For permissible environmental conditions and physical data see datat sheet: "**Standard Data**".

## 6 Technical data for drives

Drive	5¼" Magneto-optical drive	3½" DDS-2 tape drive	5¼" CD-ROM drive
Storage capacity	2.6 Gbyte (1.3 Gbyte / side) 1024 Byte / sector 17 sectors per track	uncompressed $\leq 2$ Gbyte DDS compressed $\leq 4$ GByte DDS uncompressed $\leq 4$ Gbyte DDS-2 compressed $\leq 8$ GByte DDS-2	650 Mbyte 2048 Byte / sector
Storage medium	Rewriteable magneto-optical disk	DAT cassette	Compact disk
Recording format	Rewriteable Std (CCS format) ISO/IEC 14517 type R/W	DDS at $\leq 90$ m tape length	ISO 9660
		DDS-2 at 120 m tape length	ISO 9660
Compression algorithm	-	DCLZ	-
Access times (Random Access)	25 msec.	$\leq 26$ sec. at 90 m tape length $\leq 35$ sec. at 120 m tape length	100 msec (12x Speed)
Transfer rate			
Reading	< 3.4 Mbyte/sec (average)	366 kByte/sec	1800 kByte/sec (uncompressed)
Writing	< 1.7 Mbyte/sec (average)	366 kByte/sec	-

## 7 Order details EMU 01

Order number		Description						Delivery times							
External memory unit EMU 01															
72367-0-	x	x	0	0	0	0	0	0	<b>Standard version EMU 01</b> 19" plug-in module, to accommodate 2 drives, incl. SCSI cable with LD/LD connector AC 101, power supply cable AC 410, all cables are 2 m long	<b>From 4th quarter 1997 only available as replacement</b>					
							72367-0-	<b>xDrive accommodation</b>	x	0	0	0	0	0	
							Additional order information	<b>Desktop housing with 5/12 VDC power supply from WSR BA Number 302</b> <b>Desktop housing with 115/230 VAC power supply (incl. AC 451) BA Number 303</b> <b>Delivery Unpacked for installation in cabinet in HGS BA Number 601</b> <b>Delivery Transport packing for on-site installation BA Number 602</b> <b>Assembly materials</b>							
		0						none (for installation in housing that is already present)							
	1							with 19" module rack							

## 8 Order information for EMU 02

Order number					Description	Delivery times													
External memory unit EMU 02																			
72368-0-	x	x	x		0	<b>Standard version EMU 02</b> 19" plug-in module, to accommodate 2 drives													
					72368-0-	<b>xDrive accomodation</b>	x	x	0	0	0	0							
Additional order information3						1 MO drive													
						<b>Delivery</b> Unpacked for installation in cabinet in HGS <b>BA Number 601</b> <b>Delivery</b> Transport packing for on-site installation <b>BA Number 602</b>													
						<b>Auxiliary power connection</b>													
					1	24 V DC with 2 m supply cable AC 412													
					2	115/230 V AC with supply cable AC 451, SCSI cable 2m AC 103 LD/HD, SCSI Termination AP 100													
						<b>Assembly materials</b>													
					0	none (for installation in housing that is already present) , with SCSI cable 20,5 m AC 102 LD/LD													
					1	with 19" module rack , with SCSI cable 2 m AC 101 LD/LD													

## 9 Order information for accessories

Order number								Description	Delivery times
Add-on components									
72405-4-	0	7	4	5	3	8	6	<b>AP 100 SCSI terminator</b> with LD connector (50 pole) bail-locked (For terminating the SCSI bus when an EMU is not connected to a WSR).	
72429-5-	8	0	1	9	0	9	4	<b>1 Magneto-optical disk</b> 2.6 GByte	
72429-5-	8	0	1	9	0	8	5	<b>1 DDS cassette 90 m</b> (5 per pack)	
72429-5-	8	0	1	9	0	8	4	<b>1 DDS-2 cassette 120 m</b> (5 per pack)	
72429-5-	8	0	1	9	0	8	3	<b>1 cleaning cassette</b>	
72429-5-	8	0	1	9	0	8	6	<b>1 CD disk caddy</b>	
72405-4-	0	7	4	5	7	3	5	<b>AC 103 SCSI cable</b> 2m (HD on LD connector) for connecting EMU xx to <ul style="list-style-type: none"> <li>• Hewlett Packard Workstation HP712/100MHz (WSD 13)</li> <li>• Hewlett Packard Workstation HP C110 (WSD 15)</li> </ul>	

Connection cable see List Sheet 72-6.70 "Cable and Adapter"

Footnotes:

- 1) Power supply possible from WSR 01
- 2) Power supply possible from WSR 10
- 3) Power supply possible from WSR 01(RBP > Index F)





Industriestraße 28  
65729 Eschborn  
Tel. (06196) 800-0  
Fax (06196) 800-11 19

Höseler Platz 2  
42567 Heiligenhaus  
Tel. (0 20 56) 12- 0  
Fax (0 20 56) 12- 56 79

Kohlstraße 4  
32425 Minden  
Tel. (05 71) 830- 0  
Fax (05 71) 830- 11 05

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