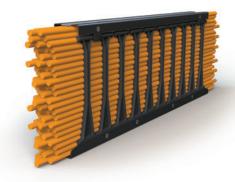


HIGH DENSITY WIRE MANAGEMENT



High Density Wire Management (HDWM) helps to improve network performance and reliability (sustem under industrial trademark).

MAIN ADVANTAGES

- Reduces risk of attenuation and substantially increases data transmission reliability
- Solution for racks and open frames
- Innovative approach for backbone and patch cables allow better organization in accordance with industry standards and major cable manufacturer recommendations
- New design for 48 patch cords (Cat. 7A) in 1U position
- Unbeatable density of patch cords
- Bend radius control
- Allows installation of up to 2016 patch cords in one rack
- Unique front panel latching system
- Front or front/rear design layout available
- > Wide range of sizes usable for typical applications

COLOR SAMPLER: RAL 9005



HIGH DENSITY WIRE MANAGER CABLE FILL CALCULATOR									
				Počet kabelů					
Code	Description	Cable Details	CAT 6 UTP	CAT 6a UTP	CAT 7a PiMF	Vlastní			
		Ø (mm)	5.870	7.239	7.620	8.000			
		Fill Factor		50 %					
Standard version									
HDWM-HM-1F	Horizontal HDWM, 1U×10 finger, front only 1U×19"×112 mm	50	33	30	27				
HDWM-VMR-42-12/10F	Vertical High Density Rack Wire Manager, 41 fingers, front only, 4	184	121	109	99				
HDWM-VMF-42-15/20F	Vertical High Density Frame Wire Manager, 41 fingers, front only,	507	333	301	273				
HDWM-VMF-42-25/20F	Vertical High Density Frame Wire Manager, 41 fingers, front only,	913	600	541	491				
HDWM-VMF-42-25/30F	Vertical High Density Frame Wire Manager, 41 fingers, front only,	1 411	928	837	760				
Finger Opening Standard	Capacity of finger opening—standard version	47	31	28	25				
Longer version									
HDWM-HML-1F	Horizontal HDWM, 1U×10 long finger, front only 1U×19"×182mm	92	60	54	49				
HDWM-VMR-42-19/10F	Vertical High Density Rack Wire Manager, 41 long fingers, front or	312	205	185	168				
HDWM-VMF-42-22/20F	Vertical High Density Frame Wire Manager, 41 long fingers, front of	791	520	469	426				
HDWM-VMF-42-32/20F	Vertical High Density Frame Wire Manager, 41 long fingers, front of	1197	787	710	644				
HDWM-VMF-42-32/30F	Vertical High Density Frame Wire Manager, 41 long fingers, front of	1 851	1 217	1098	996				
Finger Opening Long	Capacity of finger opening—longer version		92	02 60 54					

DESCRIPTION

Front/rear design

- Dual pathway for managing cables within the same HDWM
- Horizontal and vertical orientations, vertical racks (VMR) for front only

Front only design

- Simple pathway for cables
- Available in horizontal and vertical orientations

Horizontal orientation

- · Horizontal pathway for managing cables between installed equipment
- For mounting onto 19" extrusions

Vertical orientation

- · Vertical pathway for managing cables into and through the rack or frame
- · Velcro cable ties for optimum cable bundle management
- Vertical managers can be bolted together (front to back), customizing the HDWM to your requirements

Frame vertical panel (VMF)

- 3 mm thick aluminum ensures high rigidity and structural strength
- Easy installation onto RSG frames

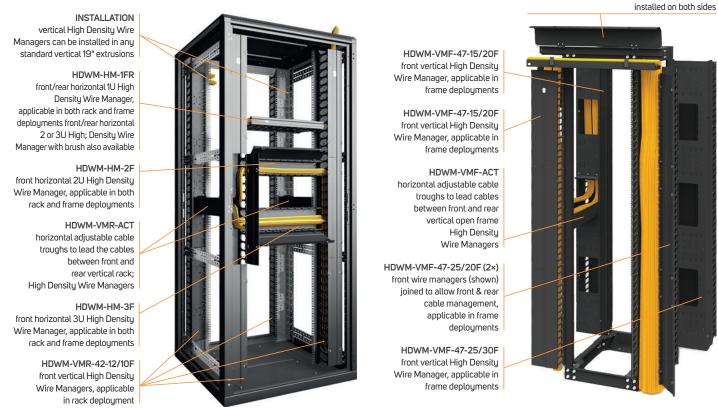
Cable Troughs

- · Allows cable management of cables between vertical rack (VMR) or frame (VMF) HDWM
- · Adjustable length

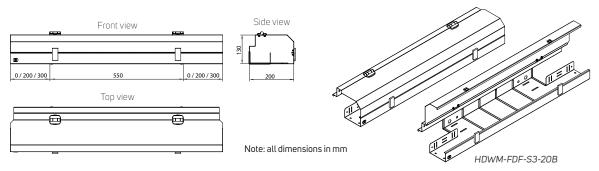
• Fingers come in two sizes standard and long

HDWM – example of use

 $\label{eq:hdwm-fdf-s3-20B} \textbf{HDWM-FDF-S3-20B} \\ \text{front duct system, compatible with HDWM-VMF-xx-yy/20F} \\$



Front duct system compatible with vertical HDWM—RSG open frame installation



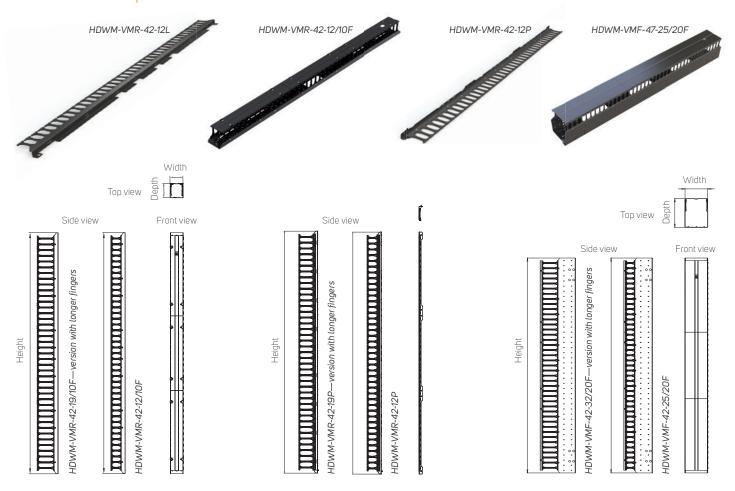
Package includes:

- Set 1: 1× HDWM front duct, 1× cable radius protector, 1× connecting module, 4× screws M5, 4× nuts M5, 4× washer M5
- Set 2: 1× HDWM front duct, 2× cable radius protector, 1× connecting module, 4× screws M5, 4× nuts M5, 4× washer M5

Code	Installation	Description	Package
HDWM-FDF-S3-20L	Open frame	Front duct system, compatible with HDWM-VMF-xx-yy/20F installed on the left-hand side	1 pc of set 1
HDWM-FDF-S3-20R	Open frame	Front duct system, compatible with HDWM-VMF-xx-yy/20F installed on the right-hand side	1 pc of set 1
HDWM-FDF-S3-20B	Open frame	Front duct system, compatible with HDWM-VMF-xx-yy/20F installed on both sides	1 pc of set 2
HDWM-FDF-S3-30L	Open frame	Front duct system, compatible with HDWM-VMF-xx-yy/30F installed on the left-hand side	1 pc of set 1
HDWM-FDF-S3-30R	Open frame	Front duct system, compatible with HDWM-VMF-xx-yy/30F installed on the right-hand side	1 pc of set 1
HDWM-FDF-S3-30B	Open frame	Front duct system, compatible with HDWM-VMF-xx-yy/30F installed on both sides	1 pc of set 2
HDWM-FDF-S3-20L30R	Open frame	Front duct system, compatible with HDWM-VMF-xx-yy/20F installed on the left-hand side and HDWM-VMF-xx-yy/30F installed on the right-hand side	1 pc of set 2
HDWM-FDF-S3-30L20R	Open frame	Front duct system, compatible with HDWM-VMF-xx-yy/30F installed on the left-hand side and HDWM-VMF-xx-yy/20F installed on the right-hand side	1 pc of set 2
HDWM-FDF-S3-EC	Open frame	End cap for front duct system	2 pcs

Vertical high density wire managers

Rack & RSG open frame installation



Package includes:

- Set 1: 1× HDWM manager, set of blanking panels, 8× screws M5, 8× nuts M5, 8× washer M5, 10× velcro ties HDWM-VCT
- Set 2: 1× HDWM manager, 4× screws M5, 4× nuts M5, 4× washer M5, 5× velcro ties HDWM-VCT
- Set 3: 1× HDWM manager, 4× screws M5, 4× nuts M5, 4× washer M5, 10× velcro ties HDWM-VCT

Installation	Туре	No. of fingers		Dimensions			Extended version with longer fingers		
		Front	Rear	H (in U)	W (mm)	D (mm)	Code	D (mm)	Package
Rack	Front	41	х	42	100	112	HDWM-VMR-42-19/10F	182	
Rack	Front	44	Х	45	100	112	HDWM-VMR-45-19/10F	182	1 pc of set 1
Rack	Front	47	Х	48	100	112	HDWM-VMR-48-19/10F	182	0.000.
Rack	L-type 800 mm	41	Х	42	-	112	HDWM-VMR-42-19L	182	
Rack	extrusion and A-type	44	Х	45	-	112	HDWM-VMR-45-19L	182	
Rack	one row	47	Х	48		112	HDWM-VMR-48-19L	182	1pc
Rack	D-tune extrusion and	41	Х	42	-	112	HDWM-VMR-42-19P	182	of set 2
Rack	A-type RSF 800 mm width, one row	44	Х	45	-	112	HDWM-VMR-45-19P	182	
Rack		47	Х	48		112	HDWM-VMR-48-19P	182	
Open frame	Front ¹	41	Х	42	200	151	HDWM-VMF-42-22/20F	221	
Open frame	Front ¹	44	Х	45	200	151	HDWM-VMF-45-22/20F	221	
Open frame	Front ¹	46	Х	47	200	151	HDWM-VMF-47-22/20F	221	
Open frame	Front 1	41	Х	42	200	251	HDWM-VMF-42-32/20F	321	
Open frame	Front 1	44	Х	45	200	251	HDWM-VMF-45-32/20F	321	1 pc of set 3
Open frame	Front ¹	46	х	47	200	251	HDWM-VMF-47-32/20F	321	0,000
Open frame	Front 1	41	х	42	300	251	HDWM-VMF-42-32/30F	321	
Open frame	Front ¹	44	х	45	300	251	HDWM-VMF-45-32/30F	321	
Open frame	Front ¹	46	х	47	300	251	HDWM-VMF-47-32/30F	321	
	Rack Rack Rack Rack Rack Rack Rack Rack	Rack Front Rack Front Rack Front Rack Front Rack Front Rack Estrusion and A-type RSF 600 mm width, one row Rack P-type extrusion and A-type RSF 800 mm width, one row Rack P-type extrusion and A-type RSF 800 mm width, one row Rack P-type extrusion and A-type RSF 800 mm width, one row Rack P-type extrusion and A-type RSF 800 mm width, one row Open frame Front 1 Open frame Front 1	Rack	Rack	Rack	Rack	Rack	No. of fingers Dimensions Longer fingers	No. of fingers Dimensions Longer fingers Longer f

¹ For front/rear design, simply order respective front managers and install them easily at the installation site with enclosed hardware (standard). Both the standard and longer versions may be combined as well.

Horizontal high density wire managers



Front/rear design

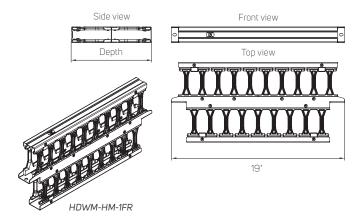


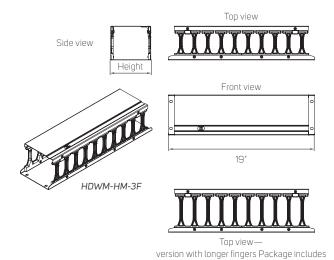
Front/rear design HDWM-HM-1FR



Front only design







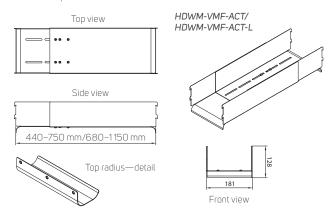
Package includes:

• HDWM manager, 1× DP-MO-01

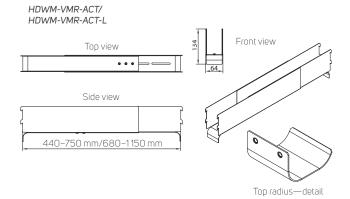
Code	Installation	Туре	No. of fingers		Dimensions			Extended version with longer fingers		Package
			Front	Rear	H (in U)	W (mm)	D (mm)	Code	D (mm)	Package
HDWM-HM-1F	Open frame/rack	Front	10	-	1	19"	112	HDWM-HML-1F	182	1 pc
HDWM-HM-1FR	Open frame/rack	Front/rear	10	9	1	19"	223	HDWM-HML-1FR	363	1 pc
HDWM-HM-2F	Open frame/rack	Front	10	-	2	19"	112	HDWM-HML-2F	182	1 pc
HDWM-HM-2FR	Open frame/rack	Front/rear	10	9	2	19"	223	HDWM-HML-2FR	363	1 pc
HDWM-HM-2FRB	Open frame/rack	Front/rear, brush	10	9	2	19"	223	HDWM-HML-2FRB	363	1 pc
HDWM-HM-3F	Open frame/rack	Front	10	-	3	19"	112	HDWM-HML-3F	182	1 pc
HDWM-HM-3FR	Open frame/rack	Front/rear	10	9	3	19"	223	HDWM-HML-3FR	363	1 pc
HDWM-HM-3FRB	Open frame/rack	Front/rear, brush	10	9	3	19"	223	HDWM-HML-3FRB	363	1 pc

Adjustable cable trough for vertical HDWM

RSG open frame installation



Rack installation



Package includes:

• HDWM-VMX-ACT-X: 1× duct, 2× radius control, 4× screws M5

	ACCESSORIES FOR HIGH DENSITY WIRE MANAGERS	
Code	Description	Package
HDWM-VMR-19	Bracket for attachment of HDWM-VMR-XX-XX/XXF to 19" profiles (not required for RDF/RSF)	1 set
HDWM-VMR-ACT	Adjustable cable trough - for front-to-rear cable management between front and rear mounted VMR, top radius included, range 440 to 750 mm*	1 set
HDWM-VMF-ACT	Adjustable cable trough - for front-to-rear cable management between front and rear mounted VMF, top radius included, range 440 to 750 mm	1 set
HDWM-VMR-ACT-L	Adjustable cable trough - Long - for front-to-rear cable management between front and rear mounted VMR, top radius included, range 680 to 1150 mm*	1 set
HDWM-VMF-ACT-L	Adjustable cable trough - Long - for front-to-rear cable management between front and rear mounted VMF, top radius included, range 680 to 1150 mm	1 set
HDWM-VMF-B15	Bracket for attachment of HDWM-VMF-XX-15/XXF to back of open frame (not required for RSG)	2 pcs
HDWM-VMF-B25	Bracket for attachment of HDWM-VMF-XX-25/XXFR to back of open frame (not required for RSG)	2 pcs
HDWM-VMF-BLANK-42	Blank panel kit to close ACT holes for 42U VMF range of wire managers	3 pcs
HDWM-VMF-BLANK-45	Blank panel kit to close ACT holes for 45/47U VMF range of wire managers	3 pcs
HDWM-FSS-50	Fiber storage spools, 50 mm deep, including mounting hardware	1 pair
HDWM-FSS-100	Fiber storage spools, 100 mm deep, including mounting hardware	1 pair
HDWM-VCT	Velcro cable ties, 25×300 mm, black	10 pcs
HDWM-VCT-B	Velcro cable belt, 13×5000 mm, black	1рс
HDWM-VCT-B-RD	Velcro cable belt, 13×5000 mm, red	1 pc
HDWM-VCT-B-GN	Velcro cable belt, 13×5000 mm, green	1 pc
HDWM-VCT-B-YL	Velcro cable belt, 13×5000 mm, yellow	1 pc
HDWM-VCT-S	Velcro cable ties—small, 13×190 mm, black	25 pcs
HDWM-VCT-S-BU	Velcro cable ties—small, 13×190 mm, blue	25 pcs
HDWM-VCT-S-RD	Velcro cable ties—small, 13×190 mm, red	25 pcs
HDWM-VCT-S-YL	Velcro cable ties—small, 13×190 mm, yellow	25 pcs
HDWM-VCT-S-GN	Velcro cable ties—small, 13×190 mm, green	25 pcs

^{*} Not compatible with divided rear extrusions of RSF rack (option U)



HDWM-FSS-50



HDWM-VCT-S

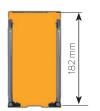


HDWM-VCT-B



HDWM-VCT

Differences between longer and standard version



HDWM-VMR-42-19/10F











Opening system right and left side

