



X-EAS-FE MX DATA SHEET

**Fastening System
for circuit integrity**



X-EAS-FE MX Stand-off single cable holder

Designation

X	-	EAS-FE	6-10	MX
Technology		Application	Cable diameter	Fastening type

Technology:

X | DX solution

Application:

EAS-FE | Stand-off single cable holder

Cable diameter:

6 | Minimum admissible cable diameter
 10 | Maximum admissible cable diameter

Fastening type:

MX | Collated fastening

Product data

Product description

X-EAS-FE MX (Type 1)



X-EAS-FE MX (Type 2)



- X-EAS-FE MX fastening system for securing circuit integrity and operability of electrical circuits during fire.
- Approved fire resistance according to DIN 4102-12.
- Easy assembling.
- Compatible with magnetic tool interface.

Fastening system

Designation		Battery-actuated fastener		
		X-P 17 B3 MX	X-P 20 B3 MX	X-P 24 B3 MX
X-EAS-FE 6-10 MX	Type 1			
X-EAS-FE 11-14 MX		●	●	●
X-EAS-FE 15-19 MX				
X-EAS-FE 20-25 MX	Type 2	●	●	●
X-EAS-FE 26-31 MX				

Dimensions for cable holders

	Designation	Width	Length	Thickness	Height
		w	l	t ₁ /t ₂	h
	6-10 MX	40 mm	72 mm	0.8/1.2 mm	28 mm
	11-14 MX	44 mm	72 mm	0.8/1.2 mm	30 mm
	15-19 MX	48 mm	72 mm	0.8/1.2 mm	35 mm

	Designation	Width	Length	Thickness	Height
		w	l	t	h
	20-25 MX	52 mm	65 mm	1 mm	48 mm
	26-31 MX	57 mm	65 mm	1 mm	52 mm

Material specification and material properties for steel elements

Designation	Element	Material	Coating	Minimum coating thickness
X-EAS-FE MX (Type 1, 2)	Cable holder	SPCC	Zinc	5 µm

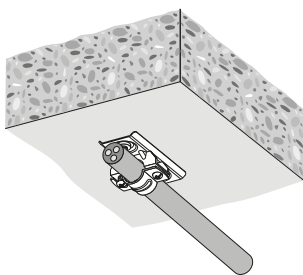
- SPCC = Cold rolled steel sheet
- Info for nails and anchors are part of the corresponding Product Data Sheets.

Approvals and certificates

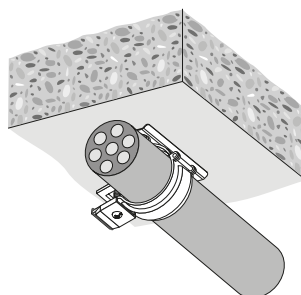
Authority	Approval/certificate no.	Date of issue	Description
MPA IBMB Braunschweig	2401/462/21	06/2021	Expert opinion norm construction
	P-2401/468/21-MPA BS	07/2021	CIS test certificate (abP)

- Not all information presented in this product data sheet might be subject to approval/certificate content. Please refer to approval/certificate for further information.

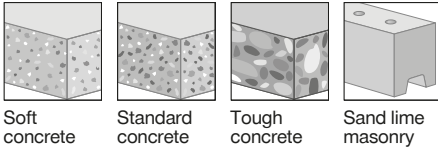
Applications



Fastening (Type 1)



Fastening (Type 2)

Base materials


Soft concrete

Standard concrete

Tough concrete

Sand lime masonry

Load conditions

 Static/
quasi static

Fire resistance

Environmental conditions

		Designation		
Environmental condition		X-EAS-FE MX (Type 1, 2) combined with X-P 17 B3 MX	X-EAS-FE MX (Type 1, 2) combined with X-P 20 B3 MX	X-EAS-FE MX (Type 1, 2) combined with X-P 24 B3 MX
	Dry indoor	■	■	■

■ = suitable for corrosion protection



• For more details, please refer to following technical document: Hilti Corrosion Handbook.

Fastener program
Item no. and description

Designation	Item no.	Description
X-EAS-FE 6-10 MX	2325722	Cable holder
X-EAS-FE 11-14 MX	2325723	
X-EAS-FE 15-19 MX	2325724	
X-EAS-FE 20-25 MX	2325725	
X-EAS-FE 26-31 MX	2325726	
X-P 17 B3 MX	2156216	Fastener
X-P 20 B3 MX	2156217	
X-P 24 B3 MX	2156218	
X-FG B3-ME	2101258	Fastener guide
X-FG B3-FE	2208570	Magnetic fastener guide

X-EAS-FE MX – Fastening electrical installation

Application recommendation

Fastened material dimensions

Designation	1 cable		2 cables		3 cables	
	Ø min	Ø max	Ø min	Ø max	Ø min	Ø max
X-EAS-FE 6-10 MX	6 mm	10 mm	3 mm	5 mm	3 mm	5 mm
X-EAS-FE 11-14 MX	11 mm	14 mm	6 mm	7 mm	5 mm	6 mm
X-EAS-FE 15-19 MX	15 mm	19 mm	8 mm	9 mm	7 mm	8 mm
X-EAS-FE 20-25 MX	20 mm	25 mm	10 mm	12 mm	9 mm	11 mm
X-EAS-FE 26-32 MX	26 mm	32 mm	13 mm	16 mm	12 mm	14 mm

Tested configurations for norm-/standard configuration according to DIN 4102-12

Cable manufacturer	VDE Nr.	Cable type		Cable dimension	Clip type	Spacing	Cable per clip	Classification
Dätwyler KERAM	7780	(N)HXCH FE 180 E90		n x 1.5/1.5- n x 35/16	X-EAS-FE _- MX	30 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E90		n x 1.5- n x 35	X-EAS-FE _- MX	30 cm	1	E30 - E90
Eupen EUCASAFE	6563	JE-H(ST)H...Bd FE 180 E90		n x 2 x 0.8	X-EAS-FE _- MX	30 cm	1	E30 - E90

Cable specific constructions according to DIN 4102-12

Cable manufacturer	VDE Nr.	Cable type	Number of pairs (n)	Number of cores (n)	Cable dimension	Clip type	Spacing	Cable per clip	Classification
Dätwyler KERAM	9361	JE-H(S)H FE 180 E30 - E90	2	2	n x 2 x 0.8	X-EAS-FE 11-14 MX	30 cm	2	E30 - E60
Dätwyler KERAM	9361	JE-H(S)H FE 180 E30 - E90	4	2	n x 2 x 0.8	X-EAS-FE 15-19 MX	30 cm	2	E30 - E60
Dätwyler KERAM	9361	JE-H(S)H FE 180 E30 - E90	8; 12	2	n x 2 x 0.8	X-EAS-FE 26-31 MX	30 cm	2	E30 - E60
Loeni Studer BETAfilam	9593	JE-H(S)H FE 180/E30 - E90	2	2	n x 2 x 0.8	X-EAS-FE 15-19 MX	30 cm	2	E30 - E90
Loeni Studer BETAfilam	9593	JE-H(S)H FE 180/E30 - E90	4	2	n x 2 x 0.8	X-EAS-FE 26-31 MX	30 cm	2	E30 - E90
Loeni Studer BETAfilam	9593	JE-H(S)H FE 180/E30 - E90	2	2	n x 2 x 0.8	X-EAS-FE 20-25 MX	30 cm	3	E30 - E90
Eupen EUCASAFE	6563	JE-H(ST)H...Bd FE 180 E90	2	2	n x 2 x 0.8	X-EAS-FE 20-25 MX	30 cm	2	E30 - E90
Eupen EUCASAFE	6563	JE-H(ST)H...Bd FE 180 E90	4	2	n x 2 x 0.8	X-EAS-FE 26-31 MX	30 cm	2	E30 - E90
Loeni Studer BETAfilam	8238	JE-H(S)HRH FE 180/E30 - E90	2	2	n x 2 x 0.8	X-EAS-FE 20-25 MX	30 cm	2	E30 - E90
Loeni Studer BETAfilam	8238	JE-H(S)HRH FE 180/E30 - E90	2	2	n x 2 x 0.8	X-EAS-FE 26-31 MX	30 cm	3	E30 - E90
Prysmien SIENOPYR-PLUS	7787	JE-H(ST)H Bd FE 180 E30	2	2	n x 2 x 0.8	X-EAS-FE 26-31 MX	30 cm	2	E30 - E60
Helukabel	8553	JE-H(S)H Bd FE 180/E30 - E90	4	2	n x 2 x 0.8	X-EAS-FE 6-10 MX	30 cm	1	E30 - E90
Sauter-Brandmelde-Systemkabel	8336	JE-H(S)H FE 180/E30	1	2	n x 2 x 1.5	X-EAS-FE 6-10 MX	30 cm	1	E30 - E60

• Number of cores n ≥ 2.

Cable specific constructions according to DIN 4102-12

Cable manufacturer	VDE Nr.	Cable type	Number of cores (n)	Cable dimension	Clip type	Spacing	Cable per clip	Classification
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	2	n x 1.5- n x 2.5	X-EAS-FE 11-14 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	3	n x 1.5- n x 4	X-EAS-FE 11-14 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	3	n x 6- n x 10	X-EAS-FE 15-19 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	4	n x 1.5- n x 2.5	X-EAS-FE 11-14 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	4	n x 6	X-EAS-FE 15-19 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	5	n x 1.5	X-EAS-FE 11-14 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	5	n x 2.5- n x 10	X-EAS-FE 15-19 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	7	n x 1.5- n x 6	X-EAS-FE 15-19 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	10	n x 2.5	X-EAS-FE 20-25 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	12	n x 1.5	X-EAS-FE 15-19 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	12	n x 2.5	X-EAS-FE 20-25 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXH FE 180 E30 - E60	24	n x 1.5	X-EAS-FE 20-25 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXCH FE 180 E30 - E60	3	n x 10/10	X-EAS-FE 15-19 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXCH FE 180 E30 - E60	3	n x 25/16- n x 35/16	X-EAS-FE 26-31 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXCH FE 180 E30 - E60	4	n x 10/10	X-EAS-FE 20-25 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXCH FE 180 E30 - E60	4	n x 16/16	X-EAS-FE 20-25 MX	60 cm	1	E30 - E90
Dätwyler KERAM	7780	(N)HXCH FE 180 E30 - E60	4	n x 25/16- n x 35/16	X-EAS-FE 26-31 MX	60 cm	1	E30 - E90

• Number of cores n ≥ 2.

Base material properties and fastener positioning in base material

Regulation	Fastener spacing
Norm-/standard construction	s = 300 mm
Cable specific construction	s ≥ 300 mm

- For more details in relation to base material properties, please refer to the chapter Fastener selection guide in the Direct fastening Technology Manual (DFTM).

Performance data
Recommended resistance under tension and shear load

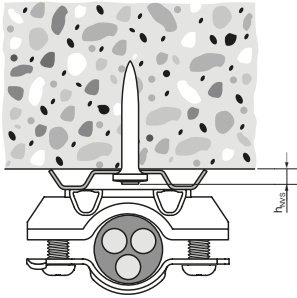
Designation	Tension load	Shear load	Fire rating cable holder	Testing according to
	N _{rec}	V _{rec}		
X-EAS-FE MX (Type 1, 2)	0.02 kN	0.02 kN	90 min	EN 1363-1: 2020-05

- Redundancy of fastening points is required.

System recommendation
System recommendation for fastening collated nails with battery-actuated tool

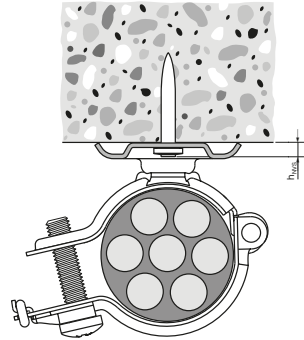
Designation				Battery-actuated tool			Base material		
	X-P 17 B3 MX	X-P 20 B3 MX	X-P 24 B3 MX	BX 3 ME			Soft concrete	Standard concrete	Tough concrete
X-EAS-FE MX (Type 1/2)	■	■		■			■	■	■
			■	■			■		

■ = recommended

Quality assurance

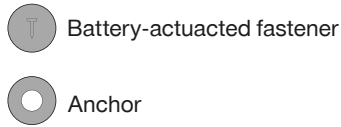
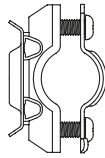
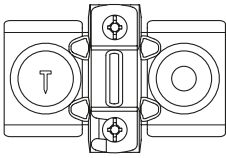
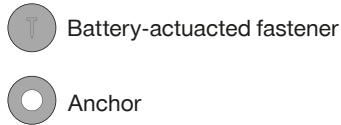
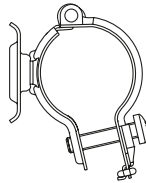
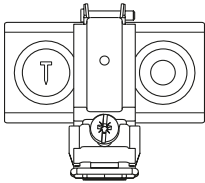
$$h_{NVS, \min} = 3 \text{ mm}$$
$$h_{NVS, \max} = 6 \text{ mm}$$

Admissible fastener stand-off (Type 1)



$$h_{NVS, \min} = 3 \text{ mm}$$
$$h_{NVS, \max} = 6 \text{ mm}$$

Admissible fastener stand-off (Type 2)

Fastening position (Type 1)

Fastening position (Type 2)

Fastener and anchor setting and installation information


- Fastener and anchor setting information (e.g. base material properties, fastened material properties and setting energy) and installation information (e.g. quality assurance) are part of the corresponding Product Data Sheet for fasteners and anchors.
- Fastener guide X-FG B3-ME recommended for fastener setting with battery-actuated tool. Holding the cable holder by hand no longer necessary.
- Visible setting failures must be replaced with a new fastener, not in the same hole.
- These are abbreviated instructions which may vary by application.
- Always review/follow the instructions accompanying the product.