

X-Pole
PLS MCB
PFIM ELCB / RCCB

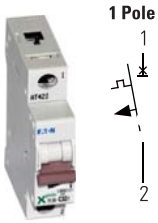
Protect People and Property



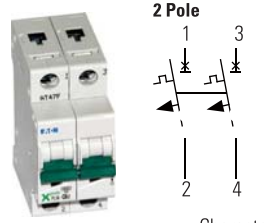
EATON

Powering Business Worldwide

Rated breaking capacity 6 kA according to IEC / EN 60898

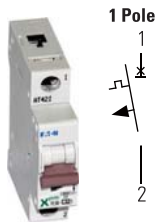


		Characteristic B PLS6-B□/1-AS	Characteristic C PLS6-C□/1-AS
6A	■	282842	282856
10A	■	282843	282857
13A	□	282844	282858
16A	■	282845	282859
20A	■	282846	282860
25A	■	282847	282861
32A	■	282848	282862
40A	■	282849	282863
50A	□	282850	282864
63A	■	282851	282865

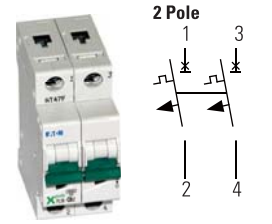


		Characteristic B PLS6-B□/2-AS	Characteristic C PLS6-C□/2-AS
6A	■	282904	282918
10A	■	282905	282919
13A	□	282906	282920
16A	■	282907	282921
20A	■	282908	282922
25A	■	282909	282923
32A	■	282910	282924
40A	■	282911	282925
50A	□	282912	282926
63A	■	282913	282927

Rated breaking capacity 10 kA according to IEC / EN 60898

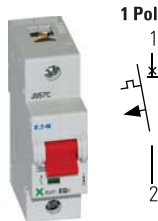


		Characteristic B PLSM-B□/1-AS	Characteristic C PLSM-D□/1-AS	Characteristic D PLSM-D□/1-AS
1A	■	282404	282430	282453
2A	■	282407	282433	282456
3A	■	282409	282435	282458
4A	■	282411	282437	282460
6A	■	282413	282439	282462
10A	■	282415	282441	282464
13A	□	282417	282443	282466
16A	■	282419	282445	282468
20A	■	282420	282446	282469
25A	■	282421	282447	282470
32A	■	282422	282448	282471
40A	■	282423	282449	282472
50A	□	282424	282450	-
63A	■	282425	282451	-

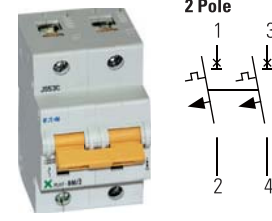


		Characteristic B PLSM-B□/2-AS	Characteristic C PLSM-D□/2-AS	Characteristic D PLSM-D□/2-AS
1A	■	282542	282568	282591
2A	■	282545	282571	282594
3A	■	282547	282573	282596
4A	■	282549	282575	282598
6A	■	282551	282577	282600
10A	■	282553	282579	282602
13A	□	282555	282581	282604
16A	■	282557	282583	282606
20A	■	282558	282584	282607
25A	■	282559	282585	282608
32A	■	282560	282586	282609
40A	■	282561	282587	282610
50A	□	282562	282588	-
63A	■	282563	282589	-

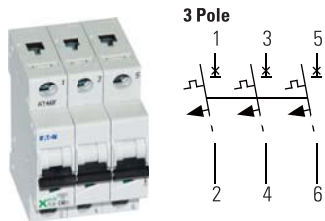
Rated breaking capacity 25 kA according to IEC / EN 60947-2



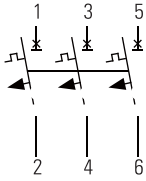
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20A	■	273352	273361	273370
25A	■	273353	273362	273371
32A	■	273354	273363	273372
40A	■	273355	273364	273373
50A	□	273356	273365	273374
63A	■	273357	273366	273375
80A	■	273358	273367	273376
100A	■	273359	273368	273377
125A	■	273360	273369	-



		Characteristic B PLHT-B□/2-AS	Characteristic C PLHT-C□/2-AS	Characteristic D PLHT-D□/2-AS
20A	■	273378	273387	273396
25A	■	273379	273388	273397
32A	■	273380	273389	273398
40A	■	273381	273390	273399
50A	□	273382	273391	273400
63A	■	273383	273392	273401
80A	■	273384	273393	273402
100A	■	273385	273394	273403
125A	■	273386	273395	-



3 Pole



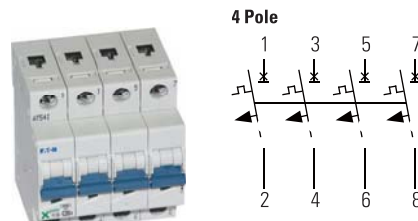
Characteristic B

PLS6-B□/3-AS

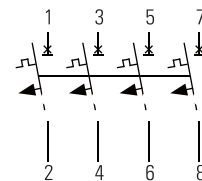
Characteristic C

PLS6-C□/3-AS

		282941	282955
6A	■	282941	282955
10A	■	282942	282956
13A	□	282943	282957
16A	■	282944	282958
20A	■	282945	282959
25A	■	282946	282960
32A	■	282947	282961
40A	■	282948	282962
50A	□	282949	282963
63A	■	282950	282964



4 Pole



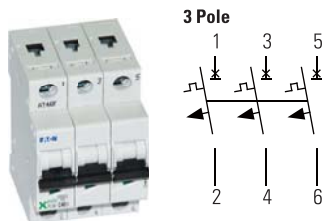
Characteristic B

PLS6-B□/4-AS

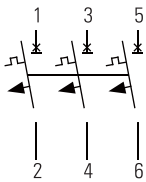
Characteristic C

PLS6-C□/4-AS

		282989	283003
6A	■	282989	283003
10A	■	282990	283004
13A	□	282991	283005
16A	■	282992	283006
20A	■	282993	283007
25A	■	282994	283008
32A	■	282995	283009
40A	■	282996	283010
50A	□	282997	283011
63A	■	282998	283012



3 Pole



Characteristic B

PLSM-B□/3-AS

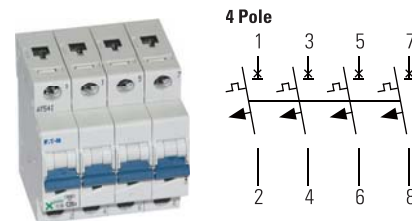
Characteristic C

PLSM-D□/3-AS

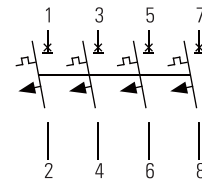
Characteristic D

PLSM-D□/3-AS

		282611	282637	282660
1A	■	282611	282637	282660
2A	■	282614	282640	282663
3A	■	282616	282642	282665
4A	■	282618	282644	282667
6A	■	282620	282646	282669
10A	■	282622	282648	282671
13A	□	282624	282650	282673
16A	■	282626	282652	282675
20A	■	282627	282653	282676
25A	■	282628	282654	282677
32A	■	282629	282655	282678
40A	■	282630	282656	282679
50A	□	282631	282657	-
63A	■	282632	282658	-



4 Pole



Characteristic B

PLSM-B□/4-AS

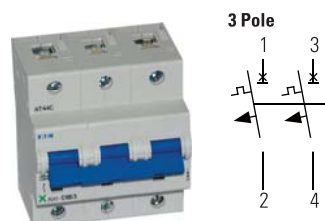
Characteristic C

PLSM-D□/4-AS

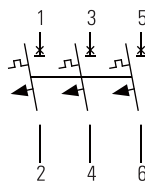
Characteristic D

PLSM-D□/4-AS

		282749	282775	282798
1A	■	282749	282775	282798
2A	■	282752	282778	282801
3A	■	282754	282780	282803
4A	■	282756	282782	282805
6A	■	282758	282784	282807
10A	■	282760	282786	282809
13A	□	282762	282788	282811
16A	■	282764	282790	282813
20A	■	282765	282791	282814
25A	■	282766	282792	282815
32A	■	282767	282793	282816
40A	■	282768	282794	282817
50A	□	282769	282795	-
63A	■	282770	282796	-



3 Pole



Characteristic B

PLHT-B□/3-AS

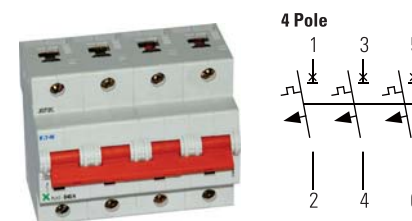
Characteristic C

PLHT-C□/3-AS

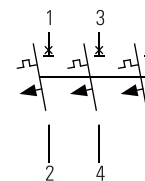
Characteristic D

PLHT-D□/3-AS

		273404	273413	273422
20A	■	273404	273413	273422
25A	■	273405	273414	273423
32A	■	273406	273415	273424
40A	■	273407	273416	273425
50A	□	273408	273417	273426
63A	■	273409	273418	273427
80A	■	273410	273419	273428
100A	■	273411	273420	273429
125A	■	273412	273421	-



4 Pole



Characteristic B

PLHT-B□/4-AS

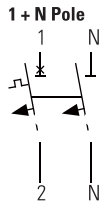
Characteristic C

PLHT-C□/4-AS

Characteristic D

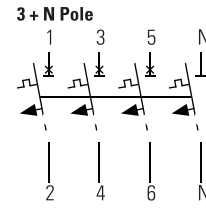
PLHT-D□/4-AS

		273456	273465	273474
20A	■	273456	273465	273474
25A	■	273457	273466	273475
32A	■	273458	273467	273476
40A	■	273459	273468	273477
50A	□	273460	273469	273478
63A	■	273461	273470	273479
80A	■	273462	273471	273480
100A	■	273463	273472	273481
125A	■	273464	273473	-



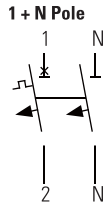
Characteristic B
PLS6-B□/1N-AS

Current (A)	Color	Characteristic B PLS6-B□/1N-AS	Characteristic C PLS6-C□/1N-AS
6A	Green	282879	282893
10A	Red	282880	282894
13A	White	282881	282896
16A	Blue	282882	282897
20A	Dark Blue	282883	282898
25A	Yellow	282884	282899
32A	Pink	282885	282900
40A	Black	282886	282901
50A	White	282887	282902
63A	Brown	282888	282903



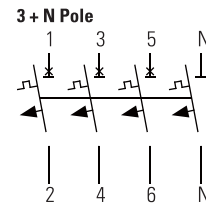
Characteristic B
PLS6-B□/3N-AS

Current (A)	Color	Characteristic B PLS6-B□/3N-AS	Characteristic C PLS6-C□/3N-AS
6A	Green	282965	282979
10A	Red	282966	282980
13A	White	282967	282981
16A	Blue	282968	282982
20A	Dark Blue	282969	282983
25A	Yellow	282970	282984
32A	Pink	282971	282985
40A	Black	282972	282986
50A	White	282973	282987
63A	Brown	282974	282988



Characteristic B PLS6-B□/1N-AS
Characteristic C PLS6-D□/1N-AS
Characteristic D PLS6-D□/3-AS

Current (A)	Color	Characteristic B PLS6-B□/1N-AS	Characteristic C PLS6-D□/1N-AS	Characteristic D PLS6-D□/3-AS
1A	Grey	-	282499	282522
2A	Pink	282476	282502	282525
3A	Grey	282478	282504	282527
4A	Brown	282480	282506	282529
6A	Green	282482	282508	282531
10A	Red	282484	282510	282533
13A	White	282486	282512	282535
16A	Blue	282488	282514	282537
20A	Dark Blue	282489	282515	282538
25A	Yellow	282490	282516	282539
32A	Pink	282491	282517	282540
40A	Black	282492	282518	282541
50A	White	282493	282519	-
63A	Brown	282494	282520	-



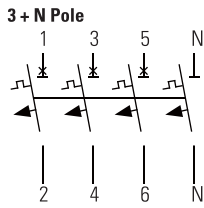
Characteristic B PLSM-B□/3N-AS
Characteristic C PLSM-D□/3N-AS
Characteristic D PLSM-D□/3N-AS

Current (A)	Color	Characteristic B PLSM-B□/3N-AS	Characteristic C PLSM-D□/3N-AS	Characteristic D PLSM-D□/3N-AS
1A	Grey	282680	282706	282729
2A	Pink	282683	282709	282732
3A	Grey	282685	282711	282734
4A	Brown	282687	282713	282736
6A	Green	282689	282715	282738
10A	Red	282691	282717	282740
13A	White	282693	282719	282742
16A	Blue	282695	282721	282744
20A	Dark Blue	282696	282722	282745
25A	Yellow	282697	282723	282746
32A	Pink	282698	282724	282747
40A	Black	282699	282725	282748
50A	White	282700	282726	-
63A	Brown	282701	282727	-

Rated breaking capacity 6 kA according to IEC / EN 60898

***DC Applications*
Characteristic C**

Current (A)	Color	1 Pole PLS6-C□/1-DC-AS	2 Pole PLS6-C□/1-DC-AS
2A	Pink	282866	282928
3A	Grey	282867	282929
4A	Brown	282868	282930
6A	Green	282869	282931
10A	Red	282870	282932
13A	White	282871	282933
16A	Blue	282872	282934
20A	Dark Blue	282873	282935
25A	Yellow	282874	282936
32A	Pink	282875	282937
40A	Black	282876	282938
50A	White	282877	282939
63A	Brown	282878	282940



Characteristic B PLHT-B□/3N-AS
Characteristic C PLHT-C□/3N-AS
Characteristic D PLHT-D□/3N-AS

Current (A)	Color	Characteristic B PLHT-B□/3N-AS	Characteristic C PLHT-C□/3N-AS	Characteristic D PLHT-D□/3N-AS
20A	Dark Blue	273430	273439	273448
25A	Yellow	273431	273440	273449
32A	Pink	273432	273441	273450
40A	Black	273433	273442	273451
50A	White	273434	273443	273452
63A	Brown	273435	273444	273453
80A	Dark Blue	273436	273445	273454
100A	Red	273437	273446	273455
125A	Yellow	273438	273447	-

TECHNICAL SPECIFICATIONS

PLS6

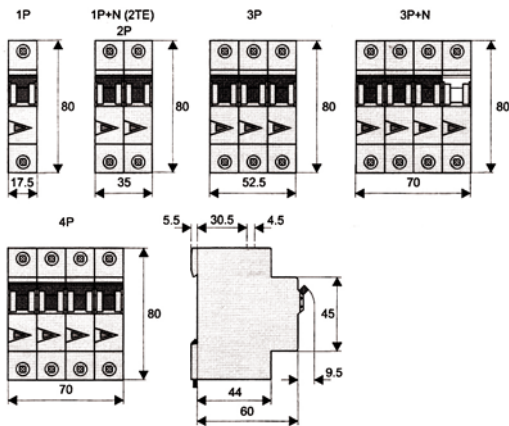
PLSM

PLS6-DC

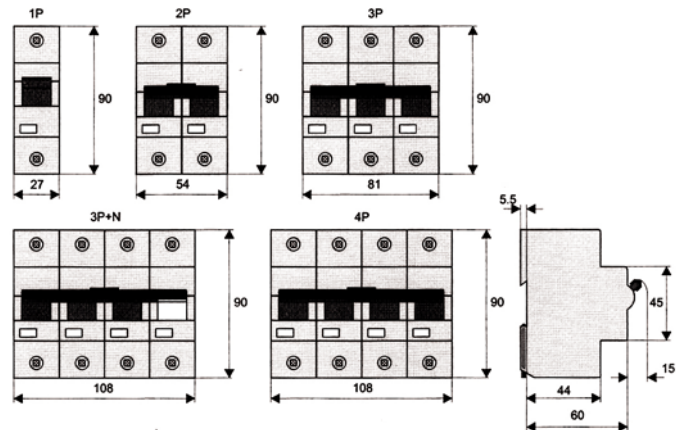
PLHT

Electrical				
Design according to	IEC / EN 60898	IEC / EN 60898	IEC / EN 60947-2	IEC / EN 60947-2
Rated Voltage - AC	230 / 400V	230 / 400V	-	230 / 400V
Rated Voltage - DC (per pole)	48V	48V	250V	60V
Rated Frequency	50 / 60Hz	50 / 60Hz	50 / 60Hz	50 / 60Hz
Selectivity class, in acc. with class	3	3	3	3
Endurance (operating cycles)	≥ 8,000	≥ 8,000	≥ 8,000	≥ 20,000
Characteristics	B, C, D	B, C, D	C	B, C, D
Rated breaking capacity according to IEC / EN 60898	6 kA	10 kA	6 kA	-
Ultimate Short circuit breaking capacity according to IEC / EN 60947-2				
Characteristic B,C	-	-	-	25 kA
$I_n = 20 - 63A$	-	-	-	20 kA
$I_n = 80 - 100A$	-	-	-	15 kA
$I_n = 125A$	-	-	-	
Characteristic D	-	-	-	25 kA
$I_n = 63A$	-	-	-	20 kA
$I_n = 80A$	-	-	-	15 kA
$I_n = 100A$	-	-	-	
Mechanical				
Degree of protection	IP 20	IP 20	IP 20	IP 40
Upper and low terminals	Open mouth/ lift terminals	Open mouth/ lift terminals	Open mouth/ lift terminals	Lift terminals
Terminal protection	Finger and hand touch safe, VBG 4, øVE-EN 6	Finger and hand touch safe, VBG 4, øVE-EN 6	Finger and hand touch safe, VBG 4, øVE-EN 6	Finger and hand touch safe, VBG 4, øVE-EN 6
Mounting	Quick fastening with 3 lock-in positions on DIN rail EN 50022	Quick fastening with 3 lock-in positions on DIN rail EN 50022	Quick fastening with 3 lock-in positions on DIN rail EN 50022	Quick fastening with 2 lock-in positions on DIN rail EN 50022

Dimension (mm) for PLS6, PLSM

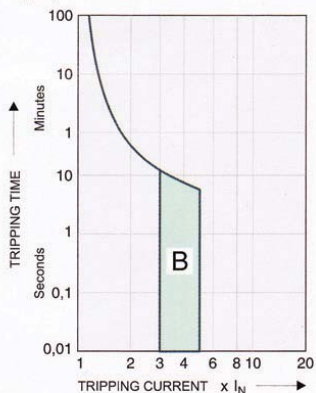


Dimension (mm) for PLHT

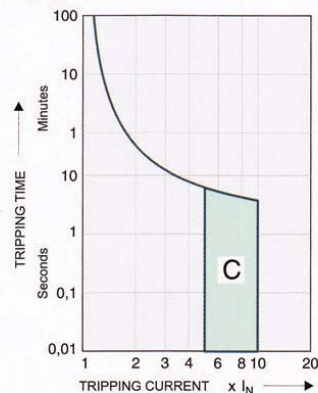


Tripping Characteristics (IEC/EN 60898)

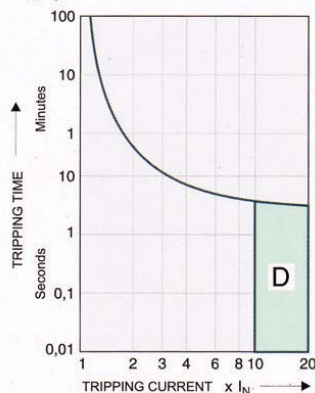
Tripping characteristics B



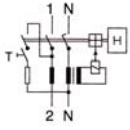
Tripping characteristic C



Tripping characteristic D

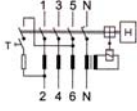


Quick-acting (B), slow (C), very slow (D)



2 Pole

	30mA PFIM-□/2/003-AS	100mA PFIM-□/2/01-AS	300mA PFIM-□/2/03-AS	500mA PFIM-□/2/05-AS
25A	282074	282075	-	-
40A	282076	282077	280078	-
63A	282079	282080	282081	282082
80A	282083	282084	282085	282086
100A	102910	102911	102912	-



4 Pole

	30mA PFIM-□/4/003-AS	100mA PFIM-□/4/01-AS	300mA PFIM-□/4/03-AS	500mA PFIM-□/4/05-AS
25A	282097	282098	282099	-
40A	282100	282101	282102	-
63A	282103	282104	282105	282106
80A	282107	282108	282109	282110
100A	102915	102916	102917	102918

TECHNICAL SPECIFICATIONS PFIM

Electrical

Design according to	IEC / EN 61008
Rated Voltage U_n	230 / 400V, 50Hz
Rated tripping current I_n	30, 100, 300, 500mA
Sensitivity	AC and pulsating DC

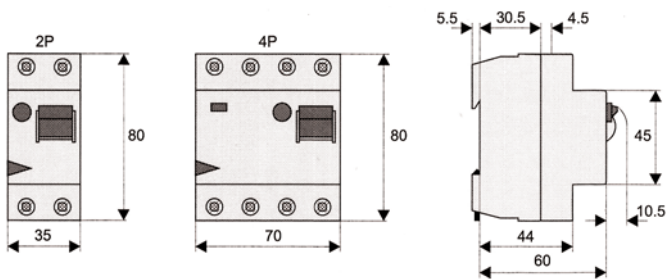
Endurance

Electrical comp.	≥ 4,000 operating cycles
Mechanical comp.	≥ 20,000 operating cycles

Mechanical

Tripping temperature	-25 °C to +40 °C
Degree of protection, built-in	IP 40
Upper and lower terminals	Open mouth/ lift terminals
Terminal protection	Finger and hand touch safe, VBG 4, öVE-EN 6
Mounting	Quick fastening with 2 lock-in positions on DIN rail EN 50022

Dimension (mm) for PFIM



Accessories for PLS6, PLSM, PLHT, PFIM

Auxiliary Switch (Snapping Design)

For Protective Device	Type Designation	Article No.
PLS6, PLSM	ZP-IHK	286052
PLS6, PLSM	ZP-NHK	248437
PLHT	-	-
PFIM	-	-

Auxiliary Switch (Screwing Design)

For Protective Device	Type Designation	Article No.
PLS6, PLSM	Z-AHK	248433
PLS6, PLSM	Z-NHK	248434
PLHT	Z-LHK	248440
PFIM	Z-HK	248432

Shunt Trip Release

For Protective Device	Type Designation	Article No.
PLS6, PLSM 12 - 60V	ZP-ASA/24	248438
PLS6, PLSM 110 - 220V	ZP-NHK/230	248439
PLHT 12 - 60V	Z-LHASA/24	248441
PLHT 110 - 415V	Z-LHASA/230	248442

Undervoltage Release

For Protective Device	Type Designation	Article No.
PLS6, PLSM 115V (Unde-layed)	Z-USA/115	248288
PLS6, PLSM 230V (Unde-layed)	Z-USA/230	248289
PLS6, PLSM 400V (Unde-layed)	Z-USA/400	248290

TECHNICAL SPECIFICATIONS

	ZP-IHK	ZP-NHK	Z-AHK	Z-NHK	Z-LHK	Z-HK	Z-HR
Electrical							
Contact Function	1NO + 1NC	1NO + 1NC	1NO + 1NC	2CO	1NO + 1NC	1NO + 1NC	1NO + 1NC
Rated Insulation Voltage U_i	250V AC	250V AC	250V AC	250V AC	440V AC	250V AC	250V AC
Rated Thermal Current I_{th}	4A	4A	4A	4A	8A	8A	6A
Utilisation Category AC 13							
Rated Operational Current I_e	3A / 250V AC	3A / 250V AC	3A / 250V AC	3A / 250V AC	6A / 250V AC 2A / 440V AC	6A / 250V AC 2A / 440V AC	6A / 250V AC 2A / 440V AC
Mechanical							
Degree of protection, built-in	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40

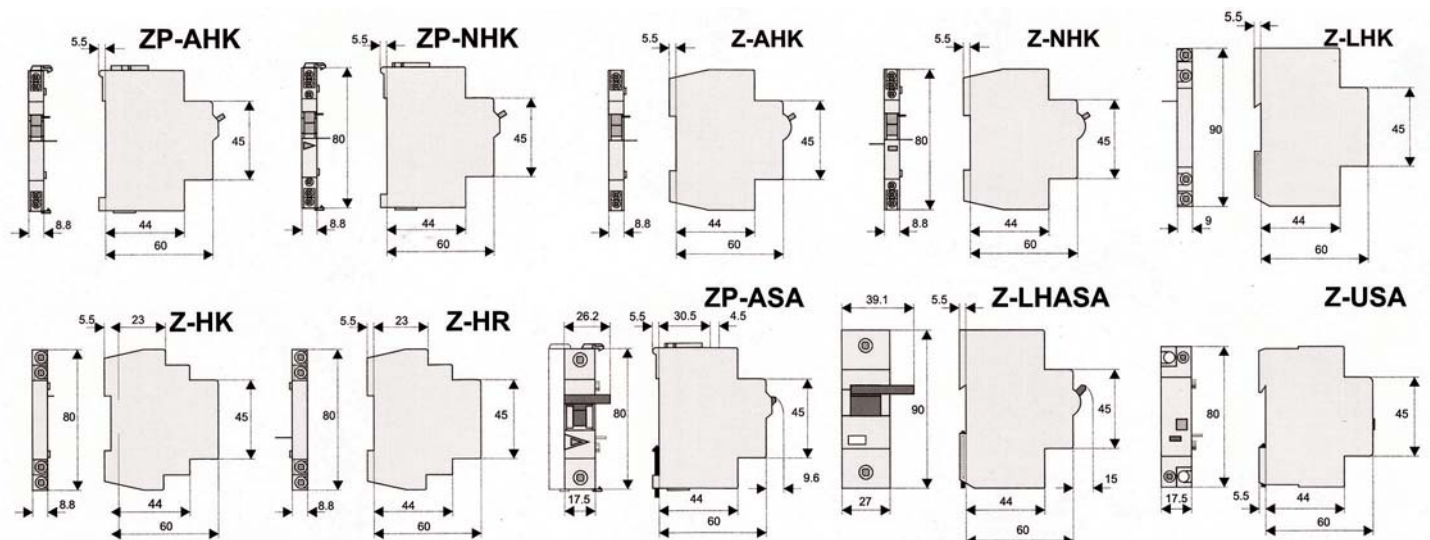
TECHNICAL SPECIFICATIONS

	ZP-ASA/24	ZP-ASA/230	Z-LHASA/24	Z-LHASA/230
Electrical				
Operational Voltage Range	12 - 60V AC 12 - 60V DC	110 - 415V AC 110 - 220V DC	12 - 60V AC	110 - 415V AC
Mechanical				
Degree of protection, built-in	IP 40	IP 40	IP 40	IP 40

TECHNICAL SPECIFICATIONS

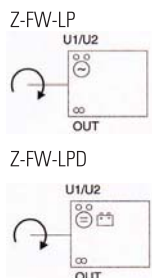
	Z-USA/115	Z-USA/230	Z-USA/400
Electrical			
Rated Voltage U_n	115V AC	230V AC	400V AC
Making Threshold	80% of U_n	80% of U_n	80% of U_n
Tripping Threshold	50% of U_n	50% of U_n	50% of U_n
Mechanical			
Degree of protection, built-in	IP 40	IP 40	IP 40

Dimension (mm)



Remote Control and Automatic Switching Device Z-FW

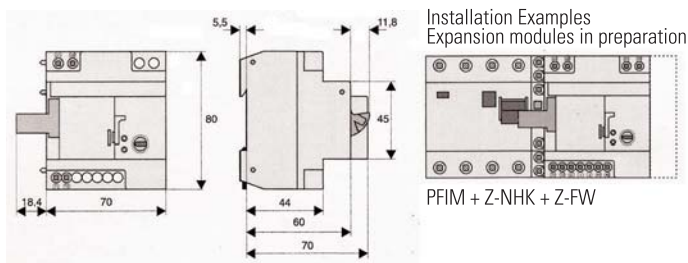
Function	Type Designation	Article No.
Without remote testing (RCD)	Z-FW-LP	248296
Without remote testing (RCD)	Z-FW-LPD	265244



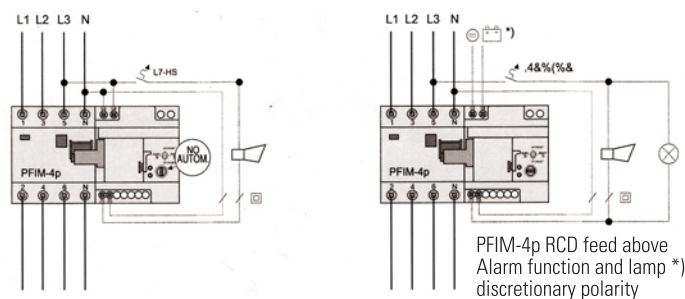
TECHNICAL SPECIFICATIONS

	Z-FW-LP	Z-FW-LPD
Electrical		
Rated Operational Voltage	220 / 240V AC	48V DC
Rated Frequency	50 / 60Hz	-
Relay output for alarm, potential-free	5A / 250V AC	5A / 250V AC
Permissible ambient temperature	-25 °C to +40 °C	-25 °C to +40 °C
Mechanical / Electrical endurance	min 20,000 ON / OFF switching cycles	min 20,000 ON / OFF switching cycles
Resetting times	max 20s; 30s; 70s; 10min; 1 hr	max 20s; 30s; 70s; 10min; 1 hr
Ready for switching operation	40s after switching on the power supply	40s after switching on the power supply
Maximum current consumption	20mA AC	300mA DC
Power consumption	1.5w	1.5w
Function selector	Automatic 5x, OFF / RESET	Automatic 5x, OFF / RESET
Mechanical		
Degree of protection, built-in	IP 40	IP 40
Terminal protection	Finger and hand touch safe, VBG 4, ÷VE-EN 6	Finger and hand touch safe, VBG 4, ÷VE-EN 6
Mounting	Quick fastening with 2 lock-in positions on DIN rail EN 50022	Quick fastening with 2 lock-in positions on DIN rail EN 50022

Dimension (mm) for Z-FW-LP, -LPD



Connection Examples



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