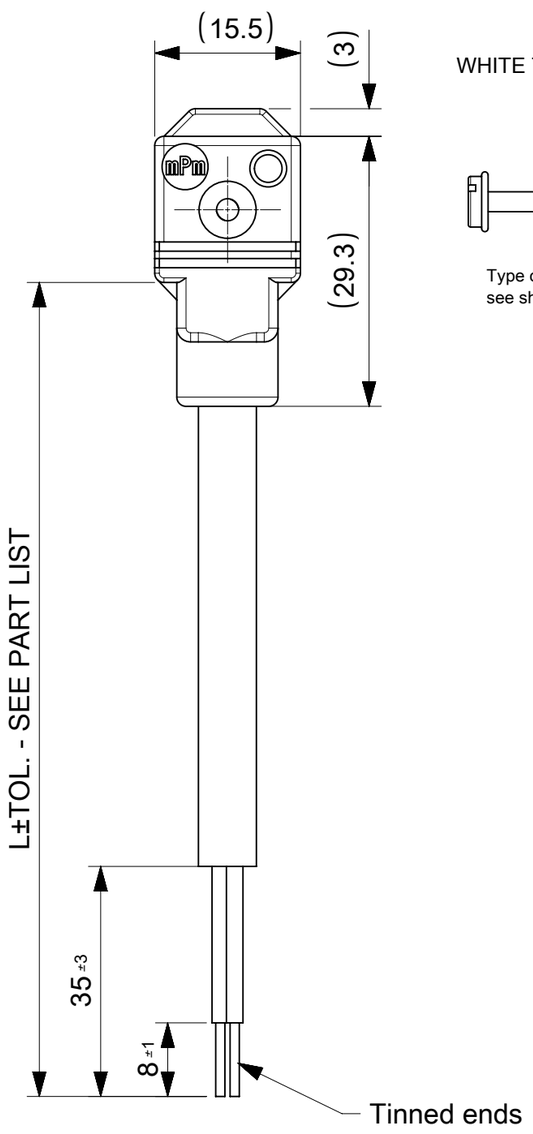
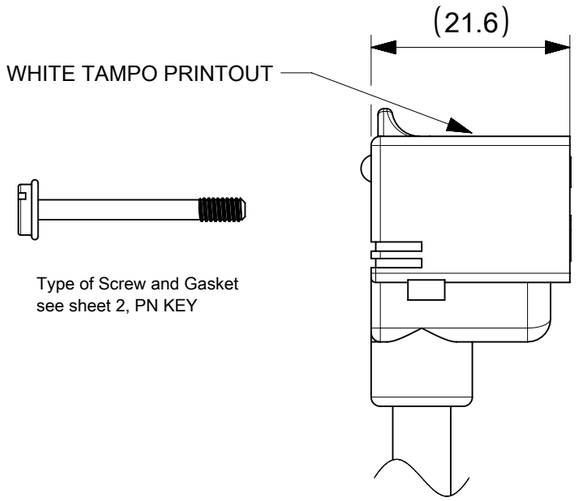
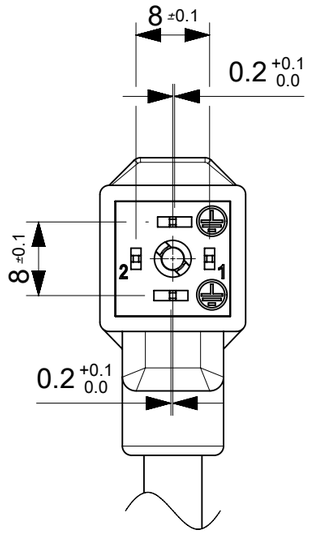


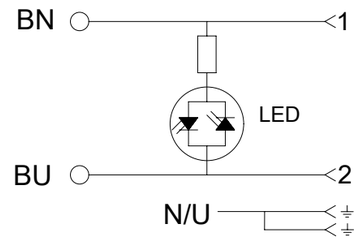


Type of Screw and Gasket
see sheet 2, PN KEY

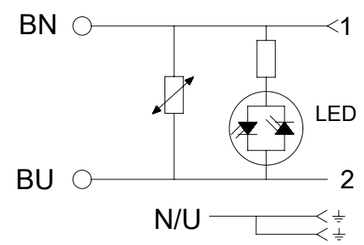


TABLICA TOLERANCJI DŁUGOŚCI TABLE OF LENGHT TOLERANCES		
POWYŻEJ OVER	DO-WŁĄCZNIE UP TO AND INCLUDING	TOLREANCJA TOLERANCE
0	1000	±20
1000	3000	±30
3000	5000	±40
5000	10000	±50
10000	15000	±100
15000	20000	±150
20000		±L/100

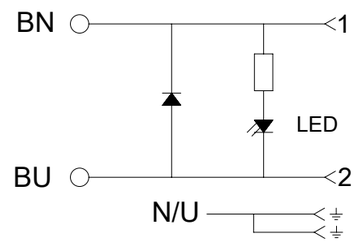
ELECTRICAL DIAGRAM A1



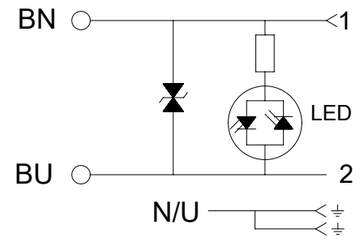
ELECTRICAL DIAGRAM C4



ELECTRICAL DIAGRAM C3

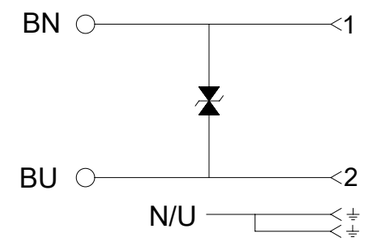


ELECTRICAL DIAGRAM S0

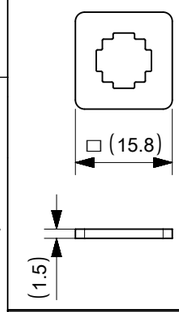
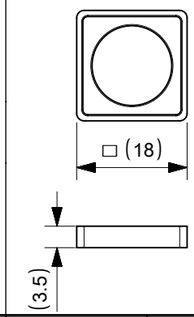
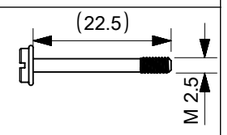
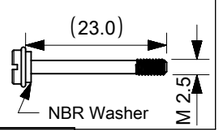


ATTENTION! IN CASE OF 1210180081 CABLE
USE BLACK 1 INSTEAD OF BROWN,
BLACK 2 INSTEAD OF BLUE

ELECTRICAL DIAGRAM S1

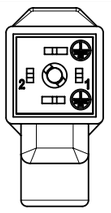
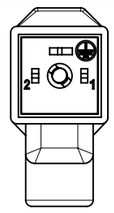
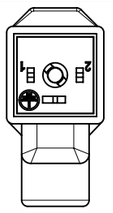


Type of Screw and Gaskets

Flat Gasket	Profiled Gasket	Screw M2.5x22.5
		
		Screw M2.5x23
		

DOCUMENT STATUS	P1	RELEASE DATE	2020/12/18 11:23:47

INSERT ORIENTATION

EARTH ON 6H & 12H	EARTH ON 12H	EARTH ON 6H
		

DIMENSION UNITS	SCALE
mm	3:2

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	± °
4 PLACES	±
3 PLACES	±
2 PLACES	±
1 PLACE	±
0 PLACES	±

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: OBSOLETED PART NUMBER

EC NO: 650268
DRWN: SUGEEB 2020/10/29
CHK'D: GGA 2020/12/18
APPR: GGA 2020/12/18

INITIAL REVISION:
DRWN: APAWLAK01 2020/01/23
APPR: RSILLER 2020/01/27

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 121050

molex

STANDARD E491 DIN FORM C

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1210501734	PSD	000	A1

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	1 OF 2

FORMAT: master-lb-prod-A3
REVISION: J
DATE: 2020/01/14

REVISION A	TRANSFERRED TO ECTR LAST DRAWING: E-121050-045 REV. A1

PN KEY ENGINEERING PN

E	4	9	1	X	X	X	X	X	X	X	X	X	X	X

E - Packing without bag
W - Single Packing

Number of wires:
1 - 2 Wires

Cable type:
See Table

Head Colour:
G - Grey
N - Black
A - CSA-UL Black
B - CSA-UL Grey

Cable Length in[cm]
050 = 50cm
300 = 300cm
10K = 1000cm

Earth PIN location (see insert orientation table):
1 = Double Earth on H6 & H12
2 = Earth on H12
6 = Earth on H6

Type of Gasket and Screw (see sheet 1):
1 = NBR Profile Gasket + Fixing Screw M2.5x22.5mm
2 = NBR Flat Gasket + Fixing Screw M2.5x22.5mm
3 = Silicone Profile Gasket + Fixing Screw M2.5x22.5mm
4 = Silicone Flat Gasket + Fixing Screw M2.5x22.5mm
T = NBR Profile Gasket + Fixing Screw + Washer M2.5x23mm

Wiring Configuration:
See sheet 3

Voltage and Led Colour

Red Led	Green Led	Yellow Led
1 = 12V	A = 12V	G = 12V
2 = 24V	B = 24V	H = 24V
3 = 48V	C = 48V	K = 48V
4 = 115V	D = 115V	L = 115V
5 = 230V	E = 230V	M = 230V

TABLE 1

CABLE TYPE	MOLEX PN	NO. OF WIRES	CROSS SECTION	CABLE O.D.	CABLE JACKET	WIRES COLOR	SHIELD
A2	1210180467	2	AWG 20	5.4mm±0.2	PVC BLACK	BN, BU	-
I2	1210180047	2	0.5mm²	5.5mm+0.3	PVC GREY	BN, BU	-
N2	1210180022	2	0.5mm²	5.6mm±0.7	PVC BLACK	BN, BU	-
P3	1202094190	2	0.75mm²	6.5mm±0.2	PUR BLACK	BN, BU	-

PART LIST

MOLEX PN	ENGINEERING PN	LENGTH
1210501734	E491N2N10011C4H	1000
1210503290	E491N2N30011C4H	3000
1210503291	E491N2N20011C4H	2000

Technical Spec:
Supply Voltage: See PN KEY
Max. current: 3A; A1-C4
Operating Temperature:
with NBR Gasket: -40°C +90°C
with Silicone: -40°C +125°C

DIMENSION UNITS	SCALE
mm	1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	± °
4 PLACES	±
3 PLACES	±
2 PLACES	±
1 PLACE	±
0 PLACES	±

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: OBSOLETED PART NUMBER

EC NO: 650268
DRWN: SUGEEB 2020/10/29
CHK'D: GGA 2020/12/18
APPR: GGA 2020/12/18

INITIAL REVISION:
DRWN: APAWLAK01 2020/01/23
APPR: RSILLER 2020/01/27

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 121050

molex

STANDARD E491 DIN FORM C

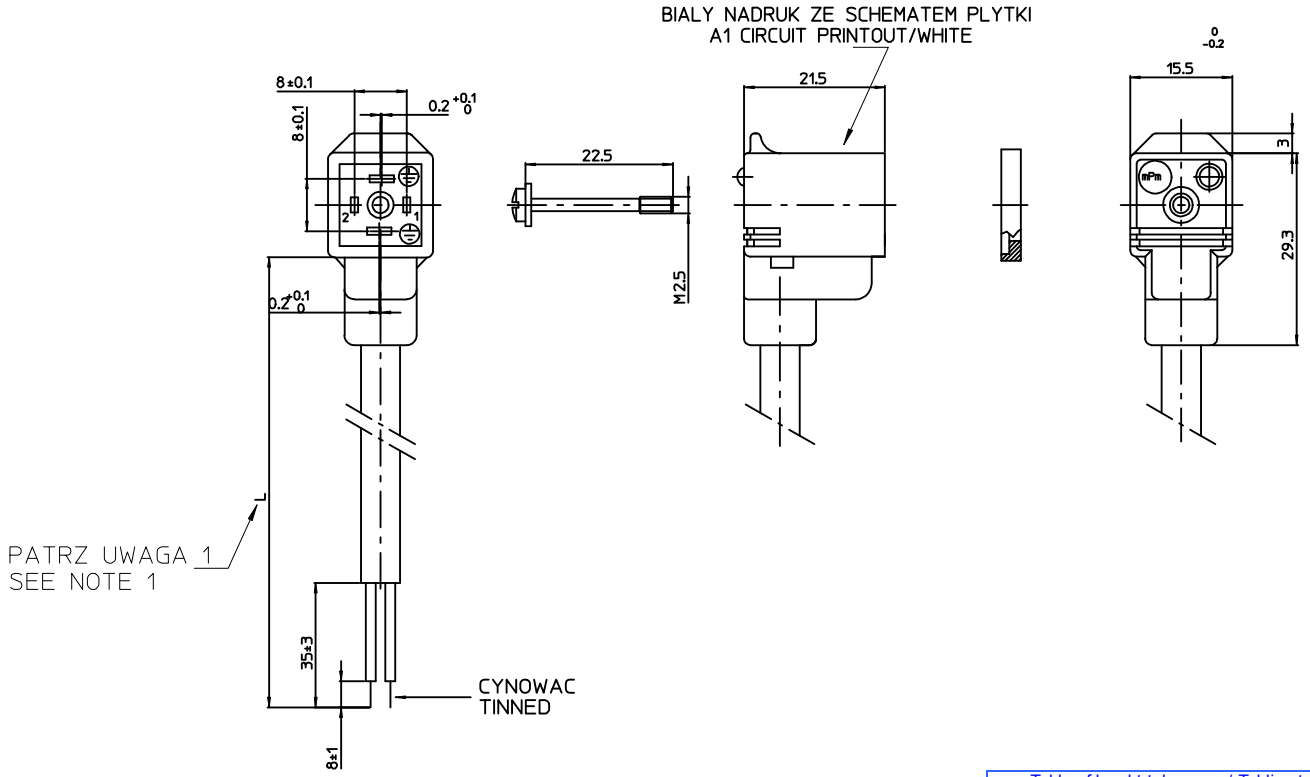
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1210501734	PSD	000	A1

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	2 OF 2

DOCUMENT STATUS	P1	RELEASE DATE	2020/12/18 11:23:47

FORMAT: master-lb-prod-A3
REVISION: J
DATE: 2020/01/14



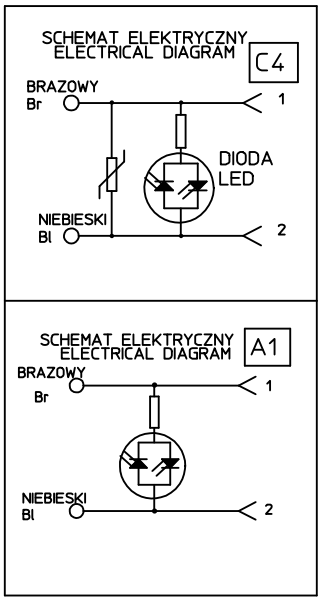


Table of lenght tolerances/ Tablica tolerancji dlugosci mm		
Over/Od	Up to and including/ Do-wlacznie	Tolerance/Tolerancja +/-
100	1000	±20
1000	3000	±30
3000	5000	±40
5000	10000	±50
10000	15000	±100
15000	20000	±150
	>20000	L/100

UWAGI:

1. DLUGOSC PATRZ ARKUSZ 2.

NOTES:

1. LENGHT SEE SHEET 2.

ORIGINAL RELEASE
EC NO: WEU2009-0474 2009/06/30
DRWN:MWOLSZCZAK 2009/07/01
CH'KD:MDABROWSKA 2009/07/01
APPR:GOGRODNIK 2009/07/01
DESCRIPTION
A
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±---°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	SCALE	DESIGN UNITS
MM ONLY	1:1	METRIC

FIRST ANGLE PROJECTION

DRAWN BY	MWOLSZCZAK	DATE 2009/01/21
CHECKED BY	MLEVYSTKYY	DATE 2009/01/21
APPROVED BY	MDABROWSKA	DATE 2009/01/21

TITLE: MPM E491XXXXXXXXXX

molex MOLEX INCORPORATED

MATERIAL NO.: SEE DRAWING

DOCUMENT NO.: E491XXXXXXXXXX

SHEET NO.: 1 OF 4

SIZE A3

10	9	8	7	6	5	4	3	2	1

E 4 9 1 X X X X X X X X X X X

E - Pakowanie bez workow
W - Pakowanie pojedynczo
Q - Szybkie pakowanie

ILOSC PRZEWODOW/NUMBER OF WIRES:
1=2 PRZEWODY,
2=3 PRZEWODY,
3=4 PRZEWODY,
6=3 PRZEWODY.

TYP KABLA/CABLE TYPE
PATRZ TABELA 1/SEE TABLE 1

RODZAJ KABLA/CABLE CROSS SECTION AREA
PATRZ TABELA 2/SEE TABLE 2

KOLOR MOULDINGU/HEAD COLOUR:
G=SZARY/GREY;
N=CZARNY/BLACK,
T=PRZEZROCZYSTY/TRANSPARENT;
A=CZARNY/BLACK;
B=SZARY/GREY.

DLUGOSC KABLA W CM/CABLE LENGHT IN CM
NP:050=50 CM, 300=300 CM.

POLOZENIE PINU Z UZIEMIENIEM/EARTH PIN LOCATION:
1=PODWOJNE UZIEMIENIE NA GODZINIE 6 ORAZ 12/DOUBLE EARTH ON 6H AND 12H,
2=UZIEMIENIE NA GODZINIE 12/1EARTH ON 12H,
6=UZIEMIENIE NA GODZINIE 6/EARTH ON 6H.

GASKET ORAZ SRUBY/GASKET SCREWS:
1=GASKET PROFILOWANY+SRUBA/NBR PROFILE GASKET+FIXING SCREWS,
2=NBR PLASKI GASKET+SRUBA/NBR FLAT GASKET+SCREW,
3=SILIKONOWY PROFILOWANY GASKET+SRUBA/SILICONE PROFILE GASKET+SCREW,
4=SILIKOWANY PLASKI GASKET+SRUBA/SILICON FLAT GASKET+SCREW,
P=ZINTEGROWANY GASKET+SRUBA/INTEGRATED GASKET+FIXING SCREW,
R=ZINTEGROWANY GASKET+SRUBA/INTAGRATED GASKET+SCREW,
T=PROFILOWANY GASKET+SRUBA, PROFILE GASKET+SCREW.

RODZAJ POLACZENIA/INTERNAL CIRQUIT
PATRZ SCHEMATY POLACZEN/WIREING CONFIGURATION

NAPIECIE ORAZ KOLOR DIODY/VOLTAGE AND LED COLOUR:

1= 12V 2= 24V 3= 48V 4= 115V 5= 230V	CZERWONA DIODA RED LED	A= 12V B= 24V C= 48V D= 115V E= 230V
ZIELONA DIODA GREEN LED	G= 12V H= 24V K= 48V L= 115V M= 230V	ZOLTA DIODA YELLOW LED

ORIGINAL RELEASE
EC NO: WEU2009-0474 2009/06/30
DRWN:MWOLSZCZAK 2009/07/01
CH'KD:MDABROWSKA 2009/07/01
APPR:GOGRODNIK 2009/07/01
DESCRIPTION
A
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±---°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: ---
DESIGN UNITS: METRIC
FIRST ANGLE PROJECTION

DRAWN BY	MWOLSZCZAK	DATE 2009/01/21
CHECKED BY	MLEVYSTKYY	DATE 2009/01/21
APPROVED BY	MDABROWSKA	DATE 2009/01/21

TITLE: MPM E491XXXXXXXXXXX

MOLEX INCORPORATED

MATERIAL NO.: SEE DRAWING
DOCUMENT NO.: E491XXXXXXXXXXX
SHEET NO.: 2 OF 4
SIZE: A3

TABELA 2 KABLE/TABLE 2 CABLES

MOLEX PN	mPm	Code	PRZEW	PRZEKROJ	MATERIAL	KOLOR/COLOUR	SREDNICA Ø	DIN A-B	DIN C
1210180080	I	0	3	1 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	-	-	-
1210180467	A	2	2	20 AWG	PVC CSA/UL 2661	Czarny/Black	5,5+/-0,2 mm	OK.	OK.
-	A	2	3	20 AWG	PVC CSA/UL 2661	Czarny/Black	5,6+/-0,2 mm	OK.	OK.
1210180394	A	2	4	20 AWG	PVC CSA/UL 2661	Czarny/Black	6,2+/-0,2 mm	OK.	OK.
-	A	2	5	20 AWG	PVC CSA/UL 2661	Czarny/Black	7+/-0,2 mm	OK.	
1210180297	B	2	2	20 AWG	PUR CSA/UL 20668	Czarny/Black	5,5+/-0,2 mm	OK.	OK.
1210180126	B	2	3	20 AWG	PUR CSA/UL 20668	Czarny/Black	5,6+/-0,2 mm	OK.	OK.
1210180387	B	2	4	20 AWG	PUR CSA/UL 20668	Czarny/Black	6,2+/-0,2 mm	OK.	OK.
-	B	2	5	20 AWG	PUR CSA/UL 20668	Czarny/Black	7+/-0,2 mm	OK.	
1210180122	D	2	3	0,5 mm2	PVC TI2 CEI 20-20	Szary/Grey	-	-	-
-	F	2	3	0,5 mm2	CNOMO	Szary/Grey RAL7000	5,5+/-0,2 mm	OK.	OK.
1210180047	I	2	2	0,5 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	5,5+/-0,2 mm	OK.	OK.
-	I	2	3	0,5 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	5,5+/-0,2 mm	OK.	OK.
1210180146	I	2	4	0,5 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	6,5+/-0,2 mm	OK.	
1210180177	I	2	5	0,5 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	7+/-0,2 mm	OK.	
1210180022	N	2	2	0,5 mm2	PVCH03	Czarny/Black	5,1+ 0,2-0 mm	OK.	OK.
1210180064	N	2	3	0,5 mm2	PVCH03	Czarny/Black	5,4+ 0,2-0 mm	OK.	OK.
1210180153	N	2	4	0,5 mm2	PVCH03	Czarny/Black	5,75+0,2-0 mm	OK.	OK.
1210180046	P	2	2	0,5 mm2	PUR - BLEND	Czarny/Black	5,5+/-0,2 mm	OK.	OK.
-	P	2	3	0,5 mm2	PUR - BLEND	Czarny/Black	5,5+/-0,2 mm	OK.	OK.
1210180302	P	2	4	0,5 mm2	PUR - BLEND	Czarny/Black	-	-	-
-	P	2	5	0,5 mm2	PUR - BLEND	Czarny/Black	7+/-0,2 mm	OK.	OK.
1210180409	A	3	2	18 AWG	PVC CSA/UL 2661	Czarny/Black	6,5+/-0,2 mm	OK.	
1210180129	A	3	3	18 AWG	PVC CSA/UL 2661	Czarny/Black	6,5+/-0,2 mm	OK.	
1210180159	A	3	4	18 AWG	PVC CSA/UL 2661	Czarny/Black	7+/-0,2 mm	OK.	
-	A	3	5	18 AWG	PVC CSA/UL 2661	Czarny/Black	7,8+/-0,2 mm	OK.	
1210180351	B	3	2	18 AWG	PUR CSA/UL 20668	Czarny/Black	6,5+/-0,2 mm	OK.	
1210180127	B	3	3	18 AWG	PUR CSA/UL 20668	Czarny/Black	6,5+/-0,2 mm	OK.	
1210180127	B	3	4	18 AWG	PUR CSA/UL 20668	Czarny/Black	7+/-0,2 mm	OK.	
-	B	3	5	18 AWG	PUR CSA/UL 20668	Czarny/Black	7,8+/-0,2 mm	OK.	
1210180073	D	3	3	0,75 mm2	PVC TI2 CEI 20-20	Szary/Grey	-	-	-
1210180145	D	3	4	0,75 mm2	PVC TI2 CEI 20-20	Szary/Grey	-	-	-
1210180120	I	3	3	0,75 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	-	-	-
1210180143	I	3	4	0,75 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	-	-	-
1210180032	N	3	2	0,75 mm2	PVCH05	Czarny/Black	6,2+ 0,2-0 mm	OK.	
1210180069	N	3	3	0,75 mm2	PVCH05	Czarny/Black	6,6+0,2-0 mm	OK.	
-	N	3	4	0,75 mm2	PVCH05	Czarny/Black	7,15+0,2-0 mm	OK.	
1210180174	N	3	5	0,75 mm2	PVCH05	Czarny/Black	8,0+0,2-0 mm	OK.	
-	P	3	2	0,75 mm2	PUR - BLEND	Czarny/Black	6,5+/-0,2 mm	OK.	

TABELA 2 KABLE/TABLE 2 CABLES

MOLEX PN	mPm	Code	PRZEW	PRZEKROJ	MATERIAL	KOLOR/COLOUR	SREDNICA Ø	DIN A-B	DIN C
1210180071	P	3	3	0,75 mm2	PUR - BLEND	Czarny/Black	6,5+/-0,2 mm	OK.	
1210180152	P	3	4	0,75 mm2	PUR - BLEND	Czarny/Black	7+/-0,2 mm	OK.	
1210180384	R	3	3	0,75 mm2	TPR HAL. FREE	Czarny/Black	6,5+/-0,2 mm	OK.	
1210180094	T	3	3	0,75 mm2	PUR CSA/UL	Żółty/Yellow	-	-	-
1210180309	Y	3	3	0,75 mm2	SIL/0300	Czerwony/Red	6,5+/-0,2 mm	-	-
1210180081	F	4	3	1 mm2	CNOMO	Szary/Grey RAL7000	-	-	-
-	F	4	4	1 mm2	CNOMO	Szary/Grey RAL7000	7,1+0,2-0 mm	OK.	
1210180042	I	4	2	1 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	7,1+0,2-0 mm	OK.	
1210180079	I	4	3	1 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	7,1+0,2-0 mm	OK.	
1210180036	N	4	2	1 mm2	PVCH05	Czarny/Black	6,5+0,2-0 mm	OK.	
1210180082	N	4	3	1 mm2	PVCH05	Czarny/Black	6,9+0,2-0 mm	OK.	
1210180117	R	4	3	1 mm2	TPR HAL. FREE	Czarny/Black	-	-	-
1210180085	N	5	3	1,5 mm2	PVCH05	Czarny/Black	8,3+0,2-0 mm	OK.	
1210180313	I	6	2	0,35 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	-	-	-
-	A	7	3	20 AWG	PVC CSA/UL 2661	Żółty/Yellow	5,6+/-0,2 mm	OK.	OK.
1210180149	I	9	4	0,75 mm2	PVC CEI 2022 II O.R.	Szary/Grey RAL7035	-	-	-

TABELA 1 TYPY KABLI/TABLE 1 CABLES TYPE

Znakowanie /Code	Rodzaje kabla /Cable types	Właściwości /Features	Przekroje /Stranding
N	PVC	Kabel z dobrą rezystancją w wodzie ale słabą w oleju./Application general purpose cable which has good resistance to water, but usually poor oil resistance.	0.5 mm2 = 15 x 0.20 0.75 mm2 = 21 x 0.20 1 mm2 = 28 x 0.20
I	PVC	Zatwierdzione przez IEC 332-2A, samogaszący./Approved to IEC 332-2A, flame retardant and self extinguishing. Limited resistant to mineral oils.	0.5 mm2 = 28 x 0.15 0.75 mm2 = 42 x 0.15 1 mm2 = 32 x 0.20
P	PVC	Dobra rezystancja w olejach i chemikaljach./Offer good resistance to oil and chemicals. Can swell when constantly immersed in water.	0.5 mm2 = 28 x 0.15 0.75 mm2 = 42 x 0.15 1 mm2 = 32 x 0.20
A	PVC	Zatwierdzony porzez CSA-UL 2661.Dobra rezystancja na wode słaba na olej./ Approved to CSA-UL 2661, application general purpose cable which has good resistance to water, but usually poor oil resistance.	20 AWG = 32 x 0.15 18 AWG = 52 x 0.15
B	PVC	Zatwierdzony przez CSA-UL 20668, bardzo dobra rezystanja w oleju i chemikaljach./ Approved to CSA-UL 20668, very good resistance to oil and chemicals.	20 AWG = 32 x 0.15 18 AWG = 52 x 0.15

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APPR:GGRODNIK 2009/07/01
DESCRIPTION
A
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±---°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: ---
DESIGN UNITS: METRIC
FIRST ANGLE PROJECTION

		DATE
DRAWN BY	MWOLSZCZAK	2009/01/21
CHECKED BY	MLEVYSTKYY	2009/01/21
APPROVED BY	MDABROWSKA	2009/01/21

TITLE: MPM E491XXXXXXXXXX

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SHEET NO.: 3 OF 4
SIZE: A3

TABELA 3/CHART 3

MOLEX P/N	WOODHEAD P/N
1210501734	E491N2N10011C4H
1210502299	E491I2N50011C4H
1210502322	E491N2N10012C4B
1210501416	E491I2N50012C4H
1210503029	E491N2N15021A12

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APPR:GOGRODNIK 2009/07/01
DESCRIPTION
REV
A

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±---°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: ---
DESIGN UNITS: METRIC
FIRST ANGLE PROJECTION

DRAWN BY: MWOLSZCZAK DATE: 2009/01/21
CHECKED BY: MLEVYSTKYY DATE: 2009/01/21
APPROVED BY: MDABROWSKA DATE: 2009/01/21

TITLE: MPM E491XXXXXXXXXXX

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