



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



Ground modular terminal block, Connection method: Push-in / plug connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 37 mm, Color: green-yellow, Mounting type: NS 35/7,5, NS 35/15



Key commercial data

Packing unit	1 PCE
Minimum order quantity	50 PCE
Weight per Piece (excluding packing)	6.0 GRM
Custom tariff number	85369010
Country of origin	Poland

Technical data

General

Number of levels	1
Number of connections	2
Color	green-yellow
Insulating material	PA
Inflammability class according to UL 94	V0
Rated surge voltage	6 kV
Pollution degree	3
Surge voltage category	III
Insulating material group	I
Connection in acc. with standard	IEC 61984
Open side panel	ja
Number of positions	1
Insertion/withdrawal cycles mechanical	100
Test specification, oscillation, broadband noise	DIN EN 50155 (VDE 0115-200):2008-03
Test spectrum	Service life test category 1, class B, body mounted

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Technical data

General

Test frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	$1.857 \text{ (m/s}^2\text{)}^2\text{/Hz}$
Acceleration	0.8 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Oscillation, broadband noise test result	Test passed
Test specification, shock test	DIN EN 50155 (VDE 0115-200):2008-03
Shock form	Half-sine
Acceleration	5 g
Shock duration	30 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Shock test result	Test passed
Temperature index, insulating material (DIN EN 60216-1 (VDE 0304-21))	130 °C
Static insulating material application in cold	-60 °C

Dimensions

Width	3.5 mm
Length	50.7 mm
Height	37 mm
Height NS 35/7,5	38.5 mm
Height NS 35/15	46 mm

Connection data

Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	14
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Min. AWG conductor cross section, stranded	26
Max. AWG conductor cross section, stranded	14
Conductor cross section stranded, with ferrule without plastic sleeve min.	0.14 mm ²
Conductor cross section stranded, with ferrule without plastic sleeve max.	1.5 mm ²
Conductor cross section stranded, with ferrule with plastic sleeve min.	0.14 mm ²
Conductor cross section stranded, with ferrule with plastic sleeve max.	1 mm ²
Connection method	Push-in / plug connection
Stripping length	8 mm

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Technical data

Connection data

Internal cylindrical gage	A1 / B1
---------------------------	---------

Classifications

eCl@ss

eCl@ss 4.0	27141118
eCl@ss 4.1	27141118
eCl@ss 5.0	27141118
eCl@ss 5.1	27141118
eCl@ss 6.0	27141141
eCl@ss 7.0	27141141
eCl@ss 8.0	27141141

ETIM

ETIM 2.0	EC000901
ETIM 3.0	EC000901
ETIM 4.0	EC000901
ETIM 5.0	EC000901

UNSPSC

UNSPSC 6.01	30211811
UNSPSC 7.0901	39121410
UNSPSC 11	39121410
UNSPSC 12.01	39121410
UNSPSC 13.2	39121410

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / GL / LR / GOST / CSA / cULus Recognized

Ex Approvals

Approvals submitted

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Approvals

Approval details

UL Recognized			
	B	C	D
mm ² /AWG/kcmil	26-14	26-14	26-14

cUL Recognized			
	B	C	D
mm ² /AWG/kcmil	26-14	26-14	26-14

GL

LR

GOST

CSA	
mm ² /AWG/kcmil	26-14

cULus Recognized

Accessories

Accessories

Bridge

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Jumper - FBS 3-3,5 BU - 3213099



Jumper, Number of positions: 3, Color: blue

Jumper - FBS 4-3,5 BU - 3213109



Jumper, Number of positions: 4, Color: blue

Jumper - FBS 5-3,5 BU - 3213112



Jumper, Number of positions: 5, Color: blue

Jumper - FBS 10-3,5 BU - 3213125



Jumper, Number of positions: 10, Color: blue

Jumper - FBS 20-3,5 BU - 3213138



Jumper, Number of positions: 20, Color: blue

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Jumper - FBS 2-3,5 - 3213014



Jumper, Number of positions: 2, Color: red

Jumper - FBS 3-3,5 - 3213027



Jumper, Number of positions: 3, Color: red

Jumper - FBS 4-3,5 - 3213030



Jumper, Number of positions: 4, Color: red

Jumper - FBS 5-3,5 - 3213043



Jumper, Number of positions: 5, Color: red

Jumper - FBS 10-3,5 - 3213056



Jumper, Number of positions: 10, Color: red

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Jumper - FBS 20-3,5 - 3213069



Jumper, Number of positions: 20, Color: red

Coding element

Coding star - PC - 3040588



Coding star, Length: 3 mm, Width: 3 mm, Height: 6 mm, Color: red

Documentation

Mounting material - PT-IL - 3208090



Operating decal for the Push-in Technology

End block

End clamp - E/UK - 1201442



End clamp, for assembly on NS 32 or NS 35/7.5 DIN rail

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

End clamp - E/UK 1 - 1201413



End clamps, for supporting the ends of double-level and three-level terminal blocks, width: 10 mm, color: gray

End clamp - CLIPFIX 35 - 3022218



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

End cover

End cover - D-PTS 1,5/S - 3214576



End cover, Length: 50.7 mm, Width: 2.2 mm, Height: 37 mm, Color: gray

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663



Insulating sleeve, Color: white

Insulating sleeve - MPS-IH RD - 0201676



Insulating sleeve, Color: red

Insulating sleeve - MPS-IH BU - 0201689



Insulating sleeve, Color: blue

Insulating sleeve - MPS-IH YE - 0201692



Insulating sleeve, Color: yellow

Insulating sleeve - MPS-IH GN - 0201702



Insulating sleeve, Color: green

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Insulating sleeve - MPS-IH GY - 0201728



Insulating sleeve, Color: gray

Insulating sleeve - MPS-IH BK - 0201731



Insulating sleeve, Color: black

Labeled terminal marker

Zack marker strip - ZB 3,5 CUS - 0829415



Zack marker strip, Can be ordered: Strip, white, Labeled according to customer specifications, Mounting type: Snap into tall marker groove, For terminal block width: 3.5 mm, Lettering field: 3.5 x 10.5 mm

Marker for terminal blocks - UCT-TM 3,5 CUS - 0829581



Marker for terminal blocks, Can be ordered: By sheet, white, Labeled according to customer specifications, Mounting type: Snap into tall marker groove, For terminal block width: 3.5 mm, Lettering field: 2.95 x 10.5 mm

Zack Marker strip, flat - ZBF 3,5 CUS - 0829394



Zack Marker strip, flat, Can be ordered: Strip, white, Labeled according to customer specifications, Mounting type: Snap into flat marker groove, For terminal block width: 3.5 mm, Lettering field: 3.5 x 5.2 mm

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Marker for terminal blocks - UCT-TMF 3,5 CUS - 0829644



Marker for terminal blocks, Can be ordered: By sheet, white, Labeled according to customer specifications, Mounting type: Snap into flat marker groove, For terminal block width: 3.5 mm, Lettering field: 2.7 x 4.7 mm

Marker carriers

Group marker label for terminal marking - GBS-ZB/26X6 - 0809298



Group marking label, snaps onto terminal center for screw, spring-cage and quick connection terminal blocks, labeled with ESL 26x6 mm or EST 25x6 mm, in the foot part with Zack marker strip, length: 29 mm

Mounting rail

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 7.5 mm, width 35 mm, length: 2000 mm

DIN rail - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, material: Steel, unperforated, height 7.5 mm, width 35 mm, length: 2 m

DIN rail - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail 35 mm (NS 35)

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

DIN rail - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail 35 mm (NS 35)

DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, Width: 35 mm, Height: 7.5 mm, Length: 2000 mm, Color: silver

DIN rail - NS 35/ 7,5 ZN PERF 2000MM - 1206421



DIN rail, material: Galvanized, perforated, height 7.5 mm, width 35 mm, length: 2 m

DIN rail - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



DIN rail, material: Galvanized, unperforated, height 7.5 mm, width 35 mm, length: 2 m

DIN rail - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, material: Copper, unperforated, height 7.5 mm, width 35 mm, length: 2 m

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

End cap - NS 35/ 7,5 CAP - 1206560



DIN rail end piece, for DIN rail NS 35/7.5

DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 15 mm, width 35 mm, length: 2000 mm

DIN rail - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, material: Steel, unperforated, height 15 mm, width 35 mm, length: 2 m

DIN rail - NS 35/15 WH PERF 2000MM - 0806602



DIN rail 35 mm (NS 35)

DIN rail - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail 35 mm (NS 35)

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, deep drawn, high profile, unperforated, 1.5 mm thick, material: aluminum, height 15 mm, width 35 mm, length 2000 mm

DIN rail - NS 35/15 ZN PERF 2000MM - 1206599



DIN rail, material: Galvanized, perforated, height 15 mm, width 35 mm, length: 2 m

DIN rail - NS 35/15 ZN UNPERF 2000MM - 1206586



DIN rail, material: Galvanized, unperforated, height 15 mm, width 35 mm, length: 2 m

DIN rail - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, material: Copper, unperforated, 1.5 mm thick, height 15 mm, width 35 mm, length: 2 m

End cap - NS 35/15 CAP - 1206573



DIN rail end piece, for DIN rail NS 35/15

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

DIN rail - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, material: Steel, unperforated, 2.3 mm thick, height 15 mm, width 35 mm, length: 2 m

Partition plate

Partition plate - ATP-ST 4 - 3030721



Partition plate, Length: 61 mm, Width: 2 mm, Height: 42 mm, Color: gray

Planning and marking software

Software - CLIP-PROJECT ADVANCED - 5146040



Multilingual software for easy planning of Phoenix Contact on DIN rails together with the integrated TRABTECH-select software module for planning comprehensive surge protection concepts.

Software - CLIP-PROJECT PROFESSIONAL - 5146053



Multi-lingual software for terminal strip project planning. A marking module allows professional labeling of markers and labels for marking terminal blocks, conductors, cables and devices. The additionally integrated software module TRABTECH-select for planning comprehensive surge protection concepts.

Screwdriver tools

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Screwdriver - SZF 0-0,4X2,5 - 1204504



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip

Terminal marking

Zack marker strip - ZB 3,5:UNBEDRUCKT - 0829414



Zack marker strip, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into tall marker groove, For terminal block width: 3.5 mm, Lettering field: 3.5 x 10.5 mm

Marker for terminal blocks - UCT-TM 3,5 - 0829484



Marker for terminal blocks, Sheet, white, Unlabeled, Can be labeled with: THERMOMARK CARD PLUS, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, Mounting type: Snap into tall marker groove, For terminal block width: 3.5 mm, Lettering field: 2.95 x 10.5 mm

Zack Marker strip, flat - ZBF 3,5:UNBEDRUCKT - 0829392



Zack Marker strip, flat, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, For terminal block width: 3.5 mm, Lettering field: 3.5 x 5.2 mm

Marker for terminal blocks - UCT-TMF 3,5 - 0829486



Marker for terminal blocks, Sheet, white, Unlabeled, Can be labeled with: THERMOMARK CARD PLUS, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, Mounting type: Snap into flat marker groove, For terminal block width: 3.5 mm, Lettering field: 2.7 x 4.7 mm

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Marker for terminal blocks - TMT (EX9,5)R - 0828295



Marker for terminal blocks, Roll, white, Unlabeled, Can be labeled with: THERMOMARK ROLL, THERMOMARK X, THERMOMARK S1.1, Mounting type: Snap into universal marker groove, Snap into flat marker groove, Lettering field: 9.5 x 50000 mm

Test plug terminal block

Test plugs - MPS-MT - 0201744



Test plugs, Color: silver

Additional products

Plug - PP-H 1,5/S/1 - 3212484



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/1 BU - 3212497



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: blue

Plug - PP-H 1,5/S/1 GNYE - 3212507



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: green-yellow

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Plug - PP-H 1,5/S/2 - 3212510



Plug, Connection method: Push-in connection, Number of positions: 2, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 7 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/3 - 3212523



Plug, Connection method: Push-in connection, Number of positions: 3, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 10.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/4 - 3212536



Plug, Connection method: Push-in connection, Number of positions: 4, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 14 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/5 - 3212549



Plug, Connection method: Push-in connection, Number of positions: 5, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 17.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/6 - 3212552



Plug, Connection method: Push-in connection, Number of positions: 6, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 21 mm, Height: 31.3 mm, Color: gray

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Plug - PP-H 1,5/S/7 - 3212565



Plug, Connection method: Push-in connection, Number of positions: 7, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 24.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/8 - 3212578



Plug, Connection method: Push-in connection, Number of positions: 8, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 28 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/9 - 3212581



Plug, Connection method: Push-in connection, Number of positions: 9, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 31.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/10 - 3212594



Plug, Connection method: Push-in connection, Number of positions: 10, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 35 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/11 - 3212604



Plug, Connection method: Push-in connection, Number of positions: 11, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 38.5 mm, Height: 31.3 mm, Color: gray

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Plug - PP-H 1,5/S/12 - 3212617



Plug, Connection method: Push-in connection, Number of positions: 12, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 42 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/13 - 3212620



Plug, Connection method: Push-in connection, Number of positions: 13, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 45.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/14 - 3212633



Plug, Connection method: Push-in connection, Number of positions: 14, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 49 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/15 - 3212646



Plug, Connection method: Push-in connection, Number of positions: 15, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 52.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/1-L - 3212659



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: gray

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Plug - PP-H 1,5/S/1-L BU - 3212662



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: blue

Plug - PP-H 1,5/S/1-L GNYE - 3212675



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: green-yellow

Plug - PP-H 1,5/S/1-M - 3212688



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/1-M BU - 3212691



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: blue

Plug - PP-H 1,5/S/1-M GNYE - 3212701



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: green-yellow

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Plug - PP-H 1,5/S/1-R - 3212714



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: gray

Plug - PP-H 1,5/S/1-R BU - 3212727



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: blue

Plug - PP-H 1,5/S/1-R GNYE - 3212730



Plug, Connection method: Push-in connection, Number of positions: 1, Cross section: 0.14 mm² - 1.5 mm², AWG: 26 - 14, Width: 3.5 mm, Height: 31.3 mm, Color: green-yellow

Strain relief - PZ 1,5/S/2 - 3212918



Strain relief, Color: black

Latching - PRZ 1,5/S - 3212905



Latching, Length: 3 mm, Width: 3.5 mm, Color: orange

Ground modular terminal block - PTS 1,5/S/1P-PE - 3214479

Accessories

Latching - PR 1,5/S/2 - 3212895



Latching, Color: orange

Latching - PR 1,5/S - 3212882



Latching, Color: orange

Drawings

Circuit diagram

