Prysmian Australia Pty Ltd
A.C.N. 096 594 080 A.B.N. 36 096 594 080

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CABLE DESCRIPTION

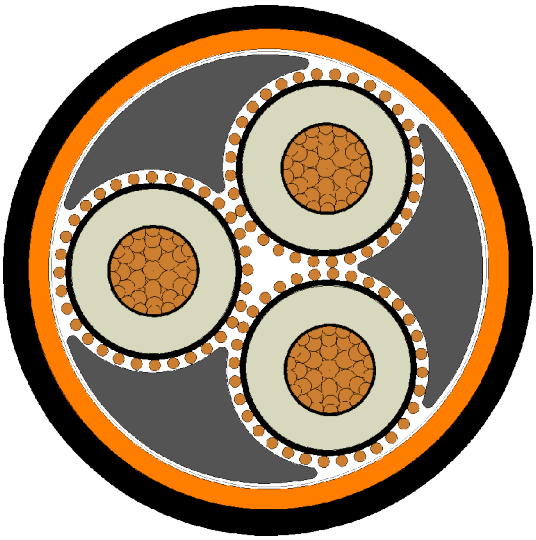
12.7/22kV 3 core 240mm² compacted copper conductor, Semi conductive XLPE conductor screen, Tree Retardant XLPE insulated, Semi conductive XLPE insulation Screen, 19.2kA plain annealed copper wire screen, Laid up, non-hygroscopic polypropylene filled, taped, 5V-90 PVC sheathed, HDPE sheathed. Cable marking: Embossed *"PRYSMIAN ELECTRIC CABLE 12.7/22kV TR-XLPE (YEAR of Manufacture)"* plus printed Metre Marking.

STANDARD	AS/NZS 1429.1 & AS/NZS 4026 Section 2	Reference Number	20199218

PHYSICAL CHARACTERISTICS

Conductor Diameter			
	Nominal	(mm)	18.1
Insulation Thickness (Nominal)		(mm)	5.5
Diameter over Insulation			
	Nominal	(mm)	31.3
PVC Sheath Thickness (Nominal)		(mm)	1.7
HDPE Sheath Thickness (Nominal)		(mm)	1.9
Overall Cable Diameter			
	Nominal	(mm)	83.4
Cable Mass	Approx	(kg/km)	11,200
Minimum Bending Radius			
During Installation		(mm)	2,080
Installed		(mm)	1,250
Max. Pulling Tension	Stocking [f]	(kN)	10.0
	Conductor [f]	(kN)	25.0

CROSS-SECTIONAL DRAWING (NTS) [g]



ELECTRICAL CHARACTERISTICS [a]

Max. DC Resistance	@ 20˚C	(Ohm/km)	0.0754
	@ 90˚C	(Ohm/km)	0.0961
Max. AC Resistance @ 50Hz	@ 20˚C	(Ohm/km)	0.0777
	@ 90˚C	(Ohm/km)	0.0980
Inductive Reactance @ 50Hz		(Ohm/km)	0.102
Star Inductance		(mH/km)	0.326
Capacitance per Core (Phase to Earth)		(µF/km)	0.294
Charging Current Per Phase		(A/km)	1.17
Maximum Design Stress		(kV/mm)	2.75
3 Phase Voltage Drop @ 50Hz & 90°C		(mV/A.m)	0.245
Zero Sequence Impedance @ 50Hz (R_o + jX_o) [c]	@ 20˚C	(Ohm/km)	0.539 + j 0.0567
	@ 90˚C	(Ohm/km)	0.687 + j 0.0567
Positive Sequence Impedance @ 50Hz (R_1 + jX_1)	@ 20˚C	(Ohm/km)	0.0777 + j0.102
	@ 90˚C	(Ohm/km)	0.0980 + j0.102

CONTINUOUS CURRENT RATING [b]

Unenclosed in Air	(A)	564
Buried Direct	(A)	491
Buried in Ducts	(A)	421

SHORT CIRCUIT RATING

Metallic Screen [d]	(kA/1 Sec.)	19.2
Phase Conductor [e]	(kA/1 Sec.)	34.3

[a] Values given are calculated only.
[b] Based on 40°C ambient air temperature, not exposed to direct sunlight, burial depth of 0.8m, soil temperature of 25°C and soil thermal resistivity of 1.2°C.m/W. For single core cables, these are arranged in a trefoil formation "Touching". Screens solid point bonded (ie: bonded at both ends)
[c] Zero Sequence Impedance based on current return path through metallic screen only.
[d] Screen Short Circuit rating based on 80°C - 250°C temperature rise.
[e] Phase Conductor Short Circuit rating based on 90°C - 250°C temperature rise.
[f] To avoid exceeding maximum sidewall bearing pressure (SWBP) of 1450kg/m, maximum pulling tension (T) and minimum bending radius (R) indicated above may have to be reduced and increased respectively by using the formula SWBP (kg/m) = T (kN) / [0.0098 x R (m)].
[g] Colours are for illustration only and may not necessarily reflect actual colours in final product.

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Printed: 22/04/2025

Customer Acceptance:
Name: _____
Position: _____
Company: _____
Date: _____

Prepared By:
Name: Vasta Alfio
Position: Cable Design Engineer
Issue Date: 22/04/2025 Issue No: 1
Reason For a Re-issue: NOT APPLICABLE - FIRST ISSUE